

final report

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Building sustainable value chains that link producers to high-value chilled lamb export markets in China

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Abstract

V&V Walsh is the only Australian meat processor and export facility with an approved license to export chilled lamb to China (as of 2018). In the short term, New Zealand lamb processors are the only major competitors looking to penetrate the same markets with similar product quality. This represents an unprecedented diversification and expansion opportunity for V&V Walsh and the lamb industry in Western Australia. However, acquiring a China chilled lamb export license alone is not enough. Chinese sales channels will likely default to comparing premium Australia chilled lamb with their own low-value frozen product. For this reason, V&V Walsh has tested and validated new value propositions with customers to demonstrate their point of difference from Chinese competitors. Simultaneously, the business has innovated down the value chain to address cost inefficiencies, capability challenges and the lack of aggregated lamb supply in Western Australia.

Western Australia's lamb supply relative to the rest of Australia is challenged by scale and competitiveness. These challenges can be overcome if suppliers and processors break with tradition to pursue new forms of collaboration, innovation and growth over the long-term. In contrast, short-term opportunistic supply chain relationships based on achieving the highest price in the cycle will only maintain the status quo. Efforts during the project have focused on each step in the value chain, including:

- Building collaborative relationships with producers;
- Creating efficiencies in lamb processing;
- Conducting prototype and commercial trials of chilled lamb for export to China; and
- Market development with high-end retailers, food service and e-commerce.

This project identified three different market opportunities for chilled lamb in China. Prototype business models were developed to test the opportunities, including a transactional, integrated and niche model. The transactional model was based on the supply of chilled whole lamb carcasses. While this model is low margin, it is helping V&V Walsh to establish credibility in the market and develop a more competitive business and efficient value chain. More integrated models were also tested with high-end retail chains. These models combine online ecommerce and offline supermarkets with consumer data to drive innovation through the value chain. Integrated models were found to be very price sensitive and slow to acknowledge the value proposition for Australian chilled lamb. This is in contrast with feedback from Chinese food service hotels and heads chefs who confirmed the excellent eating quality of Australian chilled lamb. Niche models that supply direct to expat and high-net worth Chinese consumers via ecommerce platforms were also tested. These types of niche models were found to create sustainable margins while maintaining a lower sell price compared to retail. Indications are that if niche models can be scaled to more consumers they are likely to create a sustainable business.

Commercial testing and sales data associated with these business models is providing confidence for V&V Walsh to continue to grow the chilled lamb to China business. The additional demand for chilled lamb is also creating additional revenue for WA producers.

Executive Summary

Value chain innovation for chilled lamb to China is significantly different to frozen lamb exports and domestic retail sales.

Fig. 1 shows where innovation is required at the supply end (in blue boxes) for the business to be competitive in China. Not all of these areas are new for the business but they are evolving; particularly in strategies around collective buying, aggregating supply and streamlining processes and inefficiencies. It would be fair to say that this project has increased the emphasis on scale and consolidation, better technology and building better business models. What is particularly new for the business is the *interconnection* between the blue boxes and how they collectively reduce cost and drive competitiveness through the entire value chain. Because of the new emphasis, many of the senior and middle level managers working within the business' functional areas are beginning to collaborate and innovate in new ways.

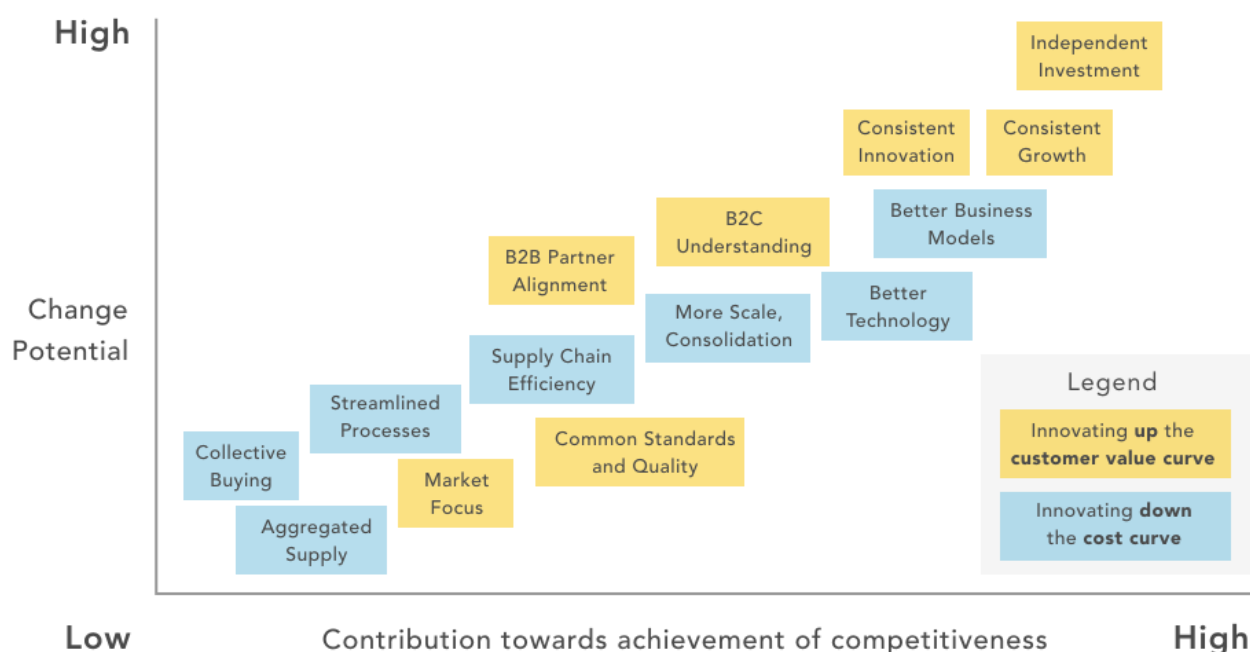


Fig. 1 Innovation up and down the cost curve. Source: DPIRD, 2018.

In contrast, innovation at the customer end (yellow boxes) is new territory for the business. Despite, the business having had opportunistic business relationships in China, there has never been a sustainable and competitive export business for chilled lamb. This project has afforded the business to take a market focus and consistently innovate, to better understand the expectations of Chinese end consumers, and to align the business operationally to achieve B2B and B2C partnerships and confidence. This kind of customer end capability has grown through a suite of market development activities, including:

- In market fact-finding in China;
- Prototyping and commercial trials in China;
- Conducting research on consumer purchasing; and
- Educational workshops within the business.

Throughout this project, key opportunities and challenges have emerged. Each of these are in a process of development (Table 1).

Table 1 Opportunities and challenges

Opportunities	Challenges
Testing customer led business models in premium markets.	Building confidence of producers and processor to test new business models. Identifying appropriate markets and networks with wealthy Chinese or expatriate communities.
Presenting the value proposition for chilled lamb to high-end retailers and food services sales channels in China.	Negotiating an acceptable price premium for chilled lamb.
Prototyping and commercial trials in high-end retailers.	Developing B2B relationships based on multi-layered value propositions.
Innovation through the whole value chain .	Prioritisation of areas commercially viable for innovation.
Product innovation and repurposing of low value Western style lamb products to a high-end market in China.	Rapid development of an R&D culture - willing to try new approaches and fail fast.
Building new leadership capability.	Willingness to pivot from traditional business approaches and adopt new strategies.
Building collaborative relationships with lamb suppliers to increase volume over the long-term.	Short-term opportunistic relationships based on achieving the highest price in the cycle.

1.1 Business models

Throughout the lifecycle of the project, the business has built capability across many areas that have helped them become more competitive (see Fig. 1). While these areas are important for export competitiveness, they need to be integrated into focused and feasible business models.

The business is continuing to design the best business models and to test different opportunities in the China market. Fig. 2 presents three business model types developed during this project; 1) Transactional, 2) Integrated, and 3) Niche.

1.1.1 Transactional

The transactional model is based around the supply of chilled whole lamb carcasses. While this model is lower in margin, it is helping the business to establish credibility in the market and develop a more competitive business and efficient value chain. Transactional business models are more easily disrupted by competitors who compete on price. The business is aware that their previous export attempts and domestic business models have been overly focused on the supply end, commodity driven and have not adequately understood or addressed the needs of high-end Chinese customers. This is probably due to the investment required, lack of on-the-ground experience, and complexity associated with developing customer-centric business models. There may be appropriate markets in China for transactional business models, however they will likely be shorter term if they do not evolve to be more integrated with customers.

1.1.2 Integrated

These models combine online ecommerce and offline supermarkets with consumer data to drive innovation through the value chain. The business is progressively removing rigid structures, regressive cultures, and fixed costs that hinder business model innovation. This is creating opportunities for new business models that *integrate with customers* and the end consumer and back to the farmer. Although integrated business models are more complex to design and implement, they are much harder for competitors to disrupt. Integrated business models leverage data-driven analytics and market insights from customers to drive product innovation and to ensure business sustainability.

1.1.3 Niche

Niche business models are designed around very specific customer problems and requirements. By design they attempt to take a niche market from larger incumbents. Typically, these business models are cheaper and simpler to implement than what their large competitors offer. Closed ecommerce communities are commonly used for selling within niche markets and to help with scale. These ecommerce models may be supported by social media marketing and people of influence. For example, in China there are closed WeChat groups led by WeChat influencers. There are also niche hidden networks of expatriates who are looking for a portfolio of trusted products and services.

Transactional		Integrated		Niche	
Supply-led	Easy to disrupt	Demand-led	Possible to disrupt	Demand-led	Hard to disrupt
Simple to implement	Short-term / opportunistic	Complex to implement	Short-term / strategic	Relatively easy to implement	Long-term / strategic

Fig. 2 Business model options

Designing and validating the above business models (Transactional, Integrated and Niche) has been central to the success of this project and to the sustainability of the chilled lamb business in China. In this way, four high-level business model elements will continue to develop after the completion of this project:

- Determining the **profit formula** for commercial viability;
- Developing a **value proposition** for the right markets and customers;
- Validating the **processes** required to operationalise the model; and
- Acquiring the right mix of **resources** for success.

Importantly, these four elements are progressively being understood and implemented through cycles of problem diagnosis and solution. These cycles are in themselves a *whole of business maturity development process*. Early in the project, the project steering committee recognised the importance of assigning different teams to work simultaneously on the four elements. It was a significant challenge, holding all the balls in the air. This was a new experience for the employees involved. As a result, the business has progressively built the business model elements and completed many sub-projects and tasks which are presented below.

1.1.4 Profit formula

This element of the business model is focused on determining market price points, gross and net margin, and fixed and variable costs.

Sub-projects and tasks:

- Supply forecasting and pricing signals research;
- Processing cost benefit analysis, bill of materials, yield analysis;
- Determining sell price points, product mix, volumes and margin erosion through to consumer; and,
- Using digital technology to optimise decision making and sell optionality.

1.1.5 Value proposition

This element of the business model is focused on understanding what value the market desires.

Sub-projects and tasks:

- Market intelligence on high-end China market in key target cities, sales channels and market segments with emphasis on retail and food services;
- Clarification on high-end consumer knowledge of chilled lamb; and
- Marketing and branding innovation for appropriate retail packs and food services formats.

1.1.6 Processes

This element of the business model is focused on developing new processes that will support the business with routines that reduce risk to the business and add value to the customer.

Sub-projects and tasks:

- Assessing value chain options including the risks and benefits of direct import versus using intermediaries;
- Optimising carcase utilisation across different customer and product mixes to address seasonal supply and commerciality;
- Design-led product development prototyping of different lamb cuts for specific retailers and food service customer; and
- Innovation of packaging processes, traceability, cold chain and logistics options.

1.1.7 Resources

This element is focused on deciding the right mix of resources (people, supply of lambs, equipment) needed to implement the business model.

Sub-projects and tasks:

- Producer network development;
- Packaging equipment for retail export;
- Logistic and distribution networks;
- Strategic partnerships;
- Internal leadership and management capability; and
- Digital technology for improved decision making.

1.2 Report sections

This report is divided into four key sections. It begins by sharing learnings from the lamb supply side and the overall procurement strategy for the WA market. This is followed by learnings and challenges associated with chilled lamb product innovation for different sales channels in the China market. A business case analysis of the different business models design and tested is then presented. The report concludes with discussion on whole value chain capability required for export competitiveness.

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2 Background

Globally, the business is the only red meat processor with an approved export licence for both chilled lamb and beef to China. This represents an unprecedented opportunity for the red meat industry in Western Australia (WA) and for the business to develop value chains for chilled lamb and beef to premium markets in China.

Recent Research and Development (R&D) completed by Greenleaf (2016) with the business highlighted the following gaps:

- Competitive advantage is not enough to compete on price – strategy must focus on consistent supply and value add products.
- Despite strong producer connections and industry engagement, information quality and frequency of producer feedback is low.
- A lack of cohesion across the value chain prohibits competitive export (from supply through to sales).
- There is a lack of consumer insights for decisions upstream for producers and livestock procurement.
- There is a lack of decision support capability to manage information across the whole chain

Previous work done by the business with MLA, DAFWA and Greenleaf (GLE) reported that the business needs to “fill the kill”, improve cost efficiencies and remain competitive in export markets. However, the following limitations were identified:

- Limited year-round livestock supply in WA;
- Restricted processing capacity for emerging Chinese consumer requirements;
- Integrated supply chain development requirements; and
- Higher costs of production.

Prior to commencing the project, a strategic plan was scoped and completed by the business. The specific activities related to the chilled lamb to China business were addressed throughout the strategic planning process, which included:

- In market intelligence to feed into targeted Chinese supply channels and market segments (retail and food services) including WA Trade and Investment Office and Asian Food Shows;
- Consumer channels (understanding the market to inform competitive product differentiation) including value proposition, food service channels, retail channels, e-commerce channels;
- Target market regions with specific China market segments/cities;
- Consumer education about chilled lamb and beef;
- Logistics and distribution networks for chilled lamb and beef (which does not yet exist in China);
- Supply chain options (direct import, intermediaries such as agents and brokers, wholesalers and distributors, e-commerce solutions);
- Demand side analysis;
- Carcase utilisation to improve value for different carcase specifications (address seasonal supply and profit challenges for producers);
- Product development options to address food security, cold chain logistics and consumer preferences;
- Processing improvements; and

- Improved producer feedback systems and pricing signals to enable forecasting and contracting.

The project elected to operationalise the above activities through the execution of this project to develop new business models and address today's customers that are more dynamic.

The WA sheep industry has spare production capacity (~430,000 additional lambs or \$42.5M) within existing capital infrastructure (Greenleaf/Gattorna 2015). The WA sheep industry lacks confidence to increase production without alignment to new export demand. Livestock productivity improvement opportunities such as alternative turn-off times could increase on-farm profitability and balance processor supply needs for new export markets.

Scoping work indicated opportunity in WA to develop alternative business models and production systems to increase supply to satisfy growing export demand (Greenleaf, Gattorna 2015).

3 Project Objectives

3.1 Supply livestock production

- Enhanced producer feedback;
- Alternative business models;
- Development of holistic procurement strategies;
- Collaborative supplier network; and,
- Decision support analytics.

3.2 Product design: development to realise emerging market opportunities by addressing consumer needs

- Development of China specific packaging solutions;
- Production processes attuned to China chilled market;
- Development of products suitable for each China market channel; and,
- Alignment of supply with consumer insights.

3.3 Consumer alignment: test and validate high value products with consumers in each market channel in targeted cities in China

- Channel development to end consumer;
- Price and logistics network analysis to support selling decisions; and,
- Whole of chain oversight activities.

4 Methodology

4.1 Research design

The method for this project involved:

- Design led innovation;
- Mix of data sources to help develop new business models;

- Large number of participants contributing to the development of new business model options; and
- Qualitative and quantitative analysis.

4.2 Design led innovation

The project used Design Led Innovation (DLI) as an appropriate method to address the project objectives. DLI can deal with complex commercial problems because it is “a process of creating a sustainable competitive advantage, by radically changing the customer value proposition” (Bucolo & Matthews 2011). In this way, this project developed completely new business models and underpinning customer value propositions for exporting chilled lamb to China.

In order to develop new business models and value propositions, the project also used the iterative process in Fig. 3 (Strategyzer 2019). This involved designing and testing and consolidating many disparate but valid perspectives from across the business. These two elements are essential to developing potential opportunities and solutions.

The blue circle first helped the business to define “Where to play”, in the China market and to identify the opportunity spaces that could create the greatest value. Secondly, the yellow circle involved the testing of prototypes (different chilled lamb products) that help define “How to win” in the best markets and sales channels.

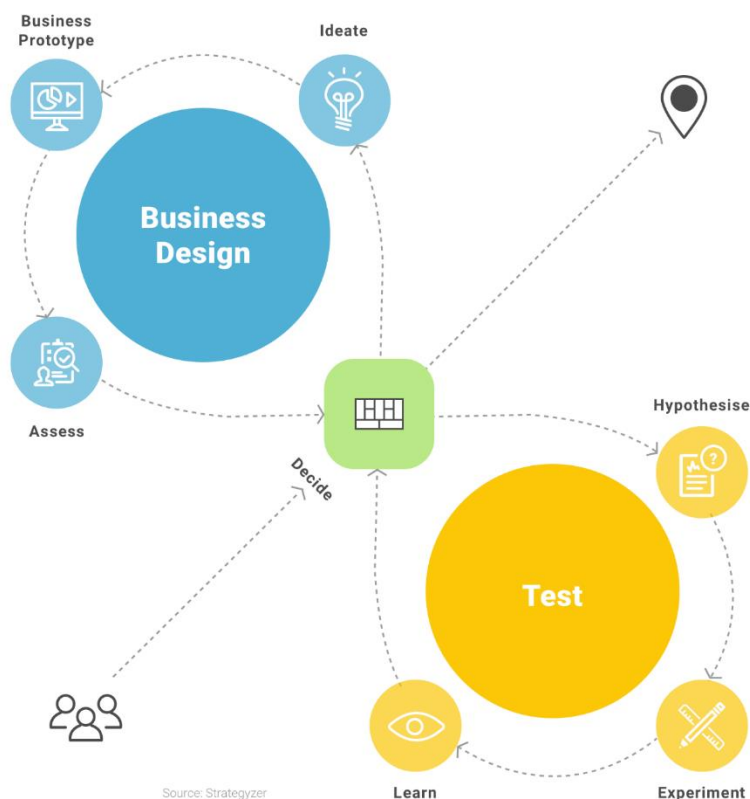


Fig. 3 The iterative process

4.3 Project phases

In total, the project included 33 milestones that were condensed into seven phases over 22 months. The phases were not strictly linear because of the iterative process applied and the fact that business continued to learn and build capability in all of the key project areas along the value chain. However, the process outlined in Fig. 4 was generally followed.



Fig. 4 Project phases

The project team initially analysed the livestock supply side to understand where the opportunities might be for increasing supply. This was followed by a big picture analysis of the China market which was subsequently narrowed down to key target markets, sales channels, personas and cuisines. From here, the business undertook internal product design and development trials. These products were packaged up ready as prototypes and tested with different customers in China. Trials involved various focus groups and tradeshows. Negotiations with different potential Chinese customers provided on the ground pricing and value proposition refinement. On this basis three business models were developed and tested with customers. The iterative process continued to inform the buy, make and sell elements of the value chain; that is, the procurement strategy with producers supplying to the business, the processing of products and the sales strategy into the China market.

4.4 Data sources and project participants

Several data sources were used throughout the project to inform the development of business model options. These included:

- Documentation available from the business' existing financial and production systems;
- Focus groups with the business' teams engaged in the project, producer groups and consumer testing groups;
- Semi-structured conversations and meetings along the full value chain; and
- Digital sources – software systems used in the business, digital integrity system from QR codes of packages.

5 Results

Results in this project found that the focus for the business was on de-risking the chilled lamb to China business and on creating a sustainable profit over time. There simply isn't confidence in the supply of lamb in WA to adopt a high risk innovation strategy. This is not to say that this project has not been innovative. In fact, the results throughout the report show that the business has been prepared to trial and test new approaches – some radical, some incremental. Some have worked well and have been embedded into the systems of the business, while others have been a learning experience.

A key finding has been the need for deep connection between the buy, make and sell functions of the business in order to achieve overall growth. In this way, the results from this project are the challenges and learnings from trying to better connect: 1) lamb procurement strategies; 2) the development of chilled lamb products suitable for China; and 3) the market mix sales strategy for China. For a sustainable and profitable business these three areas need to work in harmony.

The results in this section are presented as:

- Buy - lamb supply side challenges and learnings experienced with declining sheep numbers in WA;
- Make – challenges and learnings with designing and producing chilled lamb products suitable for the China market; and
- Sell – challenges and learnings with creating sustainable markets for chilled lamb in China.

5.1 Buy challenges and learnings

The business has learnt much about the strategic and practical challenges associated with increasing the number of lambs supplied to the business. Previous learnings from the P.PSH.0723 *Sheep Flagship Project – Supply Side Opportunities* uncovered opportunities and threats. This included a significant decline in the sheep population over the last decade and at the same time great opportunities to gain and grow market share in fast-growing overseas markets, with increased demand for lamb.

The production capacity along the entire supply chain was re-assessed in this project in order to determine the industry capacity for growth. This information allowed for the development of strategic supply chain options and the evaluation of the cost, reliability and feasibility to supply chilled lamb for the China market.

Options were developed in collaboration with the business' procurement team and the project steering committee. Many brainstorming sessions were held to discuss ways of increasing producer flock size, and to make long-term commitments to increase supply levels. Various scenarios were modelled for the business and tested against the current supply chain performance, both in terms of throughput and financial benefit to the industry.

The application of the scenarios could deliver a significant increase to the business and to WA producers with additional lamb demand and additional revenue. Scenarios were also mapped for various locations throughout southern WA where there is potential for additional supply (Fig. 5).

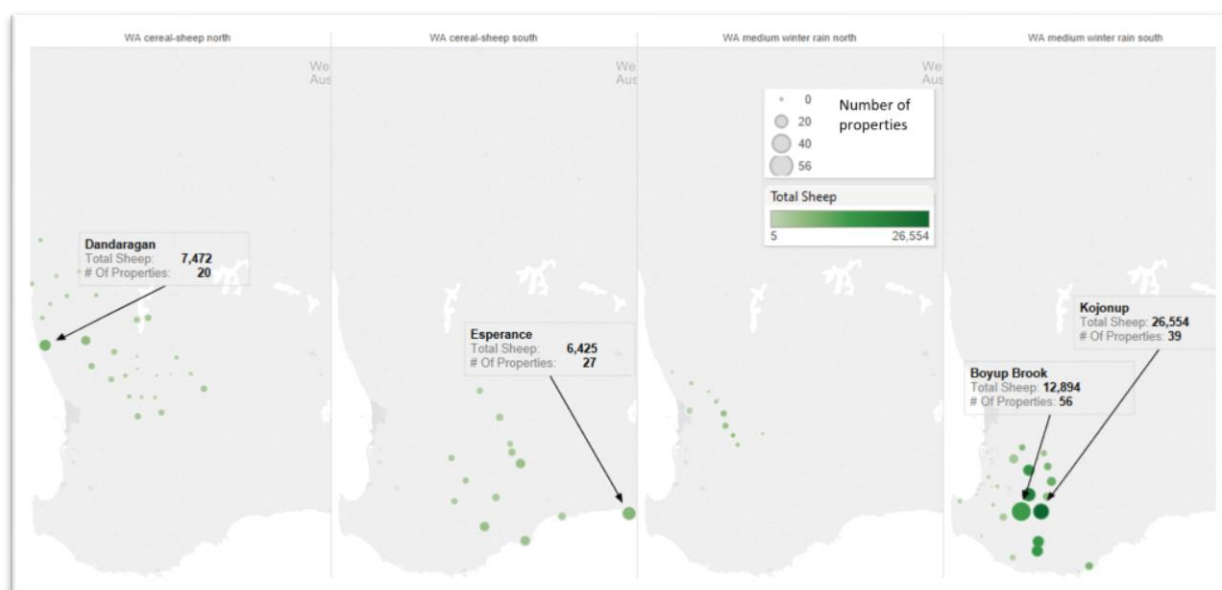


Fig. 5 Planning for new market increase

Finding: There is a significant opportunity for increasing the supply of lambs available to the business.

However, several barriers were identified and needed to be overcome for the business to realise a sustainable supply of chilled lamb to China:

- Development of store lamb and feedlot capacity;
- A growth mindset by all stakeholders in the supply chain; and
- Increase in industry confidence.

5.1.1 Producer strategies

During the project, three specific strategies were developed to address the barriers outlined above. Work continues to progress on each of these strategies, which include:

- Producer consortium strategy;
- Feedlot strategy; and,
- Data-driven procurement strategy.

5.1.1.1 Producer consortium strategy

In WA, the dominant processor-producer mode of relationship tends to be transactional and reactive – with limited direct engagement. The baseline analysis undertaken demonstrated the heavy reliance that the business has on livestock agents to secure supply. A smaller number of preferred livestock agents supply a large share of the annual throughput. This could be perceived as both a risk or an opportunity to the business.

Feedback from livestock agents and producers alike is clear (but not limited to):

- Producers value credible and relevant feedback from processors;
- Producers and agents would preference the security of available kill space;
- Some producers would highly value a longer-term supply arrangement;
- Agents and producers would preference alternative options/contact point for booking in/scheduling lamb into the business; and
- Some producers indicated the need and want to ‘become part of something more than just a supplier’¹.

Throughout the project, consideration was given to understand the true and tangible value proposition/s the business can offer producers that extends beyond a favourable price grid. In essence, any new value proposition for producers needs to enable:

- Improved engagement;
- Information feedback and feedforward;
- Supply chain efficiencies; and
- Increased trust and collaboration between the processing and production sector.

While the above points are important, any new collaborative relationships cannot jeopardise the current supply equation. That is, the perception of agents, although if strategically implemented, the concept of a “Producer Consortium” could demonstrate benefit for progressive and forward thinking livestock agents alike.

Fig. 6 was developed by the business to describe some of the components and value proposition that a producer consortium could represent.

¹ Note the above statements are anecdotal and are indicative of general feedback and comment received from a diverse set of contact points

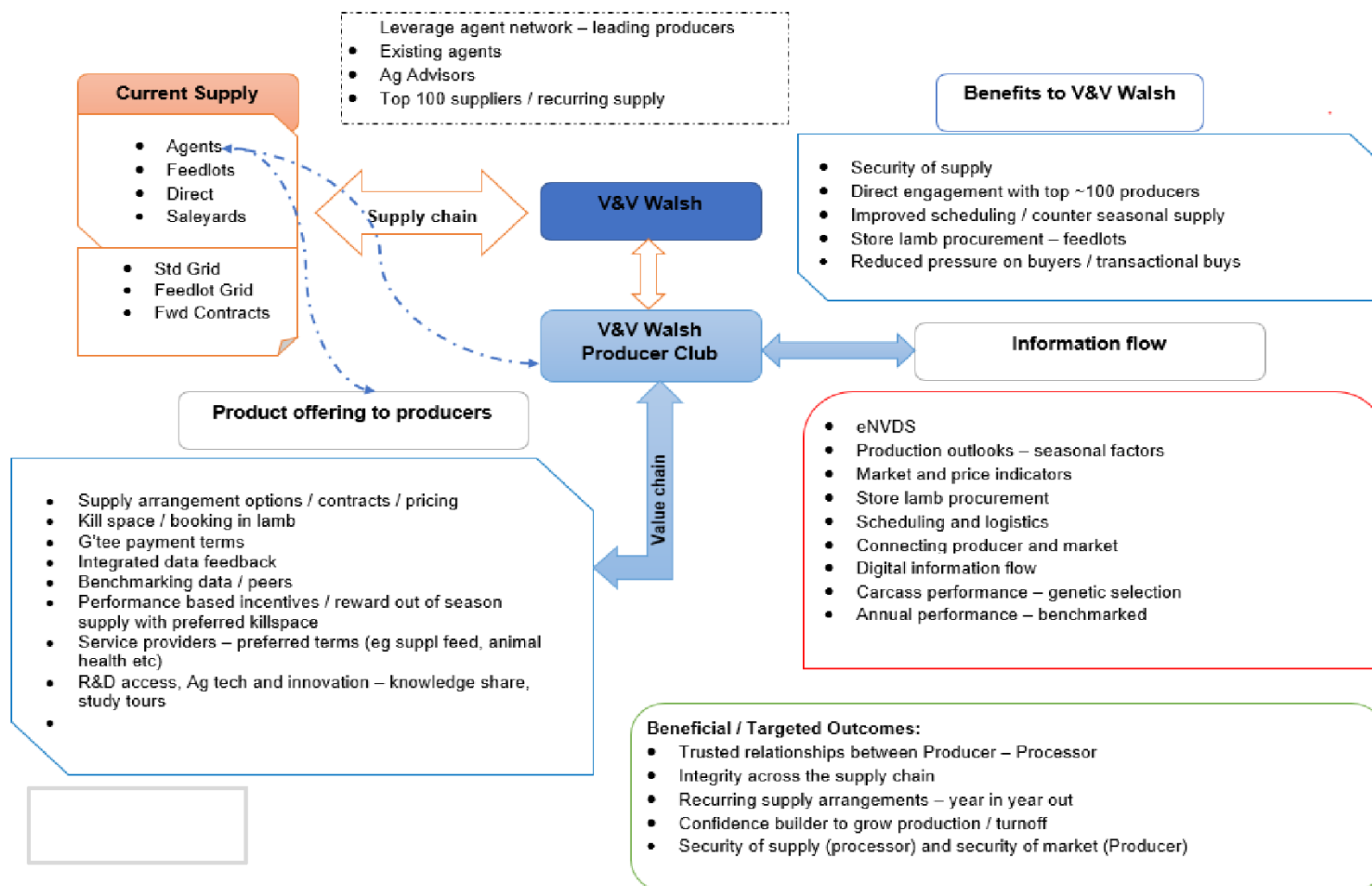


Fig. 6 Producer consortium framework

The business developed a set of principles to support an effective producer consortium (Fig. 7). These principles underpin the strategy to grow the supply of lambs by continuing to work with the largest agents and producers, plus some of the larger producers who sell direct to the business.

Although not yet fully implemented, the plan is to meet at strategic points throughout the year to gain a better understanding of what's happening in the market and to clarify potential lamb supply numbers. Specifically, this will involve knowing where current lamb bookings sit at a given point in time and where the price is going to sit for the next period.

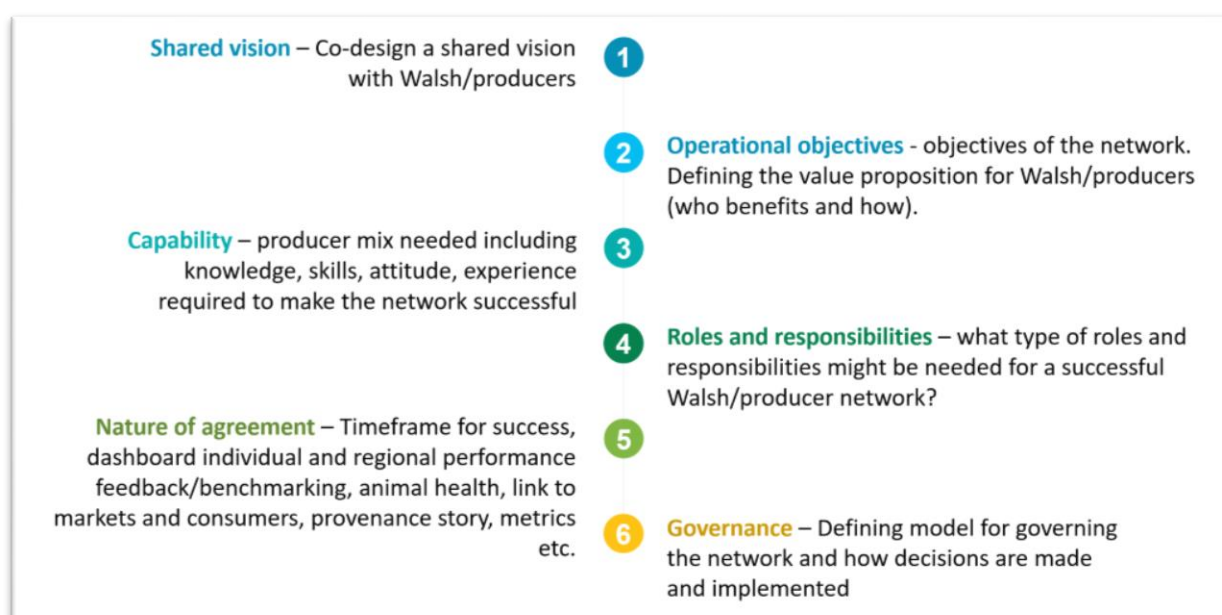


Fig. 7 Producer network effectiveness

Finding: The business has developed a new plan to develop closer relationships with top performing agents and producers to grow lamb numbers in WA.

5.1.2 Feedlot strategy

The business is in the process of developing a feedlot strategy. The approach is to buy in lighter lambs, particularly during times of the year when store lamb numbers are too low to maintain domestic contracts but also to create sustainability with China exports. A business case for a range of feedlot options is currently under development, including the recent purchase of a feedlot. The location of this feedlot is not in the normal catchment area which means that these lambs are additional.

It is also important to note that the feedlot strategy is creating confidence in the market for producers to sell their lighter lambs. This is helping producers deal with low feed levels on farm and work life balance for producer's families. Potentially, the feedlot strategy could increase supply levels significantly without any additional capital investment. The risk with this strategy is if the market becomes concerned about the potential over-supply of lambs and the price and margin could be

driven down. The feedlot strategy also provides the business with more confidence to grow the export market as supply is aggregated.

Finding: The business is aggregating supply through a feedlot strategy to help maintain China export markets.

5.1.3 Data-driven procurement strategy

The business has been in the process of building capability to identify key buy markets and available supply. Not only is it important to aggregate supply, but also to aggregate data and improve information flow throughout the supply chain for better business decision making. The data-driven approach is creating efficiencies in the supply chain, where lamb buyers and business decision makers are supported by digital technology to:

- Confirm lamb orders;
- Set key performance indicators for different time periods;
- Book livestock into the system;
- Plan for feedlot numbers;
- Build and maintain the supplier database; and
- Create grids and assign them to orders.

Using data to inform procurement decision making is providing much more to the business than just the technology. The business has been able to innovate down the cost curve by streamlining several processes that were previously duplicated and paper-based. The supply chain is also becoming more efficient as more accurate data is informing the procurement function and improving their advice to the processing and sales functions. This is helping to break down internal silos and clarify the factors that influence decision making. Critically the data-driven approach is helping to transform the business from a reactive approach to one that is strategic and supported by process and a collaborative culture.

This is also an excellent foundation to continue to build relationships with livestock producers and to provide data-driven feedback. Although in only the initial stages, the business has begun to build in ways of providing digital feedback to producers. In the first instance, there is a facility for reciprocal invoicing and killsheet feedback. There is also a vision to provide more analytical compliance and animal health feedback to producers.

Finding: The business implemented a data-driven procurement strategy to support better decision making.

5.2 Make challenges and learnings

This section presents the challenges and learnings from prototyping and trials conducted during the project.

5.2.1 Product innovation

In preparation for the prototype trial in China, there was a significant amount of research into the type and cost of products sold by competitors in China. Several ecommerce platforms were analysed such as JD.com, YHD and Hema (see Fig. 8).



YHD Cut	Yuan	AUD	Wt	AUD				
Leg	149		30.61					
	Yuan 'to AUD		4.87					
	Yuan	AUD pack price	Grms	\$/ Kg	Cut		Multiplier	
Lamb skewers 200g bag	29.9 \$	6.14	200 \$	30.70		149.5	-	
500g bag	49.9 \$	10.25	500 \$	20.49		99.8	-	
Grand farms skewers 180g	39.9 \$	8.19	180 \$	45.52		221.6667	-	
Lamb hind legs 2kg	149 \$	30.60	2000 \$	15.30	Leg	74.5	185.9	0.40
Mutton roll 500g	49 \$	10.06	\$	-		-	-	
Lamb single bone french 500g	65.8 \$	13.51	500 \$	27.02	Rack	131.6	249.4	0.53
Flap / lamb ribs domestic	95 \$	19.51	1200 \$	16.26		79.16667	-	
Gift pack	698 \$	143.33	4000 \$	35.83		174.5	-	
Lamb neck Thomas Farms	149 \$	30.60	1000 \$	30.60		149	65.5	2.27
Lamb shoulder Thomas Foods	289 \$	59.34	1330 \$	44.62		217.2932		
Lamb row - flap NZ	39.9 \$	8.19	300 \$	27.31		133		

Fig. 8 Cut, price comparison with Chinese ecommerce channels

The business also trialled many different types of Chinese style cuts. A working group broke down a full carcass to determine what could be achieved for the prototype and commercial trials. Fig. 9 provides one example of product development.



Fig. 9 Product trials

Determining the appropriate mix of cuts was based on the following factors:

- Accounting for the Chinese palette;
- Securing the best profit margin;
- Innovating difficult to sell products;
- Balancing utilisation of low and high value lamb cuts across the carcase; and
- Efficient processing, packaging and export methods.

Ultimately, five lamb products were cut, packed and presented for in China (Fig. 10).



Fig. 10 Product innovation with low value cuts

5.2.2 Prototype trials

Examples of product innovation are presented below as part of the focus group trial conducted in China. Participants in the focus group described the taste of the lamb in general as *delicate, tasty and fresh*. The three products were scored on a 1-10 scale in the following ways:

- Presentation (9.25);
- Versatility for Chinese cuisine (7.67);
- Versatility for Western cuisine (8.83); and
- Suitability for the premium market (8.83).

Participants compared the lamb they tasted at the focus group with domestic Chinese lamb. Comments made were that the domestic lamb is *less tender, less soft, less delicate, much stronger sheep flavour, irregular cutting, and that the ways of transportation are not as trustable*.

Striploin is traditionally sold as a short-loin pair for value adding or in bulk vacuum packs. The product is typically difficult to sell which is why it is exported frozen in bulk. The business decided to present

the striploin differently in a retail pack, ready for sale to high-end retailers. Fig. 11 presents the product innovation process, beginning with the striploin cap on.

Striploin was also part of the menu during the focus group in China (Fig. 11). Feedback from participants was that the *striploin did not have enough fat on the cut*. The cap of the striploin could be left on in the future to improve flavour.



Fig. 11 Striploin trial and feedback from focus group

The rolled flank is also a low value cut that is typically difficult to sell. The product innovation process is presented below in Fig. 12.

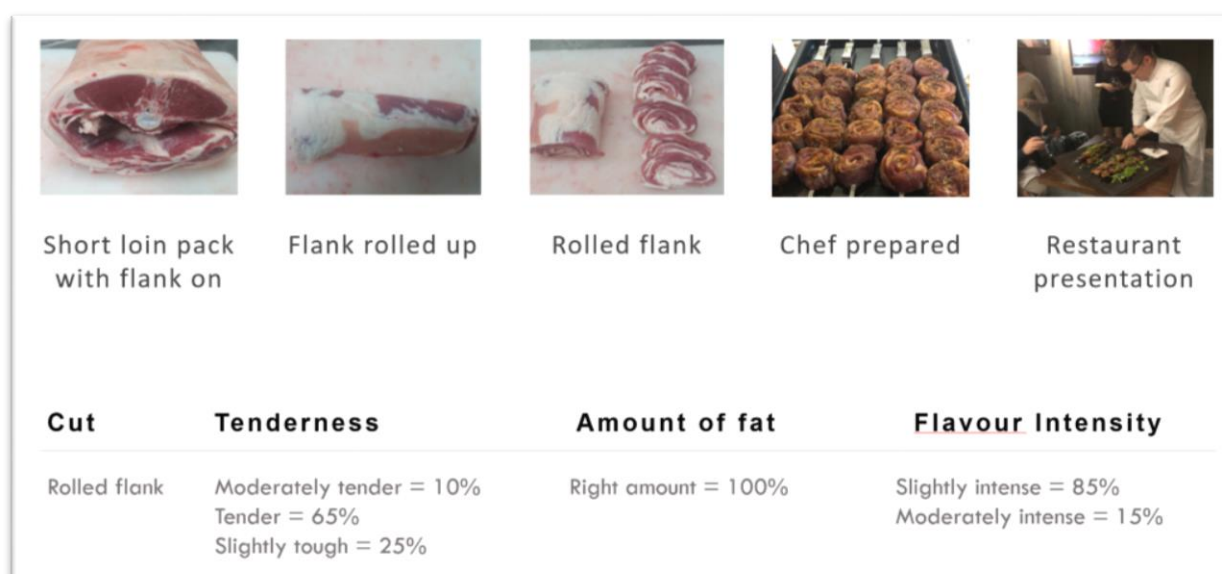


Fig. 12 Rolled flank trial and feedback from focus group



Fig. 13 Final restaurant presentation of rolled flank

Flap straps are normally a secondary cut of low value. The product innovation process was conducted to increase the value of flaps which are historically sold in bulk cartons and frozen. The process involved dicing the flaps so that they could be prepared for Chinese broth style meals. In this format the flaps could be exported to China to enable the product to be diced using a knife for wet cooking or Korean barbeque style restaurants.

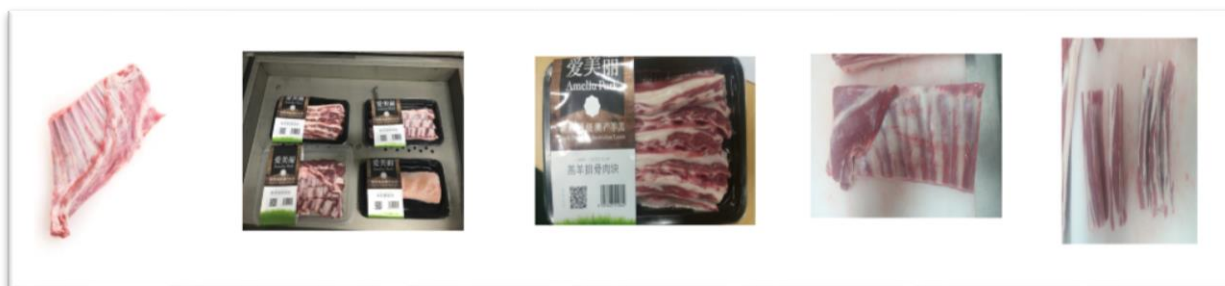


Fig. 14 Flap product innovation process

Finding: The business was able to successfully repurpose low value Western style lamb cuts to a high-end market in China.

5.3 Sell - Challenges and learnings

From the outset, the project steering committee focused on developing sustainable markets in China. This involved significant background research into the different market options.

5.3.1 Background research to support market development

Early phases in the project involved broad research into the following areas:

- Identifying Tier 1 and 2 cities to target;
- Price of lamb in different regions;
- Competitor analysis;
- Chinese tariffs on lamb;
- Chinese lamb eating habits;
- Chinese consumer purchasing habits;
- Government regulations;
- China customs clearance;
- Risks of doing business in China - food fraud;
- Trust in personal relationships over legal contracts; and
- Sales channels, retail, food service and ecommerce/online.

The business conducted a number of internal workshops with employees involved in product development and with those responsible for developing the sales and marketing strategy. The figures below show examples of the type of market development background research completed during the project which were also part of the content for internal workshops.

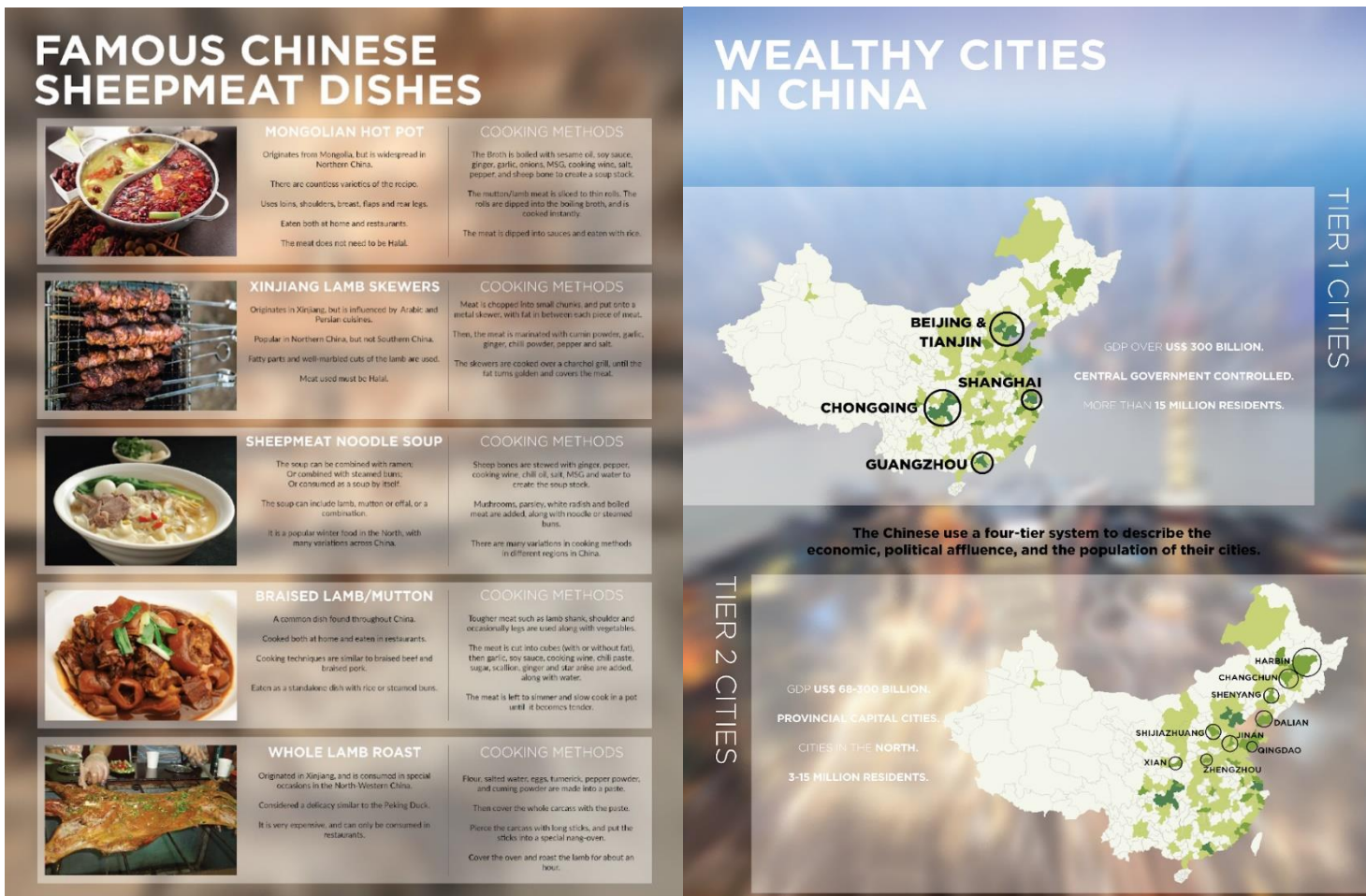


Fig. 15 Popular Chinese dishes and Tier 1 and 2 cities

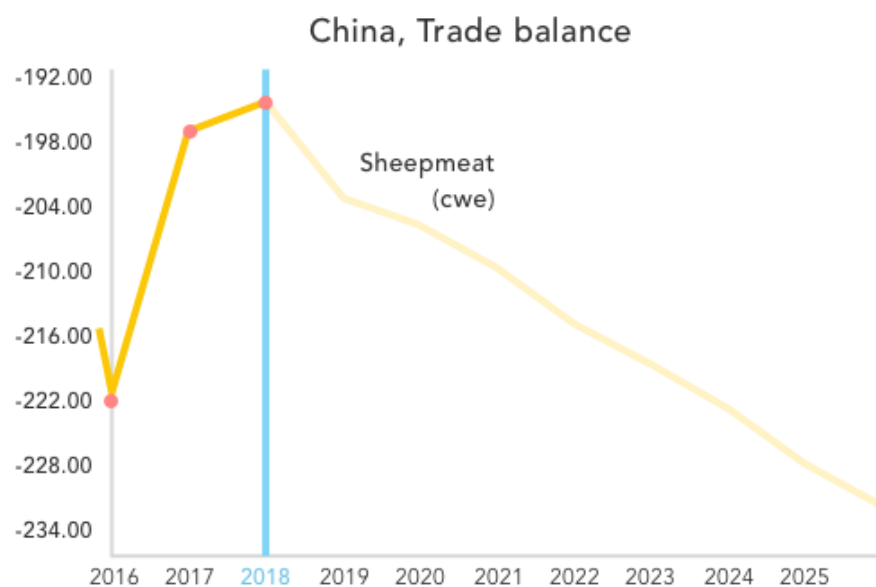


Fig. 16 China sheep meat trade imbalance

Table 2 Chinese tariffs on Australian lamb

Trade agreements	Import tariffs	Competitors	Volume restrictions	Technical access
ChAFTA China-Australia Free Trade Agreement (entered into force 20 December, 2015)	Under ChAFTA: 2017: <ul style="list-style-type: none"> Chilled bone-in/ boneless meat: 10% Chilled carcasses/ half-carcases: 10-15.3% Frozen bone-in/ boneless meat: 8-10% Frozen lamb carcasses/ half carcasses: 10% Frozen mutton carcasses/ half carcasses: 15.3% Sheep offal: 11.3-14% 2023: Meat: Zero	NZ import tariffs: Zero from Jan 2016 Uruguay, Chile & Mongolia import tariffs: <ul style="list-style-type: none"> Frozen bone-in/boneless meat: 12-15% Frozen lamb carcasses/ half carcasses: 15% Frozen mutton carcasses/ half carcasses: 23% Frozen sheep offal: 18% 	N/A	Restrictions on the number of approved plants, chilled plants and restrictions on edible offals.
	2024: Offal: Zero			

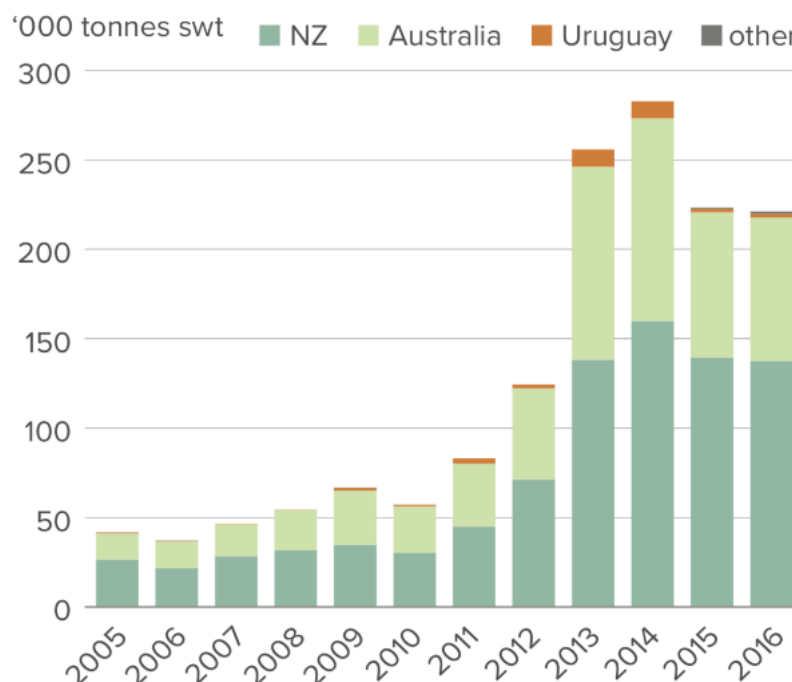


Fig. 17 Countries exporting sheep meat to China

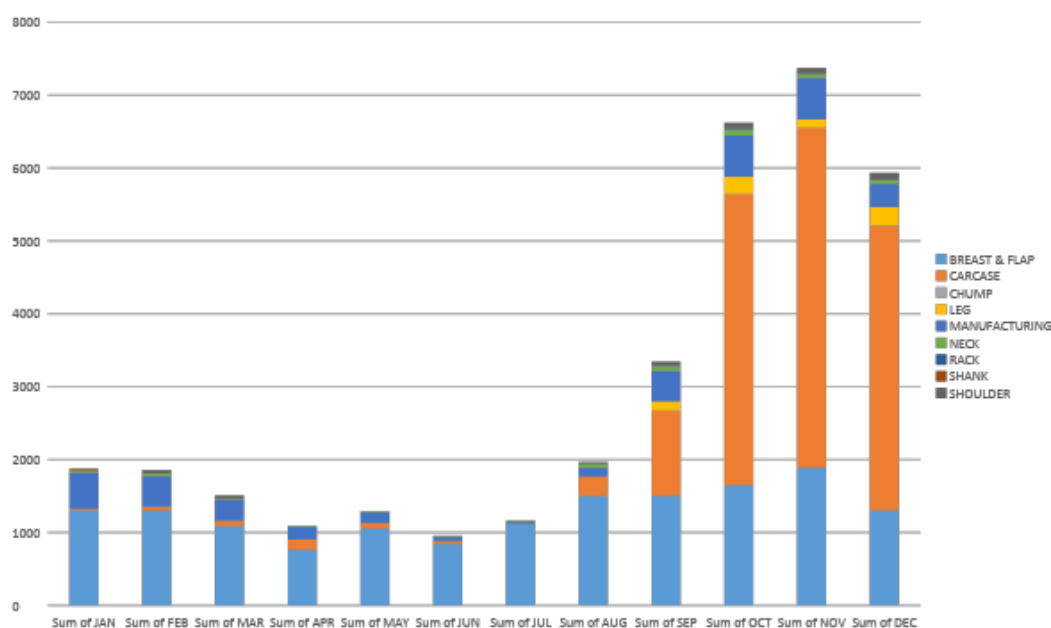


Fig. 18 Australian lamb cuts exported to China

5.3.2 Business case

The business tested three key market channels to sell chilled lamb in China. These channels were:

- Whole carcase sales (selling chilled lamb carcasses direct to Chinese processing facilities that then further process and sell individual cuts);
- Higher end retail super-markets; and

- Direct to consumer (D2C) sales to the door of Chinese consumers via their ecommerce channel that has all cold chain logistics in place.

Each channel has a different value proposition and presents a very different opportunity to the business. These opportunities are discussed below.

5.3.2.1 Transactional business model challenges and learnings

In early 2018, the business developed a relationship with a large Chinese wholesaler as a potential customer for chilled lamb. The enterprise mainly runs food manufacturing, cold storage chains and logistics, including meat slaughtering and processing. The business' relationship with the customer has evolved with over 10 trips to China, as well as representatives visiting the business' processing plant in Bunbury, WA.

A letter of strategic intent for cooperation between the customer and the business was signed in July, 2018. Various commitments were made concerning the supply and purchase of lamb products for distribution and sale in China. These initial commitments have now begun to translate into repeat orders for the business.

On the surface, developing the market through this customer appeared simple to implement because it relied on selling whole carcasses and primal cuts to Chinese wholesalers who distribute through their own networks to food service chains. From a risk management perspective the customer is attractive, given responsibility ends after an order is exported with seemingly low impact on the domestic business. However, the business model could be threatened by more competitive lamb exporters who are able to supply cheaper chilled or frozen lamb, or inferior domestic companies supplying frozen lamb into the same markets. This option does not provide the business with any control over:

- the end-to-end value chain;
- which specific retailers and networks their product is sold into;
- the number of intermediaries their lamb is supplied through; or
- the marketing and sales strategies adopted to support their products.

Selling whole carcasses is obviously a much lower-value strategy than selling through retail or direct to consumers. However, it is a useful strategy for building market demand for Australian lamb and establishing an industry presence that can be leveraged in future. There is also much lower demand volatility, which enables the processor to more accurately forecast the required supply to service the demand.

Finding: Selling whole carcasses to be processed in China is a low value option but is a useful strategy to build market demand for chilled lamb

The potential impact of competitors may also be a risk to the ongoing general supply of lamb in WA. For example, there would be a significant impact on producers if the customer starts to purchase high volumes of chilled lamb and then switched to a cheaper competitor. In this scenario, WA producers would need to commit to expanding their flocks and the associated costs, only to be left without a market. For this reason this customer needs to be approached in a sustainable way that de-risks the

business model through the whole value chain. While the model appears like a common-sense approach, it may be the opposite. The highest risk is that the model does not offer end-to-end connection through the value chain to the end consumer.

5.3.2.2 Integrated business model challenges and learnings

The integrated business model option was found to be more complex than the transactional option because it involved creating direct relationships with high-end retailers and wholesalers. These customers supply direct to consumers and to food services and are interested in building brands, product innovation, and digital traceability of the product through the value chain.

The upside is the direct relationships with the retailers and with their customers, together with access to ecommerce platforms, data analytics and market insights. This presents an opportunity to build a more sustainable and profitable business model that is closely connected to the end consumer with less intermediaries in the chain.

The integrated option has taken business leaders out of their comfort zone, to experience new problem spaces, but also to solve new problems with more creative solutions. The implementation challenge with this option is to articulate the value proposition of chilled lamb vs domestic frozen lamb. To the Australian mindset there is an obvious difference in eating quality, appearance and retail presentation, food safety and so on. From a Chinese perspective, the value proposition is only there if high-end markets and consumers are willing to pay a premium. This is where the business needs to build sales capability in presenting value propositions that address customer pains and gains with the right mix of products and support services. This is very different from transactional relationships that mainly involve taking sales orders.

Finding: Negotiating an acceptable price point is difficult with retailers because the value proposition for chilled lamb is not widely accepted.

The customer is high-end premium and all products are sold at significantly higher prices than they are in the Australian domestic market. While this reinforces the image of Australian lamb as far superior to meat products from other countries, it also reduces the accessibility of Australian lamb to the average Chinese consumer. As a result, these cuts have a limited target market, and typically cater only to affluent Chinese consumers with high disposable income. Therefore, it will be difficult for the business to generate significant growth in demand for lamb through retail channels. One of the primary causes for this barrier to growth through retail is the retailer mark-up of 60%. While reducing the processor margin would lower the average selling price per kg, it would likely have little effect on growth as the price would still significantly exceed that of other available protein sources.

Additionally, there is residual value remaining in the supply chain (the difference between the selling price and the costs and mark-ups). It's unclear where this value goes, however, it's likely that the retailers are imposing a mark-up that is higher than 60% (*and the business may also benefit from further margins*), which is causing the selling price to remain artificially high. As a result, the demand for the Australian lamb is constrained by the premium required to purchase it.

Finding: the Chinese retail market (in its current state) is likely to remain a low-volume, high-value channel for the business.

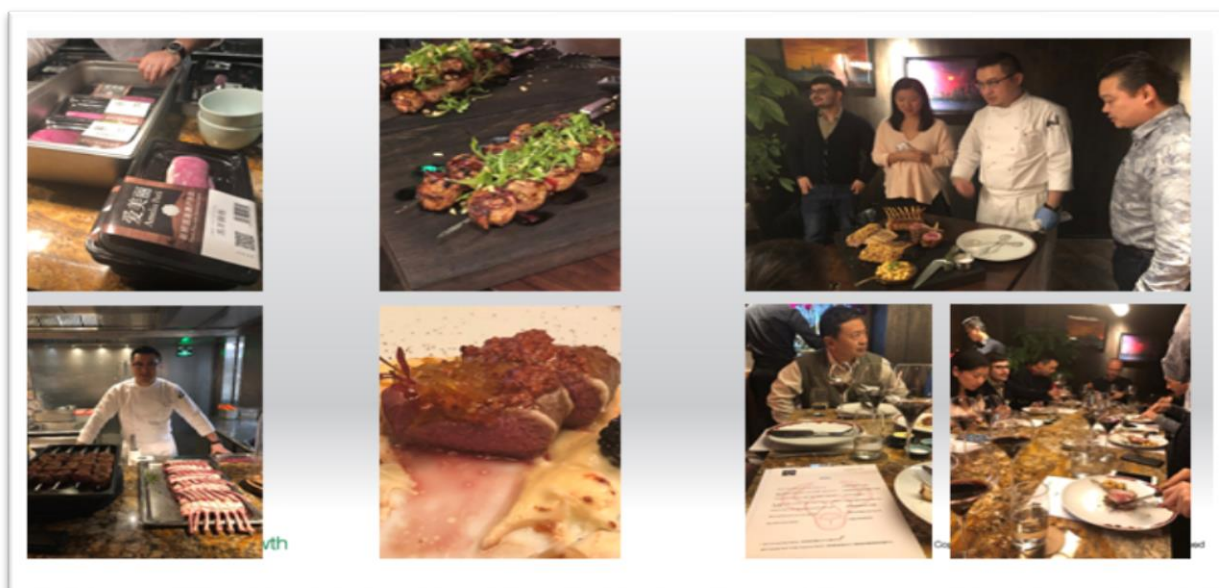


Fig. 19 Focus group to develop the value proposition for Australian chilled lamb

A prototype trial was conducted in December 2018 to build relationships with high-end retailers and to better understand how the business could present relevant value propositions. For the purpose of the trial, the business exported a small volume of chilled lamb, which was separated into gift packs and sent to potential retail/wholesale customers. Business representatives then met with each of the customers to develop relationships and understand their needs.

An in-restaurant focus group was conducted with 12 guests representing food services, including a WeChat influencer, hotel head chefs, restaurant owners and meat importer.

The overall results of the prototype trial were essential to the business' strategic objectives and to the next steps of the project. The trial resulted in sales enquires from two high-end customers, better understanding of the complexity of the market, as well as relationships with intermediaries who may be contributors to the value chain.

Strong presentation of the value proposition and coming to an acceptable product mix and price remains a significant challenge. Negotiations with potential customers involved discussion on the following:

- Confirming products, prices, volumes for commercial trials;
- Confirming marketing activities to support commercial trials;
- Reviewing options for production processes and export arrangements; and
- Rebranding retail packs based on feedback from customers.

5.3.2.3 Niche business model challenges and learnings

Niche business models that supply direct (D2C) to expatriate Australians and high-net worth Chinese consumers via ecommerce platforms were tested with a customer operating in WA and China. This customer was able to create sustainable margins while maintaining a lower sell price compared to retail. Indications are that if niche models can be scaled to more consumers they are likely to be a long term viable approach.

The customer also arranged third-party logistics (cold chain delivery) and delivered the product to the consumer's door. The lower retail mark-up of about 40% compared to the retail standard of 60% is a key competitive advantage for D2C sellers. This reduces the selling price needed to maintain a profitable margin, and also improves the ability of the business to build a more direct relationship with the consumer.

While D2C channels provide a lower value to the business than selling through retail, the price they sell their chilled lamb packs is about half that of the average retail price. This enables them to market their product to a much wider audience, and maintain a premium brand positioning that's still relatively affordable for the average Chinese consumer. Therefore, a D2C sales strategy is a potentially an effective option for selling high-value lamb cuts to the end market, as it enables the business to:

- Build more direct relationships with consumers;
- Eliminate retail mark-ups, and thus sustainably reduce the selling price needed to maintain a profitable margin; and
- Appeal to a much broader range of consumers, and thus generate higher growth in demand.

Finding: the direct to consumer sales channel may enable the business to earn more profit if supply can be managed sustainably.

6 Discussion

Two major implications were realised during this project:

- The significant number of new capabilities required to develop a sustainable chilled lamb to China business; and
- The leadership capability needed to build an internationally competitive value chain.

6.1 New capabilities for chilled lamb business

This project has highlighted numerous capability gaps in the business. Some of these gaps were known prior to the project but have since been made clearer, while other gaps were only identified during the project (Table 3).

Table 3 Capability gaps

Capability gaps	Description	Value chain area	Impact
Limited supply of lamb	Western Australian lamb supply is historically low	BUY	Insufficient number of lamb to meet the China market demand - can only supply small markets
Unclear market signals for producers	No clear supply specifications for a China market	BUY	The business has not created a clear awareness of their needs among producers
Increased producer networks designated for China market	Mutually beneficial relationships to build confidence to supply and to sell in China markets	BUY	Need to identify producers motivated toward innovation and collaboration for China market
Lack of engagement of participants in the value chain	Leaders set direction and communicate reliable information that enables suppliers to make decisions to build trust and engagement	BUY & MAKE	Results in a lack of connection through the value chain, limits trust and hinders agility and innovation to access new value.
Supply side processing & mindset	Western style products do not align well with China markets and consumers	MAKE	Need to develop a new mix of products and branding for high-end China market
Limited fit for purpose equipment and value-adding capability	Business does not have the packaging and printing equipment, or facility required for retail packs in China	MAKE	Current methods are not suitable for commercial operations. Capital

			expenditure required for production process
Lack of experience in making products for high-end Chinese markets	The business typically makes Western style lamb cuts	MAKE	Initial low volume production runs will be inefficient, costly and time consuming
Limited understanding of Chinese in-market consumer needs	Previous approaches have been commodity sales	SELL	Need to undertake market research, gain customer insights and opportunities for product solutions
No strategic export sales plan	Previous export sales approach is reactive and opportunistic	SELL	Develop an export sales strategy with targets, KPIs, marketing plan
Minimal development of strategic export customers	Limited sales orders or consistency from Chinese customers seeking chilled lamb options	SELL	Need to develop the market, build and maintain relationships and point of differentiation of chilled lamb
Lack of market agility	Overly focused on one business model	BUY, MAKE & SELL	Need to develop multiple fit for purpose business models

For successful implementation of the business models proposed in this report, the business requires a portfolio of new capabilities. Many of these capabilities have not been essential to functioning in the domestic context, and as a result are underdeveloped or non-existent in the business. The chilled lamb project has provided an opportunity to develop new capability that is applicable to both the domestic and export aspects of the business. For example, the business developed capability to digitally trace lamb retail packs in China (Fig. 20). The traceability system tested in this project operates through QR codes on retail packs which enable:

- Scanning throughout Australia and Asia;
- Monitoring via a dashboard from any location; and
- Use of geolocation, URL and timestamp to monitor whether the product was in the intended location.



Fig. 20 QR Code on retail pack linked to website

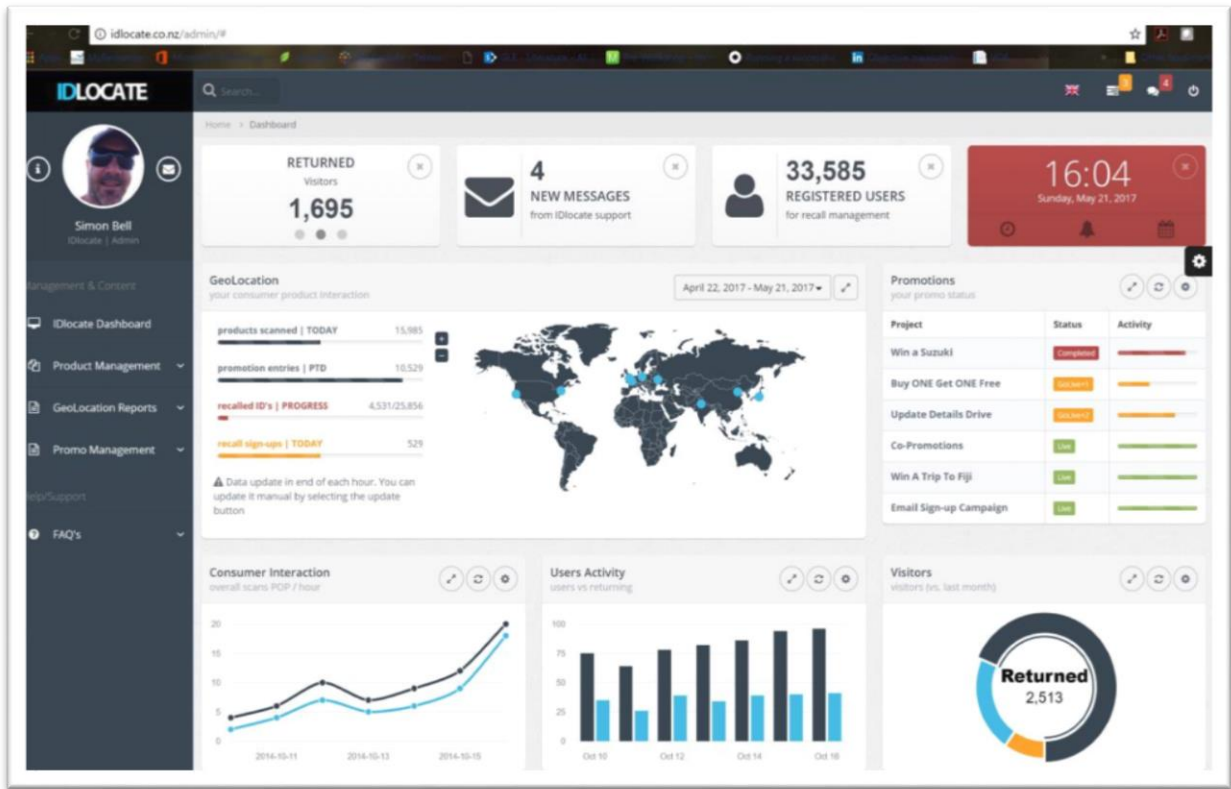


Fig. 21 Digital traceability dashboard

In this way, many of the capability gaps in the business are in the process of being addressed (Table 4).

Table 4 New capabilities being addressed

New capability	Description	Area	Impact
New China business model	Demand driven rather than supply driven	SELL	Currently testing new business models
Producer consortium	Collaborative relationships with a small group of producers, agents, feedlots	BUY	Potential to increase lamb supply and to better engage producers through feedback, regional benchmarking and connecting them with China opportunities
Design led innovation	Exploration process for develop consumer led business models	MAKE	25 employees learnt how to move through a conceptual sprint process of discovery to ideation and prototype trials
Digital traceability	Used QR codes on retail packs to trace exported product to China and protect against food fraud	MAKE & SELL	Tested digital traceability value proposition in high-end Shanghai retail and food service channels
Data analytics	Use analytics for decision making across the business	BUY, MAKE & SELL	The business is in a process of implementing new technology for more agile decision making and optimisation
Product innovation	Development of new products and commercial business model	MAKE & SELL	Tested new lamb retail products in Shanghai via prototype trial-next stage moving to full commercial trial
Export sales strategy	Data driven strategy with targets and KPIs	SELL	First draft strategy yet to be tested

6.2 Leadership capability

The business has had good success in the WA domestic market, together with a range of intermittent export relationships to China, Iran, Singapore and other countries. Despite the past successes, it was found that building a sustainable chilled lamb business to China requires a different leadership skillset. Senior and mid-level managers have been willing to adopt new strategies and to pivot when traditional methods were not fit for purpose. This section shows some of the activities undertaken that have developed leadership capability to support the chilled lamb to China business.

6.2.1.1 Strategic planning

In early 2018, and as part of this project, the business embarked on its first group-wide strategic planning process, focused on setting a compelling direction for the future. The key areas of focus are:

- Innovation - exploring opportunities that create new value for the whole value chain and drive efficiencies with active research and development.
- Customer focus - emphasis on value-adding for customers with products that meet shifting customer needs and expectations.
- Partnering - fostering partnerships and value-add relationships beyond commodity service.
- Quality - continued relentless focus on outstanding quality, integrity and trust.

The strategic planning process set three horizons for strategic focus, and a timeline for strategic aims and deliverable objectives.

Phase one, (January 2018 – July 2019) involved building a foundation for a sustainable chilled lamb export business by:

- exploring ways to increase lamb procurement through strategic partnerships; and
- creating new streams of value for local and export markets.

Goals in this phase included:

- the building of organisational capability through the creation of transparent data for decision making;
- deploying a digital platform to connect the value chain;
- increasing efficiency and reducing costs; and
- addressing gaps in workforce competency due to a lack of systems.

Phase two and three of the strategy are beyond the length of this project and focus on growth and leading industry change.

Aside from the senior leaders, most employees had no prior experience in strategic planning. This was a significant early challenge in the project. Participants tended to narrowly identify problems and pose overly simplistic solutions. Expert facilitation opened a relational context where a deeper understanding of the problem space and more mature strategies could be developed.

It will be important for the business to measure their performance against the strategy and goals, and to continue to return to their strategic plan so that the learnings and opportunities are not lost on the workforce.

6.2.1.2 Steering committee and working groups

Strategic planning naturally led to the establishment of a steering committee and working groups for the execution of the strategic goals and the project (Table 5). The steering committee participants included the business senior leadership team and Greenleaf members. Together, they provided leadership, set project scope and measured the performance of the working groups. The working groups were divided into four teams and assigned challenges across the value chain.

6.2.1.2.1 Learnings

- Conceptual methods (value propositions, business models and innovation sprints) were difficult to teach to employees that were more familiar with operational work.
- Once the prototype phase for market development commenced, working groups were more engaged and able to contribute to solutions.
- Despite beginning with 25+ people across the working groups, only about 10 people were actively involved and had the capability to produce work that solved real business problems.
- The steering committee were increasingly needed to lead and solve practical business problems.

The names and primary purpose of the working groups are presented in Table 5.

Table 5 Working groups

Working group name	Primary purpose
BUY Working Group	Increasing lamb supply
MAKE Working Group	Appropriate product development for China market
SELL Working Group	Developing appropriate markets for chilled lamb
DIGITAL Working Group	Analytics for improved decision making across the business

The working groups were a great opportunity to build new capability across the business. It was particularly important that the working groups didn't become silos, and that there was strong connection across Buy, Make, Sell and Digital. The steering committee set specific challenges for the working groups shown in Table 6.

Table 6 Working groups challenges

Working group name	Challenges
BUY Working Group	<ul style="list-style-type: none">• Build a collaborative supplier network• Use digital for decision making• Identify alternate buy methods to reduce risk• Increase producer confidence and allow for production growth

	<ul style="list-style-type: none"> • Develop value propositions for supplier network
MAKE Working Group	<ul style="list-style-type: none"> • Develop strategic buy and sell decision making capability (not reactive) • Build long term export customer mix and channels • Improve product capability to maximise carcase utilisation
SELL Working Group	<ul style="list-style-type: none"> • Connect to most profitable customers/consumers • Create connection between customer/consumer and competitive value propositions • Innovate product offerings aligned with consumer expectations

Each of the working groups were provided with a framework from which they developed their own short, medium- and long-term goals. Fig. 22 is an example framework provided to the Digital working group.

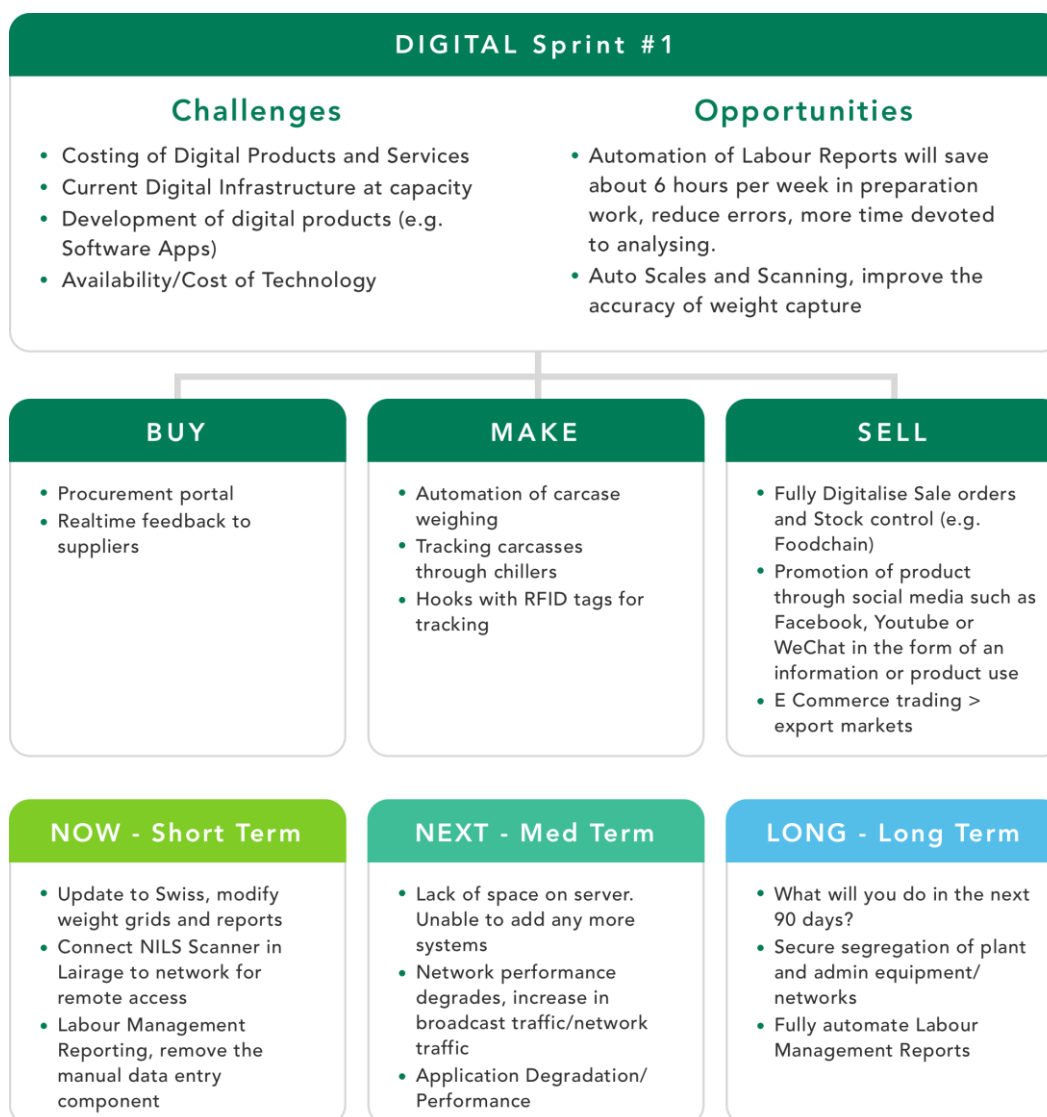


Fig. 22 Digital working group framework

7 Conclusions/Recommendations

7.1 Future R&D

The provision of easy to use data-driven feedback from processors to livestock producers in a regional network was an out-of scope need identified in this project.

Specifically, feedback mechanisms needed relate to grid compliance, regional biosecurity and on-farm animal health. This need was also well established in the recently completed Integrity Systems Company project V.LDL.1905 Understanding Future Feedback Mechanisms. This project found that there is a need for R&D into business models that create positive network effects via mutually beneficial platform technologies and solution providers to connect with localised networks. Therefore, it is recommended that R&D into data-driven feedback mechanisms and capabilities required to strengthen local networks is a necessary next step.

7.2 Practical application to the red meat industry

China is a sophisticated and complex market. Insights from this project will benefit processing companies looking to develop business models to export red meat to China. Specifically, it is recommended that companies design and test multiple business models across different cities, markets and sales channels. This is in contrast to approaches that invest in a single approach only to discover that it does work.

This report will also be informative to livestock producers and other stakeholders along the value chain who want to understand the key challenges of supplying red meat to China.

8 Key Messages

- The development of a sustainable export business to China requires innovation and capability development through the whole value chain.
- Underpinning a sustainable export strategy is the need to design and test multiple business models in different Chinese cities, markets and sales channels.
- Interconnection between the buy, make and sell functions of an export business is critical to international competitiveness.

9 Bibliography

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