Final report

Aged Care 2025+ Identifying demand and new value opportunities for Australian red meat industry

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Abstract

There are over 217,000 residents in Australian aged care, and with it costing $31 per day to feed each resident, this represents a total cost of $2.46Bn. However, it is widely recognised that the meals in aged care are of a poor standard, with only 40% of residents liking the food and as much as 50% being identified by the recent Royal Commission as being in danger of malnourishment. This is a reflection of a sector that has largely failed to evolve their approach to meal preparation, resulting in minimal funds being allocated to food ingredients (25% to 30% = $8 to $10).

This project has demonstrated through the development and testing of red meat based ready meals in an aged care facility and subsequent engagement of kitchen staff and management across the sector, that new solutions have the potential to transform the food service system operating across the sector, for the betterment of residents, food preparation staff and management. This represents a $100M+ value-adding opportunity for the red meat industry. Utilising ready meals allows a much greater proportion of these daily funds to be allocated towards food ingredients.

First and foremost, ready meals provide a more enjoyable and better-quality meal for residents. They are also of a more consistently good standard, compared to the often dry and tough protein component, that is the result of excessive re-heating of frozen foods, to ensure food safety. Ready meals also enable residents to make meaningful meal choice, providing a sense of independence, as well as providing them with more of their favourite meals.

The inclusion of ready meals, incorporated alongside the existing food service system, gives chefs greater flexibility and reduces the required number of tasks, enabling them to do fewer things better. Ready meals also provides flexibility in work practices, reducing overtime and penalty rates. Ready meals can also address a major pain point facing the CEO's of aged care facilities. The efficient running of the food service operation is frequently disrupted by the absence of the skilled staff, with staff retention becoming an ever-worsening issue. This typically adds 10% to 15% to costs, as contract staff are brought in. Serving more nutritious meals that residents consume more of, helps prevent malnourishment, which will enable facilities to access further government funding.

The 2722 Aged Care facilities are far from homogenous in their food service set up but operate a diversity of different food-service models. Most have chefs on hand to cook a daily fresh meal for residents, whilst others prepare a number of meals in bulk and then freeze them for later or outsource the production of meals but assemble onsite. Thus, different versions / adaptations of red meat based ready meals are required to deliver against these segments.

It is recommended that in order to establish red meat based ready meals in the aged care sector requires overcoming the entrenched belief amongst both residents and chefs that a freshly cooked meal is best. Thus, they need to initially target facilities which have a gap in their meal offering, such as providing a quality meal outside of meal occasions when the chef is not on duty. Facilities also need to have an existing food-service system that can easily accommodate the bulk heating of ready meals and have food service staff who are capable of plating them in a desirable manner.

The emergence of a new generation of aged care residents, defined by their Baby Boomer values and expectations, means that the current 'meat, 3 veg and gravy', that a Bain Marie set up delivers, will no longer suffice. Along with increased government focus on the sector, these dynamics will act as strong tail winds for change, accelerating the adoption of solutions like red meat based ready meals that can deliver to new standards of quality, favourite meals, nutrition and resident choice.

Executive summary

By 2025, almost 1 in 6 Australians will be over the age of 65. Yet whilst they represent a large segment of society, with a disproportionate amount of spending power, few commercial businesses have them in their sights as a customer. From a red meat perspective, they represent a significant growth opportunity, not only because Seniors generally like red meat, but because for their health and wellbeing, a diet high in protein is important to maintain muscle mass and hence independence.

Whilst seniors who live independently, still have red meat high on their shopping list, the half a million who are either in residential age care, or receive meals on wheels, are largely missing out on quality red meat. The issue is that the organisations that provide for these seniors often have outdated food-service models that, over the years, have resulted in less and less funds going towards buying quality ingredients that go into their daily meals. On average, in Aged Care, $31 is spent per resident on the daily provision of all meals and snacks, but as little as $8 of that is spent on the actual food ingredients, making it hard to incorporate quality red meat. The Aged Care sector has been largely stagnant over a number of decades, never questioning the food-service system they operate, yet as cost pressures come to bare, and with kitchen overheads and labour costs perceived to be fixed, the resultant food costs are progressively cut.

This project seeks to explore whether a fundamentally different offering – a range of largely red meat based ready meals, and an associated food-service system could in the future, redress this imbalance. Ready meals have potentially numerous advantages, not only being able to use quality ingredients (i.e. lamb loin and steaks) but provide residents with meaningful meal choice, satisfy more cosmopolitan tastes and in doing so, redistribute the COGS associated with meal delivery, requiring less skilled labour and kitchen overheads.

However, one of the biggest barriers is the belief amongst both chefs in aged care and residents themselves, that a freshly cooked meal is the best, and a ready meal is a compromise. Thus our hypothesis is that ready meals can most readily provide an alternative to the existing freshly cooked meal on offer.

This project has followed a Design Led approach, requiring real world testing of prototype offerings. However, Covid 19 has drastically reduced the project teams' access to Residential Aged Care Facilities, as in most states they have been in 'lock-down', with only essential staff allowed to enter, even at the expense of residents' relatives. Through The University of Queensland, it has been possible to get ready meals incorporated into a Residential Aged Care Facility, for a period of 8 weeks, to test the project teams hypotheses as to the value they offer. Staff and residents were fully onboard and chose which ready meals they wanted to be a part of the test. A range of ready meals were offered as an alternative choice, alongside the existing chef prepared, freshly cooked meal, for lunch on Monday through Friday. Residents also requested that the ready meals be offered as an alternative to the light meal (soup or sandwich) they were offered at dinner time.

Residents were very positive about the addition of ready meals, with over 80% trialling them and on average 33% of main meals consumed were ready meals, over the course of the test. This was evenly split between residents choosing them as an alternative to the freshly cooked meal on offer and those who wanted a 'proper meal' for dinner. Satisfaction was correspondingly positive with Overall Meal Quality and Enjoyment jumping significantly from 3.3 to 4.65, on a 5-point scale (UQ Choice Project).

A residents' customer profile was developed, identifying all the significant pain points and un-met gains that residents experienced, in and around their daily main meal. This was matched to the

benefits that ready meals offered, to determine the degree to which they were adding value – determining if they were solving important issues residents faced, or just ‘nice to have’ benefits.

Whilst residents valued the quality of ready meals and being able to make a meal choice, the biggest challenge was trying to incorporate the delivery of ready meals alongside the existing food-service system. What is thought of as a convenience solution, turned out to be challenging to implement within an Aged Care Facility from a practical perspective. Thus, the greatest challenge in establishing ready meals in RACF’s is not whether they are embraced by residents and perceived to add value, but whether the kitchen facilities can support the preparation of ready meals and particularly whether the staff roles and capabilities are able to deliver ready meals. In short, would they stick.

To gain a deeper understanding of the feasibility challenges inherent to RACF’s, a sector wide assessment was undertaken to determine the alternative food-service models that are in operation across the sector, with 4 contrasting models identified. Each had their own relative strengths and weaknesses and contrasting cost structures. Hypotheses were developed as to the value ready meals would deliver to the existing food-service operation within RACF’s and the feasibility challenges that implementing ready meals would face. These hypotheses were then tested with Head Chefs and Food Service Managers from these types of facilities, to assess desirability and feasibility implications. It was also hypothesised as to if and how the food-system COGS could be re-jigged to source an extra $2 towards food costs, to fund the incremental cost of serving ready meals.

It is recommended that a strategy be pursued where a foothold is established in the Aged Care Sector, so that the value of ready meals to residents can be demonstrated and the operation of a supportive food-service system can be proven to work, with no net cost increase. From this point, and with appropriate adaptation, other segments of the Aged Care market can be addressed (including Meals on Wheels). The danger, otherwise, is that if ready meals are introduced to a RACF that is not a good fit, that whilst residents would give it the thumbs up, the food-service system would be put under too much pressure, likely leading to the loss of key staff.

A clear initial opportunity space has been identified, a segment of RACF’s that run a Hybrid Cook-Serve/Chill food service model and are of a large enough size that they have kitchenettes staffed by Food Service Assistants who are pivotal to the successful delivery of ready meals. This represents 19% of RACF’s but 28% of Residents. Ready meals would address significant residents’ pain points - an alternative choice when they don’t like the main meal on offer, allowing them to eat a proper dinner, providing a superior meal on the weekend and for those with cosmopolitan tastes. Thus, ready meals could provide 30% of all main meals in this segment. If red meat makes up two-thirds of these ready meals, then this represents 85,000 red meat-based meals per week.

A second opportunity is to target RACF’s that operate a Cook-Chill operation (12% of RACF’s and 18% of residents). The challenge is that these facilities already offer residents a reasonable degree of meal choice, through an efficient and low-cost meal production food-service system. In this case, the value that ready meals would offer, is that they provide a better-quality meal, made from superior quality ingredients. However, whilst this might well be true, it challenges significant perceptual barriers that a chef prepared meal will always be superior.

There are a number of sector dynamics that will act as a strong tail wind for ready meals to penetrate the Aged Care sector. As the Baby Boomer generation increasingly make up new residents entering age care, they come with very different expectations and the financial means to support this. Recognition of the importance of nutritional wellbeing, more cosmopolitan tastes / shift away from meat & 3 veg meals, a higher expectation of meal quality and greater autonomy as to what they want to eat and when they want to eat it.

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1. Background

1.1 The Changing face of Aged Care

With the rise of the baby boomers beginning to enter the age where they are in the need of aged care services (aged 57 to 76), the need for innovations in new products and services for the Aged Care sector represent opportunities for Australian red meat industry. In particular, evolving mindsets from recent residents for significantly improved food experiences along with higher distribution of wealth from this cohort suggests today's seniors' issues such as lack of food enjoyment, malnutrition, food waste and lack of menu variations may well unlock new solutions for inclusions of Australian red meat.

By 2025, almost 1:6 Australian will be over 65 and today we are beginning to see changes in the design of Residential Aged Care Facilities. An opportunity to grow demand and value in these traditionally price restrictive sectors appears viable as an increasing number of baby boomers with greater wealth and arguably greater range in food cuisines are likely to desire new offers to the traditional RACFs. Understanding where to play / how to win and a case study on the approach to ideate and record key current and future modes of operations will help bring to life Aged Care 2025+ opportunity for Australian red meat brand owners.

1.2 The Prevalence of Aged Care Residents being malnourished.

The 2020 Royal Commission into the state of Australian Aged Care, determined that approximately 50% of Aged Care Residents are either malnourished, or at risk of malnutrition. This is most obviously defined by a loss of muscle mass (Sarcopenia) and thus determined by a loss of weight (as a senior, you can be overweight and malnourished). It has been shown that an intake of 25-30g of protein at meals times through high protein menu planning will support elderly residents. High bioavailable protein in the form of red meat is the best source of protein. Malnutrition is caused from an inability to eat enough food, and often the elderly have reduce intake, small meals, difficulties swallowing and often cannot eat enough volume to maintain body weight.

Seniors with malnutrition are at a higher risk of falls, infection and pressure wounds. They experience longer recovery from illness or injury and are less able to carry out daily living activities – i.e. showering, getting up from chairs.

Thus, the cost of malnutrition in not just the poor levels of wellbeing experienced by residents, but the cost of convalescing injured residents and the higher levels of care required to assist residents who are less able to support themselves. Costs associated with malnutrition also include having to purchase supplements which are an additional cost to foodservices. Though these supplements are high in protein, they are not considered first food strategy. Utilising menu planning, including good sources of protein at all meals is an essential first food strategy. Therefore, meals should be planned around meat options which are easy to eat and soups with meat and high protein ingredients. Malnutrition is high in aged care homes and that is why it is important menus reflect meals which will provide superior sources of protein and nutrients.

https://agedcare.royalcommission.gov.au/system/files/2020-06/DAA.0001.0001.0079.pdf

1.3 Why red meat is a good solution

It is important for seniors to eat a diet that is high in protein, in order to support the maintenance of their muscle mass. This is in contrast to their tendency to want to consume 'comfort foods' like pasta, or chips. Thus, it is important that they are provided with meals that they find desirable, otherwise, any protein component is liable not be eaten.

Red meat is the optimum solution, for a number of reasons, particularly when combined with some form of physical activity:

Nutritionally, red meat is superior. Not only is it high in protein, but it also delivers high levels of iron, zinc and phosphorous and vitamins B12 and B6. It is also a good source of omega 3 fats and relatively low in fat and sodium.

Red meat has many strong nostalgic associations. Many seniors lose interest in food, so connecting with earlier times in their life, particularly during their younger years, can inspire them to enjoy their food. Traditional red meat meals, like Shepperd's pie, Steak and Kidney pudding and Beef Stew are all popular for this reason.

As people reach their senior years, their sense of taste diminishes. So, whilst they might not like spicy foods, they prefer food with a fuller flavour. Thus, red meat with its stronger umami profile, is much preferred by seniors, to more bland tasting proteins (i.e. Chicken).

A key challenge for red meat is delivering texture appropriate red meat within dishes. Whilst particularly fish and to some degree chicken, is relatively easy to cut and chew, some seniors have had a bad experience with red meat and so are turned off it. Thus, it is important to offer residents red meat-based dishes, in a form that they can handle – easy to cut and eat – easy to chew. A variety of options need to be explored, such as tenderised or texture modified, which includes processes like mincing the meat, before putting it back into a more desirable format. Further developments should encompass utilising new cooking technology, such as sous vide to achieve a desirable product texture, whilst not compromising the taste / flavour of the protein component.

In the UoQ Choice project, residents were provided with a long list of alternate ready meal choices, made up of a list of beef, lamb, chicken and fish dishes. Residents were able to vote as to their favourites and what they would like to see on the menu, for the duration of the test.

Of the top 15 selected, 9 of the 15 were red meat dishes – so 60% of the choices. This similarly reflects what has been observed in other studies, that red meat is the preferred choice, amongst seniors, with fish and chicken providing some further variety.

MLA as part of healthy meals program, has developed a Tips for healthy living after 65 years brochure (see:https://www.mlahealthymeals.com.au/globalassets/mlahealthymeals/documents/brochures/live-well.pdf). Feedback from the market on this material and an opportunity for industry to build on and workshop new high value opportunities will be achieved. The preliminary working group is to include:

- Ready meals and par-cooked and fresh meat manufacturers
- Nutritionists
- Aged Care service providers
- Policy makers and advocates for Seniors

To date there are significant price restrictions on meat (and ready meal suppliers) into this sector and despite red meat being traditionally a staple for seniors, as well as being known as a good source of

protein, iron and zinc, beef, lamb and goat's high price, and variability in cooked doneness and perceived lack of versatility often results in reductions in red meat volumes at many RACFs (despite arguably higher demand that is being met by chicken and snacks such as biscuits etc).

1.4 The Role of Good Food in Aged Care

"The food we eat plays an important role in health and wellbeing. Good dietary choices contribute to healthy weight, quality of life, resistance to infection, and protection against chronic disease and premature death (NHMRC 2013). Conversely, poor dietary choices are associated with ill health. A number of dietary factors are involved in the development of chronic conditions, and in some cases, there is strong evidence of a direct association."

2. Purpose

This project will baseline and identify higher value opportunity spaces for Australian red meat inclusion in domestic RACF (Residential Aged Care facilities). Identifying current and emerging pain points for seniors in RACF are likely to be evolving following the recent Royal Commission plus the current intakes of Baby Boomers. It is anticipated that with desires for new food experiences beyond current offerings represents an opportunity to explore innovations to grow red meat demand for this sector. This will be tested with a series of interviews and workshops with stakeholders scheduled to derive key insights and findings for the benefit of the wider Australian red meat industry to consider.

This project will include a series of interviews and working group discussions to review plans and identified constraints, both current, as well as over the next five years that are/have been considered by aged care providers in Australia for inclusion of red meat as an influx of baby boomers begin to become a target market. This project will build on past MLA Ageing Population research (A.RMH.0020, V.RMH.0048) to ideate and partially validate several opportunity spaces for Australian red meat inclusion within the aged care sector with the focus to look beyond the current infirmed 85 years old + residents' lifestyle and food menus typical for today. Nutritional needs, ready to cook/heat mega trends and capabilities of centre kitchens and staff will be baselined against today's 2020 offer thereby providing insight into current and future food menu selection and budgets. Key considerations will be to identify what role red meat can play against key issues such as food enjoyment, malnutrition, menu excitement, food waste and overall cost to operate Residential Aged Care Facilities (RACF) and supply into with red meat solutions.

3. Project Objectives

The specific objectives of the project are:

i) Determine the description of "the cost to feed residents" today and for a future mode (year 2025) aged care service with development of range of red meat dish prototype. This is to allow for complete transparency in understanding what the true cost of food service within aged care beyond bill of materials, product builds or pre-prepared ready meals heat and serve. This should consider all meals and snacking slots across the facility, including Property/Plant/Equipment and Labour operating costs such as.

- Cleaning, servicing and maintaining equipment, utensils, utilities, uniforms, staff and their recruitment, turnover, rostering, training and safe foods licensing - including fit out costs and

running costs for food preparation and storage facilities with and without off-site centralised ready meal kitchens
- Preparing and order placement
- Downtimes and efficiency and yield losses (including food waste and resident on-call serving times)

ii) Develop several red meat based dishes and costings that target current 2020 residents pain points currently realised as well as unrealised (e.g. food enjoyment, malnutrition, dysphagia, reduced food waste etc) and iterate based on market insights.

iii) Develop future looking perspective of sector opportunities, through key stakeholder feedback, taking into account significant trends and market dynamics, such as the emergence of the Baby Boomer cohort, with their higher expectations and spending power, entering aged care facilities. This is to be used as a basis for a business case for "where-to play / how-to-win imperative to act" and "high value opportunity spaces" for Australian red meat brand owners to learn and apply from.

4. Methodology

4.1 Aged Care residential Facility case study

A project manager was selected to facilitate and lead a series of discussions and business case development with key stakeholders. This included engagement with service providers within the Aged Care sectors and food suppliers and menu planners and policy makers to baseline today's offer and identify opportunity spaces for red meat innovations.

Workshops were held to "bring to life" the opportunity spaces and explore the fit of alternative food-service systems with ready meals. A design led approach whereby assumptions are listed and partially validated with key insights and evidence that consider market-product fit (desirability), technical feasibility and capacity to execute and commercial viability (size of the prize against baseline for aged care operations and food procurement and handling has been considered. A final report has been developed (this document) to conclude all aspects of this project.

During the series of workshops, the participants discussed:
- Why are Aged Care Food Budgets so low?
- Why is malnutrition so prevalent in RACF (Residential Aged Care facilities)? What is current role of red meat and impost in this space?
- What is the total cost of food production in the Aged Care Sector? That is: What are the COG's? What is the CODB in wages for food ordering, preparations, service and cleaning? What are the different models such as centralised kitchens, menu design etc?
- What are the Total Costs of Ownership for the fit out, maintenance and running of a kitchen within an aged care facility? What is the cost of food waste within the sector? How does this compare against pre-prepared ready meals supply in?

What are Alternate models of meal delivery within the sector that:
- Are more cost effective,
- Are consumed and enjoyed,
- Generate less waste,
- Address specific nutrient and dietary requirements

Key considerations:

- Do operating costs impact food procurement costs. How are budgets and costs allocated? Is there a direct correlation between food and operating costs, that is, does an increase in operating costs reduce the available funding for food?
- Are residents provided with a choice of meals? Are they provided with a choice of times when they can eat meals? Are residents satisfied with both the range of meals and times they are available?
- This will guide the "where to play / how to win" approach to complete this project. A summary of the approach and key discussion points and findings will then be included in MLA standard final report for public dissemination.
- Using a design led approach, findings are to be presented using Value Proposition Canvas and Business Model Canvas Tools to describe assumptions and insights across desirability-desirability-viability criteria – see: https://www.youtube.com/watch?v=IP0cUBWTgpY

Unfortunately, the previously committed NSW RACF had to withdraw in line with COVID state and company isolation guidelines (July 2020). Thus, alternative options had to be considered.

Through the course of testing ready meals within a RACF, it came to light that an equally significant challenge to addressing residents pain points, was overcoming the feasibility challenges involved in establishing an enhanced solution into RACF's. The aged care sector is highly diverse, in terms of the food-service models that are in operation, and thus establishing any new solution would need to overcome these barriers to adoption. Hence, it was agreed the project would pivot towards understanding how to overcome the challenges inherent in establishing ready meals within RACF's, across the 4 main groupings of food-service model (so 1 product solution, with 4 different associated service models). This is in contrast to trying to test 3 different product solutions, which weren't available.

4.2 The Opportunity for Ready Meals in RACF's

Ready meals have the potential to transform the way meals are provided to residents within aged care. Across the sector, typically $31 is spent on the provision of meals, per resident per day. However, only $8 to $10 of this is spent on food costs, the vast majority going on kitchen overheads and labour.

Findings from the Australian Aged Care Quality Agency 2018, show:

- 73% of residents said staff always treated them with respect
- 81% of residents said they felt safe in the service
- 39% of residents said they always liked the food

It is hypothesised that ready meals can provide a transformational solution to address this poor standard of meals in aged care. The potential advantages of ready meals are:

- They can provide residents with choice, as against a single main meal on offer
- They can be made from superior quality ingredients and thus an inherently better-quality meals – economies of scale in manufacturing and re-distributing the labour component of the COGs that underpin the delivery of daily meals
- They can increase menu variety, offering a wider range of meals, to satisfy different ethnic tastes, or those who desire something different to the standard 'meat and three veg'

However, whilst the quality and variety of ready meals have improved significantly over the last few years, there remains the entrenched belief that they are quality compromised as a convenience

solution, that cannot compare to a freshly cooked meal. This view is believed to be widely held across chefs, residents and those responsible for placing seniors into an aged care facility – many facilities promote the reassurance that they have an on-site chef and meals are prepared fresh daily.

Thus, there is likely a perceptual barrier to be overcome and an expectation that ready meals can only supplement an existing food-service system, rather than replace a chef preparing daily meals.

4.3 UoQ Project – Barriers and enablers for increasing choice, through modifying the food service system

Through the workshop engagement process with suppliers, providers and researchers, it was identified that University of Queensland (UoQ) had a series of concurrent research proposals under development. As such, UoQ experts agreed to join the project as a primary participant and service provider.

4.3.1 Project Objectives – UoQ Choice Project

This work aims to understand the effect of increasing choice on organisational structures and workflows, costs, food waste and particularly resident satisfaction. Research has shown that the level of choice provided to residents in residential aged care is limited both within Australia and internationally. This is of concern, especially as residents report feelings of loss of control and independence as they transition into care. In order to maintain a sense of identity and autonomy, residents need to be able to make decisions about their day-to-day life. Small decisions, such as what to eat, increase in importance when in care, as the bigger decisions in life are no longer available. Because of this, it is important that aged care homes are able to offer residents choices in their meals. Scientific literature also supports increasing choice with improvements shown in food intake, resident satisfaction and quality of life.

Deciding what to eat, when to eat and with whom are all decisions individuals in the community make each day. In order to provide these same opportunities to residents and increase the number of choices available in aged care, there needs to be a change in the way current foodservices operate. Readymade meals may offer a solution for homes to be able to provide increased choices in their menus.

4.3.2 Specific Questions to Address:

The objective of the study was to assess:

- Does increasing choice deliver higher satisfaction for residents?
- Does providing choice increase residents’ consumption levels and decrease food waste?
- What are the skill sets needed to support the delivery of ready meals?
- What are the challenges in operating ready meals alongside the existing food-service system?
- What are the barriers to effective implementation of change?

4.3.3. Set Up of the Residential Aged Care Facility

The facility that was the focus for the study was a smaller than average with 36 residents. It was a privately owned facility. It operated a Cook-Serve food-service system, with a four-week menu

rotation. Residents decided 24 hours out, whether they wanted to have the main meal on offer, or whether they would rather have a light meal (sandwich, salad).

CHARACTERISTICS OF THE AGED CARE FACILITY WHERE INTERVENTION OCCURRED

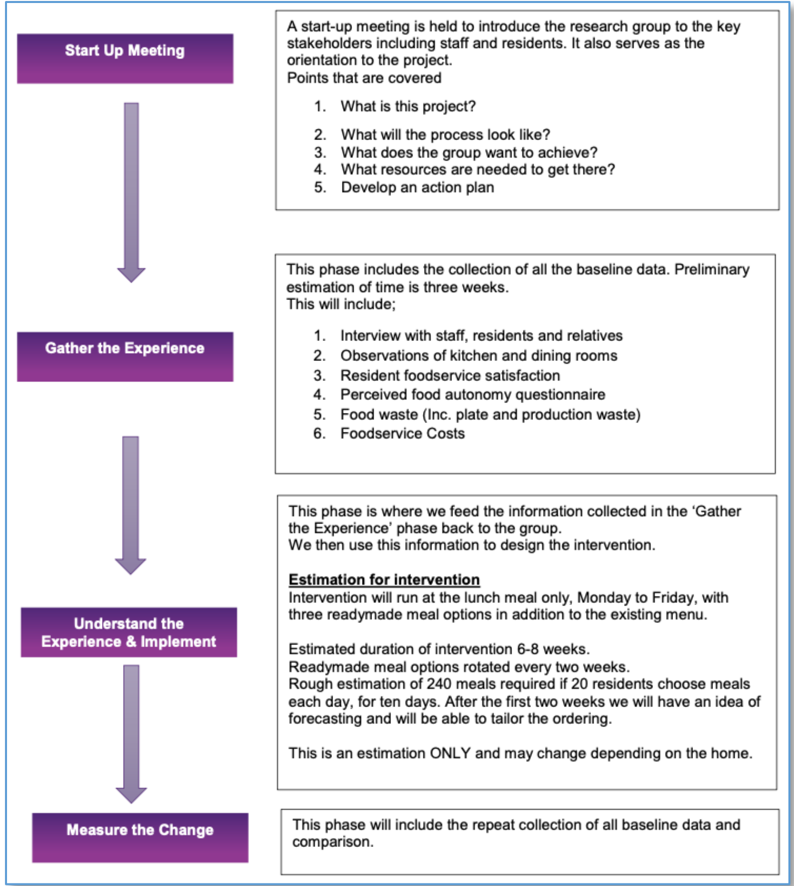
Each day a chef / cook would prepare the main meal from basic ingredients. They would start at 6am, in order for the main meal to be ready for lunch time. Not only did they have to prepare the main meal, but also breakfast, morning and afternoon tea and dinner. Their shift would finish at 1-30pm, with dinner, a light meal such as soup, heated and served by a Personal Carer, who had no skills in food service operation. As a Cook-Serve food-service system, the chef was able to prepare a wide range of meals, typified by freshly prepared Fish and Chips every Friday, which was a favourite amongst residents.

As a small facility, it had a single centralised kitchen with an adjacent dining room. The kitchen had a traditional commercial set-up, with a stove, oven and deep fryer, for preparing meals. Meals where then served from a Bain Marie. It also had a small cold room and a commercial dishwasher.

4.3.4 Design of the Project

Critical to the design of the project, was ensuring the intervention was positively received. This is particularly a concern for staff members involved in the existing food system, who might feel that a Ready Meal offering is seeking to replace them. Without their endorsement, it is likely the trial will fail, as they are required to heat and deliver these meals, as residents are not thought to be able to serve a ready meal for themselves.

Another important consideration was that Aged Care Facilities are very different, not only in their sizes, but also in the make-up of resident populations. Thus, there was a significant focus placed on introducing the study to Facility Management, Staff and Residents and their Guardians and ensuring they felt they were inputting into the design of the test. This goes beyond just the selection of ready meals, to include when those meals would be served.



Having a baseline assessment of how the existing food system performed was also critical, to ensure behavioural measures were assessed, not just attitude shifts, as generally any intervention will be positively received by residents.

1. Start Up Meeting – Project Set Up

A start up meeting was held to introduce the research group to the key stakeholders, including staff and residents. It also served as the orientation to the project. Points that were covered:

1. What is this project?
2. What will the process look like?
3. What does the group want to achieve?
4. What resources are needed to get there?
5. Develop an action plan

The project was enthusiastically embraced by both staff and residents. For residents, meals are a key focus and so anything to improve things is welcomed. For staff, they recognise the limitations of their food service system and what it can deliver and see this project as potentially filling an important gap.

2. Gather the Experience – Collection of Baseline Data

Attitude of Residents re Choice

The most common complaint around the food being offered within the ACF is a lack of variety – *"it would be nice to have something different every now and then".*

Residents feel that *"at the moment we are told what we have"*

The reality is that there is only 1 option for the main meal, with the menu rotated on a 4-weekly basis. Many residents also complained about the quality and choice on offer for the evening meal – *"all you get is soup or sandwiches"*

Residents believe choice is important, as *"it makes us independent, doesn't it?"* It would be much more like being at home, where they were able to choose what you wanted. We are not all the same – *"People are all made different and they would like certain things that the other person might not like."*

The majority of residents felt that if they were given a choice of three options, then that would be enough.

Whilst most would prefer to have a choice at lunch time (their main meal for the day), many felt that they would rather the choice of a proper meal in the evening.

Residents felt that although their previous complaints re the food were listened to, they weren't acted upon – *"I say things but then I get into trouble for bringing out my opinion." "Because most people are too afraid to speak up and speak their own minds about what they really would like"*

Staff Feedback

Staff recognised that providing choice was the number one issue associated with meals. The quality of the meals was pretty good, but choice is important for residents – the meal is the favourite part of their day.

The chef was not defensive about the opportunity that supplementing existing meals would provide. If they were new to the role, they would probably be more defensive – worried that it would put them out of a job. But having been in the role for over 5 years, the chef knew that not being able to provide residents with meaningful choice, was an issue.

The downside was having to prepare dinner (evening meal) would create extra pressure for the day shift, who are already struggling. There were also concerns as to how residents who suffered from dementia would go with the choice, or struggle to communicate what they wanted. The set up would need to be communicated clearly to staff, so that they were fully aware of what was required – frequent changes to the menu would be hard to cope with. There was also some commercial concern that some residents would request a full meal at both lunch and dinner.

Food Wastage

A benchmark level of food wastage has been assessed, prior to the inclusion of ready meals in residents' diets. As expected, this was most obviously characterised by residents not wanting to eat their vegetables but enjoying their desserts. Food wastage levels cannot be interpreted in isolation, as much depends on serving size quantities. Hence, it will be the changes in food wastage, as a result of the addition of a choice through offering ready meals, that will be assessed.

3. Understand the Experience & Implement – Design of the Intervention

This phase commences with feeding back to the ACF and residents what will happen. What the intervention will look like, in terms of the number of ready meals provided, which meal occasions and the duration of the test. The test also requires significant co-ordination with Creative Food Solutions (CFS), to ensure the desired ready meals are available, as required.

Residents Preference for different ready meals

It was important to gain acceptance of the study amongst residents, to get their support. This was most easily achieved by reflecting their preference – which of the 22 meals they would most like to have on the menu. The resultant preferences were spread across the alternatives:

- The most popular dishes (12 / 13 votes) were the Salmon, Chicken Korma, Steak Dianne, Pepper rump steak and Char-Grilled Lamb
- Secondary popular (10 / 11 votes) were Butter Chicken, Massaman Beef Curry, Ginger chicken
- Next tier (8 / 9 votes) Beef Sausage, Mediterranean Chicken, Beef Casserole, Thai Hoki Fillet, Chorizo Sausage, Chili Con Carne, Steak Chasseur, Roast Chicken.

With 32 residents expressing their preferences, no one meal was preferred by more than 40% of residents. For many, having the opportunity to have some steak, was seen as highly desirable. There was a spread across different types of meat – beef, lamb, chicken and fish. Some preferred more traditional meals, whilst others preferred more foreign flavours.

4.3.5 Undertaking the Intervention

The intervention involved the addition of 6 ready meal options to the existing main meal being offered. Prior to the incursion commencing, residents voted on which ready meals they would like on the menu. This was done as a restaurant style ordering

For the intervention, it was necessary to hire a large cold room, to store 3 weeks supply of ready meals, as well as two microwaves to heat them up. This had a knock-on effect in terms of overloading the power supply to the kitchen. There was insufficient space to install a combi-oven, for the batch heating of ready meals.

The intervention was for eight weeks duration. Prior to commencing, residents were questioned as to their level of satisfaction with the existing meal offerings, the level of choice and overall dining room experience.

The intervention was designed around 'Restaurant style dining'. This meant that residents would come to the dining room for their lunch, where they would then decide if they wanted the chef cooked meal, or a choice of six alternative ready meals, or a lighter alternative (salad or sandwich). The ready meals were also offered to residents at dinner time, for those who preferred to have a proper meal in the evening. The addition of ready meals only occurred from Monday to Friday, over the weekend, only the chef cooked meal was available to residents.

The meal order was taken by the Personal Carers and then passed to the kitchen. The chef would thus either serve the main meal from the Bain Marie or place the chosen ready meal into the

microwave for heating. The process the chef had to go through to prepare a ready meal was longer and more involved than had been envisaged:

- A ready meal took around two and a half minutes to heat up
- The plastic cover, with a strong seal, needed to be removed
- The temperature of the meal needed to be checked to ensure it was safe
- The meal often needed to be cut up into bite-sized mouthfuls
- The meal was then plated up, so it looked desirable
- Finally, the Personal Carer took the meal out to the resident

Remove cardboard & program microwave - 15 sec (& 2 mins wait)

Insert thermometer, check temp & clean - 25 sec

Peel back plastic cover & remove lamb loin - 10 sec

Carve lamb loin into manageable portions - 20 sec

Plate up lamb – 10 sec

Plate up vegetables - 20 sec

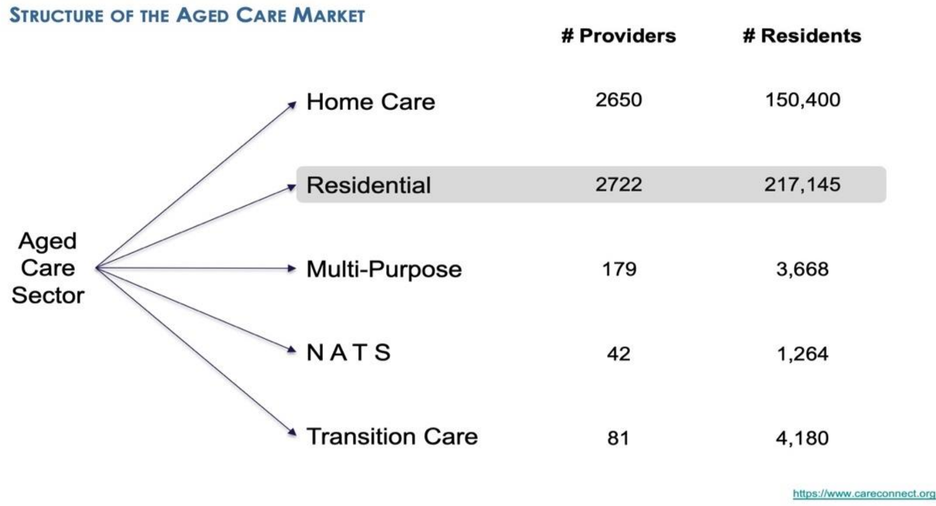
Add sauce / gravy to residents preference - 10 sec

Plated up meal ready to go out to resident - 30 sec

4.4 Feasibility Challenges in Adopting Ready Meals

4.4.1 Structure of the Aged Care Market

Today, there are 271,000 aged care residents, living in 2722 aged care facilities. There are also around 150,000 Senior Australians who receive Home Care, which typically includes some form of Meals on Wheels. However, there are a further 77,000 who have been approved to received Home Care but have not been provided with the service. Thus, in total, there are over 450,000 Senior Australians who require at least one meal each day.



There is no such thing as a typical Aged Care Facility. Even looking at averages, can be misleading. For whilst the average size of a facility is 80 residents, only 35% of facilities have between 60 to 100 residents. In contrast, 4% of homes have less than 20 residents and 10% of facilities have more than 140 residents.

RESIDENTIAL AGE CARE BREAK DOWN I

Whilst the average number of residents per age care facility is 79
There is a wide range of sizes that make up this average

# Residents	Count	Average	% of homes	% of residents
1 to 19	105	13.7	3.9%	0.7%
20 to 39	340	29.8	12.5%	4.7%
40 to 59	495	47.4	18.2%	10.8%
60 to 79	544	67.1	20.0%	16.8%
80 to 99	413	89.2	15.2%	17.0%
100 to 119	295	107.2	10.8%	14.6%
120 to 139	271	126.4	10.0%	15.8%
140 to 179	207	153.6	7.6%	14.6%
180 plus	52	213.0	1.9%	5.1%
TOTAL	**2722**	**79.8**	**100.0%**	**100.0%**

Small to Medium
55% Homes
33% Residents

Medium to Large
45% Homes
67% Residents

This broad distribution in the number of residents means that these very large facilities, which have more than 140 residents, make up 10% of facilities, they actually account for nearly 20% of all residents in aged care facilities. For our purposes, facilities were divided into two groupings – small to medium and medium to large, the reason being is they have contrasting set ups to their food operations, regardless of the food-service system they operate.

4.4.2 Contrasting Kitchen and Dining Room set ups between Small vs. Large RACF’s

Small to Medium ACF’s typically only need one of everything in the preparation and delivery of meals:

- One central kitchen where all the meals are prepared
- One central dining room that all residents come to (unless they eat in their rooms)
- Typically, 1 chef who undertakes all food preparation
- The same chef also plates up the meals, ready to be delivered to residents

The kitchen and the dining room are located next to each other, making it easy for Personal Carers to take the meals out to residents. This approach minimises the amount of kitchen equipment (overheads) required to support the delivery of meals.

KITCHEN-DINING SET-UP FOR SMALL-MEDIUM ACFS VS. SIZE OF AGED CARE FACILITY

Medium to Large ACF’s are typically structured around a number of wings, each housing 20 to 30 residents - i.e. a 130 residents home would have 5 wings of 22 residents

- Meals are prepared in a central kitchen, staffed by 2 or more chefs, dividing the tasks
- Each wing has its own small dining room, supported by a kitchenette
- Meals are the distributed out to kitchenette’s to be heated / kept warm and served

There can be quite a distance between the central kitchen and each of the kitchenette’s, some of the facilities using golf buggies to distribute the meals.

The requirement of running a kitchenette requires food-service competent staff – thus a dedicated shift of Food Service Assistants whose role it is, to ensure meals are served safely, heated to a minimum temperature, plated up from a Bain Marie set up, and served to residents.

Whilst economies of scale can be realised in a larger facility and the division of tasks amongst a number of chefs, extra kitchen equipment is required in each of the kitchenettes, as well dedicated Food Service Assistants for the final stage of delivering the meals.

4.4.3 Alternate Food-Service systems operating across the Aged Care Sector

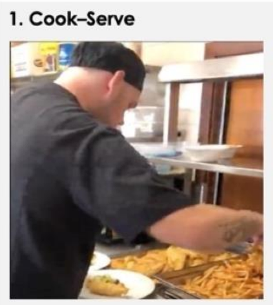
Pivotal to the delivery of meals to aged care residents is the food-service system that is in operation. As is more broadly typical across the aged care sector there is little consistency in terms of the food-service system that they operate. Some are legacy systems that have been in operation for a long time and never been brought into question as to their effectiveness. Others have been designed utilising the latest kitchen technologies to realise cost efficiencies. However, it seems few have been developed to produce the most high-quality outcome, but rather are a reflection of the limited funds that most ACF's are given to work with.

ALTERNATE FOOD-SERVICE SYSTEMS OPERATING ACROSS RESIDENTIAL AGED CARE

Food-service systems are defined by both:

- how the food is prepared – cooked from ingredients vs. assembled from components prepared off-site
- whether it is served immediately or stored for a later date, or a hybrid of the two, depending on the meal occasion

1. Cook–Serve



2. Hybrid Cook–Serve/Chill

3. Cook–Chill/Freeze

4. Convenience/Assembly

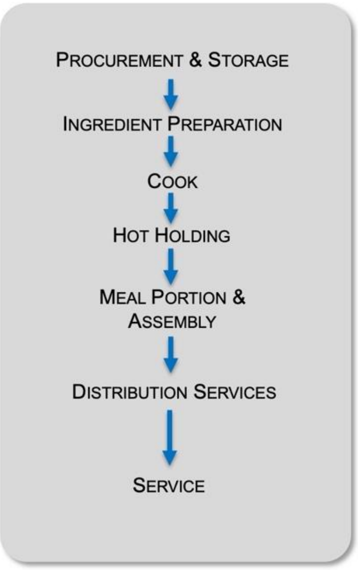
Whilst these food-service systems are presented as discrete groupings, they are in reality, shades of grey. Facilities might adapt their food-service system to encompass a different approach, at different times (i.e. if have staff shortages).

1. Cook-Serve

This food-service system is characterised by meals being prepared from scratch using largely basic ingredients – peeling potatoes, mincemeat. The commencement of meal preparation is timed working back from when the meal needs to be served, as it is delivered as a 'freshly cooked meal'.

Thus, main meal preparation commences early in the morning, with breakfast and morning tea breaking the preparation. The kitchen has a traditional commercial kitchen set up, with a hob and oven, with meals served from a Bain Marie set up. This system requires a chef / cook to prepare a new meal 7-days per week, including the weekend.

1. Cook–Serve Food Service – Key Activities

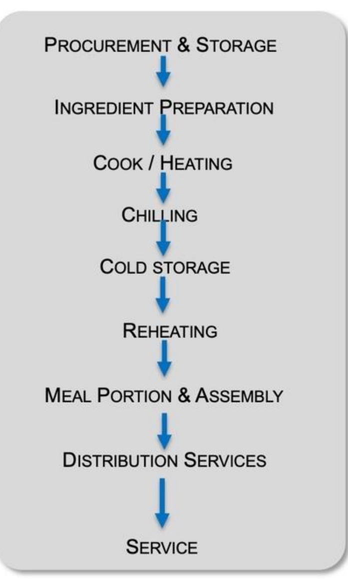


2. Hybrid Cook-Serve / Chill

This food-service system is predominantly cook-serve, typically operating in this way, 5-days per week – meals freshly prepared from basic ingredients. However, for the weekend, meals are prepared in advance, on the Thursday or Friday, and then re-heated a few days later. This requires the addition of some kitchen technologies, to be able to rapidly cool these meals, store them and appropriately re-heat them, to maintain meal quality and ensure food safety.

This system means skilled labour is not required on the weekend (hence not incurring the cost of penalty rates) but does require competent semi-skilled staff to appropriately re-heat and serve the meals.

2. Hybrid Cook–Serve/Chill – Key Activities

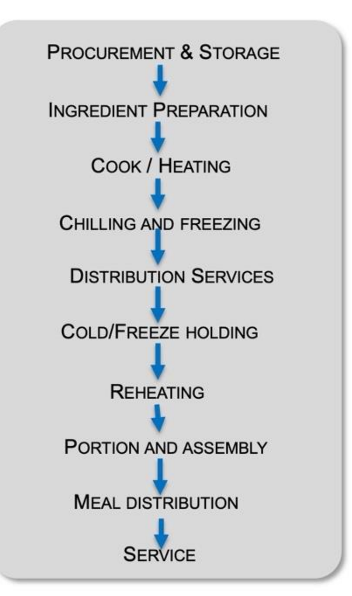


3. Cook-Chill / Freeze

This food-service system pre-prepares all meals, enabling meals to be prepared in concentrated batches – 2 to 4 days' supply. This requires a great deal of kitchen technology, beyond the preparation of the meal, in order to rapidly chill the meals, cold store them for longer periods of time and re-heat them, preserving quality and conforming to food safety standards.

Facilities that are part of a large group of homes, often spread the load across a number of kitchens, then distributing the meals across the facilities (i.e. one kitchen might bulk prepare and distribute Lasagne for 10 facilities to then serve to their residents). This system further enables skilled staff to be used more efficiently, with all meals re-heated by Food Service Assistants before serving.

3. COOK CHILL/COOK FREEZE – KEY ACTIVITIES

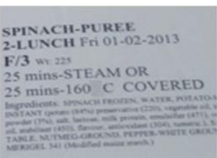


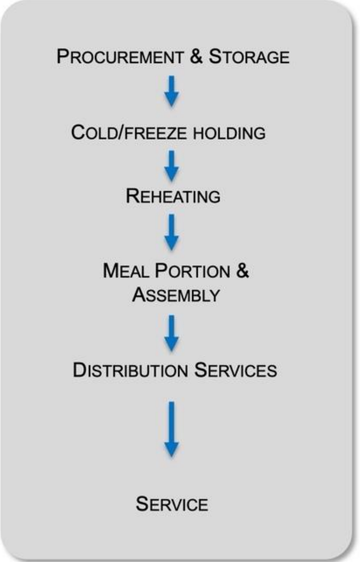
4. Convenience – Assembly

This food-service system is a significant step away from any form of kitchen. Rather than cooking meals from basic ingredients, they are assembled from a variety of convenience-based options.

Each component is brought in as a semi, or fully pre-prepared chilled offering, from which point it is re-heated prior to serving. Thus, there is no need for skilled chefs, as all food-preparation is carried out off-site. There is also little need for a traditional kitchen – hob, oven etc. though there is a requirement for extensive cold storage and capability to heat meals – combi-ovens.

4. Convenience assemble – Key Activities





4.4.4 Prevalence of each type of Food-service System across RACF's

The Cook-Serve food-service system is most common in smaller, more traditional facilities. They are often single ownership facilities, rather than being part of a group. One could characterise them as very traditional domestic food service models.

The most common food-service system are facilities operating a Hybrid Cook-Serve / Chill. These are characterised by facilities that have made some effort to modernise and find efficiencies in their operation. However, they are predominantly Cook-Serve, believing that this delivers the best outcome for residents – great tasting, freshly prepared meals.

The Cook-Chill and Convenience-Assembly are most often part of a larger group ownership of facilities, which have cost assessment and professional management that seek to find significant efficiencies in the delivery of meals, often dividing the tasks up across facilities.

Prevalence of each type of Food-service Systems and Skews in sizes of facilities – Preliminary Estimate

Type of production	1. Cook - Serve	2. Hybrid Cook-Serve / Chill	3. Cook – Chill / Freeze	4. Convenience / Assembly
TOTAL Facilities	**20%**	**39%**	**20%**	**21%**
Small – Medium Less than 80 residents **(55%)**	**17%**	**20%**	8%	10%
Medium to Large 80 or more residents **(45%)**	3%	**19%**	**12%**	**11%**
TOTAL Residents	**15%**	**39%**	**20%**	**21%**
Small – Medium Less than 80 residents **(55%)**	**10%**	**12%**	5%	6%
Medium to Large 80 or more residents **(45%)**	5%	**28%**	**18%**	**16%**

Note: The 5 highlighted groupings account for 89% of ACF's and 91% of aged care residents

For the purposes of further analyses, these were rationalised down to 5 major groupings, being of a significant number of residents and grouped if operating dynamics were considered to be reasonably similar (i.e. Small & Large Convenience-Assembly).

4.4.5 Staff shortages in Aged Care

The Aged Care sector finds it hard to recruit and retain quality chefs and food service assistants, due to the poor levels of wages and the negative associations of working in aged care. This problem is exacerbated, because younger workers are not wanting to enter the sector, it often being left to immigrants to fulfil a number of these roles.

This is particularly true for chefs, whose skills are valued across a range of food-service channels, such as Pubs and the Health Sector. With chefs being a critical role, with no other existing options to feed the residents, facilities are forced to bring in contract labour, having a significant impact on their costs.

A quick search of "chef jobs in aged care", within Melbourne, reveals that there are 350 job roles (6/6/21). Whilst this is a dynamic picture, it illustrates the challenges many facilities face in hiring and retaining chefs.

Thus there is an opportunity for high quality ready meals to demonstrate how they can fill the void, at these times, when a facility is without a chef, or the regular chef is taking leave. In this instance, ready meals can be utilised to cover/supplement those meal occasions when meals are prepared in advance, such as on the weekend. This enables a facility to soften the cost impact of having to bring in temporary staff.

4.4.6 Performance Drivers of Main Meals

There are a number of dimensions that have been identified from the literature as being important in the delivery of meals within an Aged Care Facility:

Dimension	Description
Meal quality	Tastes good & enjoyable to eat – i.e. the meat is not dry & tough, vegies not mushy True reflection of what it says it is
Menu Selection	Good representation of favourite meals – i.e. fish & chips, roasts Menu rotation doesn't feel like 'same old' food each week – i.e. occasionally salmon
Personalisation	Plated to personal likes – how arrange the sauce, which vegies Desired quantity – smaller vs. larger quantity
Choice	What want for main meal – alternative protein type to what's on offer When have that meal – i.e. residents who prefer a proper dinner
Nutrition	Meal is designed for seniors wellbeing – high proportion of protein Portion size is appropriate – smaller than active adult meal
Texture	Texture is appropriate to seniors – difficulty in chewing and swallowing (10%) Can be eaten with limited dexterity – bitesize pieces / cut with a fork (30%)

This is the basis from which the strengths and weaknesses of each food-service system was assessed. For example, it is believed that Meal Quality is best achieved through a freshly prepared meal. Or a Bain Marie type set up is best able to efficiently deliver Personalisation to residents.

4.4.7 Contrasting Characteristics of Food-Service Models

Cook-Serve is characterised by having a chef present and central to all tasks, working to prepare 'fresh' meals, so they are ready 'Just in Time'. All types of meals can be prepared this way, such as Fish and Chips, and being cooked freshly means that are of a reasonably high quality. With food started to being prepared 4 to 6 hours prior to consumption, there is little wastage from the kitchen, as residents indicate if they want the meal that is being offered.

Hybrid Cook-Serve / Cook-Chill promises to offer the best of both worlds. The majority of main meals are freshly cooked, whilst they have the capability to pre-prepare some meals, reducing the requirement to employ chefs for long periods at the weekend and in the evening. The challenge becomes that the food-service system, under tight budgetary constraints is stretched in many different directions, resulting in tasks that enable choice to be deliverd, being compromised.

Cook-Chill / Freeze focuses on running a food-service system as efficiently as possible. Whilst it is able to deliver some level of choice, the compromise comes with consistent, but average levels of meal quality and a limited menu rotation. Some meals, such as Fish and Chips, which are a favourite of residents, are just not possible under this food-service system.

Convenience–Assembly takes a very different path to regular commercial kitchens. With value-adding outsourced, either to external kitchens, or buying in ready to heat convenience solutions (i.e. Chicken Kiev's). Skilled chef resources are replaced by a supervisor whose job it is to manage food ordering from external suppliers, undertake forecasting to limit food wastage and ensure food safety standards are adhered to amongst Food Service Assistants. The compromise becomes the quality of meals served up and the lack of menu rotation.

SUMMARY - CONTRASTING CHARACTERISTICS OF FOOD SERVICE MODELS

Type of production	1. Cook - Serve	2. Hybrid Cook-Serve / Cook-Chill	3. Cook – Chill / Freeze	4. Convenience / Assembly
Key resources – kitchen equipment	Standard Kitchen – Hob, Oven, Fridge, Small Cool room	Commercial kitchen & new tech (cool room, combi ovens)	Limited kitchen (i.e. no fryer) & wide range of tech (blast chiller)	Highly limited kitchen – focus on cool storage & re-heating
Key resources - staffing	Chef is ever present and central to all tasks	Chef is pivotal & co-ordinated with FSA's during 'other' meals	Chefs working in intensive bursts & FSA's re-heating & serving	Supervisor & Food Service Assistants
Labour characteristics	'Just in Time' – skilled labour preceding serving of meal	Predominantly JIT, with pre-preparation of w/e meals	All meals are cooked in advance & stored, ready for use	Meal components are ordered, received, stored and re-heated
Quality Standard	High quality meals, limited by the use of poor ingredients	High quality meals, limited by the use of poor ingredients	Quality is average, though not critical	Quality is average, though not critical
Quality Consistency	All main meals cooked fresh – good consistency	High variation – complexity of alternate approaches	Consistently 'average' – all meals are re-heated	Consistently 'average' – all meals are re-heated
Hero Meals vs. Not so good	Fish & Chips – done properly vs. require long cooking time	Fish & Chips – done properly vs. No limitations	Roasts – if correctly re-heated vs. fresh is best (Fish & Chips)	Lasagne, Stews – keep well vs. fresh is best
Primary Pressure point – where does it go wrong	Chef under mounting pressure as meal time approaches	Chef @ End of Week – prepare meal for today & for weekend	Quality compromised re-heating meat component (vs. safety)	Ordering correct meal quantities & managing stock levels
Pro's of this food-service system	Deliver wide menu rotation Minimal waste from kitchen	Good menu variety Minimal kitchen & plate waste	Efficient use of Chefs Convenience foods - desserts	Flexible sourcing of suppliers Offer a wide range of choice
Con's of this food service system	Inefficient use of skilled staff Use of poor quality ingredients	Difficult to manage variables Hard to deliver choice	Limited menu rotation – F&C's Food wastage from kitchen	High food wastage from kitchen Menu rotation – few favourites

4.4.8 Assessing the Costs that go into the daily delivery of meals & snacks

There has been very little work done in assessing the actual costs that go in to delivering daily food to residents in aged care. The following assessment of costs has been pieced together across a number of different sources, which gives us confidence as to their validity. The reality is that many Aged Care Facilities, don't know themselves, as they only focus on certain numbers that go into the overall costs. Hence, it has been assumed that all ACF's spend about the same overall amount, which is $31 per day. This number is sourced from Stewart Brown, who collect the most robust data from ACF's. Hence our analysis is in percentage terms of this overall amount.

Simplifying it down, there are three main costs that go into delivering daily food – Kitchen Overheads, Labour and the Cost of Ingredients. We chose to split the Labour cost into Skilled (Chefs) and Semi-skilled (Food Service Assistants) to help build a picture of the cost dynamics.

It is often stated that it is only around the $8 mark (per resident, per day) that is spent on the ingredients that go into all of the meals and snacks. Our analysis and subsequent questioning of Chefs within these facilities confirmed that this was the base amount, though did vary significantly across the alternative food-service systems in operation.

4.4.9 Cost Breakdown of Alternative Food-Service Models

Cook-Serve in a Small ACF is characterised by the large proportion of the overall budget that is spent on Skilled Labour. This is as a result of needing to pay a chef penalty rates for the weekend. With the chef being such a focus for all tasks, there is the least amount of funds spent on Semi-Skilled Labour. With a basic kitchen facility, there is not a lot spent on Overheads, but that still leaves only 27% for Food Costs, which equates to $8-40.

COGS BREAKDOWN OF ALTERNATE FOOD-SERVICE MODELS

Assume equivalent spend across all types - $31 per resident, per day (source: Stewart Brown)

Type of production	1. Cook - Serve Small ACF	2. Hybrid Cook-Serve/Chill Small ACF	3. Hybrid Cook-Serve/Chill Large ACF	4. Cook – Chill / Freeze Large ACF	5. Convenience / Assembly L & S ACF
Overheads	21%	28%	25%	24%	19%
Skilled Labour	36%	26%	21%	15%	6%
Semi-skilled Labour	15%	18%	21%	24%	26%
Food Costs	27% $8-40	28% $8-70	33% $10-20	36% $11-20	48% $14-90

Hybrid Cook-Serve / Chill in a Small ACF, manages to reduce the proportion of the costs required to employ Skilled Labour, but this is absorbed in terms of Overheads and Semi-Skilled Labour requirements. Hence there is only marginally more funds available for Food Costs.

Hybrid Cook-Serve / Chill in a Large ACF, through the economies of scale that become possible, are able to make incremental savings across these other three areas, leaving more funds available for Food Costs.

Cook-Chill / Freeze in a Large ACF goes even further in reducing the requirement for Skilled Labour, though does require a greater level of Semi-Skilled Labour, given they are required to correctly re-heat meals, often from frozen, ensuring their safety, before serving them to residents. However, this does leave a further amount of funds for Food Costs.

Convenience–Assembly takes a very different approach to how they structure their costs. With minimal Skilled Labour and only a basic level of Overheads, this leaves nearly half of the overall funds available for Food Costs. However, they are sourcing very different ingredients, requiring foods that are ready to be heated (i.e. Chicken Kiev's), which cost significantly more than if they had been prepared from scratch.

5. Results

5.1 UoQ Choice Project

5.1.1 Initial Uptake of Ready Meals

Over the first few days of the intervention, 80% of residents ordered a ready meal. Thus, despite the being reservations towards ready meals, residents were keen to give them a go. When new ready meals became available, at the start of the next 3-week block, there was a corresponding lift in those wanting ready meals.

5.1.2 Ongoing usage of Ready Meals & the role they played

Over the course of the incursion, ready meals accounted for 33% of all main meals. Of the times when a ready meal was chosen, 51% were because residents didn't like the chef prepared main meal, so as an alternative lunch. Some residents requested that they would like to have their main meal at dinner time, something they had always done before coming into an Aged Care Residency. So with the addition of ready meals, they were able to have a proper meal at dinner and have a light lunch - 49% of the times a ready meal was chosen was for this reason.

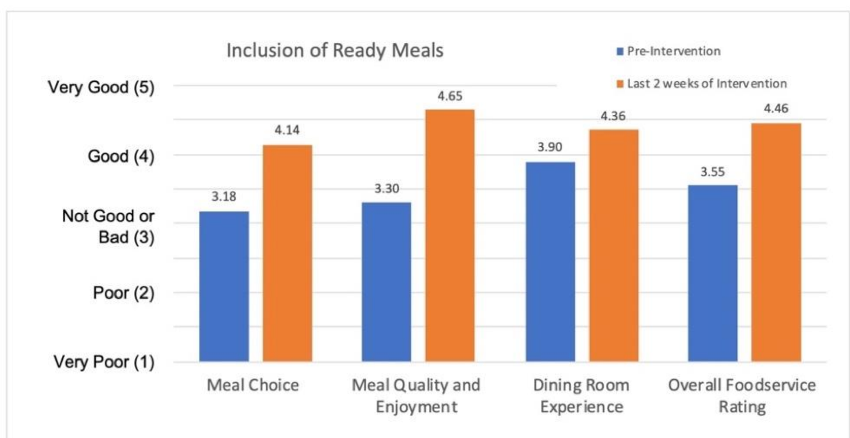
Thus, on average, with 36 main meals served per day, the chef prepared meal provided 24 of those meals, whereas 6 ready meals were consumed at lunch time and 6 ready meals consumed at dinner time. However, this varied greatly, day-by-day and week-by-week. For example, on a Friday, when the chef prepared Fish and Chips, hardly anyone ordered a ready meal or had their main meal at dinner. The range of ready meals offered to residents changed every three weeks.

5.1.3 Residents' satisfaction with ready meals

Residents' satisfaction of the existing food service was best characterised as being OK, but not great. On a 5-point scale, most residents either indicated Meal Choice, Quality and overall Rating was either OK or Good. Only the Dining Room experience was more consistently rated as Good.

In contrast, at the end of the 8 weeks, when the ready meals had been established as part of the overall food service offering, residents' levels of satisfaction was greatly enhanced. The majority of residents now indicated that Meal Choice, Dining Room Experience and Overall Rating were either Good or Very Good. Meal Quality and Enjoyment increased the most, with the majority of residents indicating they felt it was Very Good.

Residents Approval of the Inclusion of Ready Meals



Thus, the inclusion of ready meals as an alternative choice to the chef cooked, fresh meal resulted in a significant improvement in residents' satisfaction with meals.

Residents feedback at this time were:

- *"It's like a lovely 5-star restaurant, it's just a very good choice of food. The food is great."*
- *"We have a selection, having a choice gives me more freedom to have what I want to have."*
- *"Yeah, because everyone used to eat the same thing and we didn't have any choices and now we have choices. It's much better for everyone."*

5.1.4 Desirability Challenges and Issues

There were a couple of areas where ready meals did not perform as well, from a meal satisfaction perspective. One was enabling residents' preferences for how they like their meal. Examples of residents' requests were – *"I like more gravy"*, *"I like carrots instead of beans"* and *"I want a smaller serve".* What was fairly straightforward to execute when serving from a Bain Marie, was often quite a time-consuming process, or just not possible. And whilst they might seem like fairly small issues, some residents are liable to put off eating their meal all together, unless they get it the way they like it.

The other challenge for residents was that though they liked the idea of having a steak, or a lamb loin, for some it was hard to cut up themselves, as they had limited dexterity in their hands (i.e. arthritis). This required the chef to slice up the meat portion of their meals to make it easier to eat.

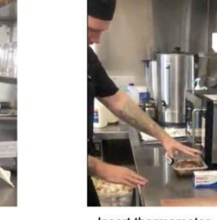
5.1.5 Feasibility Challenges

The greatest challenges in the delivery of ready meals were around feasibility - what is technically possible and whether staff have the capabilities and the inclination to deliver ready meals.

For this intervention, the method of heating meals in a microwave was problematic. With each meal taking at least 2.5 minutes to heat, and a further 2 minutes to serve, if a number of residents ordered the ready meal, then a significant back-log of getting meals out to residents occurred. This was particularly the case as the chef was required to heat and plate up the ready meals, but his priority was to serve the freshly prepared meal from the Bain Marie. This delay in receiving their

meal, particularly as their friends would have received theirs quite quickly, resulted in resident dissatisfaction.

Remove cardboard & program microwave - 15 sec (& 2 mins wait)


Insert thermometer, check temp & clean - 25 sec

Peel back plastic cover & remove lamb loin - 10 sec

Carve lamb loin into manageable portions - 20 sec

Plate up lamb – 10 sec

Plate up vegetables - 20 sec

Add sauce / gravy to residents preference - 10 sec

Plated up meal ready to go out to resident - 30 sec

With all the pressure a Cook-Serve food-service system creates, at serving time and the need to get a bunch of ready meals prepared, there was no time / attention given to rinsing the ready meal trays and disposing of them in a recycling bin. Thus, there was a doubling in the level of waste, requiring the kitchen bins to be emptied as meals were being served and extra rubbish removal.

There wasn't cool room space to store the required number of ready meals. It was decided at the outset, that the facility would need 3 weeks supply of ready meals and with offering 6 options, and no sense of how popular they would be, or which ones would be chosen, required a large number to be on hand. Thus, an outside cool room was hired, which was located outside the kitchen, in the car park. This is clearly not a long-term solution.

Running a restaurant style dining operation required front line staff (Personal Carers) to take meal orders. For many, with English not being their first language, lack of familiarity with the ready meals being offered and residents making their personal preference requests, this caused confusion and frustration amongst Personal Carers who had never been required or trained to perform these tasks.

There was only a small number of residents who wanted their main meal at dinner time. However, with the chef finishing their shift early in the afternoon, this caused some problems. The Personal Carers on duty had previously only served soup or sandwiches to residents. Being required to heat up a ready meal in a microwave, safety check that it had reached the required temperature and then plate it up in a desirable way, including cutting up the meat component was well beyond the food service capabilities of Personal Carers. To overcome this, the UoQ researchers had to cease observing operations and undertake the tasks themselves. It is doubtful, even with training, that personal Carers would be willing and able to undertake these tasks.

5.1.6 Design of a Food-Service System to Support the Delivery of Ready Meals

One of the key learnings from the intervention was the need to redesign the food-service system that supported the delivery of ready meals. For example, it is unrealistic to be able to deliver restaurant style ordering, as it puts too much pressure on the kitchen. There also needs to be the right kitchen equipment for the storage and heating of the ready meals. Finally, there needs to be staff in the right roles and with food service training to deliver the meals, rather than relying on the already under-pressure chef.

So, the design of the food-service system should:

Have minimal impact on chef – so he /she is able to focus on fresh meal preparation

Span more meal occasions than just lunch – non-main meal, weekend, …

-> Adequate **cold storage** – 1 to 3 weeks supply (trade-off vs. cost of delivery)

-> Residents specify **choice at meal prior** (breakfast for lunch, and lunch for dinner)

-> Ready meals **bulk heated** in combi oven / water bath

-> Meals **plated up by Food Service Assistants** (overseen by a supervisor & net of provision of appropriate training)

-> **Trays rinsed & recycled** appropriately – kitchen hand duties

-> Up to **20% of residents able to change their mind** – heat these meals individually in microwaves

5.1.7 Further Development of the ready meal offering

Overall residents were very satisfied with the ready meals, as demonstrated by them coming back for more. However, there were a number of issues identified which, if addressed would further enhance their appeal:

- Make the meat component super soft / tender to make it easier to chew - consideration should be given to utilising softer, or reconstituted meats, or longer cooking times for stews
- Pre-cut the meat component into bite-sized portions – such as meat balls or thinly cut
- Lots of sauce / gravy – many residents prefer it this way
- Flavour intensity – though whilst some residents want less flavour, others want more

5.2 Feasibility Assessment – Chef interviews

5.2.1 Customer Profile – Aged Care Residents and Main Meal

There are a multitude of Customer Jobs to be delivered against, in providing a daily main meal for residents. Along with these tasks are a number of existing associated Pain Points and Desired Gains that Residents are experiencing.

Customer Jobs include - the delivery of a quality meal, menu rotation, personalisation of meals, offering an alternate choice, a meal that is nutritionally appropriate to seniors and is of a suitable texture.

The associated Pain Points include – if residents are bored by receiving the same meal too often, the meat is dried out and tough or if it not plated up to their liking.

The associated Desired Gains include – feelings of Independence as a result of being given a choice, satisfying cosmopolitan or ethnic tastes and the reassurance of knowing a meal has been freshly prepared by a chef.

CUSTOMER PROFILE – AGED CARE RESIDENTS AND MAIN MEAL

5.2.2 Feedback from Chefs/ Managers of the Food-Service Operation

Requests were made to a number of Head Chefs / Food Service Managers across a range of Age Care Facilities. Those that agreed to participate were interested in the work being undertaken and keen to progress their approach in delivering quality meals to residents. As such, they were likely delivering a reasonable standard of meals and were willing to further improve. This is contrast to facilities that are rumoured to be offering a poor-quality meal offering.

Our approach was to:

- Share the results and learnings from the UoQ Choice project
- Understand the size of their (group of) ACF's & categorise the food-service system they operate
- Review and confirm their cost structure, including food costs for the main meal

- Understand the challenges they face in delivering daily meals, and how this relates to the food-service model they operate
- Discuss what benefits ready meals could bring
- Discuss how they would incorporate ready meals – design of the supporting food-service system

5.2.3 Attitudes of Chefs / Managers of Food-Service Operation

Chefs strongly believe that a freshly cooked & served meal, is superior to what any other food service system can deliver. This is not only the taste that can be delivered, but the aromas that accompany meal production. A significant part is the emotional associations of a freshly cooked meal, which is why it is important for the chef to be visible in the dining room and the importance of having an "onsite chef" is promoted for attracting new residents.

Chefs state that the cost of the ingredients for a cook-serve meal is $2-50 per resident, per day, of an overall $8-50 to $11-00 (though we believe this $2-50 is an under-assessment). Chefs are very focused on managing their daily ingredients budget but have little sense for labour costs & the implications of work practices (i.e. overtime and penalty rates of different staff roles). Staffing roles and shift practices are typically 'set and forget', only needing to be addressed, if staff are not available for a particular shift.

Chefs state that Resident's expectations and quality standards are different to outside expectations. This is most obviously demonstrated by the statement *"most would be happy if we alternated between fish and chips and roast with 3 veg each day".* Thus, they believe that meal quality needs to be good, but not great, as this is what residents are happy and comfortable with.

One of the challenges that preparing meals in advance brings, is in food-wastage from the kitchen, as residents aren't expected to indicate if they would want a particular meal more than 24 hours out (as happens in a lot of instances – will you be having Lasagne this time tomorrow?). So there is an allowance of 10% of food wastage, from the kitchen, as they need to ensure they are not in short supply. However, if this starts to edge up towards 15%, then it becomes such a large proportion of the overall food budget, that it becomes an issue that needs to be addressed.

Another issue is that despite well-designed systems & modern kitchen equipment, poor Food Service Assistants capabilities impacts quality. This is particularly the case as food safety is the number 1 priority, so in re-heating Sunday's roast, that was cooked on Friday, there is a tendency to dry it out, requiring extra gravy to make it palatable.

Seniors' appropriate nutrition is not front of mind amongst Chefs and Managers of Food Service Operations. Rather, the primary concern is that residents eat their meal. This is where Choice is believed to be important, if residents have chosen their own meal, they are more likely to eat it all.

One of the key challenges for Chefs, or Food Service Assistants who are responsible for 20 or so residents, is to know how each residents like their meal. All had examples of *"if you don't remember that Mrs Jones doesn't like carrots, and you put them on her plate, then she won't eat it".* This is why there is a tendency that serving from a Bain Marie provides the easiest means of delivering this level of required tailoring

The greatest challenge facing most Chefs is the need to offer an alternative offering to the main meal being prepared. This is not a problem where residents require a lighter meal, such as a sandwich, but is a problem when they want an alternative main meal. In reality, there is never the

same amount of effort gone into producing the second meal, with it typically being a simple meal, like pasta and sauce.

5.2.4 The Challenge of Today vs. Tomorrow – a 2025 Perspective

The Aged Care Sector is undergoing significant change, impacting the types of RACF that will survive and thrive in the future.

There will always be small independent operators who believe in what they are doing. However, they are financially restricted, so it makes it hard for them to make any meaningful change.

There are also a group of unscrupulous operators whose sole focus is to cheat the system, taking any government financial hand-outs, straight to the bottom line, rather than using it to improve the standard of care for residents. Recent indications from The Royal Commission, is that with new standards of monitoring, they will get caught out.

https://www.theage.com.au/national/golden-age-over-for-maserati-driving-aged-care-moguls-says-nursing-home-ceo-20200803-p55i4b.html

Then there are the Privately owned and Professionally managed aged care groups, running from between 5 to 25 facilities. They seek to improve the standard of care for residents, knowing that this will lead to enhancing their reputation and growing their business. They are also progressive in their thinking, exploring new ways to realise cost efficiencies. They are able to drive economies of scale and invest in Capex to improve the way they do things. They are the future of the Aged Care Sector, and are more likely to be the providers who will thrive and prosper in this new world.

These are representative of the people we spoke to for this study. For whilst they believe their food service operation is already pretty good, they are motivated to want to make it better.

Chefs and Managers of ACF's Food service Operations were strong in their belief that the sector had been relatively stagnant for a long period of time, but is now thought to be commencing a period of significant change:

- No one is quite sure the degree of impact the Royal Commission will have, but there is the belief that it could be quite significant in raising the standards across many areas. It is believed that extra funds for the provision of meals will be one key benefit, particularly for increased daily food costs.

- It is believed that whereas the existing generation of residents just want to alternate between having a Roast (meat & 3 veg) and Fish & Chips, the next generation coming through will have far more cosmopolitan tastes and things like Green Chicken Curry will break the mould in terms of offering 'meat & 3 veg'. This has significant implications for serving meals from a Bain Marie set up, requiring meals to be produced as holistic offerings.

- The aged care market is becoming increasingly segmented. The Chefs we were talking with, had a range of facilities that they managed and that the expectation of those which were located in more prestigious suburban areas had a greater expectation of food quality. Some had even started to offer restaurant style ordering, as a way to distinguish their offering as a premium facility.

- Kitchens are becoming increasingly modernised – incorporating blast chillers, combi ovens and even hot fridges - enabling them to evolve the food-service system they operate. Those facilities that have moved to full Cook-Chill are recognising the limitations of what they can produce and are starting to re-introduce chefs and kitchen equipment that allow them to prepare fresh meals – i.e. Fish & Chips. Thus, there is a move towards more hybrid type systems.

- Some aged care facilities have started to offer daily extras, like wine with dinner. It was suggested that incorporating ready meals could be treated in this way.

Thus, whilst Chefs / Managers of the Food-Service system were focussed on the role ready meals could play in today's operation, there was recognition that based upon the above factors, it could play a far more prominent role into the future.

5.2.5 Chefs / Food-Service Managers seek to balance many factors in delivering daily meals

Budget limitations – believe they could offer a lot more if had an extra $2 per resident to work with

- *"It's always challenging, servicing mining sites we work with $15 per day, which works well"*

Quality has to be of a certain standard – needs to be good but not necessarily great

- *"Protein component is the hardest to get right, re-heating, safety standards & staff training"*

Choice is important for residents – we seek to offer 2 main meals, plus a range of other choices

- *"Our residents are far more likely to eat something they have chosen, even if just a sausage roll"*

Adaptation – easily personalise a meal to a residents' tastes (quantity, which vegies, how like gravy)

- *"You have to know Mrs Jones won't eat her meal if there are carrots on the plate"*

Nutritionally appropriate for seniors – higher proportion of protein (though not front of mind)

- *"We put Sustagen in the porridge …"*

Variety across weekly menus – though for residents a question of getting their favourite meals

- *"We're putting chefs and equipment back into facilities, as some meals can't be delivered otherwise"*

5.2.6 Usefulness of Ready Meals

The thought of incorporating ready meals is seen to be useful, as they provide for the following:

- **Convenience & flexibility** – handy to have around, to respond to unplanned meal requests

- Allow a chef to **focus on fewer / more important tasks**, rather than spreading themselves too thinly
- Reduce the **reliance upon needing chefs** at times outside of preparing cook-serve main meal
- **Potentially a better-quality meal** – utilising superior ingredients and delivering a nutritionally appropriate meal for seniors (not fully / widely appreciated by chefs)

We challenged them to consider whether they believed they could play a major role, in the mix of ready meals. By this, we meant, could it reasonably provide 30% of all main meals served? It was felt it could do so, if it:

- Provided a range of **alternative choices** vs. the fresh-serve main meal – when residents don't like the freshly cooked meal on offer
- When residents want a **proper meal at dinner** time vs. smaller / simpler meals offered
- Overcoming the challenges of **Consistent quality** meals, such as on weekends, when poor re-heating practices can occur
- (Potentially) replacing existing meals being offered, as residents own volition in selecting **superior quality** meals (i.e. lamb loin ready meal vs. meat loaf)

Chefs believe that ready meals could easily fulfil a more minor role within the provision of meals for residents, providing 5% to 10% of main meals:

- Provide a range of **texture-modified** solutions – typically 10% of residents (varies greatly)
- Provide for residents that have **alternative tastes** – i.e. ethnic persuasion (curries)
- Enable a facility to **offer meals at ad-hoc times** – when family comes to visit a resident

5.2.7 Ready Meals ability to address Residents Pain Points and Desired Gains

Ready meals are able to address a number of existing Pain Points and Desired Gains that Aged Care Residents currently experience:

- Their ease of preparation enable them to be served as an alternative to the 'chef-prepared' meal on offer, or for dinner, for those residents who want a proper meal, at this time
- The packaging technology means they are fail-safe when heating up, in terms of not drying out the meat component or making it tough to eat
- Ready Meals are able to be offered in a wide variety, enabling meaningful choice by residents and a subsequent feeling of Independence
- Ready Meals have been nutritionally designed to ensure residents are eating properly

These Pain Points and Desired Gains have different levels of importance, or impact on changing behaviour – choosing an alternative to the existing main meal on offer:

Significant Behaviour – 'Don't like main meal on offer', 'Prefer main meal at dinner', 'Meat is dried out & tough', 'Not the way I like it', 'Know freshly cooked', 'One of my favourites', Make my own choice'

Secondary Behaviour – 'Ethnic tastes', 'Boring – same meal again today', 'Can't handle, needs cutting up', 'Social dynamic of eating together', 'Eating properly – wellbeing'

The implications of this, are that in order for ready meals to find a meaningful role, replacing a significant proportion of the existing main meals being offered (around 30%), then they need to satisfy these 'Significant Behaviour' drivers. If ready meals can only satisfy 'Secondary Behaviour' drivers, then they will only fulfil a minor role (5% to 10% of main meals).

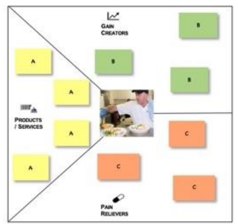
FIT OF READY MEALS VALUE MAP TO RESIDENTS CUSTOMER PROFILE

5.2.8 Assessing the Fit of Incorporating Ready Meals

This assessment of Fit was undertaken on 3 key criteria (with Feasibility being split into 2 different areas):

- **Desirable** – does the addition of ready meals address existing Pain Points (& Desired Gains) associated with the existing food-service system being operated. Can it fulfil a meaningful role, in terms of the proportion of main meal occasions it is providing for?
- **Feasible (technically possible)** – does the facility have the required kitchen set-up to allow for the storage and heating of ready meals to be done simply and easily?
- **Feasible (operationally capable)** – can ready meals be prepared and plated up by Food Service Assistants, alleviating some of the pressure facing chefs, who may be trying to complete too many tasks?
- **Viable** – can ready meals be incorporated at no incremental overall cost? With ready meals costing more than the basic ingredients required to produce a main meal, can the difference be offset by savings in other areas?

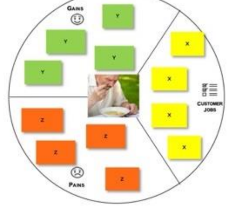
Design Led Innovation Framework



Feasible
Required kitchen equipment – store & heat? Staffing capability to deliver the meal?

Desirable
Fulfil a meaningful role? Address Pain Points existing food-service system can't deliver on?

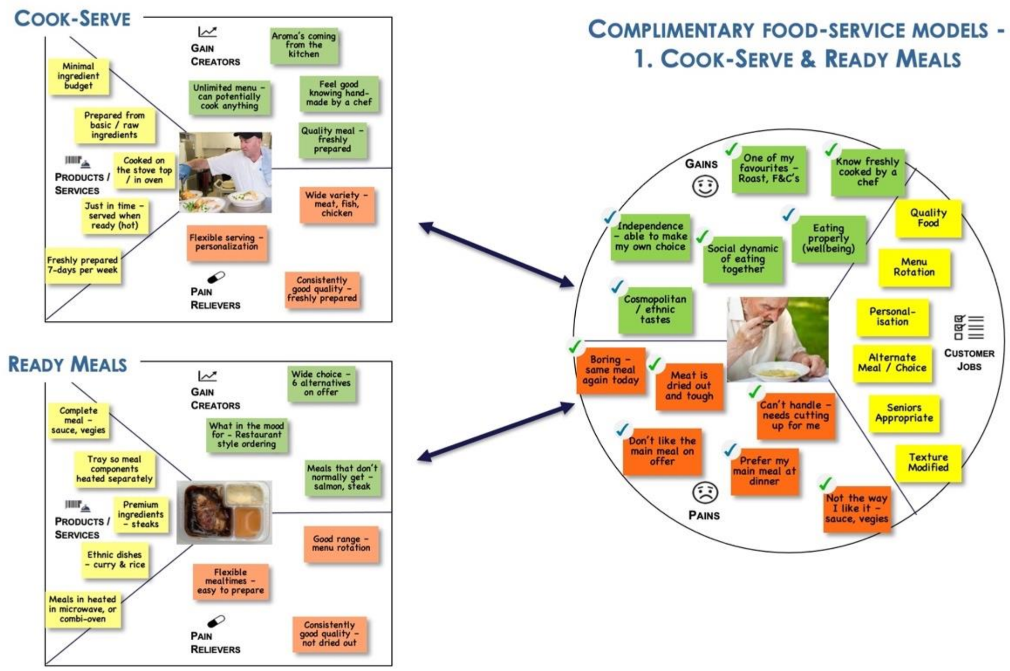
Viable
Possible to find the extra $2 for ready meals through re-jigging the COGS



5.2.9 Ready Meals in Combination with an existing Cook-Serve system in a small RACF

Desirable – address residents' pain points	Where Cook-Serve delivers 'freshly cooked', 'favourite dishes', 'the way I like it' and 'menu rotation' Ready meals addresses 'independence in making a choice', 'Eating properly', 'alternative meal' and 'proper meal at dinner'	✓
Feasible – technically possible	Lack the cool store capacity to hold anything more than a few days' supply, making it potentially costly to order stock every 2 to 3 days	✗
Feasible – operationally capable	Don't have FSA's to meaningfully assist, only PC's whose job it is to transport plated up meals to residents – hence not feasible for them to 'step up' and plate up meals	✗
Viable – cost neutral	Able to reduce skilled labour bill, by eliminating the need to have chefs incur penalty rates by working on the weekend, instead serving ready meals at this time	✓

As was the case in our RACF intervention, there were significant benefits to residents' meal satisfaction, addressing a number of existing pain points. Providing residents with meaningful choice, allowing them to eat a main meal at dinner and ensuring they are getting a nutritious meal, are all significant. It is also the case, that there is potential to reduce the 7-days per week, skilled labour requirement, though this would likely face barriers from residents used to being served a freshly cooked roast, every Sunday.



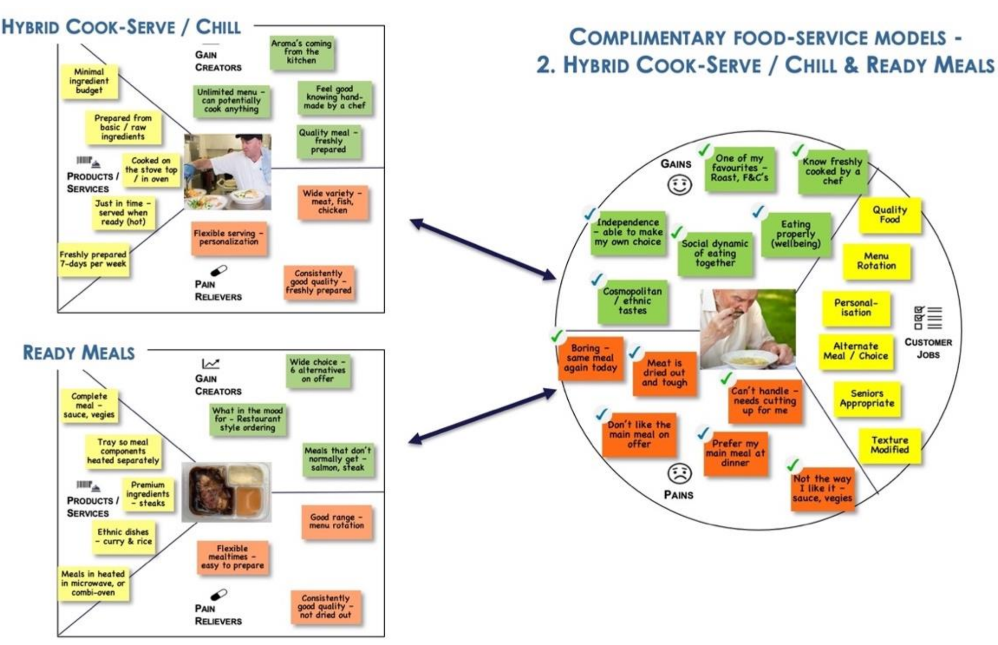
However, a Cook-Serve food-service system fails significantly, in terms of being able to accommodate ready meals without significant disruption. With only a traditional kitchen set up there is not the cool store space to store anything more than a few days' supply of ready meals and there is not the kitchen equipment required to heat a batch of meals. Similarly, the staff roles and capabilities does not allow them to deliver ready meals.

5.2.10 Ready Meals in Combination with a Hybrid Cook-Serve / Chill food-service system

Desirable – address residents' pain points	Where Cook-Serve delivers 'freshly cooked', 'favourite dishes', 'the way I like it' and 'menu rotation' Ready meals addresses 'independence in making a choice', 'Eating properly', 'alternative meal' and 'proper meal at dinner'	✓
Feasible – technically possible	With the need to pre-cook weekend meals, there is the cool room capacity to store a supply of ready meals. There are also combi-ovens in each of the ACF wings, in order to re-heat the weekend meal, which can be similarly used to heat a batch of ready meals	✓
Feasible – operationally capable	In larger ACF's the role of Food Service Assistants is well established, serving meals from Bain Marie's in each of the Kitchenette's. These semi-skilled staff are capable of batch heating ready meals and plating them up, with basic tailoring and so they look appetising.	✓
Viable – cost neutral	In a larger ACF, with cost efficiencies due to scale, there are more funds available for food ingredients. There is also the opportunity to reduce skilled labour costs, particularly eliminating the need to prepare an alternative meal choice	✓

Those RACF's that operate a Hybrid Cook-Serve / Cook-Chill system are well placed to benefit from the incorporation of ready meals. The biggest challenge chefs face with this food-service system, is being overwhelmed with the number of tasks, which means that preparing an alternative meal, delivering an appropriately nutritious meal and providing a proper meal at dinner time, don't receive the proper attention. Ready meals are well placed to fill this gap, providing a more complete experience for residents.

In large RACF's, there is the required cool room capacity and combi-ovens in the kitchenettes to support the delivery of ready meals. There is also FSA's staffing those kitchenette's who have the capability to prepare ready meals. This is not the case in small RACF's.

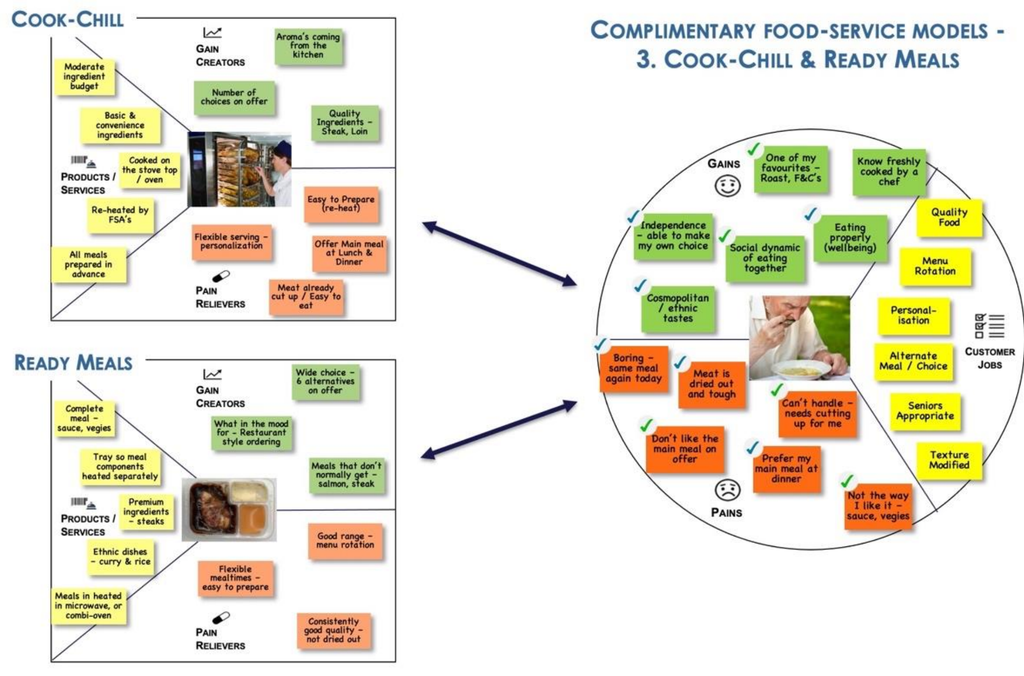


The challenge is re-distributing the COGS to support ready meals. However, with a reduction in the number of tasks required of chefs, and the extra food ingredient budget available in larger RACF's. it should be possible.

5.2.11 Ready Meals in Combination with a Cook-Chill / Freeze food-service system

Desirable – address residents' pain points	Where Cook-Chill/Freeze delivers 'independence in making own choice', 'social dynamic of eating together', 'favourite dishes', 'the way I like it' Ready meals addresses 'menu variety', 'eating properly', 'ethnic tastes', 'quality issues – meat dried out'	?
Feasible – technically possible	These facilities have plenty of cool store capacity to hold many weeks supply of ready meals. They also operate combi-ovens, so are able to batch heat a quantity of ready meals	✓
Feasible – operationally capable	Food Service Assistants currently work 7-days per week. They are used to safely re-heating each day's main meal, plus some alternative choices. They are skilled in plating up meals and adapting to personal tastes. Thus, they can easily accommodate ready meals into their mix of tasks	✓
Viable – cost neutral	There is limited scope to re-direct funds from skilled (chefs), unless they are no longer required to prepare alternative meals. Thus, the majority of the extra cost of ready meals would need to be sourced from existing Food Costs, which though larger than for Cook-Serve, are still considered to be "tight"	✓

The fundamental question is whether ready meals are considered to be a superior quality offering to meals that have been cooked a number of days ahead, and then re-heated prior to serving. It is the belief of Chefs that ready meals are of a comparable quality, and as such, will not offer significant advantages, given they are already offering residents a degree of choice. Where they do believe they need help, is in offering greater menu rotation and being able to offer more meals that residents particularly like – such as fish & chips.

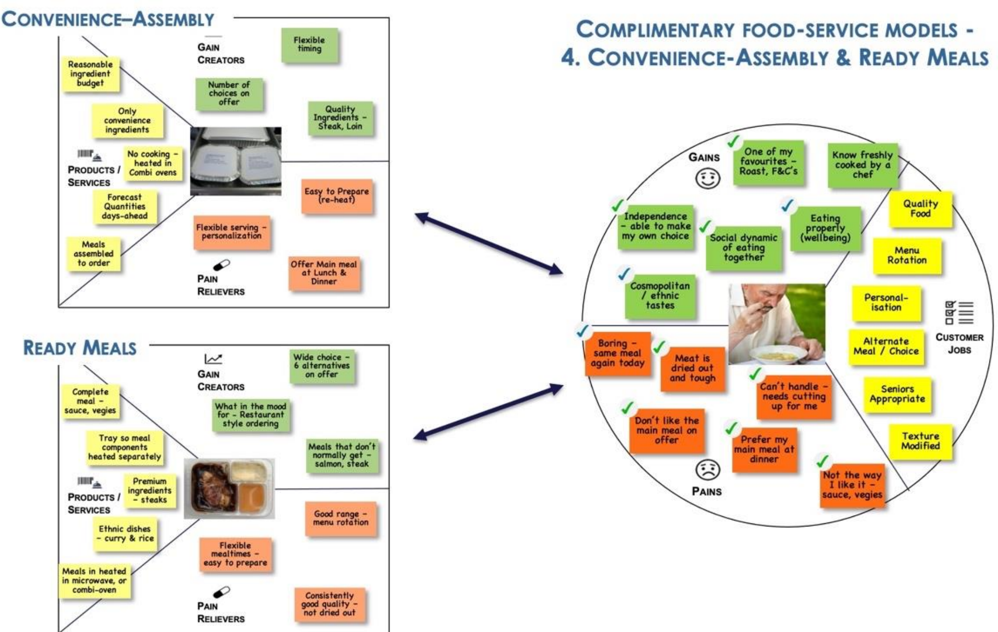


5.2.12 Ready Meals in Combination with a Convenience-Assembly food-service system

Desirable – address residents' pain points	Convenience-Assembly delivers 'don't like main meal on offer', 'prefer main meal at dinner', 'the way I like it', 'one of my favourites', 'make own choice' Ready meals addresses 'menu variety', 'eating properly', 'ethnic tastes'	?
Feasible – technically possible	These facilities are designed around cool store capacity; thus, they are able to hold many weeks supply of ready meals. They also operate combi-ovens, so are able to batch heat a quantity of ready meals	✓
Feasible – operationally capable	Food Service Assistants currently work 7-days per week. They are used to safely re-heating each day's main meal, plus some alternative choices. They are skilled in plating up meals and adapting to personal tastes. Thus, they can easily accommodate ready meals into their mix of tasks	✓
Viable – cost neutral	There is no opportunity to re-direct funds from either skilled (chefs) of semi-skilled (SFA's) labour. Thus, the cost of ready meals would need to be sourced from existing Food Costs (@ $14-90), which is used to purchase convenience components (i.e. Chicken Kiev's).	?

Aged Care Facilities that have adopted a Convenience-Assembly food-service model have already down-sized their kitchen facilities and do not employ any skilled labour (Chefs). Meals are produced from an array of 'Convenience Components' that only need to be heated from frozen, in an oven (i.e.

Chicken Kiev, Schnitzel). Combining these ‘centre of plate’ components with a range of vegetables, from a Bain Marie set up is believed to offer a reasonable quality meal.



So, whilst the food costs budget could likely extend to incorporate ready meals, there is little belief amongst Chefs that they offer any meaningful advantage over the existing Convenience-Assembly approach.

5.3 Developing the Business Model & Forecasting the Volume Opportunity

5.3.1 Value Proposition -> Business Model Canvas – Hybrid Cook-Serve / Chill

VALUE PROPOSITION – READY MEALS SUPPLEMENTING HYBRID COOK-SERVE/CHILL

Our	*range of ready meals, including premium cuts of red meat (i.e. lamb loin)*
Helps	*chefs of Aged Care Facilities that predominantly operate a cook-serve food-service system (5 days per week)*
Who	*are under pressure in delivering a fresh main meal, to thus prepare an alternative or provide a proper meal at dinner time*
By	*providing meaningful meal choice for residents, as an alternative main meal, or for those who want a proper dinner, giving them a feeling of independence and wellbeing*
Supported by	*ensuring they are eating nutritionally appropriate food – high in protein, the right texture and portion size and the range satisfies residents cosmopolitan tastes*
Unlike	*a Cook-Serve food-service system that is only able to deliver 1 proper meal*

BUSINESS MODEL – READY MEALS SUPPLEMENTING HYBRID COOK-SERVE / CHILL IN A RACF.

STRATEGIC PARTNERS	KEY ACTIVITIES	VALUE PROPOSITION	CUSTOMER RELATIONSHIP	CUSTOMER SEGMENT
Ingredient Suppliers - local *Ready meals providers – Andrews Meats Industries* *State government funding*	*Sourcing raw ingredients* *Chopping & prepping* *Cooking meal* *Serving meal, whilst still warm from Bain Marie*	*Our range of ready meals made with premium ingredients* *Helps chefs of ACF's operating a Cook-Serve system* *Who are under pressure to deliver an alternate main meal* *By delivering a choice for residents, giving them independence & wellbeing* *And ensuring they are eating nutritionally appropriate food* *Unlike C-S alone which is only able to deliver 1 proper meal*	*Residents make their choice the meal prior – either the meal freshly preferred by the chef, or a choice of red meat, chicken or fish*	*Residents of Aged Care Facilities have little to look forward to in life* *Food needs to be of an OK standard, be able to handle themselves and done the way they like it* *Meals are a highlight of the day – socialising with friends, having their favourite meals and making their own choices*
	KEY RESOURCES		**CHANNELS**	
	Chef central to activities – prepping & cooking *Commercial kitchen with modern technologies* *SFA's serve from Bain Marie's in Kitchenette*		*Meals are delivered by Food Service Assistants who re-heat meals in a Kitchenette set up*	

COST	REVENUES
$2-50 goes towards Main Meal Ingredients (of $10-20) *Overheads accounts for $7-80* *Skilled labour accounts for $6-50* *Semi-skilled labour accounts for $6-50*	*$31 Per Resident to provide all meals for the day*

5.3.2 Forecast Opportunity – Incremental Value Gain

With the pain points that are being addressed through the addition of ready meals, it is forecast that ready meals, with red meat as a superior ingredient, can have a significant incremental value implications:

Number of main meals fed in a facility that operate a Hybrid Cook-Serve/Chill food-service, in a large RACF – per week (28% of Aged Care residents)	➔ 217K x 28% x 7 days ➔ = 425K
Percentage of main meals that will be provided as a ready meal – taken from UoQ Intervention & Pain Points addressed	➔ 425K x 33% ➔ = 140K
Proportion of ready meals that will be red meat based, predicted to be 65%	➔ 140K x 65% ➔ = 91K
Value of a red meat based ready meal = $4-50	➔ 91K x $4.5 ➔ = $410K / week
Red Meat Value Creation - Annual equivalent	➔ $21.3 M

Note: Red meat currently appears prominently on the menu in Aged Care, but derived from a low value ingredient, with meals like Meat Loaf and Lasagne main stays of RACF's. Thus the incorporation of ready meals is not likely to lead to incremental volume, but will deliver incremental value, as ready meals will utilise superior / premium red meat ingredients

5.3.3 Value Proposition -> Business Model Canvas – Cook-Chill / Freeze

VALUE PROPOSITION – READY MEALS SUPPLEMENTING COOK-CHILL/FREEZE

Our	*range of ready meals, including premium cuts of red meat (i.e. lamb loin)*
Helps	*chefs of Aged Care Facilities that operate a cook-chill food-service system, where all meals are prepared days in advance*
Who	*deliver only moderate quality meals to residents, as in re-heating meals and with a focus on food safety, the end result is often dry and tough*
By	*providing a higher quality end result, through using ready meals, made from superior ingredients, whose quality is not compromised through re-heating*
Supported by	*ensuring they are eating nutritionally appropriate food – high in protein, the right texture and portion size and the range satisfies residents cosmopolitan tastes*
Unlike	*a Cook-Chill food-service system that suffers from limited staff capabilities*

BUSINESS MODEL – READY MEALS SUPPLEMENTING COOK-CHILL/FREEZE IN A RACF.

STRATEGIC PARTNERS	KEY ACTIVITIES / KEY RESOURCES	VALUE PROPOSITION	CUSTOMER RELATIONSHIP / CHANNELS	CUSTOMER SEGMENT
Ingredient Suppliers - local *Ready meals providers – Andrews Meats Industries* *State government funding*	**Key Activities:** *Sourcing raw ingredients* *Chopping & prepping* *Cooking meal* *Chilling / Freezing meal* *Re-heating meal & then serving* **Key Resources:** *Chefs bulk prepare a range of chilled meals* *Commercial kitchen with Kitchen technologies* *SFA's serve from Bain Marie in Kitchenette*	*Our range of ready meals made with premium ingredients* *Helps chefs of ACF's operating a Cook-Chill food-system system* *Who struggle to provide anything better than an OK meal, due to re-heating safety standards* *By delivering a quality ready meal that is always of a consistently good quality* *And ensuring they are eating nutritionally appropriate food* *Unlike Cook-Chill which is compromised in implementation*	**Customer Relationship:** *Residents make their choice the meal prior – either the meal freshly preferred by the chef, or a choice of red meat, chicken or fish* **Channels:** *Meals are delivered by Food Service Assistants who re-heat meals in a Kitchenette set up*	*Residents of Aged Care Facilities have little to look forward to in life* *Food needs to be of an OK standard, be able to handle themselves and done the way they like it* *Meals are a highlight of the day – socialising with friends, having their favourite meals and making their own choices*

COST	REVENUES
$2-50 goes towards Main Meal Ingredients (of $11-20) *Overheads accounts for $7-50* *Skilled labour accounts for $4-70* *Semi-skilled labour accounts for $7-40*	*$31 Per Resident to provide all meals for the day*

5.3.4 Forecast Opportunity – Incremental Value Gain

With the pain points that are being addressed through the addition of ready meals, it is forecast that ready meals, with red meat as a superior ingredient, can have a significant incremental value implications. However, there are entrenched views that need to be overcome, namely that a ready meal provides a meal of comparatively quality to a freshly cooked meal, or a meal that has been freshly cooked, chilled and then professionally re-heated (as is the case with the weekend roast).

For the Hybrid Cook-Serve / Chill food-service system we had some direct evidence of the ongoing uptake of ready meals, of 33%. Hence, we have been able to use this figure.

Whereas ready meals have not been tested within a RACF that operates a Cook-Chill food-service system. Hence, we believe that 80% of residents would give ready meals a go, but we can only hypothesise that half of those residents would perceive them to be superior to the main meal offering and hence the proportion of residents that would ongoing choose them. Thus, any estimate is based upon the range of meals being offered and a judgement as to their quality.

Number of main meals fed in a facility that operate a Cook-Chill/Freeze food-service, in a large RACF – per week (18% of Aged Care residents)	➔ 217K x 18% x 7 days ➔ = 273K
Percentage of main meals that will be provided as a ready meal – taken from UoQ Intervention & Pain Points addressed	➔ 273K x 40% ➔ = 110K
Proportion of ready meals that will be red meat based, predicted to be 65%	➔ 110K x 65% ➔ = 72K
Value of a red meat based ready meal = $4-50	➔ 72K x $4.5 ➔ = $324K / week
Red Meat Value Creation - Annual equivalent (52 weeks)	➔ $ 16.8 M

Note: Red meat currently appears prominently on the menu in Aged Care, but derived from a low value ingredient, with meals like Meat Loaf and Lasagne main stays of RACF's. Thus the incorporation of ready meals is not likely to lead to incremental volume, but will deliver incremental value, as ready meals will utilise superior / premium red meat ingredients

6. Conclusions

Satisfying the needs of Aged Care Residents, through the delivery of a daily main meal, is a complex and multi-faceted task – there are many criteria that need to be satisfied, from taste enjoyment to providing appropriate nutritional wellbeing. Associated with these tasks are a number of Pain Points and unmet Desired Gains that residents currently experience. Some of these factors have a significant impact upon behaviour, such as not being able to make their own choice, whilst others are less important.

Incorporating ready meals alongside an existing food-service system has been shown to greatly improve residents' levels of main meal satisfaction, addressing a number of significant pain points. Across four dimensions (Choice, Enjoyment, Experience & Overall Rating), resident's opinion of the meals they were served was between 'OK and Good'. Once ready meals were included and they were given a choice, residents satisfaction jumped considerably to 'Good to Very Good'.

However, the incursion of ready meals into an existing aged care facility identified that incorporating ready meals had its challenges. There were multiple feasibility factors that needed to be considered:

- Is it technically possible for the facility to cool store and bulk heat the required ready meals, having the necessary equipment to do this as a batch of meals?
- Does the facility have the operational capabilities to incorporate ready meals into what they are already doing?
- Are there staff in the right roles and with the required capabilities to heat and serve ready meals to the desired standard?

Across the Aged Care Facilities, there are 4 primary food-service models in operation. Some are the more traditional Cook-Serve model, where a meal is freshly prepared from basic ingredients each day. Whilst others have invested in kitchen technologies to be able to prepare a number of meals in advance, so they can be re-heated prior to consumption. Other facilities have gone even further, outsourcing all meal preparation, with meals being constructed from component parts.

These alternate food-service models have very different strengths and weaknesses, and the breadth of tasks they need to deliver can makes it difficult for any one specific food service model to deliver on all fronts. They also have very different cost structures, and the size / scale of a facility has implications for how it is set up (i.e. kitchenette's) and achieving economies of scale.

Subsequently, incorporating ready meals into an aged care facility, alongside an existing food-service system, produces certain challenges. These challenges are different to a facility operating a different food-service system and of a different scale.

To determine how well a ready meals offer would 'fit' requires the assessment of the following:

- Is it Desirable, fulfilling a meaningful role, addressing paint points residents currently experience?
- Is it Feasible, both technically to produce and operate from a staffing perspective?
- Is it Viable, able to be delivered with no net cost increase?

The greatest opportunity for ready meals is with Large facilities that operate a Hybrid Cook-Serve / Chill food-service system, representing 28% of residents. The key decision makers within these facilities can readily envisage the advantages ready meals can offer alongside their existing food-

service operation, making it the path of least resistance. Incorporating ready meals fulfils a number of key criteria:

- It addresses a number of significant pain points that residents are experiencing, in particular offering an alternative choice of main meal and providing a superior meal at the weekend
- Ready meals can be easily incorporated; with adequate cool storage & bulk heating available and Food Service Assistants are already in place and will be able to manage and deliver the meals
- Potentially this can be delivered for zero incremental cost, through savings on labour costs and flexibility in food costs

A further opportunity is amongst Large Cook-Chill facilities (18% of residents). However, there is a belief that freshly cooked meals are the 'gold-standard' from a quality perspective and hence this opportunity is more challenging, as the benefits of incorporating ready meals are not immediately obvious to key decision makers. This may require demonstrating the inherent value in delivering superior quality meals to residents.

These conclusions are drawn from the projects analysis regarding the way the food service systems in the RACF environment currently operates. There is a view that the Aged Care Sector, after a long period of relative intransigence, is likely to change over the coming years, due to a number of dynamic forces. It is believed that these forces will act as a tail wind for the adoption and acceptance of ready meals within the Aged Care Sector.

As the Baby Boomer generation increasingly make up new residents entering age care, they come with very different expectations and the financial means to support this. Recognition of the importance of nutritional wellbeing, more cosmopolitan tastes / shift away from meat & 3 veg meals, a higher expectation of meal quality and greater autonomy as to what they want to eat and when they want to eat it, will all drive significant change and acceptance of ready meals.

7. Recommendations

There is a significant opportunity, of $100M+, to develop and commercialise red meat based ready meals and similar value-added offerings, within the aged care sector. But more than this, is the knowledge that one would be making the lives of a great many senior Australians, that little bit better. For they have little to look forward to in life, but the enjoyment of tasty and healthy meals is something that they should experience.

The path to realising this opportunity needs to be cautiously managed, both to address the barriers to penetrating the market and the challenges to adoption – getting a solution to stick.

Ready meals in the supermarket environment have built up slowly but steadily over the past 10 years, to the point where they are now a significant part of a supermarkets offering, for both active singles and as a convenience family solution. Whilst the improvement in range and quality of these ready meals has been significant, so has overcoming the negative quality and other perceptual barriers that exist. The same hesitancy exists amongst both aged care residents and the chefs that are responsible for feeding residents, that a ready meal does not compare to a freshly cooked meal. Thus, getting ready meals accepted into a facility needs to be done by identifying a role they can play alongside, rather than initially challenging the quality of a chef prepared meal.

Secondly, ready meals are embraced by facilities, because they are easy to implement. So whilst they provide flexibility (the resident who wants something different to the meal on offer), they need to be able to be implemented without disrupting the existing food service system. This means that the facility must have the equipment to heat a batch of ready meals and most critically, the staffing capability to manage residents making a meal choice and then plating it up as a desirable offering.

Success requires a staged and targeted approach to rolling out ready meals.

The aged care sector has diverse food-service systems in operation, each with contrasting strengths and weaknesses. The recommended strategy is to gain a foothold in the sector, through the targeting of facilities that can see a significant role for ready meals and have the capability to technically and operationally incorporate ready meals into their existing food-service system. Thus, it is recommended to target larger facilities that operate a **Hybrid Cook-Serve / Chill model** (18% of facilities, 28% of residents), as ready meals provide the flexibility that is currently lacking, and the food service assistants have the capability to deliver ready meals. From this foundation it is possible to gain acceptance of ready meals, demonstrate the role they can play, and how they can best be implemented alongside an existing food-service systems.

Ready Meals need to be further developed to optimise their adoption, addressing new issues.

Whilst ready meals address existing pain points, they have also inadvertently introduced some new pain points for residents, that are critical to their ongoing success.

The red meat component of the ready meals needs to be easy to eat, so whilst it is desirable to offer residents a steak, it is not always practical for them to cut it up themselves, or chew and swallow it. Thus, consideration needs to be given to it coming in bite-sized portions, or texture modified, so residents can ‘cut it with a fork’. Ideally the packaging would be easier to open, as it is challenging for food service assistants to handle, particularly when opening several ready meals. The range could also be rationalised, as a choice of 3 options at a mealtime is likely sufficient.

A food-service system to support the delivery of ready meals needs to be formalised, across a number of dimensions. For example, whilst it is ideal to be able to offer ‘restaurant style’ ordering,

this places too much strain on kitchen operations, and there is little trade-off if residents make their selection at the meal prior, allowing meals to be heated in a batch process.

Ready Meals need to be further tested within an Aged Care Facility, to prove they can deliver on all dimensions: resident's acceptance, ease of implementation and commercial viability.

Ready meals are unlikely to be adopted by facility management, unless they can also demonstrate no overall incremental cost, but rather the re-distribution of the existing COGS.

The right target aged care facility needs to be selected, staff need to be trained appropriately to implement ready meals in the desired way and the mechanism for measuring performance needs to be put in place, not only residents' satisfaction levels, but the efficiency of kitchen operations and a financial assessment of the shift in COGS that is achieved. It is important that this test is implemented by the aged care staff, to demonstrate that it can be realistically sustained once the facility is no longer receiving direction and assistance as part of a test.

It is unlikely a single ready meals solution will prove to be a panacea across the aged care sector. It will require some adaptation to address the different pain points residents experience and the contrasting capabilities of the different food-service models in operation. Further research should encompass exploration of ready meals in component forms (i.e. the protein component as a stand-alone item), to allow greater flexibility for facilities to be able to incorporate into their core Bain Marie operation.

Consideration should also be given as to the role discrete market opportunities can play – texture modified meals, residents who have particular dietary needs (i.e. Vegetarians), or ethnic preferences.

Successfully serving Aged Care Residents is the cornerstone for future growth amongst a far broader group of Seniors

Seniors living in aged care facilities represents only 6% of Australian Seniors. Thus, there are other similar segment opportunities, such as Meals on Wheels, through to those Seniors who are living independently but are looking for a tailored, convenience meal solution. Seniors in Australia will go from 15% of the population, to over 22%, in the next 25 years.

The aged care sector is growing significantly from both a volume and value perspective, and there are several dynamics of change that will act as 'tail winds' that will further support the success of value-added offerings, such as ready meals. As the Seniors cohort becomes dominated by Boomers, they come with higher expectations of better-quality food, nutrition, and a desirable meal experience. They also have the financial means to act upon these expectations. Once an initial foothold is established, an offering and supporting food-service system evolved and proof of the value created, then red meat based ready meals can become a significant commercial player and bring a great deal of benefit to a large and disadvantaged audience.

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https://agedcare.royalcommission.gov.au/system/files/2020-06/DAA.0001.0001.0079.pdf

Findings from the Australian Aged Care Quality Agency 2018
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9. Appendix

9.1 Aged Care 2025+ Identifying demand and new value opportunities for Australian red meat industry (28 May 2020)

Video Conference 28.5.2020 - 2.00pm – 3.30pm

Attendees: **Professor Sandra Capra AM**, University of Queensland

Dr Karen Abbey, University of Queensland

Mikaela Wheeler, PhD Candidate, University of Queensland

Ngaire Hobbins, APD Dietician

David Jenkinson, DIJ Strategy

Peter Morris, Laurieton Lakeside Aged Care Residence

Bella Whang, Ipsos Australia

Susan Wall, Ipsos Australia

Dean Gutzke, Relationship Manager, Value Chain Meat & Livestock Australia

Peter Cox, General Manager, Creative Food Solutions

John Marten, Business development Manager, Creative Food Solutions

Welcome and why are we here? – John - “Would you eat this?” (Attached), Aged Care (Active Aging) 2025+ (attached)

Introduction: John to facilitate with each attendee.

University of Queensland attendees will discuss the importance of meal choice within the sector. Mikaela will also update the team on other associated projects they are working on.

Ngaire will share insights on the requirement of protein in the aging community’s diets. Critically, let’s start providing the sector with the food they enjoy eating. Ngaire can also comment on the opportunities that exist within the in-home care sector.

Peter Morris will provide an overview of the facility. Also, an update regarding potential timelines for access to the facility.

Peter cox will provide an overview regarding the capabilities of the CFS facility and the association with both the Andrews’s meats and JBS businesses.

David will provide an overview on the design led thinking project approach and its application to this project.

Bella & Susan can share their research knowledge of the sector and the qualitative and quantitative experience they have in the consumer research world.

Goal

- Get red meat onto the menu within ACF's & meals on wheels, providing greater choice, enhancing residents / customers inherent food enjoyment and address nutrient deficiencies. This requires re-thinking existing food supply and service models, to deliver a solution within overall ACF commercial constraints.

Hypothesis – (page 12, Aged Care PDF)

- Increased rates of malnutrition are being driven by poor food choices which are often not being eaten and are not providing residents with adequate levels of protein.
- Increasingly low food budgets are limiting available food options for Kitchen staff to prepare and residents to consume. This limits available choices of different food options for residents.
- Total cost of operations (Property, Plant, Equipment and Consumables) for ACF's, limits and erodes the available budgets, and subsequent choices, of available and appropriate food for residents.
- Many aged care residents are missing out on the enjoyment that should be experienced when consuming nutritious, edible and tasty food.
- There are alternative supply and service models that could better supply residents with a range of meals that are more nutritious, enjoyable and that generate less waste

Milestone 1 and beyond + the Elephant in the corner…….Group discussion and participation

Typically, MLA projects are broken down into Milestones that capture the key requirements for each stage of the project.

In a normal world we would meet face to face and kicked the project off, alas, we are not currently living in a normal world…….

The advent of Covid-19 has resulted in numerous one on one conversations and emails that have led me to developing the above-mentioned hypotheses. This helps me with my alignment, however as the rest of the working group has not had the opportunity to collaborate on these points, is there a need for further review or refinement?

This videoconference essentially covers off the requirements for Milestone 1.

The development of Milestone 2 will be one of the key outcomes of this workshop.

In order to test these hypotheses, we were planning on working with Peter Morris's team at Laurieton Lakeside Aged Care Residence. This remains the plan, however dates are as yet to be confirmed. **(John to cover off high level thought process on this and ask group for feedback and questions)**

Please note, finding information regarding Meals on Wheels or in-home food supply is incredibly challenging, however some assumptions as to market size can be found on page 13 of the Aged Care PDF

Working group requirements and participation still needs to be developed and confirmed. We will continue to work through this based upon the teams' feedback on the above points.

Alignment on next steps – Please consider your answers to the below questions.

- What actions do you believe are required in order to progress to Milestone 2?
- What do you believe is your role in Milestone 2?
- Are you comfortable in participating as part of Milestone 2?
- What is required in order for you to participate as part of Milestone 2?
- What thoughts or recommendations do you have based upon your participation in today's video conference?

Outcomes, notes and agreed actions:

The agreed goal is to get red meat onto the menu within ACF's & meals on wheels, providing greater choice, enhancing residents / customers inherent food enjoyment and address nutrient deficiencies. This requires re-thinking existing food supply and service models, to deliver a solution within overall ACF commercial constraints.

The workshop (28/5/2020) satisfied the Milestone 1 requirements as part of the MLA Aged Care 2025+ Identifying demand and new value opportunities for Australian red meat industry project.

The Milestone 2 requirements will include:

- A presentation of the findings from the completion of workshop 2. Workshop 2 will involve a full review of the findings from the attached UQ project proposal as well as any other work that is commissioned as part of the Milestone 2 activities. These additional activities will be confirmed during the course of the next 4 – 6 weeks.

Other action points include:

- CFS (Ruben) to provide UoQ (Mikaela) with the sales data for the existing supply of cooked ready meals/protein into the residential aged care sector.
- Peter Morris to review the UQ Project Proposal with internal Laurieton Lakeside stakeholders, and provide the working group with an update as to what can occur and when this may be able to take place.
- All working group participants to consider their ongoing roles within the project and to prepare any thoughts or recommendations. I will collect these from you upon my commencement in the new role.

9.2 UoQ engagement (Aged care residence 2) consultation (29 June 2020)

On 29 June 2020, a workshop was convened with the UoQ team to provide an update with respect to other ACF's potential participation in the trial. The outcome was that three UoQ proposal were presented to the group (Refer to the Appendix, Section 8).

There is obviously a significant amount of data that the UoQ team are in the process of collecting. The collection of this information will enable them to make an informed assessment of current costs, based upon actual spend, associated with the provision of food services within the sector. It was agreed that once the project team completes the ready meal trial (at the proposed SE Qld aged care residence site, proposed in South Port – to be confirmed) that we will be able to conduct a cost comparison between the provision of ready meals versus meals cooked from scratch. Ultimately and ideally, we would be able to provide a simple “Cost to serve” assessment, per meal, across both models.

It is considered that there may be additional models that could potentially be tested, such as cooked protein and veg portions, however ready meals were considered to be the path of least resistance initially and more in line with the immediate capabilities at CFS. Subsequently, on 3 July 2020, after meeting the SE Qld aged care residence, it was agreed that the Southport facility agreed to participate in the trial.

UoQ engagement & planning (Aged care residence 2) meeting (22 July 2020)

A meeting was convened by UoQ and the SE Qld aged care residence Southport on 22 July 2020. It was confirmed that the engagement meeting went well and the concept to participate in the trial was well received. The Southport residence agreed to start as soon as we have all planning in place.

The home sees this as a real opportunity to support residents. The agreed p includes:

1) UoQ (Mikaela) will start project work

2) Once that is in place there will be a site visit to discuss the project, engage staff, residents and relatives. This will be a good opportunity to get feedback around the meals.

3) UoQ (Mikaela) will be working on UQ ethics

Proposed the next meeting in early August with UoQ (Mikaela) providing feedback.

9.3 Food packaging – technical input session

A consultation was undertaken to provide technical input into the design of the food packaging. Proposed design is included in Figures 1 & 2. This is the 3-cavity tray which allows AMI to separate the meal components so that they can be easily plated and presented.

These trays proposes to use SMART technology. The film does not require piercing while reheating. The film will rise and "pillow" as the product heats and will slowly release steam as the product reaches temperature. This ensure that heat is evenly distributed throughout the tray and it also ensures that the meal protein remains moist and tender. Also, it is proposed that the supplier (CFS) simply applies a label for each pack containing NIP, Use By Date and product descriptor. This will save on significant artwork and product sleeve costs, which for the purpose of the trial, if added, would simply add to the finished cost of goods. There are prototype meals which were provided in the Aged care discovery document were found available now at local Woolworth stores (See separate Milestone 2 delivery document).

Figure 1: Food tray packaging - initial considerations.

Figure 2: Food tray packaging - initial considerations.

Using a design led approach, findings of the next phase will be presented using Value Proposition Canvas and Business Model Canvas Tools to describe assumptions and insights across desirability-feasibility-viability criteria.

9.4 Preliminary Menu Master List (Partial selection)

Table A1: Preliminary menu master list a) Angus Beef Sausages, b) Beef Casserole, c) Butter Chicken, and d) Char Grilled Lamb.

Angus Beef Sausages with Creamy Potato, Pea Mash and Onion Gravy

1. Remove sticker & place unopened meal in
2. Microwave on high for 3 minutes 30 seconds
3. Let the meal stand for 1 minute after heating.
4. Remove film taking care with any steam that may escape.

Keep refrigerated at 1-4°c.
Use on day of opening.

INGREDIENTS

Beef Sausage, Potato and Pea Mash (Potato, Butter, Cream, Salt, Pepper, Skim Milk Powder), Peas)), Onion Gravy (Water, Red Wine, Onions, Sugar, Molasses Caramel, Acetic Acid, Xanthan, Salt, Jus Powder (Sugar, Maltodextrin, Thickener (1422), Natural Flavours, Salt, Vegetable Powders), Red Currant Jelly))

NUTRITIONAL INFORMATION

Average Quantity per 100g	
Energy	645 kJ
Protein	7.8 g
Fat, total	9.5 g
-saturated	4.6 g
Carbohydrate	8.7 g
Sugars	2.1 g
Sodium	412 mg

ALLERGENS
Contains: Milk, Sulphites
May Contain: Fish, Crustacea, Peanuts, Sesame, Soy and Tree Nuts

Creative Food Solutions / Andrews Meat
38 Birnie Avenue Lidcombe NSW 2141
400grm (1 Serve)

Beef Casserole with peas in a classic gravy with sweet potato mash

1. Remove sticker & place unopened meal in
2. Microwave on high for 3 minutes 30 seconds
3. Let the meal stand for 1 minute after heating.
4. Remove film taking care with any steam that may escape.

Keep refrigerated at 1-4°c.
Use on day of opening.

INGREDIENTS

Sweet Potato Mash [Sweet Potato, Potato, Peas, Butter, Milk Powder, Salt, Pepper], Beef, Gravy {Water, Jus Powder [Sugar, Maltodextrin, Thickener (1422), Salt, Vegetable Powders, Potato Starch, Vegetable Gums, Vegetable Oil], Celery, Carrot, Onion, Leek, White Wine, Garlic, Thyme}, Carrot, Celery, Onion.

NUTRITIONAL INFORMATION

Average Quantity per 100g	
Energy	353 kJ
Protein	7.7 g
Fat, total	3.4 g
-saturated	1.7 g
Carbohydrate	4.9 g
Sugars	3.5 g
Sodium	194 mg

ALLERGENS
Contains: Milk, Sulphites
May Contain: Fish, Crustacea, Peanuts, Sesame, Soy and Tree Nuts

Creative Food Solutions / Andrews Meat
38 Birnie Avenue Lidcombe NSW 2141
400grm (1 Serve)

Butter Chicken in a creamy spiced tomato sauce with green beans and cauliflower rice

1. Remove sticker & place unopened meal in
2. Microwave on high for 3 minutes 30 seconds
3. Let the meal stand for 1 minute after heating.
4. Remove film taking care with any steam that may escape.

Keep refrigerated at 1-4°c.

INGREDIENTS

Chicken Breast, Butter Sauce (Water, Onion, Tomato Paste, Coconut Powder, Cream, Crushed Garlic, Lemon Juice, Vegetable Oil, Garam masala, Salt, Cumin, Paprika, Turmeric, Cardamom, Ginger) Cauliflower Rice, Green Beans.

NUTRITIONAL INFORMATION

Average Quantity per 100g	
Energy	567 kJ
Protein	14.2 g
Fat, total	7 g
-saturated	3.6 g
Carbohydrate	3.4 g
Sugars	2 g
Sodium	101 mg

ALLERGENS
Contains: Milk, Sulphites
May Contain: Fish, Crustacea, Peanuts, Sesame, Soy and Tree Nuts

Use By Date: 21.05.2020

Creative Food Solutions / Andrews Meat
38 Birnie Avenue Lidcombe NSW 2141
400grm (1 Serve)

Chargrilled Lamb with Potatoes, and Brussels sprouts in a rich mint gravy

1. Remove sticker & place unopened meal in
2. Microwave on high for 3 minutes 30 seconds
3. Let the meal stand for 1 minute after heating.
4. Remove film taking care with any steam that may escape.

Keep refrigerated at 1-4°c.
Use on day of opening.

INGREDIENTS

Lamb, Mint Gravy, (Water, Jus Powder (Vegetable Gum (Guar Gum, Xanthan Gum), Oil, Sugar, Thickener (Potato Starch), Natural Flavouring), Onion, White Wine, Sugar, Mint), Potato, Carrot, Brussels Sprouts.

NUTRITIONAL INFORMATION

Average Quantity per 100g	
Energy	524 kJ
Protein	7.4 g
Fat, total	7.6 g
-saturated	2.7 g
Carbohydrate	6.9 g
Sugars	2.8 g
Sodium	165 mg

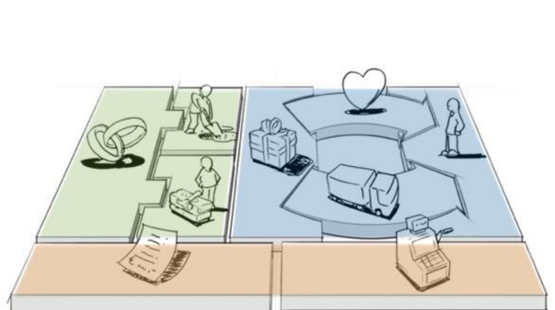
ALLERGENS
Contains: Milk
May Contain: Fish, Crustacea, Peanuts, Sesame, Soy and Tree Nuts

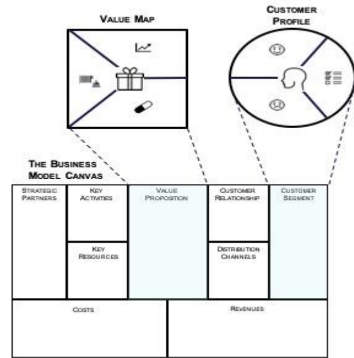
Creative Food Solutions / Andrews Meat
38 Birnie Avenue Lidcombe NSW 2141
400grm (1 Serve)

9.5 Developing the Business Model Canvas

The Business Model Canvas provides a holistic picture of what it takes for a business to successfully deliver on a commercial opportunity. The Business Model Canvas is made up of three sections:

1. Desirability (shaded blue) – Can we conceive a product / service that enough customers want, which solves big enough problem for them?
   The Value Map drives the Value Proposition and the Customer Profile drives the Customer Segment, within Desirability.
2. Feasibility (green) – Do we have the ability to access the key resources and capabilities required to deliver the solution?
3. Viability (orange) – Are we able to achieve desired revenue levels with associated cost structures that make it a viable business?

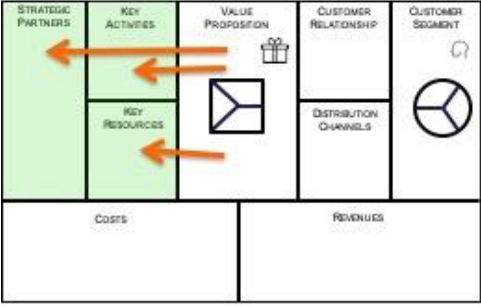




Develop Required Feasibility in Realising a Solution

It is critical to assess if we have the capabilities required to deliver the desired value proposition, whether from within the organisation, or through 3rd parties.

Strategic Partners would include the producers of the ready meals. Key Activities includes the activities that must be added to the food system – such as plating up the ready meals appropriately. Key Resources includes the resources required to support the value proposition, such as having the necessary fridge capacity to store a batch of ready meals, to cover a desired period of time.



Assess the Costs and Revenues Associated with Delivery

The nature of the Aged Care sector is that they operate on tight margins and there is only a set amount of funds available to support the delivery of daily meals, no matter how those funds are divided between different COGS (i.e. raw ingredients, chef salaries, kitchen equipment overheads, …). The challenge in assessing the cost base, is not so much the incremental increase or decrease in costs, but that the COGS have likely been reconfigured, such as reducing overheads, allowing more to be directed towards variable costs (such as on superior quality ingredients).

As part of the Cost estimate, the most significant key resources and activities must be assessed. From a revenue perspective, what are our customers willing to pay? How does this compare to what they are currently paying? Does this have an impact on the overall liking and reputation of an Aged Care Facility, amongst residents and their Guardians?

This assessment reveals the commercial opportunity for ready meals within an Aged Care Facility, like the Southport one that is the focus for the project.