

Rural R&D for Profit Program

*Rural R&D for Profit Market and
consumer insight to drive food value
chain innovation and growth
“Insights2Innovation”*

Final Report

Meat & Livestock Australia

Timeframe for Project activity: June 2015 – June 2018

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Young Food Innovators Residential Field Visit

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Note: the department will publish the final report on its website but will not publish the appendices.

Plain English summary

Insights2Innovation is a first of its kind collaboration between Meat & Livestock Australia, Dairy Australia, Hort Innovation, Fisheries Research and Development Corporation, Department of Economic Development, Department of Economic Development, Jobs, Transport and Resources, Rural Industries Research and Development Corporation, Wine Australia, Austrade, Department of Agriculture and Food, Western Australia, CSIRO and Australian Pork Limited.

The project intended to address key objectives of the Rural R&D for Profit Program by developing new knowledge and deep market insights that will inform more strategic innovation investment decisions, and ultimately, lead to increased value for primary products.

Specifically, this project focused on capturing market insights, identifying high-value opportunities in export markets and helping producers and their supply chain partners respond effectively to those opportunities. It also looked at building the capacity and capability of agri-food supply chains to innovate and collaborate for market advantage, by creating easy-to-access tools and strategies.

By collaborating with stakeholders across the agri-food sector, deep market insights were captured for the China, ASEAN and MENA regions. Crucial to the success of Insights2Innovation was the development of novel and practical approaches to translating these insights into innovation opportunities. Using the participatory action research framework, the project explored and evaluated different models of how to achieve this – one at the enterprise level (Value Chain Flagship Demonstrations) and the other at the individual level (Young Food Innovators).

Value Chain Flagship Demonstrations involved producers and their value chain partners working together to convert market and consumer insights into tangible innovation and growth options. Foundation research outputs and the learnings were embedded in the design of specific strategies targeting identified market opportunities and in the development of pilot value chain designs.

Young Food Innovators was designed to help emerging industry leaders in the Australian agri-food sector develop a 'whole-of-chain' (plate-to-paddock) approach and build their strategic value chain thinking and capability. Delivered through a series of residential workshops, this cohort-based program enabled participants to work with food value chains that were seeking to innovate in order to grow high value opportunities; in both domestic and export markets, drawing on market and consumer insights.

Through these two models, significant innovation opportunities were identified and contributed to agri-food organisations exploring new products, brands, value chains and business models.

For example, through participating in the Young Food Innovators, Yanalla Farms in Queensland have established a new 'PinksBlush' custard apple brand. Under the Value Chain Flagship Demonstrations model, processors Teys Australia undertook a project to employ design-led innovation in the creation of a sustainable, long-term business models focused on food solutions, not just the beef supply chain.

Importantly, the Insights2Innovation project has also provided a framework for the sector to develop the necessary innovation capabilities to be able to understand and respond to market insights and investment opportunities, enabling them to transform their organisations and drive growth.

Lessons from all of the activities undertaken as part of the Insights2Innovation project have and will be used to inform new programs of work. The creation of a Knowledge Portal will ensure that learnings and insights continue to be communicated and shared beyond the life of the project.

Meat & Livestock Australia has already employed the learnings from the Insights2Innovation project into two programs of work around innovation capability building - one designed to encourage producers to engage directly with the innovation agenda, and the other designed to attract and encourage food innovators to explore and develop new ideas.

The support of the collaborating organisations, the Young Food Innovators alumni and the Value Chain Flagship Demonstrations partners will also assist with the acceleration of adoption of innovation capabilities across the sector.

Assisting food value chain businesses and producers to engage effectively with new higher value markets is critical to the sustained growth of the Australian agri-food sector. The work undertaken to date is only the start for the sector in developing long-term capability to transform and respond to disruptive innovation and commercialisation opportunities.

Further work is needed and the sector needs to continue to invest in developing innovation and commercialisation skills and knowledge for market and export opportunities, in order to ensure long-term prosperity.

The Insights2Innovation project has attracted additional funding from partners MLA Donor Company, Fisheries RDC, Seafood CRC, Department of Economic Development, Jobs, Transport and Resources, Australian Pork Limited and Wine Australia, along with considerable in kind support from Fisheries RDC and Hort Innovation. The additional funding from the MLA Donor Company in particular, has totalled over \$10 million and has enabled many learnings and outcomes from the project to be adopted by industry.

Abbreviations and glossary

Term	Meaning
Participatory action research	A research approach, which is common in the social sciences, that aims to develop new insights by engaging teams to undertake real world experiments and providing them with a framework to constantly learn and reflect from project outcomes as they progress.
ASEAN	The Association of Southeast Asian Nations. Member States include Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Vietnam.
Three Horizons of Growth	A widely used management model, developed by McKinsey & Company, to assist companies assess potential areas for growth while ensuring they remain focused on their existing business. Horizon 1 represents activities undertaken within the existing core business. Horizon 2 identifies emerging opportunities for the business. Horizon 3 considers long-term future growth opportunities.
Design thinking	A term that describes a practical and iterative innovation process. Design thinking has its roots in formal design education, but has been adopted for use in business innovation and strategy. The process starts with taking a human-centred approach to understand the dimensions of a problem. Solutions are then prototyped and tested, which allows for a deeper understanding of the issue before investment in a final solution is made.
Design sprint	A time constrained activity, enabling teams to apply design thinking tools to a problem to assist in reframing the idea and potential solutions.

1 Project rationale and objectives

Insights2Innovation is a first of its kind collaboration between Meat & Livestock Australia, Dairy Australia, Hort Innovation, Fisheries Research and Development Corporation, Department of Economic Development, Jobs, Transport and Resources, AgriFutures Australia, Wine Australia, Austrade, Department of Primary Industries and Regional Development, CSIRO and Australian Pork Limited.

The program sought to develop novel and practical approaches on how to translate insights into innovation opportunities that would support high value growth initiatives and, ultimately, build demand for Australian agricultural food products in emerging export markets and market segments. Assisting food value chain businesses and producers develop this capability is critical to the sustained growth of the Australian agri-food sector.

The program had three primary objectives:

- a) to generate knowledge, technologies, products or processes that benefit primary producers
- b) to develop pathways to extend the results of rural R&D, including understanding the barriers to adoption
- c) to establish and fostering industry and research collaborations that form the basis for ongoing innovation and growth of Australian agriculture.

The key research questions that the Insights2Innovation program aimed to address were:

- How can the Australian agri-food sector create a more effective and collaborative innovation eco-system involving cross-sectoral Rural Research & Development Corporations (RDCs); government agencies; public and private research providers in Australia and internationally; educational institutions; financial and economic development system; and commercial food value chain participants? How can the innovation eco-system support the development of sophisticated and comprehensive market and consumer insights that lead to the identification and acceleration of high value growth opportunities?
- How can deeper market and consumer insights be developed to be more relevant and accessible to the industry and commercial value chain users of the information, and how can these insights be transformed into smarter innovation investment decisions (for example, new products, packaging, technologies and value chain business models)? What are the issues that should be considered in determining pre-competitive investments in identified growth opportunities?
- How can market and consumer insight capabilities be more effectively developed within agri-food value chains to enable them to better respond to new high value market opportunities? How can industry engagement in this area be improved?
- What could a more sustainable (and preferably cost-neutral) insights model for the future look like? Should the focus of the model be sectoral or cross-sectoral and what are the key inter/intra sectoral issues?
- How can market and consumer insights be delivered to primary producers to enable them to become more effective and empowered participants in agri-food value chains?

Do market and consumer insights lead to improved and sustainable business performance at farm gate, and how can this be measured?

These research questions were addressed through a multi-phased action research program involving stakeholders across the agri-food sector.

A key outcome was to identify and inform innovation investment decisions aimed at positioning the industry for high value growth in the emerging markets and segments over the next 3-5 years. To assist the program stakeholders maintain this focus the 'Three Horizons' model (Figure 1) was adopted to frame the research plan. Using this model, Horizon 2 activities were targeted. However, it was anticipated that some of the research outcomes would be of immediate value for incorporation into near-term marketing and product innovation activities over the next 0-3 years (Horizon 1) and may also point to longer-term disruptive change (Horizon 3).

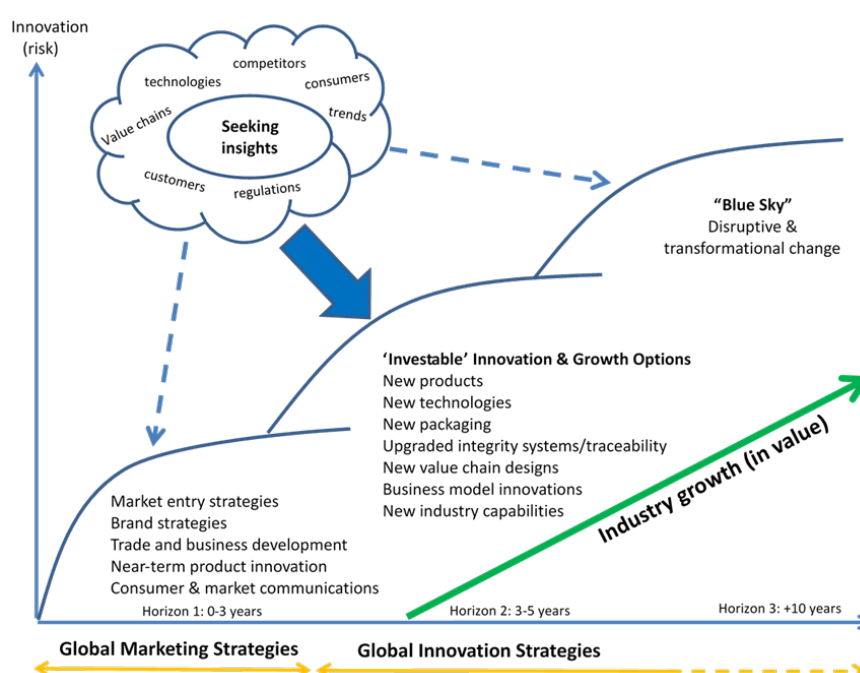


Figure 1 - Adapted Three Horizons Model (Baghai, 2000¹)

The process of how to translate market and consumer insights into innovations was a critical component of the program. Using industry best-practice approaches, two models, both broadly founded on design thinking principles and participatory action research, were developed and

¹ Baghai M, Coley S, White D, (2000) The Alchemy of Growth: Practical Insights for Building the Enduring Enterprise, Harper Collins

piloted throughout the program. These two models were the Young Food Innovators and the Value Chain Flagship Demonstrations sub-programs.

Young Food Innovators was designed to help emerging industry leaders in the Australian agri-food sector develop a 'whole-of-chain' (plate-to-paddock) approach and build their strategic value chain thinking and capability. Delivered through a series of residential workshops, this cohort-based program enabled participants to work with food value chains that were seeking to innovate in order to grow high value opportunities; in both domestic and export markets, drawing on market and consumer insights. The program equipped participants with best-practice innovation tools and knowledge to enable them to become innovation catalysts and participate effectively in the value chains of the future.

Value Chain Flagship Demonstrations involved producers and their value chain partners working together to convert market and consumer insights into tangible innovation and growth options. Foundation research outputs and the learnings were embedded in the design of specific strategies targeting identified market opportunities and in the development of pilot value chain designs. It involved a customised process of information exchange, strategy co-design, and co-development of research activity related to specific industry growth opportunities.

The Young Food Innovators and Value Chain Flagship Demonstration sub-programs were the vehicles to translate the extensive market insights work into innovations and deliver the Insights2Innovation program outcomes, which resulted in:

- Successful identification and development of innovation opportunities which have informed implementation plans that add value to primary products
- Provision of knowledge to producers and their value chain partners about markets and consumer preferences to enable more informed and better targeted decision-making
- Improved through-chain connectivity that will facilitate adoption of 'whole-of-chain' technologies and business model innovations that assists with export success and increased profitability
- Increased/building of future industry capability to support whole of value chain innovation including the attraction and development of young food innovators
- Greater collaboration and leveraging of effort between key participants within the food innovation system, including cross-sectoral RDCs, government agencies, public and private research providers in Australia and internationally, educational institutions, producers and food value chain participants.

Learnings from the two sub-programs are reported on throughout the final report. As the collaborating/participating organisations continue on their innovation journeys, learnings will continue to be captured. As insights emerge, they will be used to inform future activities planned to be undertaken by the stakeholders.

A significant body of market and consumer research has also been developed through the Insights2Innovation program. This research will be made available to the agri-food sector through the Knowledge Portal (<https://mlaus.sharepoint.com/sites/I2IKnowledgePortal>) – one of the key deliverables of the program.

The Knowledge Portal was originally conceived as a static digital repository for reports and case studies generated throughout the program. However, as the program moved into the translation

phase, the Knowledge Portal concept was evolved to ensure it was able to capture the process of how to translate those insights into innovation. This dynamic model has been captured as case studies and shared on the Knowledge Portal and will be refined further as projects evolve and through future work.

2 Method and project locations

The program followed an integrated set of activities overseen by partner representatives, through a steering committee. Five key activities (Figure 2) framed the core of the program. The activities straddled an insights (data collection) phase and a translation to industry phase. Underpinning this significant body of work was the participatory action research framework, which enabled outputs to be refined, lessons to be captured and impacts to be assessed.

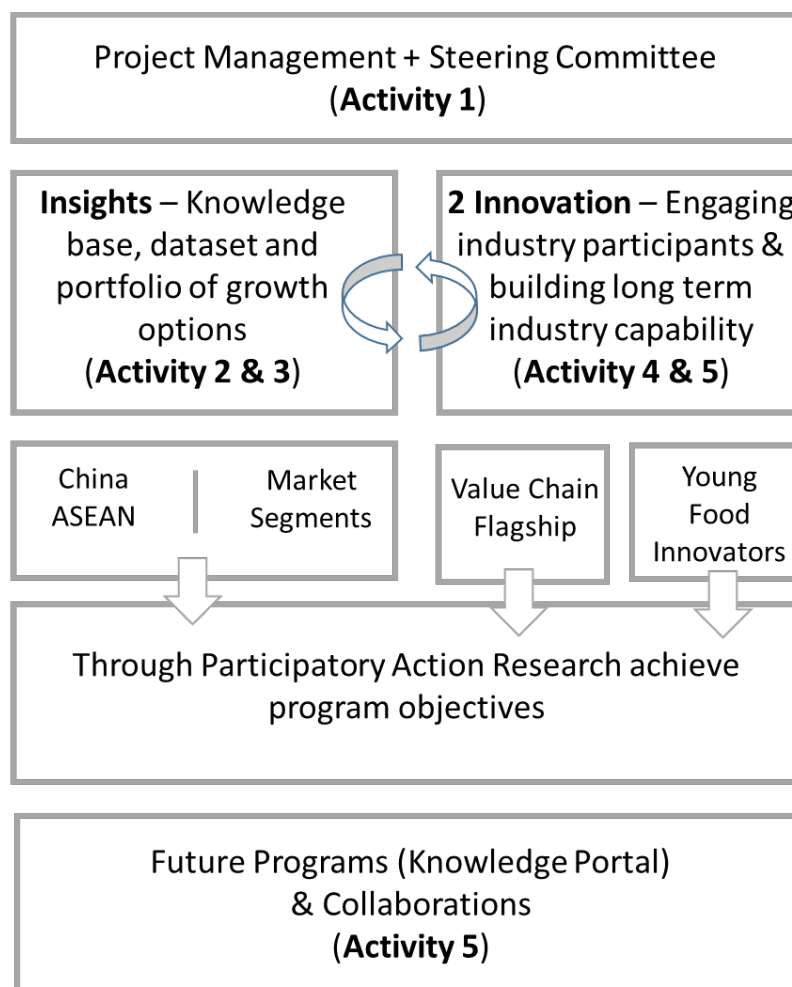


Figure 2 - Integrated Program Activities

Activity 2 and Activity 3 focused on the creation of new knowledge and growth opportunities in specific regions. Insights for both the China and ASEAN regions have been completed, which has also included specific market segment research. Hort Innovation have also undertaken a specific market investigation as part of this activity phase.

Activity 4 and Activity 5 focused on the translation of these insights into innovation with industry partners. To understand the barriers to undertaking insight driven innovation within

organisations, two models (sub-programs) were developed: Young Food Innovators and Value Chain Flagship Demonstrations.

The combination of the insight reports and the two sub-programs enabled the project objectives to be achieved over the three-year time-frame (Figure 3).

Activity	Output	2015		2016		2017	2018
		Sept (MS1)	Dec (MS2)	May (MS3)	Dec (MS5)	May (MS6)	July (MS8)
#1 - Project Initiation and Management	1(a)	X					
	1(b)	X					
	1(c)	X					
	1(d)		X			X	
	1(e)			X		X	
	1(f)						X
#2 – Collaborating to access and develop a comprehensive knowledge base and datasets	2(a)		X				
	2(b)		X				
	2(c)		X				
	2(d)				X		
	2(e)				X		
	2(f)			X			
	2(g)			X			
	2(h)		X		X		
	2(i)			X	X		
	2(j)						
	2(k)				X		
	2(l)				X		
	2(m)					X	
	2(n)					X	
#3 – Using analytics to create a portfolio of growth options	3(a)				X		
	3(b)					X	
#4 - Engaging Industry Participants	4(a)				X		X
	4(b)						X
	4(c)				X		
	4(d)				X		X
#5 - Build long term industry engagement	5(a)		x			X	X
	5(b)						X

Figure 3 - Program Timeline and Outputs

2.1 Program Method Description

Activity #2 - Collaborating to develop a comprehensive knowledge base and data sets

The steering committee start-up meeting held in August 2015 identified China as the priority key export market for all sectors to focus on during the first phase of the project.

In October 2015, a China ‘deep dive’ insights workshop was held with working group members from all partners. During this workshop, an initial China implementation plan was developed which focused on exploring the potential of high value growth opportunities. Key themes identified which required further investigation included:

- Attractive cities profiling: an insight tool that assists in defining market opportunity spaces and ensuring future growth activities are targeted where there is potential to create greatest value.
- Policy, regulations and market access: insights to underpin a deeper understanding of Chinese attitudes to regulation with an aim to leverage insights to differentiate Australian products from competitors.
- Value chain design: an insights report to assist in understanding gaps and future trends in value chain design that present options for greater competitiveness (including value

chain mapping, business models, identification of top 50 customers, and e-commerce in China).

- Cold chain capability analysis: detailed insights analysis of the cold chain logistics capability for selected cities in-market in order to develop a better understanding of current and planned cold chain capacity.

In addition to this work, other activities were identified through the participatory action research framework and guided by the steering committee and included:

- Developing an understanding of the 'smart packaging technology landscape' for China. This was undertaken through a data mining analysis of patents and literature, identifying technology insights and solutions related to the 'food without fear' theme specifically: food safety, shelf life, anti-counterfeit, traceability, and provenance.
- Detailed ethnographic studies on emerging market segmentations including 'snacking/convenience' and 'aging'.

The China 'deep dive' study was completed over an 18-month period and resulted in a significant body of research which was made available to the sector through extension activities and the Value Chain Flagship Demonstrations and Young Food Innovators sub programs. This material is available through the [Knowledge Portal](#). The China insights work and the outputs created are summarised in Figure 4.

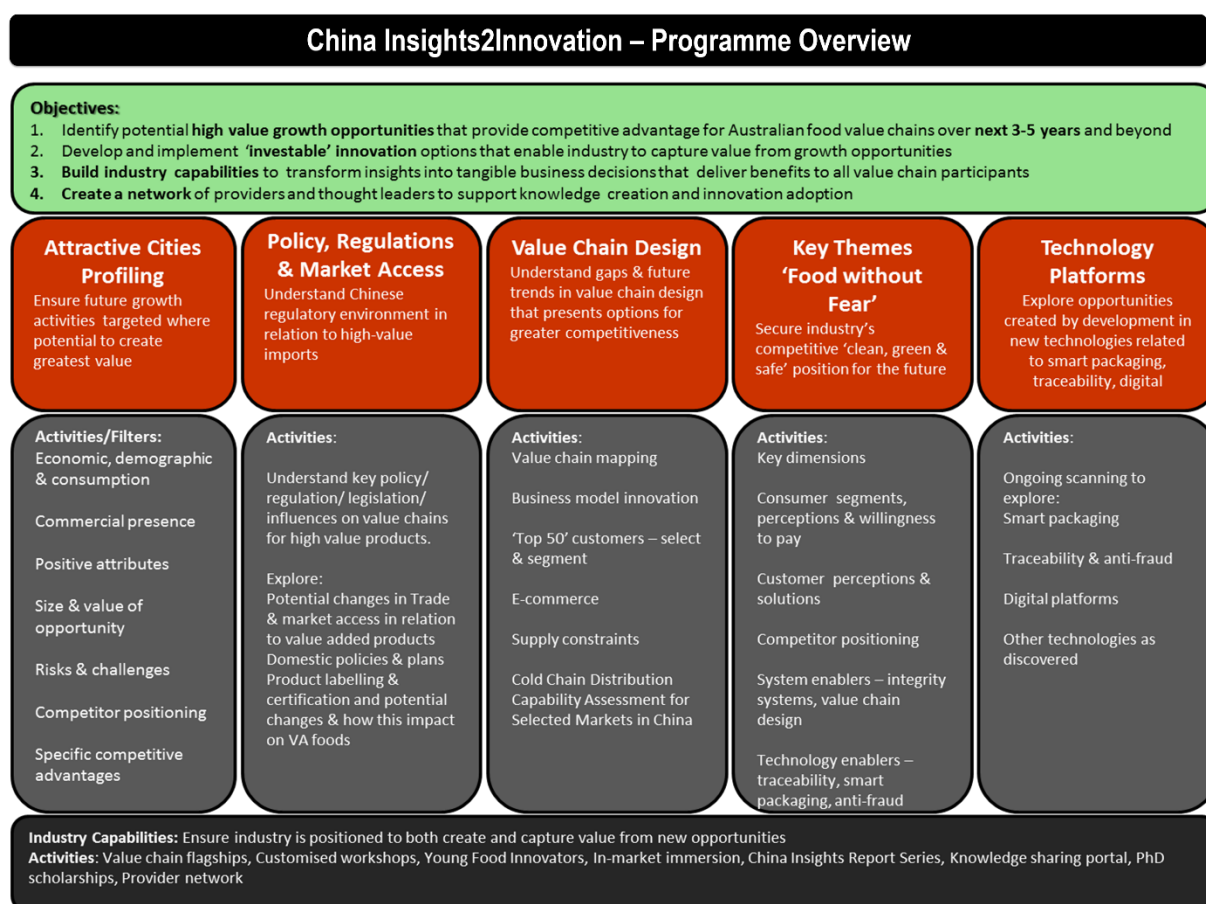


Figure 4 China Insights2Innovation Overview

Following from the China insight research, the approach was applied to the ASEAN region. An ASEAN 'deep dive' workshop with partners was undertaken and identified the following key themes to be investigated:

- an analysis of the geo-political prospects across ASEAN markets
- testing of identified opportunity spaces across markets
- identification of common themes and opportunities across ASEAN markets
- identification of the most immediately attractive markets
- development of 'investment propositions' to engage potential industry partners
- confirmation of behavioural characteristics of this consumer segment and identification of cultural differences
- identification of the highest priority markets
- exploration of a multi-sector approach to positioning Australian premium foods in targeted markets
- identification of what 'premium' means within each sector in ASEAN markets(eg Horticulture)
- analysis of enabling 'infrastructure' such as e-commerce opportunities and requirements in targeted markets.

The ASEAN 'deep dive' study is ongoing. Progress reports have been made available through the Knowledge Portal and will continue to be developed beyond the life of the Insights2Innovation project funding.

In addition to the two sector-wide 'deep dives', targeted horticulture research was initiated to investigate export opportunities in key high value Asian markets (including China and Indonesia) for new blush pear varieties and summerfruit (an identified sector priority).

Activity #3 - Using Analytics to Create a Portfolio of Growth Options

As the market insights were being developed, stakeholder forums and workshops were held to identify industry partners to participate in the Value Chain Flagship Demonstration pilots. This dynamic and interactive cycle was a core component of sharing and refining the China market insights.

For example, the preliminary market knowledge reports for the global food trends of 'snacking' and 'food for active ageing' was used for workshops held in Sydney and Brisbane in 2017. Over 50 participants from commercial industry value chain enterprises attended workshops and assisted in the validation of the draft industry growth plans.

Following these workshops, a brochure was created to demonstrate Horizon 2 opportunities in China (Figure 5) and be used as a resource for industry engagement. The China Insights2Innovation brochure identified 'white space' opportunities, such as 'food without fear', which highlighted the potential for Australian food products that can demonstrate superior safety and provenance.

China Insights2Innovation

Through MLA Donor Company (MDC), the *China Insights2Innovation program* provides an exciting new partnership mechanism for Australian red meat value chains to develop future high value growth opportunities in China in a supported innovation environment. To help facilitate the design and execution of successful high value China growth strategies the program will provide partners with:

- Co-investment funding for the development of new products, process technologies, packaging, traceability/anti-fraud and digital solutions that create higher value for consumers and customers
- An innovation framework that will assist partners to maximise future high value growth options including assistance with value chain and business model design
- Access to a wide range of market insights and R+D materials
- Support to trial new decision support tools to assist in focusing growth strategies and capturing value from the China market in the future
- Access to a network of China experts and design-led innovation providers to provide partners with the expertise that will be necessary for success

Is China Insights2Innovation for you?

MDC is looking for partners who want to explore new ways to pursue a high value growth strategy for Australian red meat exports in China over the next 2-5 years. We anticipate that our partners in this new initiative could be red meat businesses currently operating in China with a commitment to move away from a transaction-based commodity business model or, alternatively, new entrants into the China market who are looking to establish sophisticated red meat export value chain offerings.

Future Focused Growth – What's NEXT?

Increased competition in the Chinese red meat market, including the re-entry of beef from Brazil and the US, could significantly undermine Australia's current market position. With higher production costs than these competitors, it may no longer be enough to simply rely on our 'clean, green & safe' image. The establishment of a premium/high value point of difference for Australian red meat in China by executing a *What's NEXT: Horizon Two Strategy* is imperative to achieving a long term defensible position.

To assist partners to optimise their own China business goals with the highest value options, MLA has commissioned in-depth research in areas such as: Attractive China Cities; Value Chain and Business Model Design; and Market Trends. Decision support tools have been developed to assist partners to identify the best market opportunities.



China Insights2Innovation



High Value Growth Opportunities

In preparation for this program, MLA commissioned extensive research into the value opportunities for success in China. Research highlights include:

- Identification and thorough understanding of potential target consumer segments
- Identification of fertile themes for innovative high growth areas (such as *Food without Fear*), technologies, and products in the Chinese red meat market
- Identification of the cities and channels that represent greatest value growth potential for Australian red meat and a decision support tool for aligning target cities with partner strategies

Value Chain Design

Recently completed value chain research has provided insights and identified opportunities to improve:

- Value chain efficiency and effectiveness
- Cold chain logistics
- Competitiveness based on customer connection and loyalty to Australian products
- Identification of in-country partners that align with partner strategy

Decision support tools have been developed to assist partners make the most of the research outcomes to date.



Technology and Market Access

Insights2Innovation market access research focuses on understanding China's policy, regulatory and market access structure and environment, and how it relates to red meat, particularly premium value added red meat products. This knowledge is vital in limiting costly unforeseen market access situations.

Smart Packaging and Technology

To maintain the premium reputation of Australian meat, anti-counterfeiting, traceability assurance and temperature monitoring smart packaging technologies are being explored. Access to MLA's broad network of providers is available for our partners to solve their digital and technology challenges.

Key Themes

Working with global trends and insights leaders MLA identified a number of key themes that influence consumer behaviours in China. One of these key themes is *Food without Fear*. Recent food scares and reports have identified that the primary concern is for food safety in China. This clearly presents an opportunity for food products that can demonstrate superior safety and provenance. While Australian red meat exports are currently well-placed in this area, it is also clear that competitors are catching up.

Sample Decision Support Tools

- Attractive China Cities Interactive Database
- Top 15 Attractive China Cities Interactive Database with red meat specific metrics
- Interactive Meat Market Sizing Database for Top 15 Attractive China Cities
- Interactive Retail Store Meat Pricing Database
- Top 50 Value Chain Attractive China Customers Interactive Database

China Insights2Innovation

Figure 5 China Insights2Innovation Prospectus

In addition to the China work, specific market segments were explored to understand evolving food trends and identify opportunities to grow the value of Australian food products. Following an analysis of trends, the '2Morrow's Food' initiative resulted in the development of a second resource for industry engagement (Figure 6). This was presented to industry as a portfolio of growth options for the sector to consider.



Global Food Trend Opportunities

In preparation for this program, MLA commissioned extensive research into high value emerging global food trends. Research highlights include:

- Health and Well-being
- Convenience including snacking
- High Protein
- Targeted demographics including ageing population and infants
- Naturally Functional
- Free-From
- Direct-To-Consumer

Snacking

Anything can be a snack. Anytime can be snack-time. Snacking is part of everyday life.

In America, 75% of consumers snack more than two times per day. The UK is close behind. Consumers are willing to pay significant premiums for the convenience of snacks.

In the USA, some of the fastest growing snack brands contain red meat.

International Red Meat Snack Successes:

- Krave Jerky – Official sponsor of the 2016 USA Olympic team
- Epic Bars – extreme athletes/alternative lifestyle
- Bombshell Jerky – female primary market
- Wild Zora – “free-from” enthusiasts



2Morrow's Food Insights2Innovation



Health and Well-being

Consumers are demanding products that deliver a sense of health, prevention, treatment, satiety and/or wellness as part of a balanced diet. These trends are driven by longer life expectancy, increasing obesity rates, and greater consumer awareness. Wholefood goodness that capitalizes on natural functional nutrients such as protein, and are low in fat, salt and refined sugars are high on the menu.

Active Agers

The emerging generation of seniors exhibits very different characteristics compared with previous generations:

- Baby boomer population bulge
- Greater disposable income
- Higher life expectancy
- Lifestyle maintenance priority

Technology for 2Morrow's Food

The power of digital technology is disrupting the way we live and work. How will it revolutionise the way people chose to eat? Existing and developing technologies, such as smart packaging, can generate greater value through guaranteeing provenance, creating an interactive relationship with consumers and assuring purchased items are fresh and natural.

Other Key Trends

Consumers are increasingly becoming more discerning and selective in their food choices. Perceived premiumisation, permission-to-indulge, convenience and with a clear ethical and environmental sustainability and provenance story are rising trends.



2Morrow's Food Insights2Innovation

Figure 6 '2Morrows Food' Initiative

Hort Innovation extracted their initial insight work to develop growth opportunities for the fresh fruit sector. Two reports were prepared, 'Consumer Insights for Australian Pears and Stonefruit in Indonesia' and Consumer Insights Australian Blush Pears in Thailand' (Figure 7) and have been shared with industry.

The horticulture sub-project focused on opportunities in high value Asian markets for blush pears and summerfruit. Both are industries in which Australia enjoys a comparative advantage over many other producers globally, and can capitalise on growing global demand. However both industries have traditionally been domestically focused, and despite challenging conditions in domestic markets in recent years, both industries have struggled to capture export opportunities.

High proportions of Australia's pome and summerfruit crops have traditionally been produced for processing. Nationally, 75 per cent of peaches, nearly 50 per cent of apricots, and close to one-third of pears were traditionally directed into processing (including juicing). However, fruit intake for processing has declined sharply over the past decade, with major processor SPC Ardmona reducing peach and pear intake by 53 per cent and 65 per cent respectively from 2008 to 2015. Increased supply to the fresh market has placed downward pressure on prices received by Australian growers, as the domestic market has been flooded and both pear and summerfruit industries, lacking export-readiness, have been unable to move substantial volumes of fruit offshore.

In particular, Australia's pear industry has struggled to export due to a lack of quality cultivars that meet consumer expectations. Between 1992 and 2007, exports declined from 20% to 2% of total production. Production is still dominated by the traditional European pear cultivars: Williams' Bon Chrétien (WBC) and Packham's Triumph; both have been in production for over a century. Key to revitalising pear profitability will be introducing new blush pear cultivars known to be preferred by customers.

For new pear cultivars and many summerfruit cultivars, there is limited data available on Asian preferences, optimal harvest maturity or their postharvest physiology. Research into these three areas will be essential to improve cultivar selection, harvest practices and postharvest handling to deliver products that will command premium prices in key export markets.

As new insights emerge, there can be progressive creation of new (and in some cases transformational) growth options that can be evaluated based on the size of the opportunity; projected value proposition; risk; investment and complexity required to capture the opportunity; degree of fit with current and future industry capabilities; intensity of competitor activity; and sustainability of consumer/market demand.

Industry value chain participants continue to be exposed to consumer preference research and consumer insights defined through this project, encouraging the Summerfruit, Apple and Pear industries to evaluate and respond to new Asian export opportunities. The project complements existing Summerfruit, Apple and Pear export strategies and Victorian Government outcomes being sought through the Food to Asia Action Plan.

The project has provided a stock take of the collective knowledge for export markets including Thailand, Indonesia and China. The stock take has informed where information gaps exist, and where there is synergy in effort across market access and trade activities within government

and industry. This is the first time that this level of information has been collated and shared across the Summerfruit, Apple and Pear sectors, and is expected to deliver significant cost savings and efficiencies for export production and handling chains into the future.



Figure 7 Hort Innovation ASEAN insight reports

Activity #4 - Engaging Industry Participants

As the market research was being undertaken, industry engagement was occurring through industry forums and design workshops. The workshops enabled the initial insights to be validated by the sector and for industry to begin to prepare to undertake programs of work to capture the value from the insights. The goal of these workshops were to identify value chain partners willing to engage and to develop 'investable' innovation and growth strategies based on the translation of market and consumer insights.

The ability to engage industry in investing in market opportunities is a core challenge for the sector. The design-led industry engagement process that was developed included:

- Initial engagement with industry partners who contributed and participated in the foundation research interviews and data collection to assist in the validation of the insights.
- Introduction of the market insights outputs to a broad range of industry participants. This was achieved through the development and communication of the specific program brochures and resources, and by inviting expressions of interest from prospective participants.

- Introductory workshops with those industry partners who expressed interest in learning more about program and providing them with the opportunity to collaborate on the identification of tailored research and the development of industry-driven action plans. Typically, these workshops were conducted over several hours with the industry partners' senior executive teams.
- Follow-on 'deep dive' strategy development workshops with a group of industry partner representatives across business, marketing and operational level staff. The half-day facilitated 'deep dive' workshop explored the partners' strategy and potential high value export market innovation opportunities. The objective of the workshops was to identify specific opportunity spaces and associated innovation responses which present unique and sustainable high value industry growth opportunities.

The process has been piloted with the red meat sector. The China Insights2Innovation and the '2Morrows Food' resources were shared with eight red meat value chain partners through design-led workshops. This led to the establishment of an industry action plan for the Value Chain Flagship Demonstrations. The key areas of focus which these partner have prioritised include:

- Building new sustainable value chains - market opportunity assessment, product, service and value chain design research and demonstration pilots for high value products into China.
- In-market partner selection and business model design research.
- Customer discovery and market validation activity relating to the preliminary innovation opportunity spaces identified through the foundation research.

Additional industry engagement activity is continuing, with an increasing number of red meat exporters seeking facilitated workshops to understand how the Insights2Innovation program can support their export market innovation objectives.

The model of industry engagement has evolved through this pilot process and has helped informed the ongoing adoption activities (described further in Section 5). The learnings have also been integrated into the Knowledge Portal, which will provide the platform to enable the further dissemination of insights and adoption.

Activity #5 - Building Long Term Industry Capability - Young Food Innovators

The Young Food Innovators sub-program was developed as an additional model to the Value Chain Flagship Demonstrations to explore approaches to building capability to translate insights into innovations. Young Food Innovators was initiated at the start of the Insights2Innovation project (December 2015) and focused on assisting young professionals build 'whole-of-chain' (plate-to-paddock) strategic value chain thinking and capability.

The bespoke program is designed for emerging industry leaders looking to develop new high value opportunities in domestic or export markets, implement innovative new business models or accelerate the adoption of new disruptive technologies within their production business.

In order to fulfil this aim, the key learning objectives of the program were to:

1. To develop the cognitive, practical and creative skills necessary to apply design led thinking in all aspects of innovation development projects

2. To be able to recognise the inter-relatedness of all phases of the supply chain in order to transition to a value chain design framework
3. To investigate and apply innovative approaches/tools to the contemporary, interdisciplinary management and evolution of forward thinking commercial food systems

Rather than one-directional learning, Young Food Innovators employed active learning principles throughout the program.

From its inception, the plan was to involve two cohorts. The first cohort was to focus on the post farm-gate sector, with participants engaged in a range of initiatives exploring new high value opportunities and the implementation of design thinking within their agri-businesses. This cohort included participants from the red meat sector that were from newly created co-funded traineeship roles. The first cohort of participants started in August 2016 and attended six one-week residential workshops. The last three residential workshops were held in conjunction with the second cohort.

The second cohort commenced in June 2017 and consisted of producers looking to build new high value opportunities in either domestic or export markets, implement innovative new business models, or accelerate the adoption of new disruptive technologies within their business.

Following feedback from the first cohort, the second cohort undertook an accelerated one-year program. This enabled both cohorts to be combined for the remainder of the program.

The curriculum and venues for Young Food Innovators consisted of:

Residential	Location	Activity
Residential 1 – Cohort 1 July 2016	Sydney, NSW	Content: Global Mega-Trends, Technology Trends, High Value Food Export Markets, Introduction to Design-Led Thinking Providers and industry partners: UTS, Monash University, CSIRO, Meat & Livestock Australia, Hort Innovation, Dairy Australia, Food Innovation Partners, ERA Innovation, Honey & Fox, Sydney Fish Market, Green Camel Farms and Australian Institute of Food Science and Technology
Residential 2– Cohort 1 November 2016	Brisbane, QLD	Content: Design-Led Thinking and Value Chain Design Providers and industry partners: IDEO (USA), University of Queensland, Massey University, Hort Innovation, Australian Country Choice and Coles
Residential 3 – Cohort 1 March 2017	Melbourne, Victoria	Content: Front End Innovation Best Practice – Knowledge and Product Mapping, Insights, Ideation, Prototyping, Consumer Validation.

		Providers and industry partners: Monash University, Massey University, Dairy Australia, Food Revolution Group, Caprilac
Residential 1 – Cohort 2 July 2017	Sydney / Inverell / Armidale, NSW	Content: Design-Led Thinking – Sydney & Inverell (NSW) – Industry Challenge, Bindaree Beef Providers and industry partners: Massey University, Bindaree Beef, Australian Meat Emporium, Victor Churchill Meats, Kelso Beef Farm, Costa Blush Tomato Farm, Persimmons Australia Inc, Hort Innovation.
Residential 4 – Cohort 1, Residential 2 – Cohort 2 (Combined) September 2017	Wellington, New Zealand	Content: Design-Led Thinking - Industry Challenge, Landcorp / Pāmu Providers and Industry Partners: Massey University, Pāmu (Landcorp Farming Limited)
Residential 5 Cohort 1, Residential 3 – Cohort 2 (Combined) November 2017	Melbourne, Victoria	Content: New Venture Ecosystem, Culture Change Management, Front End Innovation Best Practice (Cohort 2 only) – Melbourne Providers and industry partners: Massey University, Hargraves, Monash University, Food Innovation Centre, SproutX, Rocket Seeder, AGL, Treasury Wines, Telstra, Artesian, University of Queensland, Badalya, Moon Dog Craft Brewery, Simplot, Straight To The Source
Residential 6 Cohort 1, Residential 4 – Cohort 2 (Combined) March 2018	Sydney, NSW	Content: Future Forecasting & Branding Providers and industry partners: Massey University, Institute For The Future, Perfection Fresh, Studio Paradise.

3 Project Outcomes

3.1 Project level achievements

The Insights2Innovation project has resulted in the development of significant innovations and commercialisation opportunities across the agricultural sector. The breadth of work undertaken over the three-year period highlights the opportunities, which can be achieved through the investment of capturing deep market insights and building the capability to translate these into commercial opportunities.

Activities undertaken across the agri-food sector have resulted in or contributed to:

- Yanalla Farms (Sunshine Coast, Queensland) developing their innovation capability and establishing a brand for the PinksBlush custard apple.
- Sandelwood feedlot (Darling Downs, Queensland) developing an integrated paddock-to-plate model that links like-minded producers to provide a consistent supply of quality feeder cattle to the feedlot, in order to supply a group of key end domestic and export customers.
- Lush Lychees (South Yamba, Queensland) developing a new business model focusing on handpicked gifts.
- LAMBPRO (Riverina, NSW) understanding whether consumers wanted to have access to lamb branded products, and which are of superior and consistent eating quality.
- New Zealand Landcorp Farming Limited (Pāmu) investigating a world-first deer milking farm system and milk product which is food safety compliant, efficient and scalable.
- Flinders Island Meat (Oakleigh, Victoria) transitioning to a new business model focusing on food service distribution.
- Building insights to drive food value chain and growth opportunities for Harvey Beef (Harvey, Western Australia).
- Exploring the development a business model to bring together farmers in the Mimosa region (NSW) to market their product by sharing their individual stories.
- Bega cheese exploring a snacking offering targeting a specific age demographic.
- Highlighting the importance of data and its value across Australian Country Choice vertically integrated value chain.
- An innovative product for sheep handling, Back Up Charlie, developed by a producer in Urana NSW, that is being adopted by sheep producers across Australia.
- Increased flexibility of Zespri and the NZ Kiwifruit industry to match increasing volumes of the SunGold™ variety to extend harvest, packaging and storage window.
- Peninsula Avocados (Mornington Peninsula, Victoria) developing a business model to utilise second-grade fruit directly into the food service area.

To provide an in-depth snapshot of the scope of achievements to date from the program, five case studies have been selected and presented below. These projects best demonstrate the capacity for longer-term improvement in through-chain connectivity and the potential to apply

insights to inform and facilitate future adoption of technology and business model innovations. Three of these case studies are from Young Food Innovators, and the remaining two are Value Chain Flagship Demonstrations.

The case studies form part of the Final Project Evaluation Report framework (Appendix 7.3), where a semi-structured interview was undertaken with the company project lead, to capture the insights and lessons from their participation to date. Full case study details are included in the Final Project Evaluation Report.

Value Chain Flagship Demonstration – Case Studies

V & V Walsh, Bunbury, Western Australia	V & V Walsh (VWV) is a 60-year-old family-owned processor specialising in beef and lamb production for domestic and export markets (China, Indonesia, South Korea, and Singapore). V & V Walsh has recently entered a strategic transitioned merger and acquisition agreement with the Craig Moyston group, positioning the business for growth in developing new products and expansion into new markets.
Opportunity	<p>Due to the finite size of the Australian red meat market and VWV having significant domestic supermarket business already in place, a clear opportunity for growth lies in targeted export into high value markets. This strategy allows the business to achieve greater efficiencies as well as critical mass in the competitive sheepmeat market. Unprecedented growth in the red meat market into China makes this market a clear target opportunity, supported by the fact that VWV are the only Australian plant accredited for both chilled lamb and beef supply into China (2018).</p> <p>In order to take advantage of this opportunity it was first necessary to grow Western Australian lamb production and secure livestock supply, as well as address seasonal supply fluctuations that continue to be a challenge for the business in managing customer supply expectations. Growing the supplier base and building trusted relationships with producers underpins this growth strategy and was a core focus of the project. Appropriate branding strategies will be researched and trialled. A dedicated Chinese customer base that VWV can partner with to grow a lamb brand, leveraging the provenance and Australian story, forms part of the strategy, completing an end-to-end value chain approach.</p>
Approach	The historic business approach to innovation had focused on whether an innovation would either save money or make money. Engaging with Meat & Livestock Australia (MLA) and the industry experts they have brought in to the project has brought external insights and ideas to the business, as well as new ways of thinking. Through this process, a new approach to innovation was developed, where questions now focus around what value the innovation provides to the business model or supply chain. For example, will this build trust with the end consumer? Will this provide better information to producers?

	<p>MLA market insights were provided to VVW in the form of data on the China market, Chinese consumer purchase drivers and attractive target cities for Australian red meat. The level of detail contained in this data has helped to validate high-level strategies developed by VVW senior staff with extensive business experience in China.</p> <p>In addition to these market insights, access to industry experts with deep in-market experience has been extremely valuable throughout the project, and has provided the business with more confidence in their strategy.</p>
Outcome	<p>For this strategy to be successful, it required significant change to occur throughout the value chain. One of the early challenges was in the livestock procurement part of the business, for two reasons. Firstly, there were heavily entrenched behaviours and thinking around marketing livestock in WA, and strong reliance on the use of livestock agents. Secondly, and underlying this, is a historical mistrust of processors by producers, so breaking down these barriers was critical to achieving the desired model of a balanced portfolio of trusted agents combined with direct lamb supply contracts.</p> <p>VVW have worked to identify and collaborate with early-innovator producers, supporting the approach that farmers learn from farmers. They are moving towards new business models offering bankable forward contracts (some of which are already in place) and detailed processing feedback to support on-farm breeding decisions to encourage producers to grow their lamb supply. Steps to breaking down these barriers are building an open door policy, visiting producers on their own farms, building a new procurement team with a more collaborative approach, inviting producers to visit the plant and generally working out 'how to work together'.</p> <p>VVW have launched and trialled small quantities of Amelia Park chilled lamb into China. This has highlighted the need for an appropriate in-market partner who is able to leverage the benefits of chilled lamb over the frozen product Chinese consumers are familiar with.</p>
Impact	<p>A major impact of the project to date has been a change in thinking and behaviours across the business that has visibly grown 'people capability'. This has created the change in approach to innovation and ignited the idea that expansion requires innovation in every team. Only a few months into the project, the business is also seeing changes in their procurement strategy, and a new approach to annual forward planning.</p> <p>Through this project, the business has learned the importance of engagement, collaboration and transparency for the supply chain to succeed in moving from a transactional model to longer-term supply relationships through dedicated partnerships and with long-term customers. Creating internal cross-departmental teams has helped with this approach but this is just as important externally as it is internally.</p>

Teys Australia, Brisbane, Queensland	Teys Australia is a beef processing business transitioning to a food solutions business. With a significant footprint in beef processing across the east coast of Australia, Teys also owns and operates cattle feedlots; a tannery; value-adding facilities producing cooked centre of plate solutions and fresh, retail ready products; and a 50% joint venture with a wholesale and distribution business. Up to 70% of Teys' beef is exported, largely to the United States and Asian markets including Greater China, Korea and Japan.
Opportunity	<p>To meet long term growth targets, Teys is seeking to develop new growth opportunities that are both profitable and diversified. To support this, Teys has employed a design-led innovation approach to create a sustainable, long-term business model that is focused on food solutions, as well as continued operational excellence in primary processing.</p> <p>Teys is working towards a more customer-focused business model by employing consumer insights, e-commerce and a range of technology and skillsets to support data-driven decisions and analytics.</p>
Approach	<p>The Teys Australia Business Accelerator was a structured, innovative, intensive program of work exploring strategically selected opportunity areas for diversification of earning streams outside of primary processing operations (feedlots, processing plants, and their wholesale beef business). The project was structured so as to not jeopardise 'business as usual', hence the 'skunkworks' model was used, where an arms-length, dedicated, focused team looked at four opportunity areas over a twelve month period.</p> <p>Of the four opportunity areas, two were 'outside-in', driven by megatrends and growth opportunities, and the remaining two were 'inside-out', determined by strategic drivers of operational excellence within the business.</p> <p>Market opportunities were systematically explored and project gate decisions driven by evidence to ensure assumptions were tested and validated at all stages.</p>
Outcome	<p>An example from the Business Accelerator project is the work done on the 'active ageing' segment. Once Teys were at the granular level of research into the 65+ age group, they could assess 'known needs' and 'unknown needs', and look at who is servicing these. That created an opportunity space outside Teys' traditional innovation targets. Scoping the opportunity in terms of an 'end user value proposition' enabled Teys to define the opportunity in that space and evaluate the sustainability of alternate business models.</p> <p>The Business Accelerator has provided a common vocabulary and shared mindset that consumer insights can be used to drive a design-led process, even in B2B business models. It has highlighted that business models and the way they are connected create the most value for the business.</p>

	<p>Using micro-processes such as ‘lessons learned’, the structured evaluation of events or failures to create organisational learning, has become an important part of the innovation process. The value created by these learning opportunities has seen ‘lessons learned’ become widely adopted across different business functions and considered to be part of the common vocabulary at Teys.</p> <p>The language and process of design-led thinking is now incorporated into strategic plans, with new innovation clusters adopting some concepts of the lean start-up. The format of robust, repeatable processes has also been incorporated into key decision-making processes in the business.</p> <p>One of the biggest barriers to progress is the operational and cultural change that enterprise innovation creates. The Business Accelerator is recognised as the beginning of an ongoing journey for Teys. The challenge of cultural change is not only inevitable but also necessary for large existing businesses pursuing a deliberate strategy of growth. It was highlighted that the ‘ambidextrous organisation’ is essential when a business operating at scale is attempting to create sustainable growth paths – it effectively needs two structures, two sets of KPIs, two operating models and two sets of competencies in the business. The challenge is to get these operating harmoniously together.</p>
Impact	<p>Tey's focus is now on innovation for a purpose, and they are actively investing in sustainable growth for the organisation. Innovation is centred on the ‘Three Horizons’ approach in terms of both timeframes and degrees of uncertainty.</p> <p>The organisation has made a significant shift in thinking from the ‘inside-out’, targeted at incremental processing improvements, to also include ‘outside-in’ thinking that is consumer focused.</p> <p>The new product development process has been re-written to become a 12-step process that is consumer focused. Teys has a broad innovation portfolio and continue to be active in working with a broad range of R&D providers from the likes of CSIRO through to robotics specialists. In line with their new consumer-centric approach to growth, Teys are now investing in marketing expertise and insights to build business capability in that space.</p>

Young Food Innovators – Case Studies

Perfection Fresh, Sydney, New South Wales	<p>Perfection Fresh (PF) is a horticultural grower, marketer and exporter of a wide variety of fruit and vegetables including brassicas and broccolini, tomatoes, berries, grapes, mushrooms and mangoes. The company focus is on branded unique offerings that provide a higher value margin than commodity products. PF have owned the Calypso mango brand for two years and have grown this into the largest mango brand and variety in Australia. PF do some exporting but their focus has been supply to the domestic market.</p>
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	<p>PF value add in several categories including fresh cut vegetables (such as ready to bake roasting trays), fresh cut fruits (such as fruit pots) and snacking packs for airlines (such as a punnet of hummus with carrot batons, or Jatz biscuits and Bega cheese), all of which are produced on-site.</p>
Opportunity	<p>The Calypso mango brand has been performing extremely well; consumers in all markets enjoy the product and prefer it to many competing varieties as well as mangoes from other exporting markets. PF have been exporting Calypso mangoes to Hong Kong and into China through the 'grey channel' where products are exported to Hong Kong and on-sold to China. The reason they have not previously targeted the official channel into China is due to the need to Vapour Heat Treat (VHT) mangoes going into this market. There are only two commercial VHT service providers nationally and they are only capable of treating small quantities so this has not been a feasible option for the volumes China seek. Freight has also been expensive, relying on air freight to provide the best shelf life when product reaches the market. Selling through the unofficial market restricts access to official retail channels such as Alibaba and Walmart. In addition, PF cannot brand the product as Calypso. These challenges make it very difficult to supply consistently and grow the brand, particularly with a seasonal product.</p> <p>Market research in China indicates there is a strong appetite for large volumes of Calypso mangoes on a regular basis, meaning that an alternate VHT treatment solution was desired. PF selected a site in Queensland where they built a facility that can VHT an entire 20-foot shipping container. The facility has trialled a container of mangoes, applying VHT and mimicking the sea freight process to test how the mangos perform. The Calypsos have performed extremely well and are edible immediately upon opening the controlled-atmosphere container. The shelf life has almost doubled compared with the shelf life offered by commercially VHT treated and air-freighted product.</p>
Approach	<p>The project has helped PF approach the VHT project with more confidence and supplied an approach and framework to innovation that will stick with the business. The design-led thinking process helped the business with some of the key thinking points, looking at the value chain differently to the past 'start to finish' approach, where products were initially trialled and then a market identified. Now they are asking questions about the consumer and the occasion, looking at the 'end game' and who they are targeting, without 'innovating for the sake of it'. Bringing in outside expertise has helped PF become more strategic.</p>
Outcome	<p>Domestic consumer demand for mangoes is not growing, so without export growth the price return at farm gate will go down based on demand. One hundred thousand additional B74 (Calypso) trees have been planted, growing production by one third in preparation for export demand.</p> <p>This approach will mean the value of the Calypso brand will continue back to the farm gate, allowing PF to maintain the farm gate price at its current level</p>

	while growing the market above domestic requirements. This would not have been the case without the export opportunity.
Impact	<p>The PF business was already evolving towards a more innovative approach but the project has provided new thinking based on a customer-centric methodology. It has redefined the way they approach innovation as well as how they define innovation in terms of products and packaging.</p> <p>– PF has helped with capital injections for growers who could not previously expand. Previously, there was no guarantee of an increase in profit, but with the larger harvest from B74 trees and the expanded export growth, they now have a very happy grower group. This project also opens doors for future mango varieties into China.</p>

Sydney Fish Market, Sydney, New South Wales	Sydney Fish Market (SFM) is a NSW industry-owned private business that operates a working fishing port, the largest seafood auction in Australia and a retail arcade, together attracting over three million visitors annually. SFM has evolved from an auction house to become a tourist destination and international brand. Fifty-four percent of all Chinese tourists to Sydney visit the markets for a fresh seafood meal, signalling opportunities to expand sales into China and other Asian markets.
Opportunity	The large number of Chinese visitors to the SFM provide a perfect target market for growth. If these visitors to the market were able to make a purchase to send home or to arrive with them on their flight home this would be a tremendous opportunity for a captive customer base already on site. This also aligns with the strong culture of food as a gift item in China and reflects the high esteem the Chinese place on Australian seafood. Currently there are quarantine restrictions on travellers bringing seafood into China but various aspects of this opportunity have been explored and are under discussion with the aim of reaching a feasible solution.
Approach	SFM are taking a different approach to the China market where they are focusing on their existing Chinese visitors rather than trying to target cities or regions in China. The drivers behind consumer purchase decisions are very relevant to building business models that enable sales into China. Understanding the occasions for purchase and broadening thinking around this to include the 'Australian experience' is also very valuable, and is evidenced by the purchase patterns of tourists to the markets.
Outcome	SFM are positioning themselves as a high quality brand and a leader in the seafood industry. The nature of their business means they are already a key link in the seafood supply chain between fishers, buyers and on-site sellers. Plans to improve technology platforms and incorporate blockchain technology will build capability and strength both up and down the value chain. Taking a more customer-focused approach to business development also underpins

	<p>long-term industry capability because this means seafood suppliers can focus on sourcing products where they can be confident of demand from consumers. Other innovations from the project have included:</p> <p>Technology platforms and IT systems to reduce freight on product coming from other ports where there are customers local to those ports (for example, a Brisbane buyer may currently purchase product from SFM that has originally come from Brisbane).</p> <p>Working with other seafood markets that have traditionally been competitors to form a tourism trail for visitors to the east coast.</p> <p>Designing components for the new markets including conducting their own water treatments on site from water in the harbour.</p> <p>Generally thinking outside the square, for example creating multi-use spaces like a carpark that could also be used for pop-up events or other purposes.</p>
Impact	<p>Through the project, SFM has had contact with a network of innovation specialists across Australia, New Zealand and the United States. This has provided access to businesses and sites that have broadened their thinking around whole-of-chain opportunities. A key learning has been the need to engage people from across the business in projects implementing change. Some early wins with design thinking-led projects really helped to bring people on the journey and grow engagement in the process.</p> <p>Working with and gaining support from a broad range of Rural Research & Development Corporations has also been of benefit. Seafood Industry Australia launched this year and it has been beneficial for them to get market insights from other Australian RDCs who already have teams and experience in international markets.</p>

Bulla Dairy Foods, Colac, Victoria	<p>Bulla Dairy Foods is an Australian, family-owned business that has been in operation since 1910. Bulla purchase milk and cream to manufacture ice cream, frozen yoghurts, frozen custards, table creams, sour creams, yoghurts, cottage cheese, fresh cheese, cheese spreads and imitation creams for domestic and export markets. Bulla have a strong retail presence and are a solid player in B2B and food service channels including quick service restaurants.</p>
Opportunity	<p>Bulla have a strong presence in New South Wales, Victoria and Queensland and wish to expand into more Australian states as well as into export, specifically South-East Asia and the United Arab Emirates. Current commodity pricing in the dairy sector means that profit opportunities are strongest in export markets. Bulla have been establishing an export strategy for around 18 months and have an office in Singapore to study the Asian opportunity. They now have five people in the export team, focused on bakeries and retail supermarkets.</p>

	<p>Strategy managers collaborate with local agencies on consumer insights and flavour expectations in the target markets.</p> <p>Bulla identified demand for adjacent products as an element of the value chain. Although not historically part of the Bulla culture, they have broadened their thinking to collaborate with companies in adjacent spaces. This approach focuses on mutually beneficial opportunities in line with consumer-led market research.</p>
Approach	<p>Bulla remain competitive through a strong new product development pipeline and a focus on innovation. Historically both 'innovations' and 'renovations' were categorised as new products, but this approach did not facilitate studying the market, understanding consumer needs or creating solutions for consumer problems. Rather, they had released products that were commoditised, not in the premium category and that did not deliver the experience the consumer seeks. Consumer insights were generally managed at a high level within the business and did not flow to the new product development team.</p> <p>The biggest long-term outcome for the business will be the significantly higher chance of success in entering export markets and in new product development and branding, based on a consumer-driven approach. Bulla have now implemented a stage-gate process to decision-making in new product development. At different stages of the development process, the team have to share full consumer insights with the wider team, formalising the consumer-led process.</p>
Outcome	<p>Whilst it is too early to comment on a profitability impact, there are clear productivity improvements in the business from the design-led thinking approach. The team are able to push products through the pipeline much faster because with a clear market expectation they are able to narrow their scope of focus and deliver outcomes much faster. This means there are now fewer product failures and a shorter time to launch. There are positive reflections from key stakeholders in the business on the new processes and a small team in the business who share the design-led thinking approach are collaborating to roll this out more broadly.</p>
Impact	<p>Bulla have expanded their network through the project and now know where to come should they need external input. They have refined their interaction with agencies gathering consumer insights. Bulla now collaborates with agencies in-market and has been able to make adjustments during the data collection process that have proved very valuable to making sure they get the right information, ultimately facilitating a smoother new product development process.</p>

Many of the projects started through the Value Chain Flagship Demonstrations and Young Food Innovators are ongoing and will continue beyond the life of the Insights2Innovation project. Evaluations will continue beyond the life of the project to ensure the lessons and impacts achieved by the individuals, firms and sectors can be shared. This ongoing work will form a core aspect of the Knowledge Portal and will encourage other producers to embed innovation within their business.

3.2 Contribution to program objectives

Assisting food value chain businesses and producers to engage effectively with new higher value markets is critical to the sustained growth of the Australian agri-food sector. Identifying models to achieve this was central to the program. The Insights2Innovation project has addressed this challenge through collaborative research and development (R&D) activity to support continued innovation in Australia's primary industries. The core objective of the project was to identify models of how to realise productivity and profitability improvements for primary producers, through:

- a) generating knowledge, technologies, products or processes that benefit primary producers
- b) strengthening pathways to extend the results of rural R&D, including understanding the barriers to adoption
- c) establishing and fostering industry and research collaborations that form the basis for ongoing innovation and growth of Australian agriculture.

The project's five key activities enabled the development of new knowledge and deep market insights that will inform more strategic innovation investment decisions at both industry and value chain levels.

Key project outcomes have included:

- Successfully identified innovation opportunities that will inform implementation plans that add value to primary products.
- The provision of knowledge to producers and their value chain partners about markets and consumer preferences to enable more informed and better targeted decision-making.
- Improved through-chain connectivity that has facilitated adoption of 'whole-of-chain' technologies and business model innovations that aim to generate export success and increased profitability.
- Developed industry capability to support whole of value chain innovation including the attraction and development of young food innovators
- Enabled greater collaboration and leveraging of effort between key participants within the food innovation system, including cross-sectoral RDCs, government agencies, public and private research providers in Australia and internationally, educational institutions, producers, and food value chain participants.

Project 'insight' deliverables included:

- Collaboration across the RDC stakeholder group to access and develop a comprehensive knowledge base and data sets based on assessment of gaps in knowledge against industry priorities.
- Studies and reports on consumer insights and preference for select markets and segments, specifically China and ASEAN.
- Studies and reports on demographic influences on agri-food in China.

- Reports on foresight themes for China, with key themes including ‘food without fear’, ‘fuss-free food’, ‘novelty factor’, ‘patriotic purchasing’, ‘health on the agenda’, ‘consuming to look good’, ‘the new sustainability agenda’, ‘value seeking’, ‘modernised agriculture’, ‘scaled-up food’, ‘international influence’ and ‘the high end dining-out opportunity’.
- Analysis and reports on food trends for China and ASEAN, specifically ‘snacking’, ‘personal care’ and ‘natural/health’.
- Value chain maps for China and identification of new agri-food business models for the sector to consider.
- Behavioural segmentation across value chains for China, specifically within the context of an aging population and snacking food trends.
- Targeted industry competitor and new product scanning, specifically around value chain innovations and emerging food trends, including healthy snacking.
- Analysis and reports on Australian agri-food value chains and their operations with China, which identified that capturing value in China over the next 3-5 years requires a premium proposition underpinned by a clear channel differentiation strategy.
- Identification of technology and intellectual property enablers in China.
- Analysis and reports on market access constraints and technical barriers to trade for selected sectors in China.

These reports have been included in the project evaluation and reports are available through the [Knowledge Portal](#).

Project ‘innovation’ deliverables included:

- Using analytics to create a portfolio of growth options focusing on a China insights opportunities (China Insights2Innovation prospectus) and market segmentation opportunities (2Morrows Food prospectus)
- Engaging industry participants through Value Chain Flagship Demonstrations. Five case studies have been developed which summarise how business models have evolved through the application of design thinking principles to enable the organisations to become consumer-focused in their thinking and approach to innovation and growth.
- The development of a prototype ‘Knowledge Portal’ that will communicate and extend reports and learnings from each activity.
- Building long-term industry engagement, through the design and delivery of an emerging leader traineeship program (Young Food Innovators), aimed at assisting the red meat, horticulture, seafood and dairy industries to attract, develop and retain new talent. Twenty-four participants from across the stakeholder group successfully completed the program.

The deliverables to date have established a platform for the agricultural sector to continue to innovate through the translation of deep market insights into innovations, which will realise productivity and profitability improvements for primary producers. The project has enabled a pool of early adopters across the agri-food sector to take to market innovations and commercialisation opportunities.

Through the industry projects undertaken, a model of innovation to assist with the adoption of new capability has emerged. This model will continue to be refined as the innovation projects

grow and mature. However, more important is the community of innovation leaders, which this project has assembled and provided with the skills and knowledge to innovate. These early adopters will be the innovation ambassadors to ensure opportunities can continue to grow and be scale across the agri-food sector.

4 Collaboration

This project has brought together for the first time Rural Research & Development Corporations and State-based government agencies who have an interest in connecting deep market insights and building innovation capabilities to realise productivity and profitability improvements for primary producers. Throughout the project, many formal and informal collaborations have formed across the entire food value chain. Without the project, many of the collaborations would not have been realised. A list of collaborations mapped against program activity include:

Project Stakeholders – The founding members of the partnership and Steering Committee representatives

- Meat & Livestock Australia
- Dairy Australia
- Hort Innovation
- Fisheries Research and Development Corporation
- Department of Economic Development, Jobs, Transport and Resources
- AgriFutures Australia
- Wine Australia
- Austrade
- Department of Agriculture and Food
- Western Australia
- CSIRO
- Australian Pork Limited

Markets Insights Collaborations - The partners who were commissioned to undertake research on specific market insights and assist in the dissemination of the findings

- KPMG
- Canadean
- University of Southern Queensland
- Victoria University
- Global Data
- Institute of Supply Chain Logistics
- Thomson Reuters
- Monash University

Flagship Pilot Demonstrations – The early adopters from the Australian Red Meat sector who had a desired to create innovation based on the insights developed.

- Teys / Cargill
- V&V Walsh
- Northern Cooperative Meat Company
- Thomas Foods International
- Harvey Beef

- Pardoo
- Kilcoy / New Hope

Young Food Innovators Program – The partners who collaborated to support the 24 Young Food Innovators to develop ‘whole-of-chain’ strategic value chain thinking capabilities.

- ACC
- Bindaree Beef
- Harvey Beef
- Patties Foods
- Bulla Foods
- Bega Foods
- Murray Goulburn
- Sydney Fish Market
- Perfection Fresh
- Xinoa
- Mycelia Organics
- Lush Lychees
- Peninsula Avocados
- Yanalla Fruits
- B.E. Campbell
- Flinders Island Meat
- Lambpro
- Signature Beef
- Mimosa Valley Lamb
- Sandalwood Feedlot
- Yuluma Plains Pastoral Company
- Lowanna Properties
- Landcorp / Pamu (NZ)
- Zespri (NZ)
- Harmony Agriculture & Food Co.

- Massey University
- University of Queensland
- Monash University
- University of Technology Sydney

- CSIRO
- Food Innovation Partners
- ERA Innovation
- Honey & Fox
- Green Camel Farms
- AIFST
- IDEO (USA)
- Coles

- Food Innovation Centre
- Food Revolution Group
- Caprilac
- Victor Churchill Meats
- Kelso Beef Farm
- Costa Blush Tomato Farm
- Persimmons Australia
- Hargraves

- Meat & Livestock Australia
- Hort Innovation
- Dairy Australia
- Australian Pork Ltd
- Fisheries Research & Development Corporation

The extensive number of activities and projects undertaken over the three-year period has provided all collaborators and participants with a wide range of opportunities and new connections. There are multiple opportunities for the collaborations established through the program to continue and be extended through the ongoing project activity, future programs of work, and through further collaboration through the Rural R&D for Profit program.

5 Extension and adoption activities

The participatory action research framework, which underpinned the program, has resulted in continuous extension and adoption activity by participants.

‘Deep dive’ industry workshops were held as a means to disseminate insights to value chain partners about markets and consumer preferences, to allow them to better-target their innovation investment decision-making. Following the identification of stakeholder priorities at the commencement of this project, it was decided that China was a key emerging market to target and that ‘snacking/convenience’ and ‘aging’, would be the dominate key market segments for attention.

Following the identification of the gaps in knowledge for these key markets/segments, industry workshops were conducted:

China ‘deep dive’ workshop

Friday 23 October 2015
Sydney
9.00-4pm
Cross-sectoral attendees
MLA North Sydney office

Healthy ageing and snackification in Asia, the Middle East and Australia

Monday 4 April 2016
Brisbane- Workshop one
9.30-12pm
Cross-sectoral attendees
Rydges Fortitude Valley
Monday 4 April 2016
Brisbane- Workshop two
1.30-4pm
Cross-sectoral attendees
Rydges Fortitude Valley

Wednesday 6 April 2016
Sydney- Workshop three
9.30-12pm Cross-sectoral attendees Christie Corporate Offices, North Sydney
Wednesday 6 April 2016
Sydney- Workshop four
1.30-4pm Cross-sectoral attendees Christie Corporate Offices, North Sydney

ASEAN Market 'deep dive' workshop

Thursday 7 April 2016
Sydney
9.00-4pm Cross-sectoral attendees Christie Corporate Offices, North Sydney

As the 'deep dive' workshops progressed, Value Chain Flagship Demonstrations were scoped with industry partners using a design-thinking framework. Through this process an industry engagement and action plan was developed for the red meat sector (as an initial pilot) to build on the China Insights2Innovation and 2Morrows Food insights.

Eight red meat exporters were engaged as part of the industry engagement process, and have participated in the introductory and/or 'deep dive' workshops with subsequent pilot programs of collaborative work either under development or currently underway. Further industry engagement activity is continuing with an increasing number of red meat exporters seeking facilitated workshops to understand how the program can support their enterprise level export market innovation objectives. An overview of focus areas currently being investigated include:

Industry partner	Pilot project overview
Producer co-operative processor, exporter and marketer	A research project around value chain design, partner selection and feasibility model development. This pilot project represents phase 1 of what is anticipated to become a broader program of work, which will explore the application of all 7-value chain design considerations identified within the foundation research as critical success factors for new value chain pilots in the Chinese market.
Pastoral company, grass fed exporter	A pilot initiative is underway to develop a comprehensive China market innovation strategy refining a high value product and service model offering for chilled pasture fed product into China.
Processor, exporter and marketer	The foundation research learnings across the attractive city profiling, policy, regulations and market access, value chain design and cold chain capability assessment areas are being incorporated within the organisation's China market innovation strategy. This activity will build on the firms preliminary in market activity specifically with regard to the Horizon 1 and 2 type initiatives, which present the opportunity to create higher value and defensible offerings that.
Processor, exporter and domestic marketer	<p>The development of a specific China innovation strategy aligned to and integrated into the company's overall business strategy. The scope of the innovation strategy currently under development includes initiatives in the following key business areas: new products and market segments within China, marketing and market access, new business systems and models, supply chain innovation information management, supply chain alignment, through-chain assurance, and the development of a specific e-commerce offering.</p> <p>Hort Innovation is also co-developing a portfolio of innovation activity with this industry partner.</p>
Processor, exporter and domestic marketer	<p>This project is looking at building sustainable value chains that link producers to high value China chilled lamb export opportunities. It will demonstrate how new integrated value chains targeting high value chilled market opportunities within China should be designed and implemented, including the development of new product offerings with the objective of increasing profitability and farm gate returns for the industry. This project builds on the preliminary Insights2Innovation project to date and supports the design and execution of high value growth opportunities within China, incorporating the research findings from the most attractive market opportunities and value chain design considerations.</p> <p>The project will involve:</p> <ul style="list-style-type: none"> Developing new product and packaging formats based on consumer research insights in market.

	<ul style="list-style-type: none"> Aligning production to new chilled China market opportunities by developing closer on-farm supply networks supported by enhanced feedback systems and improved pricing signals. Creating connections between the supply, processing and consumer with decision support tools and end-to-end value chain communication offerings. The development and implementation of a high value China ecommerce strategy.
Processor, exporter and domestic marketer & supply chain solutions company	Subsequent to the 'deep dive' strategy workshop with this industry partner, a number of attractive export market innovation opportunities were identified. Project plans for these initiatives are currently being developed and encompass both product and value chain design offerings.
Processor, exporter and domestic marketer	The collaborative project with this industry partner will demonstrate, through pilot activity, how new value chains can be designed and implemented to ensure maximum value is captured through partnership with in-market partners. The in-market partner in this case is one of the fastest growing supermarket retail chains in China, and the design will incorporate the critical success design elements identified through the value chain design research activity.
Processor, exporter and domestic marketer	The project with this industry partner will determine the optimal distribution channel and product positioning for a high value chilled red meat offering within China. The project will also explore themes and concepts around replicating the 'Australian meat cabinet' within the Chinese retail context.

Additional industry workshops are now planned to continue the work undertaken in the Value Chain Flagship Demonstrations.

The MENA Attractive Cities Study has also recently been completed. This study was undertaken in two-phases.

In Phase 1, a total of 58 data-points has been collected on 31 cities in the region and a PESTEL model built, in order to identify the Top 6 most attractive cities for Australian red meat exports into the medium term future. The six cities selected were Dubai, Doha, Kuwait City, Istanbul, Riyadh and Tehran.

In Phase 2, a deep-dive research programme was conducted in the six most attractive cities, including consumer research with, expert interviews and store visits. Key measures from the consumer research study were matched to the original PESTEL model to enrich it and optimise the accuracy of the market sizing data. In terms of the key insight areas, we have data on red meat market sizing by volume and value in key retail and foodservice channels up to 2020, consumer insights on meat purchasing, preparation and consumption habits and attitudes.

Reports associated with the MENA Attractive cities study have been included in the [Knowledge Portal](#). These insights will be shared with industry participants as per the China and ASEAN industry engagement process.

Adoption of project outputs has equally occurred within Young Food Innovators. During the course of the program, each of the participants worked on and developed an individual project. During each residential, the knowledge and skills that framed each session acted as a catalyst to shape their individual projects and build innovation capability for both the participant and the firm.

Young Food Innovators has created an alumni cohort of strong ambassadors that are capable of promoting the benefits of this program and encouraging others in their networks to undertake similar training and development. An overview of how the participants intend to continue and extend their projects and knowledge has been included as part of the Program Evaluation (Appendix 7.3)

In addition, ongoing innovation capability programs have commenced as a direct result of the feedback and insights generated from the Insights2Innovation program. Two such pilot activities are described below.

- The **Producer Innovation Fast-Track** program is an initiative developed by MLA Donor Company (MDC) to enable producers to be actively involved in driving the innovation agenda. This program identifies the industry trailblazers and provides the support and expertise required to build their innovation capability.

As an evolving pilot program, Producer Innovation Fast-Track is designed to accelerate the development and adoption of innovation and capability that has the potential to significantly improve farm and value chain performance. It provides the expertise, co-funding and support to producers who are innovators, early adopters, AgTech entrepreneurs or future value chain leaders. Further details of the programs are attached Section 7.1 Attachment 2. Several case studies on the success of the program for primary producers can be found at: <https://www.mla.com.au/fast-track>

- A **Design Sprint Challenge** model was developed to further disseminate the market insights generated as part of the program. The initial pilot was a collaboration between Rocket Seeder (<https://www.rocketseeder.com/>) and the MDC to deliver a series of design sprints that encouraged food innovators to explore and develop new ideas. Through these one-day facilitated design sprints, participants were encouraged to present a design-led solution which identified:
 - which customer/market needs would be address by their idea built around red meat
 - what problems/tensions are being solved
 - the key features within proposed bundles of products/services/technology platforms that match the target market's needs
 - the opportunity that the Australian red meat industry could potentially capture from their idea

Based on the 2Morrrows Food research, the themes that were chosen for the pilot design sprints were:

Personalised nutrition - Consumers are becoming more connected to their own health and wellbeing using devices such as smart watches, and are seeking personalised nutrition options to meet their individual needs. This trend creates opportunities for new bundles of products and services involving red meat that can be aligned to different lifestyles, health requirements and life stages.

Snacking-on-the-go - Consumer-eating patterns are changing, progressing beyond the traditional breakfast/lunch/dinner options to a 'grazing' and 'on-the-go' snacking approach throughout the day and night. In addition, consumers are seeking alternatives to sweet, high carbohydrate snacks especially for uses including outdoor activities, kids' lunch boxes and desk-based snacking. With its high protein content, red meat represents an ideal snacking energy source but, in its raw state, is highly perishable and not ready to eat. What are the high value opportunities for Australian red meat beyond the current limited options of shelf stable jerky and meat spreads?

Healthy ageing - The ageing population continues to be a key driver of change. Red meat with its high protein, iron and zinc content as part of a healthy diet and exercise can help to prolong health and wellness for this market. However, as consumers age, the incidence of chewing and digestion challenges increases and appetites often decline, resulting in reduced food consumption. Whilst red meat has often been a staple of baby boomers diet, the challenge is how to address this markets nutritional needs and challenges through novel business models and food solutions.

Sustainable food and/or packaging - With almost one third of all food created for human consumption going to waste each year, deriving more from less along the Australian red meat value chain is a key imperative. Many consumers are using sustainability as the basis for their purchasing decisions, and brand owners are seeking novel technology platforms and business models that can transform 'waste' streams into high value food as well as utilise sustainable packaging.

Further information on the initial Rocket Seeder pilot can be found in Section 7.1 Attachment 3.

These two pilot activities represent MLA's initial thinking on how to build innovation capability across the red meat and livestock sector. All program partners are committed to continuing to explore this sector wide challenge and to collaborate to investigate new models and programs.

6 Lessons learnt

Many lessons were gained through the multiple activities undertaken during the program. Many of these have been captured through the participatory action research framework, which have allowed individual projects to pivot and evolve. New insights will continue to emerge as the projects continue and new projects commence. It is intended that these insights will continue to be captured and shared through the Knowledge Portal over time.

Key program level insights have come primarily from the Value Chain Flagship Demonstrations and Young Food Innovators. The lessons are presented below and could inform the design of future innovation capability programs for the Australian agri-food sector.

Value Chain Flagship Projects

- *Communication of insights* – Market insights and opportunities need to be contextualised and communicated to industry participants in a manner that encourages value chain innovation investments and growth strategies. Given the breadth and complexity of the material arising from the market insights research, it was difficult for current industry partners to immediately absorb and act on the research. Going forward, this material will be further refined and adapted into tools to allow for ease of adoption including the development of more accessible resource materials. In addition, internal capability within industry partners needs to be supplemented with specific external expertise to assist in the translation of insights into innovations.
- *Balanced innovation portfolio* - The goal of undertaking the flagship pilots was to ensure that the innovation strategy action plans reflected an appropriate portfolio investment approach across each of the 'Three Horizons'. However, it was clear from the work undertaken that incumbent businesses prefer to continue to invest in Horizon 1 activities. To overcome this, a deliberate and focused facilitated workshop process with an industry expert was undertaken. This helped ensure a more strategic Horizon 2 and Horizon 3 innovation investment portfolio was considered. This resource-intensive process was critical to ensuring a balanced innovation portfolio approach could be achieved. Given the sector-level expertise required for this, it was difficult to generate cross-sectoral collaboration. As the program evolves, the exploration of new models to achieve a balanced Horizon model will be explored.
- *Incumbents Vs new entrants* – It is unlikely that the majority of industry incumbents will seek to embrace the disruptive innovation opportunities identified through the market insights research. Therefore, there is a need to identify and support new entrants and agile SMEs as well as encourage incumbents to diversify into this space. The Producer Innovation Fast-Track program and the design sprint challenge activity has been developed to address this gap. These programs are in the process of being piloted with results to be shared across the other project stakeholders and wider agriculture sector.

Young Food Innovators

- *Program agility* - At the outset of Young Food Innovators, two cohorts were planned, one from the agri-food sector and the second from the producer sector. The intention was always to co-design the program with the participants to make the content as relevant as possible. This flexibility enabled the delivery of a curriculum that was highly relevant and practical.

During the program delivery, it was clear that there would be value in bringing the two cohorts together. Based on feedback, the participants greatly benefited from this in terms of broadening collaboration opportunities. There was initial scepticism at first by some participants, but the greater insights they gained by having people from different parts of the value chain proved to be a success.

Therefore, a key takeaway was the need to maximise the diversity of participants across the value chain and sectors in the delivery of such a program. The social capital that can be captured from such a project will form the foundation for long-term partnerships that cut across sector boundaries.

- *Practical delivery vs formal delivery (lectures)* - Very early on in the program it became apparent that participants preferred an inquiry based (practical delivery and fieldwork) rather than a direct instruction (lectures) delivery model. As the program evolved, the use of case studies and practical design sprints on real company challenges was adopted. The participant's feedback indicated greater benefit from this delivery model. Further, the residential format (location based, weeklong activity) was preferred by participants and all valued visits to other organisations during each residential.

The program was also originally designed as a twenty-four month program, however following an interim review, a twelve-month program was identified as the preferred model. The second cohort piloted this model of intensive learning with positive feedback and high levels of impact. We believe that the additional sessions such as Market, Technology and Global Trends that the first cohort participated in can be provided by alternative means such as pre-reading and providing access to industry resources.

- *Formal accreditation* - The program would have benefited from academic accreditation. Feedback from participants indicated formal accreditation would have helped participants and companies see a clear benefit for participation, beyond tacit innovation capabilities and innovation projects.

Many of the participants in the first cohort struggled to maintain buy-in for the program with their companies. Due to company restructures within their firm during the program, participants often found they were reporting to people who had no prior

knowledge of the program. Shortening the program to 12 months may help to minimise the impact of staff reporting changes.

Driving change within an organisation without authority or influence is difficult. We observed both the newly created innovation roles and incumbents whose roles were redefined to focus on innovation, struggled to drive change and influence strategic investment decision-making within their organisation. It was clear that the need to have organisational commitment across the business is critical to achieve success. Further, senior leadership training as part of such a program is recommended.

- *Mentoring* – Mentoring, both from internal and external channels is critical. As the participants were rapidly learning new knowledge and tools, they needed strategies to help communicate this to their business. Assisting the participants to translate their new knowledge and skills to their own business required considerable support between each residential from the program leaders. This was provided to the participants as part of the program in terms of weekly check-ins, however additional models need to be explored including the role of teaching technologies to support this.
- *Ongoing delivery* - The participants uniformly endorsed the program and would support the creation of a similar program in the future.

Hort sub-program

- Many unknowns still exist for summerfruit and pear supply chains wishing to target new and existing export markets. Limited summerfruit and pear cultivars were evaluated during this project. There remain unanswered questions in each of the three selected markets that relate to consumer preference and alternative cultivars that can meet consumer defined quality parameters for Asian markets. Further research is required to determine how summerfruit and pear cultivars respond to disinfestation treatments and their suitability for air and/or sea freight export.
- Consumer insight and preference research reporting needs to be tailored for specific audiences. A stakeholder analysis report 'Considering new fruit cultivars in the Goulburn Murray' indicated that more targeted, user friendly information must be relayed to fruit growers, marketers and retailers to achieve wider adoption.
- Ensuring export readiness for entry to new or expanding markets will require greater industry leadership, coordination and engagement. Deep Dive Workshops were suggested by the RRDPP Steering Group as a future mechanism, but a broader program of activities will most likely be required to resolve the suite of production and supply chain issues that ultimately impact on fruit quality and shelf life at destination.

RDC collaboration

Managing a project of this size and complexity, across the different stakeholder groups was logistically challenging, yet highly rewarding. The project was extremely ambitious to undertake

the depth of research over the period available; and to diffuse these insights across the agri-food sector to realise productivity and profitability enhancements. All stakeholders are commended on the level of resilience displayed to ensure the project intent and spirit of collaboration was maintained. In terms of key lessons learnt for maximising opportunities for collaboration across the RDC's the project identified the following:

- *Insights as a model to unify RDC collaboration* – The process of generating the market insights provided a common platform for the RDCs to seek a common ground in understanding the opportunities and risk in market. Although each RDC had a specific interest per market, the majority of the insights overlapped each RDC interest and therefore became both an efficient model of data collection but also model of collaboration.
- *Capability building* – Young Food Innovators was an effective model to build a future platform for RDC collaboration. As noted above, the diversity of sector level participants and value chain expertise that the Young Food Innovators were exposed to during the program, has set the foundation for long term collaboration across the RDCs
- *Flagship type projects will remain industry specific* – It was clear that working with an individual business to share and encourage a portfolio of innovation activities required deep domain knowledge specific to each particular sector. Therefore, opportunities for cross sector collaboration at the project level may be limited.
- *Knowledge portals need to become more than static document repositories* – The original intention was that the significant material captured during the project would be made available through a Knowledge Portal. However, as the project progressed, it was clear a model of diffusion and capability development needed to be integrated into this process. The use of design-thinking tools has assisted organisations to both understand the opportunity and develop the expertise to create innovations. Therefore, the Knowledge Portal concept will evolve to become a community of practice where approaches to innovation and new market insights can be shared.

6.1 Closing Remarks

The project has been a very positive experience for participants and stakeholders. Many lessons over the three-year journey have been learnt. It is clear that developing long-term capability to transform the sector will be critical for the success of the sector and their stakeholders. The two models developed to build innovation capability, which were explored through this project, are an initial start, but more will be required. Therefore, the stakeholders will continue to invest in their individual programs for innovation capability building based on the learnings from this project.

To continue with the collaboration established through this program a future Rural R&D for Profit grant will be considered by the stakeholders. Initial thinking is that this proposal will bring together the innovation ecosystem, such as accelerators, incubators and investment community together with the RDCs to build an innovation and commercialisation platform. The stakeholders' hope to be able to extend the Knowledge Portal to sustain the process of capturing market insights, thereby removing the need to make significant investment into insight generation. Future work will also ensure the sector will grow the expertise and capability to transform and align to Horizon 2 and Horizon 3 disruptive innovation and commercialisation opportunities, across the value chain and into new markets.

7 Appendix - additional project information

7.1 Project, media and communications material and intellectual property

Section 7.1 Attachment 1 Media and Communications URL List

Section 7.1 Attachment 2 – Producer Innovation Fast Track Flyer

Section 7.1 Attachment 3 – Rocket Seeder Design Sprint Opportunity Briefs

7.2 Equipment and assets

No equipment or assets were funded through this project. The publicly accessible reports have been made available on the Knowledge Portal

(<https://mlaus.sharepoint.com/sites/I2IKnowledgePortal>)

7.3 Monitoring and evaluation

As agreed with the Department, the project evaluation will consist of five case study evaluations that best demonstrate the capacity for longer-term improvement in through-chain connectivity and the potential to apply insights to inform and facilitate future adoption of technology and business model innovations. Three of these case studies are from the Young Food Innovators, and the remaining two are Value Chain Flagship Demonstrations. A review of project achievements against KPI and outputs has also been undertaken.

Section 7.3 Attachment 1 contains the completed Program Evaluation undertaken, consisting of:

- A review of project achievements against activities, KPI and outputs (Section 2)
- A qualitative analysis of Flagship projects to evaluate the work in progress outcomes to the program objectives (Section 3)
- Participant self-reflections for the Young Food Innovation program participation and impacts.

7.4 Budget

The project's Milestone 9 Final Financial Report is due 31 August 2018.