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Review of Pet Food Category – Identifying high value opportunity spaces for Australian red meat industry (insights2innovation)

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Executive summary

The pet food category is rapidly shifting due to changes in consumer expectations and global trends. This project identified new opportunities for the red meat industry to capture value currently lost to multinational pet food manufacturers.

Results show an opportunity to move from standard by-products margins of \$0.09/kg to a valueadded product of \$3.95/kg for retail, and \$7.20/kg for B2C. These results are based on modelling that would require further validation and in-market testing in a second stage investigation of value chains.

Globally, the pet food market is projected to reach a value of US\$128.4 billion by 2024, growing at a rate of 4.5% during 2019-2024. The Australian market size is also expected to grow from US\$2.4 billion to US\$2.8 at 4.6% annually through to 2023.

Consumer trends specifically highlight the demand for raw and fresh pet food products that consist of real ingredients and are free of preservatives and synthetics. This presents an opportunity for the red meat industry to develop new business models and value propositions for value-added by products and low value cuts.

Consumer interviews and focus groups conducted during this project found support for premium raw and fresh pet food. Currently, there is a small market for premium raw and fresh pet food (1-3% of the Australian pet food market). However, we conservatively suggest that this market could increase to 10%. This is assuming red meat companies position themselves to supply products with the appropriate value propositions for consumers. The premium Australian red meat brand could also be leveraged for export markets given the global interest in raw and fresh pet food.

Australian start-up companies (e.g. <u>https://lyka.com.au/</u>) with business models that are faster, cheaper and simpler than the big incumbent (e.g. Mars) pet food manufacturers are already moving to niche customer segments for raw and fresh. They are also addressing additional value propositions for customers, like human grade kitchens and recyclable packaging.

The project adopted a design-led innovation methodology to better understand the pet category problem space and to develop solutions that might work for industry. The process provided a structure for the project and ensured that outputs are consumer driven and sufficiently robust for the commercial context. Project phases included:

- Market review of trends and reports;
- Consumer insights through interviews and focus groups;
- Value proposition development;
- Financial modelling of opportunities and business model scoping; and an
- Industry workshop.

The red meat industry will benefit from the findings of this exploratory research by designing and testing new business models that aim to capture new value, based on the opportunities identified. Companies with a willingness to build rapid prototypes and de-risk new ventures will benefit most from this project.

A further investigation of domestic and export markets will involve R&D throughout the full value chain, including the validation of producer supply, processing innovation, branding, sales channels, markets and consumers testing.

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1 Background

With the rising middle class there has been an increase spend on premium pet food (and pet care) beyond the traditional canned offering along with indulgent treats and meals. Pet products in 2016 represented \$87.2bn in global spending with ~2.5% CAGR growth forecast to 2021. Key trends include innovation opportunities in offering alternative diets for pets and new pet food formats ensuring naturalness, and digital tools emerging now in pet care.

This report presents a review of the pet food category market trends, sets out the approach to develop value propositions, together with identifying new high valued opportunity spaces for the Australian red meat industry.

2 Project objectives

This project has three main objectives:

- Data and insights gathering and analysis using excel charts and reports on the current and future pet food and pet care category and baseline current Australian red meat inputs into this sector
- Customer and key stakeholder interviews to capture pain/gain points to understand drivers of purchase and elements for pet food innovation and usages and occasions for Australian red meat inclusion
- Minimum of 3 high value opportunity spaces for wider Australian red meat industry and/or briefing for hackathons for red meat innovation in pet food category

3 Methodology

3.1 Design-led innovation

Broadly, the project adopted the double diamond method to better understand the pet food category problem space and to develop solutions that might work for the red meat industry. The method allowed the project team to diverge and converge on problems and potential commercial solutions.



Figure 1. Double-Diamond Method.

Underpinning the method, is the design-led innovation process. The process provided a structure for the project and ensured that outputs are consumer driven and sufficiently robust for the commercial context. In this way, we sought to de-risk potential opportunities and solutions for the red meat industry.



Figure 2. Design Led Innovation Process.

3.2 Discover phase

During the Discover phase we undertook a market review of international and domestic market trends associated with the pet food category. This was completed through an analysis of publicly available reports, database searches and reports provided by MLA. This phase concluded with a synthesis of the findings, where we scored our findings against a desirability, feasibility and viability framework. This was done so that the results could inform opportunity spaces in the Define phase.

3.3 Define phase

The Define phase of the project began with determining three opportunity spaces through consumer interviews and focus groups. The project team (Greenleaf, DIJ and MLA) took the view that we were more likely to achieve an innovative outcome for industry by framing opportunity spaces and testing our assumptions in a commercial context, rather than looking for insights from existing trends. Ideally, we wanted industry to view the pet food category as a strategic business space rather than a by-products commodity stream.

Consumer interviews and focus groups were conducted with people who are innovators and heavy users in the context of the opportunity spaces. Results from interviews informed the customer personas and value propositions. Targeted database searches on innovative pet food product launches across APAC were also completed to help define the opportunity spaces.

3.4 Develop phase

The Develop phase of the project was spent modelling the financial opportunity for the red meat industry. This activity included modelling on the revenue and costs associated with procurement, processing, packaging and logistics. This was undertaken for two sales channels, retail and B2C through online subscription.

The Develop phase also began some initial concepts around potential business models. Actual business model prototypes would need to be properly tested in a next stage project. However, in this project we were able to begin working with red meat companies on high-level scoping of business model concepts.

3.5 Deliver phase

The Deliver phase included an industry workshop to validate the findings of this project and the delivery of this report.

4 Results

In this section the results found in reports and databases are presented, followed by results from interviews and focus groups.

4.1 Why do we care?

Rising world incomes and other global megatrends have influenced increased spending on pet food, which in turn has precipitated several trends in this \$100bn plus industry.



Figure 3. Global Market Size.

The Australian domestic pet food market is also continuing to grow annually at 4.6% through to 2024.



Figure 4. Australian Market Size.

Global trends that are particularly relevant to the pet food market are described below.

4.1.1.1 Premiumisation

Consumers are becoming increasingly willing to pay for a better eating experience for their pets. From 2013 to 2018, the average global price of pet food increased by 18.5%, to nearly U.S. \$3.50 USD per pound. The premiumisation of pet food manifests in many ways. For example, there is a trend towards the use of human-grade ingredients in pet products. Further, pet humanisation now means that pet products may be customised to the age, size, condition and even personality of individual animals. Additionally, greater interest is now taken in pet food provenance. Key examples:

- Providore Air Dried Pet Food \$49/kg
- Lyka customised human-grade dog food delivery
- Instant soups and milkshakes
- Petbarn launches online questionnaire to help customise food to individual dogs

4.1.1.2 Health and wellbeing

An increasing number of consumers care about the health and wellbeing benefits of the pet food they are buying. Health and wellbeing include both functional and emotional concerns. On the functional side, consumers care about health areas such as digestion, skin, coat and teeth. In most markets, this has caused pet owners to seek out natural ingredients and products that are free from additives and preservatives. Notably, the natural trend has inspired pet food based on the 'wild' diet of pets. This has given rise to single-protein sources and raw meat as central pet food ingredients, particularly for dogs. On the emotional side, many consumers value food that reduces their pets' anxiety and stress, has anti-seizure properties and relieves pain.

Key examples:

- Globally, "no additives/preservatives are the #1 advertising claim found on packaging of pet food products released after 2011
- Cibapet has launched CBD pastilles and oils for cats and dogs. It claims that the "cannabinoid works with your pet's natural endocannabinoid system to provide them with the relief they need to perform at their best ability"
- *Lactobacillus* from fermented drinks, or superfoods like chia are beginning to feature in pet food

4.1.1.3 Moral brands

Consumers are beginning to look for more ethical pet food brands. To these consumers, pet food ingredients must be ethically sourced, and the brand must treat its labour and animals responsibly. Uptake in environmentally friendly products is also of note, with many brands now sourcing ingredients from local sources with a low carbon footprint and using compostable packaging. Additionally, halal certification is a must for some consumers. Moral brands involved in charitable programs can also enable consumers to feel ethically responsible without having to spend time or money to do so.

Key examples:

- Pedigree has now fused their pet food website with a dog adoption section
- SaviourLife+ donates 50% of profits to pet rescue organisations
- <u>Beco Pet Foods</u> provides low carbon, locally sourced, free range products with compostable packaging

4.1.1.4 Convenience

Consumers are becoming busier and are looking for easier ways to feed their pets. A major example of this is the rapid rise of auto-delivery business models in the pet food industry. Advancements in logistics capabilities have made this a possibility. Decision-making is also being taken out of the hands of the consumer, who can now subscribe their pet to entire diets rather than singular foods. Finally, more convenient packaging is on the rise.

- Flexible, resealable stand-up packaging is replacing tinned pet food
- Many online pet superstores feature repeat delivery

• Convenient packaging claims are found on 20% of Australian pet food products released since 2011

4.1.1.5 Urbanization

Urbanization may be indirectly influencing the pet food industry landscape. High-density urban areas have tended to confine pets to indoor areas instead of outdoors. Households themselves have also decreased in size. Multi-unit residential buildings now account for over 25% of total housing commencements. This generally reduces the average size of pets. Particularly, larger dogs are most likely to be kept outdoors, and smaller dogs are more likely to be kept indoors. This may impact the quantity of pet food required, with bulk purchases becoming less prominent. However, it also impacts the general lifestyle and level of stress that the average pet experiences.

4.1.1.6 Digitalisation

- Pet wearable devices like fitness tracking collar (Garmin Delta Smart Collar) and GPS tracker (Findster).
- Pet Cameras/monitors
- Auto-feeders

4.1.1.7 Social media

• Halo now contracting Instagram pet influencers to advertise their products in their posts

4.1.2 Supply-side Trends

Full carcase utilisation endeavours have combined with automation and business model developments to provide some exciting pet food opportunities.

4.1.2.1 By-product innovations

For meat suppliers, full carcase utilisation is paramount for maximising profitability. By-products have historically been lower-value ways to help achieve this. However, to ensure continuous growth, processors and manufacturers must innovate to increase the value of the entire carcase, including its by-products.

Key examples:

- Coctio produces bone broth that is a human-grade, protein rich, healthy ingredient used in
 pet foods today. The bones of animals contain several nutritious elements but making bone
 products edible has been a challenge for the industry. However, new innovative methods of
 processing bone have been commercialised in recent years. Bone may soon could move to a
 higher value product as it can fulfil the clean label, organic and health requisites.
- Dried coproducts: there have been developments in the ability of abattoirs to process and package dried lamb ears and other dried coproducts. These coproducts can serve as pet treats. Production of dried pet treats has been identified as a potential value-adding opportunity for red meat abattoirs. There are also many automation opportunities within this process.

By-product snacks: research has been conducted into the potential for processors and renderers to use low-value meat outputs to create higher value protein snacks for pets. The initiative satisfies the "waste to profits" push on the supply side, and snackification trends on the consumer side.

4.2 Where to play?

The pet food market is broadly divided into three areas: snacks and treats, dry food and wet food. The snacks and treats area are over-saturated with the large number of products released annually since 2014 (see Figure 5). The dry dog food market is dominated by the large incumbent pet food manufacturers.



Figure 5. Dog Snacks and Treats and Dry Food Market.

The key opportunity for the Australian red meat industry is in the wet dog food market. This is due to the high global consumer interest in raw and fresh pet food (Figure 6). Consumers impressions of what is described as a *natural* ingredient also falls into raw and fresh product that red meat processors can produce through by-products and low value cuts (Figure 6).



Figure 6. Global Consumer Trends toward Raw and Fresh Pet Food.

4.2.1 Why not cat food?

Cat owners and cat food manufacturers favour chicken over red meat with approximately 62% of products using chicken. Our results shows that since 2017, there has been few beef products released for cats.



Figure 7. Protein Source Releases since 2017.

4.2.2 Price point

The price point of wet dog food is high, with an average of US\$19 per/kg. Currently in Australia there is about 1-3% of the market who are willing to pay a premium for high quality wet dog food. This is despite 20% of beef and lamb products claiming that they are premium. Figure 8. shows the high price point (\$12-\$24) for 1-3% of the whole pet food market.



Figure 8. Dog & Cat Food (Wet and dry) Price in US dollars.

There is also minimal variation in wet dog food products in terms of package type with many still being sold in cans. This approach tends to lack authentic and transparent brand claims of premium and natural. The other major product type and size are products with multiple serves which can create a value multiplier (see Figure 9).



Figure 9. Wet Dog Food Package Type and Size.

Incumbent pet food manufacturers are focussed on selling large volumes of highly processed pet food. Figure 10. shows the top performing companies. In the Australian context, Mars Petcare Inc, Nestle Purina Pet Care and Hill's Pet Nutrition are the top performers.



Figure 10. Global Top Companies in Pet Food.

Research on the market share across sales channels produced some inconsistent results. We attempted to triangulate multiple data sources including various reports and databases. Figure 11. first shows an overall pet food breakdown across sales channels, followed by Figure 12 where we

have estimated based on multiple data sources. There is currently a shift away from retail dominance for premium pet food to pet speciality stores and online sales.

Channel	Avg. Ma	rket Share %	Typical Products/Services	Opportunities
Supermarket	81-86	(45%)	Dry pet food, wet pet food, chilled pet food, treats(biscuit), treats(meat)	Fuse pet products with humar products in one place?
Pet Specialty Stores	30-36	(25%)	Dry pet food, wet pet food, chilled pet food, treats(biscuit), treats(meat)	Trend towards shopping at per superstores over supermarket
Butcheries	8-21	(10%)	Raw meat, pet mince, pig ears, bones	Raw meat diet
Online	5-7	(10%)	Dry pet food, raw meat, wet pet food, chilled pet food, treats(biscuit), treats(meat)	Convenience trends, network trends
Vet	12-15	(10%)	Prescription diet pet food, dry pet food, wet pet food	Health and wellness trends

Figure 11. Sales Channel Breakdown across Pet Food.

Channel	Market Share %	Premium Beef Share	Premium Beef Value	Premium Lamb Value	Premium Red Meat Value Total
Supermarket	45%	5%	\$3.96M	\$1.06M	\$5.02M
Pet Specialty Stores	25%	50%	\$39.60M	\$10.56M	\$50.16M
Butcheries	10%	30%	\$23.76M	\$6.37M	\$30.10M
Online	10%	15%	\$11.88M	\$3.17M	\$15.05M
Vet	10%	0%	\$0	\$0	\$0
Total			\$79.20M	\$21.12M	\$100.32M

Figure 12. Sales Channel Breakdown across Red Meat Pet Food.

4.3 Consumer insights from interviews and focus groups

Consumer interviews and focus groups identified three possible opportunity areas for the red meat industry.

4.3.1 Opportunity 1- Wholesome and natural dog treats

The participants in interviews and focus groups tended to be sceptical about whether the current treat offerings were healthy choices for their dogs.



Figure 13. Current Treat Products on the Market.

Results from interviews and focus groups showed that professional couples with a young dog are potentially a target customer persona.



- Professional couple 28 to 35, focused on progressing their careers and living a cosmopolitan life style
- Live inner-suburban of major capital city apartment or townhouse (no real garden)
- Well educated, good with money etc. but when it comes to health issues the dog might have, that all 'goes out the window'!
- Weekends are a chance to switch off and relax take the dog to the local dog-friendly café

Dog Relationship:

- Was her dog, but has become our dog the family we have before having a family
- Concerned with the dogs development important to socialise with other dogs and be healthy and happy
- Worry about leaving the dog alone, whilst gone for the day feel guilty that dog has to fit their life style
- Dog gives them some structure to their lives can no longer just go out drinking with work colleagues
- Feel that their dog loves them unconditionally sad when they leave & waiting for them to come home
- Note: Overlap with 'Have a Special Relationship' customer



Figure 14. Target Customer Persona – Professional Couple with a Young Dog (Treats).

A range of pain points and un-met needs were found amongst young professional couples including:

- Guilt of leaving their dog at home for the day
- Some treats have high levels of preservatives
- Natural treats are seen as being expensive

- Purchased on impulse when re-stocking kibble
- Some treats offer both functional and health benefits
- Want more contemporary natural offerings

Treats were also found to fulfil a variety of roles:

- 1. Critical part of puppy training
- 2. At home obedience and reward
- 3. Keep dog occupied during work day.

Opportunity 1 – Wholesome treats for professional couples is presented as a value proposition below.

Our	dog treats
Helps	dog owners who have to leave their (young) dog alone at home for the day
Who want to	not feel guilty that they're bad 'parents', keeping their dog occupied, entertained and out of trouble, until they get home
Ву	through superior food drying technology of whole 'animal parts', make doggie treats that tick all the boxes - dogs love the taste, all-natural, but reassures against any risk of bacteria
Supported by	either through its own form, or with the supporting toy-element, keeps your dog engaged for many hours and provides functional health benefits (i.e. gum health)
Unlike	other treats that are full of preservatives or anti-fungal compounds

Figure 15. Value Proposition for Opportunity 1.

4.3.2 Opportunity 2- Conscientious dog owners – passionate about a raw diet

Opportunity 2 has a target persona of dog owners who are very conscientious and believe in the benefits of a raw diet. These dog owners tend to be singles in the 30-40 age group and can also be without children or the children have left home. Interestingly, these owners are likely to have pedigree dogs which have specific breed health issues.

Lifestyle & Value:

- Single's in their 30's or 40's, or couple without children / children have left home
- Comfortably set up, don't want for much happy with the simple things in life taking the dog for a walk
- Introspective prefer the company of dogs, like to be thought of as being fairly knowledgeable
- Well-educated, independent in their views about many things in life and somewhat worldly

Dog Relationship:

- Desire to make their dog super-healthy the best it can be
- Not their first dog, describe themselves as a dog person
- Have a passion for a particular breed deep understanding of that breed and any health issues that tend to afflict it
- Some are full on Members of dog clubs, 'show their dogs'
- Live their life through their dog nothing is too much trouble, when it comes to their dog
- Love to see their dog 'full of life' bounding around with other dogs and fetching balls etc

Knowledgeable and progressive in their thinking on dogs – avidly research online and contribute to chat room discussions



Figure 16. Target Persona – Conscientious, Believe in Raw Diet.

Some of the people interviewed made their own pet food at home. This is a significant weekly activity of sourcing ingredients, preparing meals and packaging in containers for freezer storage.



Kangaroo meat & livers from Coles, vegies from local market



Strain vegies and then coarsely puree with potato masher



Chop all vegies into small pieces



Add to the meat & liver mixture



Leave to low-simmer on the hob

Mix by hand, ensuring the vegie

mixture is well worked through



Meanwhile chop up liver and mix with Kangaroo meat



Divide into patties, placing in 2per-day packs – place in freezer

Figure 17. Sourcing and Preparing Natural Ingredients.

A range of pain points and un-met needs were found amongst the target persona including:

- Critical of dried dog food due to preservatives, fillers etc.
- Feeding processed dog food likely leads to cancer

- Challenge in shifting dog's diet to raw based
- Seek as close as possible to raw what is naturally best for them
- Seek tailored nutrition, reflecting breed requirements and age-related needs
- Success in having a dog that is in prime condition
- In making own food, hard to source the required ingredients offal, ground bones

Opportunity 2 is presented as a value proposition below.

Our	raw dog food
Helps	conscientious dog owners who believe a natural diet is the best thing for a dogs wellbeing
Who want to	make it easy to feed their dog a raw food diet, rather than struggling to work out what they need and source all the ingredients
Ву	producing fresh raw dog food that is tailored to your dogs breed, age and unique health challenges, to optimise long-term wellness
Supported by	a solution that is delivered directly to your door, in refrigerated packaging, to provide you with a weeks supply of fresh, raw dog food, in individual compartments
Unlike	processed dog food that will likely lead to my dog prematurely ageing and getting cancer

Figure 18. Value Proposition for Opportunity 2.

4.3.3 Opportunity 3- have a special relationship with their dog – fresh dog food

This target persona consisted of professionals who are singles, couples, and progressive families that live inner-suburban of major capital cities in apartments. They also tended to have designer dog breeds and treat them like a pseudo baby.



Figure 19. Target Persona for Opportunity 3.

The target persona was found to follow a weekly process of purchasing fresh meat to make their dog food.



Figure 20. Fresh Dog Food Preparation.

The value proposition for opportunity 3 is presented below.

Our	fresh dog food
Helps	dog owners who have a special relationship with their dog – member of the family / their baby
Who want to	return the unconditional love their dog shows them, by feeding them the best possible food that their dog will love
Ву	making it easy to give your dog vet-endorsed, premium, fresh dog food, the way you would make yourself, if you had the time each day
Supported by	sourced from premium, local ingredients and available through retailers that support fresh offerings and share your passion for dogs
Unlike	buying packaged dog food from the supermarket, which shows you don't really care!

Figure 21. Value Proposition for Opportunity 3.

4.4 How to win?

This section of the report includes financial modelling of the potential costs and revenues associated with the raw and fresh opportunities presented above. This is followed by some initial high-level business model scoping conducted during the industry workshop with red meat processing companies.

4.4.1 Modelling & Analysis

The modelling provided below supports both opportunity 2 & 3. The values and assumptions focus on the wet dog food market. This market was selected as the most viable of the pet food markets for processing companies, as it would yield higher margins than dry dog food, and the dog treats market

(Opportunity 1) is already saturated with over 550 products in retail. Dog food is considered more compatible with beef than cat food.

Based on conservative industry averages, normal margins for offal and raw material by-product sales are around \$0.09/kg. If red meat processors were to do in-house value added raw and fresh products, they could earn a \$3.95/kg margin for retail and \$7.20/kg for B2C. These predictions include additional processing and logistics costs. The potential revenue and profit based on the size of the Australian market are presented in Table 1 and 2.

Processor- Retailer Sales Margin		
Raw Material Pricing (\$/kg)		\$ 2.26
Normal Margin (\$/kg)	4%	\$ 0.09
Additional Packing & Labour costs (\$/kg)		\$ 5.54
Additional Processing costs (\$/kg)		\$ 2.03
Transport Cost (\$/kg)		\$ 0.16
Transfer Price (\$/kg)		\$ 10.08
Price to Distributor		\$ 13.93
Distributor Margin	5%	\$ 0.70
Distributor Sell Price (\$/kg)		\$ 14.63
Price to Retailer		\$ 14.63
Mark-up	30%	\$ 4.39
Retailer Sell Price (\$/kg)		\$ 19.02
Additional Margin	38%	\$ 3.86
Total Margin (\$/kg)	39%	\$ 3.95

Table 1. Processor Margin when Selling through Retail Channels.

Table 2. Processor Margin when Selling Direct to Consumer.

Processor- Direct to Consumer Margin		
Raw Material Pricing (\$/kg)	\$	2.26
Normal Margin (\$/kg) 49	<mark>%</mark> \$	0.09
Additional Packing & Labour costs (\$/kg)	\$	5.54
Additional Processing costs (\$/kg)	\$	2.03
Transport Cost (\$/kg)	\$	1.88
Cost before customer acquisition	\$	11.70
Marketing costs (\$/kg)	\$	0.22
Total costs (\$/kg)	\$	11.92
Sell Price to Consumer (\$/kg)	\$	19.02
Additional Margin 609	% \$	7.11
Total Margin (\$/kg) 609	% \$	7.20

The process through which the total margin (\$/kg) values were assessed in the above figures was through the process of reverse engineering. The projected sell price to consumers was calculated as

the average \$/kg sell price of wet dog food products currently on the market. From this, various margins were added, and costs were included (i.e. raw materials, additional packaging etc.) until the gap between the total cost and total benefit for the processor yielded a total \$/kg margin.

Table 3. Transport Costs when Selling through Domestic Retail.

Transport Costs- Domestic Retail									
Pallet weight (kg)		369.6							
Transport Cost Pallet (\$/100kms)	\$	20.00							
Average distance transported (kms)		300							
Average \$/kg			\$	0.16					

Table 3 shows the cost of transporting the pet food product from the processing plant through a distribution facility. This is based on the average distance from plant to facility being 300km, and the pet food being transported on a standard pallet. The transport costs will fluctuate on a plant-to-plant basis, due to variances in the standard size of the delivery and the distance between each plant and each facility.

Table 4. Transport Costs when Selling Direct to Consumer.

Transport Costs- Direct to Consumer									
Metropolitian Van Hire Costs (\$/day)	\$	250.00		Delivery Surcharge					
Labour \$/hr	\$	31.05		10 kg	\$	12.40			
Deliveries per Hr		2		20 kg	\$	8.20			
Hours per Day	\$	8.00		40 kg	\$	-			
Deliveries per Day		16							
Cost per Delivery	\$	31.15							
Kg Delivery Cost for 10kg pack	\$	1.88	10						
Kg Delivery Cost for 20kg pack	\$	1.15	20						
Kg Delivery Cost for 40kg pack	\$	0.78	40						

Table 4 shows the cost of transporting pet food product directly from the plant to the door of consumers. It is assumed in the calculation of the profit margin for direct to consumer sales that transport costs reflect the 10kg pack delivery cost (this is higher than the cost of the other 2 pack sizes). This maintains the conservative nature of the anticipated profit margin.

Marketing \$ (customer acquisiton)								
	Total							
Marketing ad spend- annual	\$ 200,000.00							
No. of impressions made (no. times consumers reached)	80,000,000		Cost per 1000 impressions	\$	2.50			
% of impressions generating loyal customers	0.05%							
No. of loyal consumers acquired	40000							
Kg purchased per year- loyal consumers	15	600000						
% of impressions generating casual customers	0.20%							
No. of casual consumers acquired	160000							
Kg purchased per year- casual consumers	2	320000						
Total kg produced (annual)		920000						
Total cost per kg		\$ 0.22						

Table 5. Marketing Costs for Direct to Consumer Sales.

When selling direct to consumers (generally through online retail), there is a need for marketing, so consumers have awareness of the brand. A large marketing budget of \$200,000 was assumed with a standard cost per thousand impressions (CPM – technically cost per mile) of \$2.50 (social media advertising), which will reach consumers approximately 80 million times. Conservative estimates regarding the number of customers generated per impression were used to estimate an annual demand for 920,000 kg of pet food product (this is significantly less than the estimated achievable demand for premium wet dog food products). This resulted in approximately \$0.22/kg of marketing costs.

Raw Material Prices				
Ingredients	% of product mix	\$/kg		
Beef Products	71.0%	\$ 1.68		
Vegetables	25.0%	\$ 3.87		
Gelling Agents	2.0%	\$ 1.20		
Vitamins (Food)	1.0%	\$ 5.00		
Flavouring Substances	0.5%	\$ 3.00		
Salt	0.5%	\$ 1.22		
Food Colours	0.2%	\$ 3.00		
Minerals	0.0%			
Average \$/kg	100%	\$ 2.26		

Table 6. Raw Material Prices.

The raw material of the potential ingredients in the wet dog food product were used to estimate an average \$/kg of the final product (based on a projected product mix). These ingredients were based on the typical ingredient composition of the wet dog food products currently on the market. The focus was put on beef products (71%) rather than vegetables and other figures. The \$/kg was obtained from market data on sourcing prices of each product; for vegetables and flavouring substances, averages were taken of the products commonly used in human-grade ready meal products. Therefore, the prices are likely inflated and may be less (resulting in a lower raw material \$/kg).

Beef Products	\$/kg		% mix
Livers	\$	1.75	41%
Kidneys	\$	0.87	5%
Lungs	\$	1.80	11%
Hearts	\$	2.10	13%
Presumptive Beef Trimmings	\$	2.20	8%
Trim for Pet food	\$	1.00	8%
PHMC Meat	\$	2.18	8%
Tallow from Render	\$	0.60	8%
Average \$/kg	\$	1.68	

Table 7. Raw Material Pricing for Beef Products.

The beef products pricing was based on the values in Table 7. This was based on an average \$/kg for offal and some secondary products that are commonly used in dog food.

Packaging Costs						
	Net weight per pack (kg)	Packs per carton	Net weight per carton (kg)	Cartons per pallet	Net weight per pallet (kg)	
	0.35	12	4.2	88	369.6	
Packaging	Price/Unit	Units/Pallet	Units/Carton	Units/Pack	Price/kg	
CPET / PP Dual Ovenable Tray	\$ 0.16			1	\$ 0.46	
Tray Sleeve - Cardboard	\$ 0.10			1	\$ 0.29	
Carton Liner	\$ 0.10		1		\$ 0.02	
Carton	\$ 1.30		1		\$ 0.31	
Carton Label	\$ 0.03		1		\$ 0.01	
Pallet Pad	\$ 0.62	1			\$ 0.00	
Stretch Wrap	\$ 4.00	1			\$ 0.01	
Pallet Hire	\$ 3.81	1			\$ 0.01	
Blank Pallet ID Label	\$ 0.02	1			\$ 0.00	

Table 8: Packaging Costs (not inclusive of labour costs for packaging).

0.05

Table 8 shows the estimated costs for the materials used to package and distribute the product. Based on a net weight per pack of 0.35kg, it's estimated that the average packaging \$/kg is \$1.16.

4.4.2 Industry workshop – business model scoping

\$

Packaging Loss

Total Cost

An industry workshop was conducted to validate the findings with representatives from red meat processing companies. The workshop attendees and feedback on the workshop are in section 8 under the appendix of this report.

Following the presentation of findings and much discussion about the potential opportunities for the red meat industry, workshop participants began a high-level business model scoping exercise. To guide the business model exercise participants were provided with two provocation statements and business model canvas guiding questions.

The purpose of the provocation statements was to 'provoke' a different kind of future for the participants and so that they could think creatively about the design of pet food business models (see Figure 22). Provocation 1 was domestically focussed and B2C, whereas Provocation 2 was export focussed into Asia and a collaborative effort between several red meat processors.

0.05

1.16

Prov 1.

It's the year 2025 and the red meat industry has captured 40% of the Australian domestic pet food market by providing premium fresh pet food direct to consumers.

How did this occur?

Prov 2.

It's the year 2025 and several Australian red meat processors have collaborated to develop highly successful premium fresh pet food markets into Asia.

How did this occur?

Figure 22. Workshop Provocation Statements.

The guiding questions below, were high-level so that participants were comfortable to share ideas and explore if they were interested in developing their own company business models.



Figure X. Business Model Guiding Questions.

The results of the business model scoping work completed during the workshop are presented in Table 9 and 10.

Table 9. Provocation 1 - Business Model Scoping Exercise.

Provocation 1			
It's the year 2025 and the red meat industry has captured 40% of the Australian domestic pet food market by providing premium fresh pet food direct to consumers. <i>How did this occur?</i>			
Key Resources	Key partners		
Describe the type of resources you think you will need? (product, equipment, capabilities, time)	Describe the type of partners will you need through the supply chain to make this work?		
 SC capacity Enabler Logistic capacity Packaging Shelf life "fresh" Direct market channels; Rapid prototype Market facts 	 Existing markets 1-2 years New "partners" 3-4 years ↑ margin Build capacity stage 1+2 		
Key activities	Barriers		
What are the main activities that will need to be done to make the business work operationally?	What are some of the major barriers to overcome for you to be successful?		
 Paradigm shift: branded, food Increased 2nd pact value Support further development ↑ Core value 	 Cold Chain Risk/Barrier to entry Mindset Overcome barrier of human food made same C° on site as pet food Current consumer risk: now pet food – negative 		

Table 10. Provocation 2 - Business Model Scoping Exercise.

Provocation 2 It's the year 2025 and several Australian red meat processors have collaborated to develop highly successful premium fresh pet food markets into Asia. <i>How did this occur?</i>		
Key Resources	Key partners	
Describe the type of resources you think you will need? (product, equipment, capabilities, time)	Describe the type of partners will you need through the supply chain to make this work?	
 Production lines Processing equipment Raw materials based on supply demand multi-protein Storage Equipment demands depend on current capabilities 	 Existing supply chains/market players (leverage) Cold chain delivery system provider (cross- border and domestic in China) Raw material provider Processors Direct sale expert in China Retail sale channel in China 	
Key activities	Barriers	
What are the main activities that will need to be done to make the business work operationally?	What are some of the major barriers to overcome for you to be successful?	
 Sales channel analysis – specific to country as China Supply and storage: vending machines Per food take away or same day delivery Eco packaging & traceability Communication plan Branding, digital performance boost with pet influencer Solid consumer insights research, target population Aim high customer – high net worth 	 Price sensitive + value Shelf life Substitution risk Existing competitors from Japan, Korea and local brands 	

5 Conclusions/recommendations

This exploratory project conceptualised three opportunity spaces for the red meat industry to capture new value. We concluded that Opportunity 1 (Treats) was not viable due to an oversaturated market. Our results showed that Opportunity 2 and 3 ('Raw and Fresh') are supported by first stage financial modelling, primary data collection and desktop research. On these early indications our recommendation is that several hypotheses should be tested in market via a second stage project.

Suggested hypotheses to test include:

- 1. *Red meat companies are losing profit margin by selling by-products to pet food manufacturers rather than value-adding themselves.*
- 2. Red meat companies who produce their own value-added wet dog food products will increase their profit margins on by-products and low value cuts.
- 3. Red meat companies will increase the Australian premium dog food market size by 5% by producing and selling value added raw and fresh beef and lamb dog food products.

We recommend that several pilot projects involving different companies be undertaken across export and domestic value chains to test prototype raw and fresh dog food products. Pilots should produce important insights across the Buy, Make and Sell areas of the value chain that will benefit the broader Australian red meat industry.

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7 Appendix

7.1 Workshop feedback

Attendees	16
Companies (ACC, OBE, JBS, TFI, Teys, NCMC)	6
Feedback sheets completed	7
Overall rating of workshop	8.3/10
Intention to now review their strategy for pet food	63%
Interested in MLA follow up regarding pet food insight and/or potential co-funding	100%