

BEYOND MEAT: A REVIEW OF FOODPLUS

**A Programme Jointly Funded by ANZCO
and the Primary Growth Partnership
(Ministry for Primary Industries)**

PROGRESS REPORT

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EXECUTIVE SUMMARY

1. The FoodPlus programme is a seven year partnership jointly co-funded by ANZCO Foods Limited and the Ministry for Primary Industries under its Primary Growth Partnership programme. The programme aims to maximise the value that can be extracted from the processing of the red meat carcass. The focus is particularly on high added value foods and healthcare products.
2. This review was undertaken between August and December 2015, and encompassed governance, management, funding and intellectual property matters. Two specific review components addressed market research and new product development. The overall review also considered progress to date and likelihood of the programme achieving its designated outcomes.
3. The progress of the FoodPlus programme represents a step change for ANZCO compared with the period leading up to the commencement of the programme. Prior to that time, product diversification beyond branded processed meat products received very modest resources and was primarily an adjunct to Harvest operations. It is now a potential basis for transformation of the company beyond a meat producer to a manufacturer of high added value foods and healthcare products.
4. In the context of the well-known institutional shortcomings of the New Zealand meat industry, ANZCO's FoodPlus programme stands out as an innovative role model for the industry. While ANZCO is still some years away from achieving the full targeted corporate transformation, the company is heading in the right direction and on track for the revised FoodPlus programme to achieve its designated outcomes.
5. The quality of the governance and the management of the FoodPlus programme is generally very good, and there are no major issues with respect to relevant systems, accountabilities, procedures and processes.
6. The different roles of the Programme Steering Group vis-a-vis the line management and governance structures within ANZCO are well understood, and the execution of those roles is a credit to all involved. Minutes of the Programme Steering Group and ANZCO's Food & Solutions Advisory Board demonstrate clear and appropriate complementarities.
7. The current restructuring of accountabilities of those responsible for the FoodPlus programme will clarify and strengthen project management accountability.
8. There is a need for more accuracy in budgeting and forecasting by FoodPlus project managers.
9. There have already been some notable successes arising from the programme, with healthcare products in particular substantially exceeding their originally envisaged proportionate contribution to revenues generated.

10. The degree of product development and science stretch in Project 2 (Novel Foods) has been modest, but a new project focused on a novel meat product is much more technically challenging and aligns much better with PGP requirements.
11. The major competitive advantages identified for the FoodPlus programme arise from ANZCO's pre-production supply chain and production strengths. ANZCO therefore requires careful strategic decisions and third party collaborations to strengthen its position across the full value chains for novel products. ANZCO has had substantial successful experience with joint ventures over many years.
12. The review concluded that the programme needs to take greater cognizance of complex post-production value chain elements in executing and interpreting market research as a basis for product development decisions. There has been a tendency to commence product development on the basis of market research that primarily only identified apparent product demand.
13. There is a need for greater input and advice on post-production value chain elements, particularly with respect to healthcare, which is the product and market area most naturally foreign to ANZCO. This is important to ensure high quality decisions at FoodPlus project, and ANZCO management, advisory board and board levels.
14. From a strategic standpoint, ANZCO's board and management at all levels have a sound and commonly appreciated understanding of the need to structure effective and sustainable relationships with post-production value chain participants, including market participants, in order to strengthen the company's competitive advantages. This is demonstrated by some significant initiatives to link up with some major value chain participants offshore.
15. Consistent with this type of innovation, there have been some misjudgements in the commercialisation of some FoodPlus derived products. These are more than balanced by the above-mentioned strategic initiatives and some notable successes, particularly the blood and protein products, and the niche pericardia products for high value surgical applications.
16. The ups and downs of commercialisation reflect two important realities. The first of these is that the commercialisation of products developed through the FoodPlus programme is effectively an "action learning" (or "learning by doing") experience for ANZCO. The second is that ANZCO is seeking to transition from a traditional meat company with an inevitably strong primarily commodity-based culture, to a sophisticated, value added advanced foods and healthcare products producer. The baseline is the traditional meat industry's limited progress in moving in this direction.
17. The transformation of ANZCO is an important corporate goal, and the FoodPlus programme supports that goal. Organisationally, it is being facilitated via the Food and Solutions division of ANZCO. The structure, operations and culture of that division are critical to the achievement of the targeted transformation. They have been well thought out and executed. There are vitally important and functionally successful differences and complementarities between the Food and Solutions, and the Harvest divisions of ANZCO. The successful interfaces between the two groups with respect to supply of blood and

pericardia by the Harvest division are modest examples of the beginnings of the desired transformation.

18. The extent to which ANZCO achieves a comprehensive transformation into a food and healthcare company partially depends upon the commitment, response and strategic alignment of its shareholders who have all indicated full support for the FoodPlus programme. There is no question of the recognition by the Board of the challenge that ANZCO faces with respect to the FoodPlus programme, and also of the very high level of enthusiasm and commitment from the Chairman, Managing Director and senior management to support the programme through to completion.
19. It is important in judging the progress towards the desired transformation to consider profit margin and not just revenue. Profit margins on current and planned new products are far higher than profit margins on the traditional Harvest-based business. Accordingly, although the FoodPlus programme currently only accounts for a very small proportion of the red meat carcass that is currently lower value, the financial impact is already recognised as very positive, and is likely to be much more material by the time the programme comes to an end, and particularly by 2025.
20. It is too early to say what proportion of the carcass will eventually be utilised through the FoodPlus programme, but irrespective of the proportion, the financial impact is likely to be significant, ultimately transformative and an important example to the meat industry.
21. These points are important in interpreting the reduction in the scale and budget of the FoodPlus programme. The much higher margins achievable are even more important to the transformation than the revenue. The higher margins will drive investment decisions which will in aggregate be a key component of the transformation. There is still a determination within ANZCO to achieve a much higher revenue target more consistent with the original target albeit over a longer time horizon.
22. The overall economic impact of FoodPlus is difficult to determine, given the high level of uncertainties reflected in two major restructurings and resizing of the programme. Markedly different economic impacts have been proposed by economic experts. After reviewing the assumptions behind each, the lead reviewer supports a mid-high GDP impact estimate around \$200 million. Further, a range of qualitative factors suggests significant upside to this figure, which could conceivably lead to the programme approaching its original economic impact target of in excess of \$600 million.
23. The spillover impact of FoodPlus on the New Zealand red meat industry is much more likely to arise from ANZCO becoming a role model for the industry, rather than from the direct transfer of proprietary IP (after an exclusive use period) as originally anticipated by the PGP contract. There are a number of other initiatives around New Zealand seeking to add value from bovine and ovine lower value materials, but none as comprehensive as the FoodPlus programme. Most focus on different products. Gradually increasing awareness of the significantly higher margins achieved by the programme is likely to generate further such industry initiatives. While some may be competitive with ANZCO, more are likely to focus on different products and market segments.

24. ANZCO has also initiated linkages with key New Zealand participants in other industries including horticulture and dairy. This has resulted in transfer of useful lessons and methodologies, and is likely to result in further such technological and capability spillovers as the FoodPlus programme matures.
25. Overall, the aggregate evidence of progress is substantial and indicative of the fact that ANZCO is very much on a path to transformation. The proportion of overall operational activity accounted for by the FoodPlus programme is still small, but the impact on margin means that the programme punches above its weight within the company. All of the indicators of progress are positive and point to the programme entering an even more precise, exciting and larger scale phase of new product and market development, with national economic outcomes at least as good as projected and potentially a great deal higher.

KEY FINDINGS AND CONCLUSIONS

While it is clear that the FoodPlus projects have followed different trajectories with significantly different outcomes for each, some common themes across the programme can be pinpointed.

1. While market research has formed the basis of the product development work across the programme, Conducere found that there were some inadequacies in the extent to which commercial development was market-led. There were some shortfalls to varying degrees in the definition, scoping, design and collection of market research/intelligence and the analysis of the results across all of the projects.
2. With that caveat, the programme's stage gating, no/go product development decisions and subsequent prioritisations have generally followed a logical and systematic design-led process broadly consistent with best practice in novel product development. Programme management is working to improve "design led" to standards achieved by global FMCG and healthcare companies.
3. In aggregate, an "action learning" approach has effectively, if not intentionally, been adopted for the programme. "Action learning" has been defined simply as "an approach to solving real problems that involves taking action and reflecting upon the results"¹. The emphasis is on taking action rather than allocating large amounts of time to planning that can become excessive and counter-productive. The implication is that action learning will inevitably lead to successes and failures, and that those involved will learn valuable lessons along the way. This is exactly what has happened in the FoodPlus programme. Most failures have been efficient "fast failures" but irrespective, the learnings from failures have been valuable and they have been heeded.
4. Rather like focusing binoculars, the programme has consistently moved towards a clearer and narrower set of priorities, discarding projects, products and markets lacking sufficient promise, and slimming down the budget to suit the more tightly-focused programme. A more sophisticated approach to integrating critical marketing information into product development decisions is now evident.
5. The close involvement of third parties has markedly improved programme performance, and demonstrated the value of partnerships and collaborations with parties with critical knowledge and experience through the value chain beyond that available within ANZCO.
6. There is no argument that ANZCO is a highly-competent, internationally-competitive and well-respected meat company. As noted in the original business case, it had developed a small number of added value meat products. However, the change required to create a "food, nutrition and health care" culture across the company will be profound. It represents a very substantial departure from "business as usual". The core competencies, technologies, markets, customer and market intermediary expectations, product/service characteristics

¹ https://en.wikipedia.org/wiki/Action_learning

and regulatory environments for some of the products, especially the non-food products, are very different from those of even the very best international meat companies. Longer term, the extent of these differences and the strategic implications will need to be carefully considered by the board and major shareholders as the FoodPlus programme progresses towards its conclusion.

7. ANZCO's commitment to the comprehensive FoodPlus programme is an excellent role model for the traditional red meat industry. The advanced foods and healthcare products likely to emanate from the programme will in many cases be far removed from meat. This is the most transformative element of the programme and it is crucial that it is not constrained by traditional meat industry boundaries and assumptions.

RECOMMENDATIONS

The majority of the recommendations arise from the findings from the review of Market Research processes, in several cases – especially at the strategic level – confirmed by the review of Governance and Management and the review of Product Development processes. The emphasis of the recommendations reflect the fact that the FoodPlus programme is generally being governed and managed well, and is also being executed well in terms of product development systems and processes. It is in the strategic areas where that ANZCO can most improve the performance of the FoodPlus programme. In particular, there is a need to ensure that comprehensive and high quality market-based information (a) drives decisions on target products and markets, (b) helps determine project priorities and required core competencies and (c) informs decisions on how much of the post-production value chain ANZCO should seek to capture.

Governance

1. Strengthen the Programme Steering Group through the addition of an independent member with particular knowledge of the post-production value chains associated with advanced foods or healthcare.
2. Continue to seek expert independent advice, particularly with respect to healthcare, at senior ANZCO management and board levels.

Management

3. Increase capability in market-led commercial development and business model design in FoodPlus management.
4. Ensure Project Managers have experience that is aligned to the end-use markets and find ways to share insights and learning across the programme, particularly between projects targeting similar markets.

FoodPlus Projects, Resources and Allocation, Market Research and New Product Development

The importance of genuinely market led commercial development

5. Resource projects more explicitly to reflect end-use markets.
6. Continue to sharpen the programme's focus and to resource priority projects with increased staff if necessary.
7. Introduce a more systematic approach to market research activities, including continuing to engage NZTE and other expert support.
8. Use external expertise at a strategic level to help broaden and inform the discussion about market-led commercial development programme and business model design.

9. Appoint a Specialist Advisor to give FoodPlus project teams better direction on using market research to address business issues and guidance on techniques to provide the right type and quality of information to reduce uncertainty in decision making. (We note this has already been actioned).
10. Create market research plans that are more explicitly related to the delivery of business goals for each project, the key decision points and the types of research to be conducted.
11. Clarify criteria in the programme's Stage Gate process in terms of market-based information required for each decision point.

Document Traceability

12. Review the traceability of documentation and develop a common practice across all FoodPlus projects (eg project labelling and numbering).

Project Specific Areas

Project 2: Novel Food Products

13. Appoint a Project Manager with a marketing background in consumer goods or retail foodservice.
14. Revisit the Australia-New Zealand market prioritisation scoring framework.
15. Conduct market feasibility and validation studies on the priority markets identified by quantitative screening to complete the market selection process.
16. Use a Human Centred Design (HCD) approach in customer situations that are readily and frequently repeated so that solving the user need can be scaled to address a much larger opportunity and outputs can contribute to value proposition development.

Project 4: Stocks, Broths, Extracts and Flavoured Oils

17. Strengthen the overall focus towards strategic opportunities.
18. Review market intelligence gathered to help inform new product development strategy.

Projects 3, 6, 7 and 8: Protein Supplements, Biotissues, Bioculture and Nutrition

19. Ensure review meetings with customers and channels to discuss product concepts are structured to ensure understanding of the full value chain, important user needs and creation of a viable value proposition.
20. Develop a deeper understanding of the buying processes in large international medical/technical companies.

Reporting Systems and Performance

21. Ensure that project managers execute more accurate project budgeting and forecasting.
22. Risk analysis and management are an important part of programme management, and reported risks to achievement of targeted programme outcomes need to be more regularly updated.
23. To ensure that there are no misunderstandings between ANZCO and MPI with respect to public communications, they should agree a common communications strategy as approved by the Programme Steering Group.

Progress Towards Achieving programme Outcomes

24. Explicitly develop an “action learning” management philosophy across the FoodPlus programme.

Intellectual Property

25. Include trade secrets in the IP register.

1. INTRODUCTION - THE FOODPLUS PROGRAMME

There have been isolated attempts over several decades by the New Zealand meat industry to derive greater value from the red meat carcass that is destined for lower value uses. The FoodPlus programme is the first comprehensive and coordinated such attempt. The programme comprises multiple streams of technical research and product development - supported by market research - that consider a wide range of product and market opportunities that can be broadly categorised as food or healthcare related.

Importantly for the credibility of the programme, it is being executed by Christchurch-based ANZCO, the country's third-largest meat company after Silver Fern Farms and Alliance Group. ANZCO is jointly owned by Japanese companies Itoham Foods and Nippon Suisan Kaisha, as well as ANZCO's directors and managers, including chairman and founder Sir Graeme Harrison. In April 2015, the Overseas Investment Office approved Itoham's \$40 million application to increase its stake in the company to 65% from 48.3%, taking the company's overseas ownership to 81.8%. ANZCO's origins extend back to 1984.

In most respects, until recently, ANZCO could fairly be described as a conventional New Zealand meat company, albeit with roots in its development as a marketing business owned by the former New Zealand Meat Producers Board. It had developed some added value businesses. However, the FoodPlus programme has the potential to catapult the company beyond the boundaries of the meat industry.

ANZCO employs some 3000 employees worldwide and has eight offshore offices, procuring and processing prime New Zealand beef and lamb for delivery to more than 80 countries. ANZCO recorded revenue of \$1.26 billion in its most recent financial statements for the year to September 30, 2014.

A low profit:sales ratio is indicative of the low margins that characterize the traditional meat industry in New Zealand. For decades, the industry has been beset by intense rivalry in stock procurement and excess processing capacity. A study earlier this year noted no significant progress by the meat industry in solving its serious institutional deficiencies over some 25 years.

Also important in setting the context for the FoodPlus programme was the Meat Industry Association's 2011 Red Meat Strategy². This comprehensive study made a wide range of valuable strategic recommendations. However, it was essentially a meat focused document. It only referred very briefly to added value meat opportunities via simple bullet points, i.e. pharmaceuticals, nutraceuticals, ingredients, blood products, and pelts/hides/leather. The rationale for the FoodPlus programme adopted by ANZCO was not covered by the Red Meat Strategy in favour of improvements to the value chain of the essentially conventional red meat industry.

² Red Meat Sector Strategy. Meat Industry Association and Beef + Lamb New Zealand. Prepared by Deloitte. March 2011

The limited progress made by the industry in capturing and integrating the many valuable strategic recommendations of the Red Meat Strategy is reflected in the conclusions of the Meat Industry Excellence report five years later. This ongoing industry scenario, together with the concomitant highly cyclical revenues generated in the meat industry, are a key driver of ANZCO's rationale to diversify via the FoodPlus programme. Until the FoodPlus programme was initiated, there had only been very modest moves over just a few years towards added value operations beyond branded processed meat.

The FoodPlus programme focuses on extracting value from the entire red meat carcass. This is a more fundamental starting point for value addition than red meat. In effect it redefines added value. It offers value creation from non-traditional uses of the carcass that in the long term could conceivably reduce present dominant meat cuts and products to by-product status.

In this industry context, the FoodPlus programme is a comprehensive and innovative initiative and a role model that has the potential to comprehensively challenge traditional industry thinking.

2. OUTLINE OF THE REVIEW

Objectives of the review

The objectives of the review were to:

- i. Assess programme progress to date as a whole, in each of the objectives, and in particular the likelihood of the programme delivering the expected outcomes;
- ii. Identify any unintended consequences (positive and/or negative);
- iii. Assess internal and external factors affecting the programme including management and governance;
- iv. Identify any key risks to achieving the contracted outcomes;
- v. Identify potential additional benefits (spillovers).
- vi. Enhance the outcomes of the programme in terms of speed and magnitude of commercial outcomes.
- vii. Deliver recommendations for the future strategy, direction and delivery of the programme.

Scope of the review

The review involved a three pronged approach:

- The lead reviewer (Vantage Consulting Group) responsible for assessing the overall governance, management and IP elements of the FoodPlus programme, and for writing the overall report. Dr Peter Fennessy (AbacusBio) provided quality assurance oversight to the lead reviewer.
- A specialist market research consultant (Conducere) responsible for assessing the market research undertaken by the programme, the linkage between market intelligence and project/product development decisions and relevant strategic issues
- A specialist product development consultant (Drummond Food Industry Advisory Services) responsible for assessing the quality and appropriateness of the execution of the FoodPlus programme's product development programme

The review consisted of extensive interviews of those involved in the governance, management and execution of the FoodPlus programme, and some closely involved or interested stakeholders. The reviewers also reviewed a wide range of documents including the original business case, the business plans, agenda and minutes of the Programme Steering Group and relevant sections of the minutes of the ANZCO Food and Solutions Advisory board, numerous internal documents, standards, MPI/ANZCO agreements, third-party agreements and meat industry studies and reports.

Consistent with the objectives of the review, it was neither an audit, nor an assessment of the rationale for ANZCO's involvement in the programme. The three independent phases of the review were carried out between August and December 2015, with the market research and product development phases preceding the governance/management review.

3. PROGRAMME GOVERNANCE

The FoodPlus programme has a dual governance structure. The programme is located within the Food and Solutions division of ANZCO and the managers responsible for the projects that constitute the programme report to the CEO, Food and Solutions. This CEO and his team are in turn accountable to a Food and Solutions Advisory Board that is effectively a subcommittee of the ANZCO Board. Along with management, this body is responsible for FoodPlus programme resourcing, priorities and direction, including stop/go decisions on projects and project reorientation and restructuring as recommended by management.

In parallel with this, at the outset of the FoodPlus programme, MPI and ANZCO established a Programme Steering Group (PSG), which monitors the performance of the programme against the milestones and outcomes agreed between MPI and ANZCO.

Although the PSG and the ANZCO Board have different roles, they receive the same information on the progress of the projects. MPI also receives a report on the performance versus milestones information that is particularly important to MPI. This information provision policy means that MPI is as fully informed as the Food and Solutions Advisory Board and Board on the technical product and market development within FoodPlus, and on all decisions relating to resource allocation, setting of priorities, and changes to the programme.

The structure has worked well, and there is a great deal of goodwill and mutual respect between the representatives of ANZCO and MPI that engage with one another on programme governance. Both have the highest regard for the PSG chairman, who brings a background as a scientist and science manager and specific experience on national sheep and beef industry matters.

Programme steering group

The PSG meets monthly, typically with two meetings held by tele- or video conference and every third one face-to-face. The PSG is made up of two ANZCO and two MPI members.

The Programme Manager attends and services all meetings of the PSG (effectively via a “dotted line” accountability), and liaises with the chairman on a fortnightly basis. Minutes are kept and signed off, and action points are recorded and then checked for progress at the next meeting.

There is a good mix of skills across the group. Decisions are typically by consensus, which works well because of the high level of trust that took only a short time to develop between the parties and the harmony and common sense of direction which characterise PSG meetings. The capabilities of the chairman and his specific knowledge of the meat industry make an important contribution to these positive outcomes. The PSG also has a good relationship with the PGP Investment Advisory Panel. The interaction between the two, particularly two formal meetings characterised by a frank and honest exchange of views, has been particularly positive for the overall governance of the FoodPlus programme.

While the PSG does not have any line function in terms of controlling the operations of the FoodPlus programme, MPI members do not hesitate to promote operational suggestions, and these have been consistently well-received and typically acted upon by ANZCO.

The PSG has laid a foundation for valuable collaboration between MPI and ANZCO. In conjunction with ANZCO, it has been proactive in getting FoodPlus in front of MPI, e.g. with respect to trade policy, nutritional labelling and internal regulatory matters. MPI has established a reference group incorporating functions from across the Ministry specifically to deal with the most difficult problems where there is no obvious regulatory solution. The reference group is a very good example of government responding to private sector needs and anticipating rather than just reacting to important trade access and related problems.

Food and Solutions Advisory Board

The Food and Solutions Advisory Board (Advisory Board) meets six weekly to bi-monthly.

The FoodPlus programme manager contributes to the agenda for each meeting. Minutes are recorded and action points are noted and checked for progress at the next meeting.

The Advisory Board is an important sounding board for the Food and Solutions CEO, and the structure means that the board of ANZCO is particularly well-informed on the FoodPlus programme on an ongoing basis. The minutes clearly demonstrate the strong and clear guidance by the Advisory Board in the direction of a more focused programme, as discussed later in the report. The Advisory Board is also a useful bridge for linking the FoodPlus programme to the technological strengths of major shareholder Itoham.

The PSG Chair and permanent MPI representative attended a recent Advisory Board meeting, further cementing good relations and communication between MPI and ANZCO.

Scope for improvements

The FoodPlus Programme Steering Group could benefit from the addition of an independent member, or alternatively from access to independent expert advice with particular knowledge of the post-production value chains associated with advanced foods or healthcare.

Recommendation 1

Strengthen the Programme Steering Group through the addition of an independent member with particular knowledge of the postproduction value chains associated with advanced foods or healthcare.

Given the intention that the FoodPlus programme, within the wider context of the Food and Solutions division, is to be the catalyst for the transformation of ANZCO, it is important that the Advisory Board - and the ANZCO board itself - continues to receive independent advice on the critical aspects of novel market and product developments. To the extent that the FoodPlus programme's core competencies, technologies, products and markets increasingly extend into novel products and complex new markets, from a programme (and arguably board) risk management perspective, organised receipt of independent, high-level advice will be beneficial. This is particularly true for healthcare products, where regulatory, phytosanitary and end-user risks are typically the greatest types of risk, yet are the least likely to be well understood. Senior management is already taking appropriate actions in this area and needs to continue to do so.

Recommendation 2

Continue to seek expert independent advice, particularly with respect to healthcare, at senior ANZCO management and board levels.

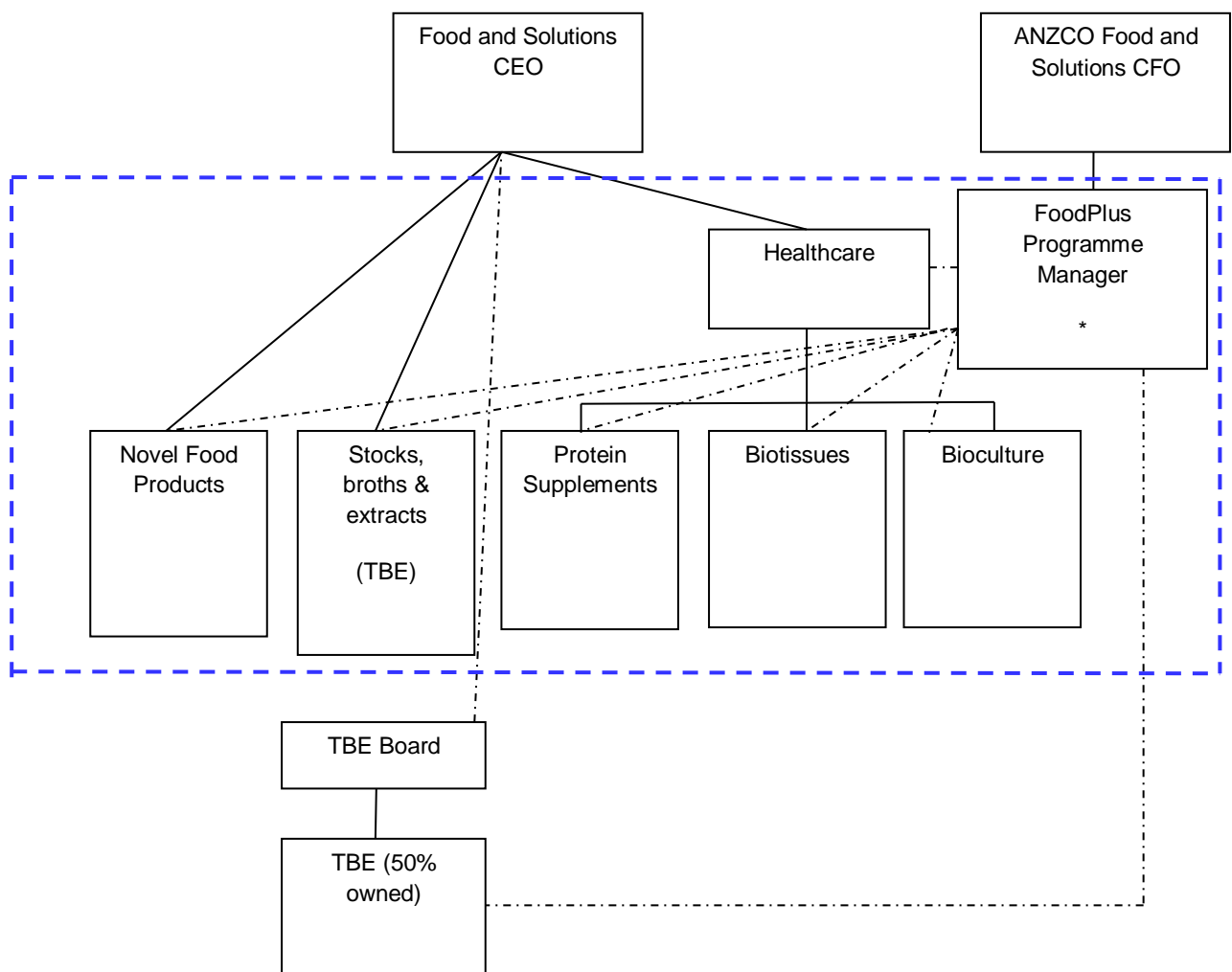
This is important in order to validate product and market related decisions by, and outcomes from, the FoodPlus programme in areas that are high-risk to ANZCO because of their inherent new products/new market or regulatory characteristics.

The topic of governance is expanded upon further in Section 11.

4. PROGRAMME MANAGEMENT

The management structure of FoodPlus is located within the Food and Solutions Division. To date, it has generally worked satisfactorily. Conducere noted that there is scope to improve allocations of responsibilities so that technical NPD staff are not expected to make market-related decisions. Accountabilities could also be more logically organised. Both of these issues are already being addressed as indicated in the following diagrams.

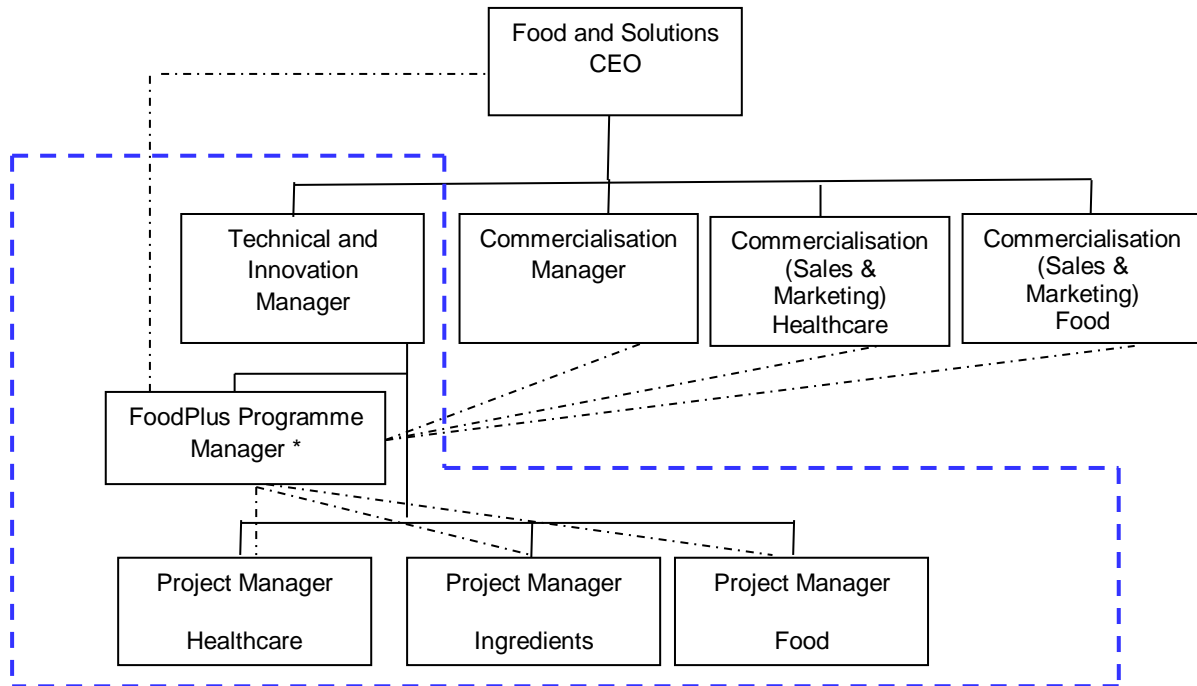
Present FoodPlus Programme Management Structure
(The actual FoodPlus programme consists of those within the blue dotted line)



Footnote: * The Programme Manager reports to the CFO for administrative purposes, but liaises continually with the Food and Solutions CEO on the operation and compliance of the FoodPlus programme.

While the management structure has worked quite well, over time it has become clear that there is a need to ensure that product development staff specialise more explicitly within their area of expertise. The evolution of the FoodPlus programme has created an opportunity and need for commercialisation, marketing and sales to be handled by specialists in those areas. This greater specialisation is reflected in the following proposed new structure.

**Revised FoodPlus Programme Management Structure
(within the blue dotted line alongside commercial roles.
Details still being finalised, to be implemented early 2016)**



* The FoodPlus Programme Manager will liaise with all programme staff, and also with the Food and Solutions CEO and those with commercialisation and sales and marketing roles.

There are also opportunities for fine tuning of management capability related to the FoodPlus programme, as indicated in the following recommendations.

Recommendation 3:

Increase capability in market-led commercial development and business model design in FoodPlus management.

Recommendation 4:

Ensure Project Managers have experience that is aligned to the end-use markets and find ways to share insights and learning across the programme, particularly between projects targeting similar markets.

For example consumer buyer (FMCG-food service) vis a vis expert buyer (medical-technical). Find ways to share insights and learning across the programme, particularly between projects for similar end - user markets - e.g. on markets, customers, consumers, research services.

5. FOODPLUS PROJECTS, RESOURCES AND ALLOCATION, MARKET RESEARCH AND NEW PRODUCT DEVELOPMENT

This section summarises the key conclusions cited by Conducere in the review of the FoodPlus market research, by Drummond Food Services Advisory (DFSA) in the review of the FoodPlus new product development, and observations by Vantage Consulting Group during the governance and management review.

The importance of genuinely market led commercial development

Conducere found that there were areas for improvement in the extent to which commercial development was market-led. There were shortfalls to varying degrees in the definition, scoping, design and collection of market research/intelligence and the strategic analysis of the results across all of the projects. These across-the-board findings need to be factored into the individual project analyses outlined below.

Recommendation 5:

Resource projects more explicitly to reflect end-use markets.

For example, consumer goods products vis a vis med-tech markets. The skills and experience required to develop successful Go To Market strategies are different. Ensure project teams know what evidence is required to demonstrate a compelling and sustainable value proposition that is the foundation of a commercial business case.

Recommendation 6:

Continue to sharpen the programme's focus and resource priority projects with increased staff if necessary.

Ensure a strong and ongoing commitment to prioritise FoodPlus project areas, business strategies, research goals and market research plans based on market attractiveness, probability of success and investment considerations.

Recommendation 7:

Introduce a more systematic approach to market research activities, including continuing to engage NZTE and other expert support.

Each task should have a research brief that defines the outcomes required from the research that is discussed and agreed with the individual conducting the research.

Recommendation 8:

Use external expertise at a strategic level to help broaden and inform the discussion about market-led commercial development programme and business model design.

Recommendation 9:

Appoint a Specialist Advisor to give FoodPlus project teams better direction on using market research to address business issues and guidance on techniques to provide the right type and

quality of information to reduce uncertainty in decision making. (We note this has already been actioned).

Recommendation 10:

Create market research plans that are more explicitly related to the delivery of business goals for each project, the key decision points and the types of research to be conducted. The methodology and scale of research must reflect the size and complexity of actions that business will commit to following a positive result.

Recommendation 11:

Clarify criteria in the programme's Stage Gate process in terms of market-based information required for each decision point.

Document traceability

DFSA noted particularly good examples of document traceability in the Biotissues and Bioculture projects, but not in all projects.

Recommendation 12:

Review the traceability of documentation and develop a common practice across all FoodPlus projects (eg project labelling and numbering).

Project 1 – Novel Raw Materials

Project 1 had ceased operation prior to the commencement of this review. The project tended to focus on novel raw materials that would have potential for Project 2, Novel Foods. The original focus was on four sub-projects which included characterisation of raw materials. In retrospect, it may have been more valuable for Project 1 to have explored the potential of novel raw materials for more genuinely innovative foods than simply those within the Project 2 category. Part of the problem lies in the stretch and scope of foods in Project 2 to date - they are new and generally within ANZCO's existing manufacturing capability rather than constituting innovative foods.

The market research being undertaken could open up opportunities to resurrect some of the products explored in Project 1.

Project 2 - Novel Food Products

The original Novel Food Products business plan included some very broad brush figures on the global food service industry and a "focus" on creating a "wide range" of novel food products. The approach taken may however have been helpful in providing ANZCO's board with a vision of the potential financial upside of the FoodPlus programme. The subsequent reality was that this project applied the most comprehensive approach to market assessment, in a context of minimal initially available information on target markets. Project priorities were based on a combination of international research monitors and quantitative market analysis commissioned in Australia and New Zealand using a Strategic Opportunity Scorecard. The result was a robust information base derived from

multiple sources and able to be cross referenced for each country, industry and market. This market information base was a strong platform that enabled FoodPlus to focus higher level qualitative research in target regions. Accordingly, sector selection criteria were appropriately applied.

Reflecting the sounder market analysis underpinning this project, progress in Project 2 has been more focused than suggested by the originally envisaged number of projects and multi-disciplinary teams, and has included a number of commercialisation successes. These have generally been responses to discrete market opportunities and have been characterised by only modest technical stretch. There has also been a number of unsuccessful product development projects within Project 2.

Acknowledging the commercial successes to date, DFSA concluded that there was scope for the FoodPlus programme to increase the science and technical stretch within Project 2. This would necessitate a shift from product-focussed development with immediate delivery to more strategic NPD where the development phase included the use of food science principles and research to deliver meat proteins in an innovative form. A collaborative NPD team would include research providers together with ANZCO personnel to deliver, for example, a more food structures based approach that would ultimately result in an innovative meat based solution.

A more recent project, focused on a novel meat product, includes greater technical stretch in certain aspects of the processing phase.

Conducere noted the need for a project manager with a marketing background in consumer goods or retail food service. Human Centred Design specialists can most usefully contribute to development of important value propositions for scalable opportunities within Project 2 rather than being used to address issues of market feasibility and validation.

Recommendation 13:

Appoint a Project Manager with a marketing background in consumer goods or retail foodservice.

Recommendation 14:

Revisit the Australia-New Zealand market prioritisation scoring framework.

Recommendation 15:

Conduct market feasibility and validation studies on the priority markets identified by quantitative screening to complete the market selection process.

Recommendation 16:

Use a Human Centred Design (HCD) approach in customer situations that are readily and frequently repeated so that solving the user need can be scaled to address a much larger opportunity and outputs can contribute to value proposition development.

Project 3 - Protein Supplements

Limited available published market information indicated which geographic areas represented the best opportunity. The paucity of published information led FoodPlus programme management to move quickly into the market and identify industry experts who could help guide the project.

This project was outsourced to two independent food development and technical consultants, under the guidance of ANZCO Healthcare. This was a commercially- and technically-astute decision, as the relevant expertise was not available within ANZCO, and the consultants were well qualified to undertake the development work.

This project is a good example of the significant expectations upon staff involved in the FoodPlus programme to achieve early “runs on the board”.

This area serves to demonstrate the natural tension between the expectations of the FoodPlus programme team and ANZCO’s appetite for more science/clinical and capital investment. The latter is inevitably limited by competing internal demands for investment and return on investment criteria established by the company.

While Project 3’s market focus on subsequent product development is commendable, it is important that the FoodPlus programme continues to investigate further opportunities.

Project 4 - Extracts, Stocks, Broths and Seasoning Oils

Beyond the scope of the FoodPlus programme, but important to Project 4, was the acquisition by ANZCO’s 50% owned joint venture company Taranaki Bio Extracts Ltd (TBE) of a new processing plant (the third at TBE).

Essentially, the FoodPlus programme then had access to a major plant. The initial plan envisaged customised product types across a number of categories this would have been very demanding on the personnel involved and in attracting the necessary skill mix and establishing international partnerships. Project managers have worked assiduously on opportunities, and much greater product focus than the originally envisaged list quickly evolved. The project team is strong and well balanced, and highly motivated. Proximity to the rendering plant is a valuable source of competitive advantage.

TBE now has a strong working relationship with NZTE and the team responsible for Project 4 has found some good market opportunities and commercialised some initial products. Production costs are very sensitive to yields achieved from raw materials, and the TBE team is focussing on yield improvements in prototype products. The team is to be commended for now seeking out some product opportunities with greater technical stretch. It will be important to develop greater marketing sophistication.

The team is in a good position to identify and exploit more strategic market opportunities. This will require reviewing market intelligence to ensure that the marketing strategy takes particular account of market attractiveness, market trends, competition and market segments to identify the best potential opportunities.

Recommendation 17:

Strengthen the overall focus towards strategic opportunities.

Recommendation 18:

Review market intelligence gathered to help inform new product development strategy.

Project 5 - Intermediate Processed Foods

This project ceased operation virtually before it got off the ground and was rolled into Project 2 in 2013. The considerable natural common ground between the two projects outweighed any rationale for maintaining the project as an autonomous endeavour. Several early good points from the project planning stand out:

- leveraging off Project 4
- a modest and manageable number of target products
- good awareness of the different factors important to manufacturers vis a vis end consumers
- acknowledgement of the interaction between processing and food constituents in the sensory science, and good appreciation of the need to model final process forms.

Project 6 Biotissues

Conducere characterised the market for biotissues as small, specialised, and high growth with relatively few customers. Published market off-the-shelf reports were obsolete, but some preliminary market research proved useful. Based partly on the market research, and enquiries from trading houses, Project 6 sensibly restricted the number of target products and has centred primarily on the extraction and modification of pericardium for surgical applications, and other specialised products. ANZCO brought in technical expertise to develop the pericardial market opportunity. The project manager has a very good knowledge of current and potential markets and excellent relationships with buyers.

The Biotissues project has produced some excellent outcomes for ANZCO. The FoodPlus programme has successfully developed cross-linked pericardium which has been commercialised by ANZCO - a good example of moving up the value chain. The reviewers were also impressed by the buy-in of the plant project manager responsible for raw material supply, including the motivation and training of plant staff. Plant management and staff played a crucial and collaborative role in the development of the complex value chain involved in extraction, preservation and distribution of pericardium. Critical issues included ensuring that plant staff understood the surgical end use of the product, selecting animals within particular age bands for pericardial extraction, complying with intensive audits by customers, preserving pericardial material within a narrow temperature band, facilitating high level of traceability and ensuring delivery within a tight timeframe.

More importantly, the collaboration provides an excellent example of the beginning of the transformation of ANZCO from a traditional meat processing company to a sophisticated manufacturer capable of achieving its vision. Within Project 6, there are good examples of the operation of the FoodPlus programme's stage-gate process.

Project 7 - Bioculture

This project is concerned with the development of products derived primarily from bovine bloods and serum, targeting medical intermediary markets where product end-uses are very highly regulated. Early and preliminary analysis of available published market information concluded that such information was very limited. ANZCO made a very good project manager appointment at the outset of the project. The incumbent was market-based and proved adept at establishing market networks, including a Global Expert with a long track record in the serum company, and in generating important market intelligence.

The FoodPlus project team has learned a great deal technically and in understanding world markets from its involvement with ANZCO's joint venture Bovogen. The project team is working hard to develop a range of new products for new markets. Given the highly technical nature of Project 7 products and their applications this is an area where collaborative research with both potential customers and research institutions has the potential to deliver leading edge product solutions by the end of the FoodPlus programme.

Project 8 – Nutrition

The focus of this project was anticipated to be on nutritional supplements. Early in the life of the programme, the project was put on hold because of insufficient market opportunities - identified with the assistance of a US market expert who prepared appropriate market intelligence to support the programme's Go/No Go stage-gate process.

Project 8 is no longer operational, but components of it have been integrated into Project 7.

Recommendations for Projects 3, 6, 7 and 8

Recommendation 19:

Ensure review meetings with customers and channels to discuss product concepts are well structured to ensure understanding of the full value chain, important user needs and creation of a viable value proposition.

Recommendation 20:

Develop a deeper understanding of the buying processes in large international medical/technical companies.

There is a need to use industry expert insights to critically assess major customers' propensity to purchase in specialist medical and complex technical markets based on a full commercial evaluation of barriers to change. Customer feedback processes need to be strengthened to provide high quality information on prototype products.

6. FUNDING

Since the inception of the programme there have been no difficulties with or between MPI and ANZCO with respect to programme funding. ANZCO's invoicing and supporting information has been of a high standard and timely, and payments from MPI have been appropriately transferred as agreed between the parties.

MPI conducted a financial audit of the FoodPlus programme in mid-2015 and found ANZCO's financial management systems to be suitably robust and effective.

Funding has been adjusted downwards twice to reflect narrowing scope and greater focus of the FoodPlus programme, as noted elsewhere in the report, and budgeting and transaction processes have been adjusted smoothly to accommodate these changes.

7. REPORTING SYSTEMS AND PERFORMANCE

Basis of reporting

Good reporting systems commence with the gathering of adequate and good quality information. There are several different information streams within the FoodPlus programme and in aggregate, they provide the basis for effective reporting on the progress and status of the programme and the use of PGP funds.

Stage-gating and prioritisation meetings are a feature of the FoodPlus programme. They represent a continuous project review and decision-making process, and provide important information on project performance. Frequent and formal project reporting has been built into the FoodPlus programme management regime. This encompasses PGP milestones and also provision of cost information to the ANZCO accounting system. The PSG discusses the implications of stop/go decision points for all projects. Within ANZCO, there is a need for more accuracy in project budgeting and forecasting.

Recommendation 21:

Ensure that project managers execute more accurate project budgeting and forecasting.

A timesheet system is used for all staff involved in the FoodPlus programme to allocate their time to the programme. Auditing of the system was not within the scope of the review. However, a strong feature of the review was the clear sense of responsibility among ANZCO and TBE staff interviewed to record the allocation of their time fairly and accurately.

Reporting to the Programme Steering Group

The primary reporting from a programme accountability perspective is to the Primary Steering Group, which meets monthly. Reporting is both of a high quality and comprehensive. Reporting typically covers the annual planning period. Key elements of the PSG reporting template are:

i. Programme management recommendations to the Programme Steering Group

This short section seeks specific approvals from the PSG encompassing all matters covered in the report.

ii. Financial implications of changes to the project annual plans

Any such implications are noted and budgets adjusted accordingly.

iii. Project status summary

This section summarises the overall status of delivery against agreed outcomes. A “traffic light” system is used to highlight the status of each project with comments on any orange and red ratings.

iv. Progress overview

The goal of each project is reiterated, along with a project overview and a specific comment on any progress or lack of progress during the period covered by the report.

v. Achievement measures completed during the report period

For each project, milestone achievement measures are summarised, along with the original due date and actual date completed. Output and next steps and implications are reported alongside. An improved format would be for this particular report to encompass just the reporting period since the last PSG meeting rather than including milestone achievement measures that have been completed in previous periods.

vi. Intellectual Property

Consistent with the MPI/ANZCO agreement covering IP principles, key IP outputs and expected utilisation are recorded. As noted in the IP section of this review, there is a need to add an additional column to allow monitoring of the five-year timeframe for ANZCO to make any proprietary IP available on commercial terms.

vii. Communications

Key communications and publications, including content, target audience and reach are reported.

viii. Financial detail

For the suite of projects, ANZCO, Crown and total actual and budget are recorded for the period covered and for the year-to-date. There is a separate table for ANZCO and Crown variance against budget also covering all projects. A further and particularly important table includes notes on budget variances for each project. An improved format would be for this variance report to encompass just the reporting period since the last PSG meeting - i.e. base it on project costs, investors' contributions and budget for the last month rather than the year-to-date period.

Another table details forecast project expenditure the end of the financial year. A final table shows variances against budget for the preceding quarter for each project.

It would be preferable to have the commentary on budget variances match the periods between PSG meetings rather than the year to date. This would provide greater focus and clarity for PSG members in monitoring programme performance.

ix. Risk Management

Risks identified in the current progress report are noted, including the original date reported, impact and mitigation. It would be helpful for the "Impact" column to be more specific on the extent of the impact (i.e. high, medium or low).

Recommendation 22:

Risk analysis and management are an important part of programme management, and reported to achievement of targeted programme outcomes need to be more regularly updated

x. Commercialisation register

The Commercialisation Register identifies products, markets and customers for each product category, the original date of the commercialisation, sales to date and volumes of each product category. This is particularly valuable in indicating the significant contribution of a minority of projects, which in turn is useful in project prioritisation decisions. The register would be more informative if there were separate columns for sales and volumes since initial commercialisation, and sales and volumes since the last report.

xi. Skills and capability development

Consistent with the PGP programme's emphasis on capability development, this section reports new positions created for new graduates or early career employees and student internships. The report is a cumulative one for the programme since its inception. It is suggested that any specific changes since the last PSG meeting be explicitly noted.

xii. Collaboration

This section notes collaborations with universities and private companies, reflecting the importance of such collaborations and PGP funded programmes. The report is also a cumulative one for the programme since its inception. It is suggested that any specific changes since the last PSG meeting be explicitly noted.

xiii. Individual project reports

This section includes more detailed reporting on high priority projects including activities, outcomes/results/decisions, actions (immediately past and pending) and route to commercialisation information. There are further details of project risks, impacts and mitigations, and allowance for specific priority project related capex, intellectual property and publicity/third-party contacts. The improved tabulated presentation of individual project reports, introduced in the July-September 2015 report, is commended.

xiv. Appendix 1 - Achievement Measure tables

This appendix again uses the "traffic light" approach to list all milestones by project, with the status recorded as on track (green), cautionary - issues arising and being attended to by management (yellow) or major issues need to be addressed if outcomes are to be achieved on time and within budget (red). The last category includes milestones that are no longer achievable. There is a column for comments, but greater explanation of the red status milestones is warranted.

Overall, these reports to the PSG committee (copied, apart from Appendix 1, to the Food & Solutions Advisory Board) are comprehensive and high quality. There is a mix of year-to-date data and data relating to the period since the last PSG. As noted, there are instances where there should be greater emphasis on reporting on progress since the last report to the PGP (or using quarterly data as a proxy), rather than year-to-date. Year to date reporting inevitably incorporates information that has been previously reported to the PGP, and tends to camouflage information relating specifically to the period since the last meeting.

Internal ANZCO reporting

The ANZCO Food and Solutions Advisory Board meets six-weekly to bi-monthly. The Board members involved have each received the same information on project progress as the Programme Steering Group.

The Food and Solutions CEO, the FoodPlus programme manager and project managers meet weekly along with executives responsible for sales and marketing and branding. Project reports are provided to enable the group to prioritise projects. There is another formal meeting of project managers held quarterly at which 90-day plans are debated and determined.

Minutes and action points from meetings are generally circulated to FoodPlus team members although not always revisited at subsequent meetings. Nevertheless, management and staff are well used to executing the action points from the minutes and completing outstanding tasks identified.

On a more informal basis, “stand up/stand down” meetings are also held at the beginning and end of a week as needed to focus actions and achievement of targets on selected priority projects.

All FoodPlus project managers have regular one-on-one meetings with the FoodPlus manager. Project managers have an appropriate level of acceptance of their “dotted line” accountability to the programme manager on programme related matters. ANZCO is not a hierarchical organisation, and there is a good deal of effective cross communication and informal reporting within and amongst project managers.

In addition, a précis of the FoodPlus section of the report to the ANZCO board is circulated to all ANZCO senior managers, contributing to a good level of understanding of the nature and role of the programme within the company.

It is clear that there are effective and comprehensive reporting systems in place for the FoodPlus programme. Subject to the suggested improvements, reporting has been well-executed across the programme to ANZCO management and board, and to the PSG.

Public Communications

The Office of the Auditor General reported in 2015: “The information the Ministry currently reports publicly is prepared by the relevant industry partner based on quarterly reports to the respective PSGs. In our view, these reports are unsuitable for the public because they have been prepared for people with specialist knowledge of the relevant programmes. Public reporting needs to be simpler and more readily understandable to appropriately inform members of the public about the performance of PGP programmes.”³

In the case of ANZCO, MPI included a comprehensive, well written and easily digestible report on FoodPlus in its September 2014 edition of Agrigate. The article was not simply based on quarterly reports, but included references to interviews with management. While Agrigate may have a limited readership, it would certainly include interested stakeholders, and the information is still available online.

³ (OAG Report, Part 5, [Home](#) / [2015 publications](#) / [Ministry for Primary Industries: Managing the Primary Growth Partnership](#) / Part 5: Measuring progress towards Primary Growth Partnership objectives

It may be appropriate for the PSG to consider an annual update of this excellent report on FoodPlus.

In general, MPI would like to see more publicity about PGP-funded programmes. This reflects the Crown contribution, and that it is appropriate for recipients to recognise this. At present, there is nothing available on the ANZCO website about either the PGP funding or the FoodPlus programme. Clearly, commercial-in-confidence considerations are paramount, and any publicity needs to respect this principle.

A reasonable course would be:

- a carefully and concisely worded section of the ANZCO website allocated to the FoodPlus programme acknowledging the contribution of the PGP,
- when major, new product launches are announced, or when presentations are made about the programme, projects or major new products, there is reference included to the contribution of the PGP.

Recommendation 23: To ensure that there are no misunderstandings between ANZCO and MPI with respect to public communications, they should agree a common communications strategy via the PSG.

8. PROGRESS TOWARDS ACHIEVING PROGRAMME OUTCOMES

Critical and related questions are – how well has the programme performed overall and is it truly transformational for ANZCO?

Resource allocation

The resource allocation to FoodPlus by ANZCO represents a big step-change for the company. The operation of the programme has to be placed in the context of earlier years in ANZCO's history. Prior to FoodPlus, development of innovative products was the responsibility of a small team, without internal involvement of professional staff with FMCG or healthcare backgrounds. By comparison, even the reduced financial contribution by ANZCO of just under \$30 million to the FoodPlus programme over seven years demonstrates the substantial resource commitment the company is making.

Performance to date against PGP programme targets

The overall success achieved by the FoodPlus programme can be measured by the fact that ANZCO has commercialised 16 products developed from multiple lower value raw materials across the programme. Management acknowledges this relative performance will be challenging in the future. The products span food, healthcare and protein ingredients, reflecting the breadth of the FoodPlus programme. Six of the commercialised food products were initially developed at the ANZCO Innovation Centre at Lincoln. In addition, the contributions of joint venture companies Bovogen and TBE have been very important.

In considering performance to date, it is also important to acknowledge that there have been several discontinued projects, reflecting a disciplined, stage-gated approach to project management.

Managers involved in FoodPlus are acutely aware of the desire of ANZCO's board and senior management to drive revenue as much as possible, especially where manufacturing capacity is not being fully utilised. While this pressure is understandable, it is important that ANZCO's leaders appreciate the significant lead-times and complexities in working with new products and new markets.

Margins vis a vis revenues

It is essential to consider FoodPlus in the context of the total revenues of ANZCO and the margins they are achieving. FoodPlus and even Food and Solutions are only a small proportion of the total revenues. However, the margins they are already obtaining in Food and Solutions are a great deal higher than they can achieve in Harvest. Typical margins in the traditional business are relatively low, however some of the most advanced and innovative FoodPlus created products have the potential to achieve high margins. It is arguably more important to consider margin alongside total revenue in considering the impact on the overall ANZCO business. Senior management shares a long term vision whereby an animal could conceivably produce revenues, and especially margins, that derive substantially from the parts of the carcass that are currently contributing very little financially.

Food and Solutions culture

New Zealand meat companies typically operate within relatively short time horizons, of perhaps six months. This reflects a necessary trading way of thinking, and is quite different from the culture necessary for a successful advanced foods and healthcare company. It is evident that the FoodPlus programme has made a significant contribution to the evolution of a new and appropriate culture within Food and Solutions, notably different from the traditional meat company culture within Harvest.

This is evident from the longer time frame of projects; the greater internal level of collaboration; the increasing focus on establishing relationships with third parties (e.g. active collaborations with four universities as a direct result of FoodPlus programme activities and multiple collaborations with several high-technology New Zealand companies); the new professional skill sets within Food and Solutions (eg five positions created for new graduates or early career employees plus an internship within the programme); the physical configuration of Food and Solutions' staff seating arrangements; and even the widespread use of sticky notes for informing and monitoring projects.

These descriptors point to the type of culture that can be expected to significantly influence a transformed ANZCO.

The contribution of the FoodPlus programme has to be set alongside ANZCO's decision to allow Food and Solutions to develop its own culture separately from Harvest. There is no question that this deliberate separation was a major contributor to the creative and innovative culture evident within Food and Solutions. The two divisions are now co-located while retaining their separate cultures and this is proving very helpful to the FoodPlus programme in enabling ready access to and communication with Harvest management.

Positive impacts on Harvest operations

While Harvest operations will continue to operate as it has over recent years, with changes more at the margin (e.g. increased automation), it will gradually be impacted by the FoodPlus programme. Two examples come to mind. One was where Food and Solutions gathered ANZCO's plant managers together to discuss supply of blood for serum products. Supply process related problems were discussed and ironed out collaboratively by gaining the confidence and support of the plant managers to maintain an across-the-board consistent and quality-focused supply chain approach for the new products.

A second example was at the Canterbury plant where Food and Solutions had to both demonstrate the value of the new project to plant management and to help train operating staff to remove the pericardium very carefully. The approach adopted was exemplary in gaining buy-in of management, supervisors and processing staff.

There will be more of these cultural and operational changes as the FoodPlus programme proceeds, but ANZCO has demonstrated by these examples that they are capable of adapting their traditional operations to the slowly emerging new business model.

“Action learning” approach

The above points lead to a more fundamental issue of the assessment of the FoodPlus programme’s progress to date in achieving its programme outcomes. Perhaps not intentionally, in committing to FoodPlus, ANZCO has effectively embarked on an “action learning” programme. While more often used in a leadership training context, “action learning” can be defined as “an approach to solving real problems that involves taking action and reflecting upon the results. The learning that results helps improve the problem-solving process as well as the solutions the team develops”⁴. The emphasis is on action, analysis of results, team discussions and learning from experience. There is typically plenty of room for taking risks and making errors (essential for product innovation where probabilities of success are typically modest at best), as both risks and errors can contribute to the learning process. The role of the FoodPlus manager is comparable to that of a facilitator in typical action learning situations. The alternative could be a more formalised and top-down approach to programme management, avoiding risks and minimising errors.

The action learning approach is particularly well suited to the New Zealand psyche, the sometimes harsh realities of the meat industry and to the practical experience base of most ANZCO management and staff. It is the opinion of the lead reviewer that it has been formative in the greater programme focus that has evolved as described below.

There are instances where the complexities of the post-production value chain have not been adequately considered in market research, or where the parties involved did not appreciate the value of a partnership with an established player in targeting a new product at a foreign market, the dynamics of which were not well understood. ANZCO and TBE management have been very open in discussing these instances, and it is clear that they have learned important strategic and operational lessons from them. In other situations, management is learning from its significant successes.

Given that the action learning approach reflects the reality of the progress of the FoodPlus programme to date, there may be value in management adopting the approach more explicitly and deliberately. Guidance in exactly this direction was provided by the Food and Solutions Advisory Board in April 2015 when they posed the question, “What are the learnings of the FoodPlus experience to date?” It is important that action learning incorporate more careful analysis of complex market-related risks and influences as emphasised by Conducere.

Recommendation 24:

Explicitly develop an “action learning” management philosophy across the FoodPlus programme.

Improved programme focus

A major finding of the review is the improved focus of the FoodPlus programme. This is evident in several respects. First, projects with limited potential have either been discontinued or rolled into other related projects. Second, there is now a greater concentration on priority products and markets with the greatest potential, particularly compared with the wide range initially identified in

⁴ https://en.wikipedia.org/wiki/Action_learning

the 2012 project plans. Third, the budget has twice been slimmed down to reflect the tighter focus on the highest priority projects.

For the first two reasons, it is important that this budget reduction is seen as a good outcome and not in any sense a failure. On the contrary, it shows that FoodPlus and wider ANZCO management have been prepared to set high quality decision criteria and where necessary make hard decisions on the future of projects. The outcomes are likely to be correspondingly higher quality products and greater commercialisation and marketing successes.

Moves up value chains

Important to the tighter focus has been the increased targeting of more highly differentiated products as distinct from the initial programme thinking which assumed that non-differentiated ingredients were a worthwhile market.

The key driver of the changed direction up value chains has been the recognition of intense competition amongst non-differentiated ingredient manufacturers. From this point on, technical and market demands within the programme will be correspondingly higher, and will require detailed market and regulatory analysis, close customer engagement to enable in-depth understanding of customer requirements, effective links with strong market participants and a good deal of patience. The company has wisely recently increased expert market input.

Final comment on progress towards achieving outcomes

The evidence of progress in aggregate is substantial and indicative of the fact that ANZCO is very much on a path to transformation. The proportion of overall operational activity accounted for by the FoodPlus programme is still small, but the impact on margin means that the programme punches above its weight within the company. All of the indicators of progress are positive and point to the programme entering an even more precise, exciting and larger scale phase of new product and market development, with national economic outcomes at least as good as projected and potentially a great deal higher.

9. CHANGES TO AND IMPLICATIONS OF ECONOMIC, TECHNOLOGICAL, REGULATORY, MARKET OR OTHER CONDITIONS

Economic returns/conditions

At a macro level, the impact of the FoodPlus programme benefits from the lower New Zealand dollar, but is adversely impacted by the relatively low level of global economic activity that has prevailed since the programme was established.

A NZIER report was commissioned in 2011 which concluded that overall net GDP benefit from the FoodPlus PGP programme would be an increase in GDP of \$630 million by 2025 and consumption benefits would be \$480 million⁵. Additional indirect spillover GDP benefits to other sectors were also identified resulting in net positive indirect effects of \$113 million.

As a result of the reduction in the scale of the programme, the estimated GDP impacts have been estimated at approximately \$200 million.

ANZCO noted that the programme had been downscaled in line with revised projected revenues and corresponding required project expenditure. There was a clear intention stated to outperform the revised forecasts. The revised programme was an integral component of an overall assessment of the Group's business through to 2020.

ANZCO reiterated its strong commitment to the FoodPlus programme and to the transformation to a value-added Food and health focused company, leveraging its access to raw materials, production capabilities and abilities to trace products to source. The company restated its commitment to maximising value from every carcass processed and to undertaking more risky endeavours to develop products and related market and product research in line with the parameters of MPI's Primary Growth Partnership.

The company noted the significance of some project commercialisation successes to date and the positive impact on the company's culture and diversity of resource allocations. However, the reviewer was also impressed by the response that ANZCO is taking a long-term view - well beyond the seven year timeframe of the FoodPlus programme - on the investment and the outcomes and to the transformation of its business.

While acknowledging the lower revenue forecasts, management expressed determination to continue to seek to target the original forecast of \$630 million growth in GDP, albeit over a longer time frame. Anecdotally, we noted a sales forecast (confidential) for one particular high value product line for the coming year that was significantly higher than the previous year. This quantum of increase is not unusual in novel or early stage healthcare products in particular.

⁵ Value of Proposed Shift in Focus: the wider economic benefits of ANZCO's PGP proposal. NZIER. Confidential report to ANZCO, 11 July 2011

It is interesting to consider the potential benefits from the FoodPlus programme in the context of qualitative factors such as:

- the impressive across-the-board enthusiasm and commitment of ANZCO management for the FoodPlus programme and the strong support of the board and major shareholders
- the carefully considered types of products and product themes that are now the focus of the programme
- the market segments and the geographical markets being targeted
- product successes to date
- the vastly higher margins achievable on new products relative to the value of prior uses of the raw materials
- the very high market growth potential of some of the new products, particularly in healthcare, and specific new opportunities drawn to the attention of the lead reviewer
- leveraging of third-party resources to date and commitment to future third-party collaborations
- the potential processing-related contributions of Itoham and potentially through the market connections of its cornerstone shareholder.

These in aggregate underline the potentially substantial sales revenue and economic benefits upside to the FoodPlus programme, over and above the inevitably hazardous economic cost-benefit analysis. Most of these factors were not available to or taken into account by NZIER and were certainly not clear to FoodPlus management in planning the programme at the outset. From all perspectives, we have no doubt of the national economic value of the FoodPlus programme, including the potential upside to economic benefit estimates.

Other risks and opportunities

We have identified no further major economic, technological, regulatory, market or other changes that are likely to materially impact upon the FoodPlus projects that ANZCO is undertaking. Food and Solutions has a good awareness of these classic “SWOT” type factors. At this point, it is more a question of monitoring the inevitably evolving environment, e.g.:

- opportunities that arise under New Zealand’s increasing range of free-trade agreements, especially the Trans Pacific Partnership. Tariff reductions on processed meats could provide significant benefits for the meat industry, and high protein and blood product tariffs will be eliminated. TPP benefits to ANZCO’s blood product exports will be reduced to the extent that most exports go to Australia, and are already tariff free under CER.
- ongoing increases in the intensity and breadth of regulatory regimes relating to healthcare products, e.g. health claims, product safety and traceability.
- gradual increases in the volume and complexity of specifications of what constitutes “good manufacturing practice” where this is relevant to novel products being developed
- new marketing opportunities arising from online sales, e.g. the rapid growth of Ali Baba and online purchasing in China, and use of relevant online sales optimisation technologies.
- continuing the effective liaison with MPI on market access and retention of New Zealand’s important status of being free of critical diseases such as BSE.

The FoodPlus programme’s governance structure and annual planning process ensures that risks and opportunities such as these are identified and assessed regularly.

10. INTELLECTUAL PROPERTY

The PGP funding includes a requirement that ANZCO make available on commercial terms proprietary IP after the agreed period when ANZCO has exclusive use of the IP.

The 2015/16 FoodPlus annual plan update reports that in 2014, FoodPlus commissioned an independent assessment of the potential IP that may be developed through ANZCO (including but not specific to the programme) and reviewed appropriate IP management options. The review details are confidential, but identified a number of areas where more robust systems have now been developed for identifying, handling and protecting IP within the group.

Significantly, the IP reviewer was encouraged by the appropriateness of the ANZCO corporate culture in terms of staff wanting to “do the right thing” in protecting IP important to the company’s competitive advantages.

The FoodPlus programme manager has developed a template for recording all legally-protected proprietary IP. At present, no such proprietary IP has been registered and recorded. Legally protected IP was foreseen in the original business case as being a likely important outcome of the FoodPlus programme.

Inclusion of trade secrets in responses to regulatory authorities’ demands, especially with healthcare products, is sometimes necessary but will require careful management by ANZCO as new products enter the commercialisation stage.

Recommendation 25:

Include trade secrets in the IP register.

Although naturally protective of trade secrets, ANZCO has had a number of positive discussions with representatives of other (non-meat) primary Industries about the FoodPlus programme and elements that could benefit them. It is too early to judge the prospects of any spin-off from these. And there has already been at least one instance where ANZCO has freely transferred IP to a biotechnology company on an “industry good citizen” basis.

11. LIKELIHOOD OF FOODPLUS ATTAINING OUTCOMES WITHIN SPECIFIED TIMEFRAME

Important determinants of the likely transformation of ANZCO into an advanced food product and healthcare company are:

- a common view across ANZCO as to what FoodPlus will achieve, and what its impact will be on the company
- strategic fit with the shareholders' long term goals, strategies and aspirations, and
- whether the relevant skill and experience base to drive the transformation is available on the company's board.

The need for a clearer long term vision

Both the market research reviewer and the product development reviewer commented on the need for a clearer long-term vision for the FoodPlus programme. It would be appropriate that this vision ties together the desired outcomes of the programme and the corporate transformation that ANZCO is seeking. There is every reason to promote within the programme and across ANZCO the original purpose expressed for the programme in the business case:

“Purpose of the programme: ANZCO will derive significantly greater value from new industries, using the entire animal and developing differentiated, added value, branded products. This will be transformational for ANZCO, and as wider adoption occurs in the industry, for the meat industry as a whole.

While the formal reiteration of a clear vision is warranted, it is mitigated by a number of important factors.

First, the enthusiasm and commitment of all managers interviewed by for the transformative change of ANZCO to a higher added value producer was independently observed and reported on by all three consultants. It was a highlight of this review.

Second, the “action learning” nature of the FoodPlus programme referred to earlier means that managers at all levels, and board members, are continually absorbing new information about novel product development, the processes involved, the post-production value chains and market opportunities, the competition, and the rationale behind project prioritisation changes. Over time, these lessons will also be absorbed by shareholders, including the major shareholder, Itoham.

Third, the FoodPlus programme is a multi-year one, allowing time for information to be absorbed and strategies to be changed. This is reflected in the increased degree of project focus and the more precise targeting of budgets - again based on decisions from previous strategic and operational actions taken, not all of which have been perfect.

Fourth, there is a great deal of communication and consultation amongst the staff involved in the FoodPlus programme and an increasing sense of direction as the programme achieves greater focus.

Overall, there is a clearly understood intention to grow the Food and Solutions Division (including FoodPlus's contribution) to a point where ANZCO is widely recognised both as a leading meat company and a major producer of high added value food and healthcare products.

ANZCO ownership - a potentially important determinant of future corporate transformation catalysed by the FoodPlus programme

At the time of increasing Itoham's level of shareholding (March 2015), Itoham wrote formally to MPI outlining its "full support and commitment for ANZCO Foods Limited ongoing participation and investment in the FoodPlus programme". This is an important and commendable expression of support. There is no question of the recognition by the Board. of the challenge that ANZCO faces, and of the enthusiasm amongst Board and senior management to support the programme through to completion.

ANZCO governance - a potentially important determinant of future corporate transformation catalysed by the FoodPlus programme

It is important for senior management, the Food and Solutions Advisory Board, and even the ANZCO board, to continue to receive independent advice on development and marketing of novel products, particularly healthcare products developed through the FoodPlus programme.

International literature and best practice reinforces the importance of having strong and relevant technical and marketing capability on or independently available to boards of companies engaged in diversification. ANZCO's senior management obtains risk management advice, e.g. legal and insurance advice when developing new products. A continued commitment to obtaining independent advice at board and senior management will be important for the achievement of the programme outcomes.

Outlook for achieving outcomes

There is no doubt that the ultimate, transformed business will be very different from the current one. However, ANZCO is several years away from that; the company is heading in the right direction and are focusing its activities, its project and product choices, its target markets and budgeted resources in that direction.

On balance, noting the revised lower revenue and expenditure forecasts and assuming the company adopts the bulk of the recommendations in this report, the evidence suggests that ANZCO is very much on track to achieving the designated programme outcomes.

12. LIKELY INFLUENCE OF SUCCESS OF THE FOODPLUS PROGRAMME ON THE RED MEAT INDUSTRY

The Outcome Logic Diagram for the ANZCO FoodPlus programme (November 2013) anticipates a number of outcomes and benefits important to the red meat sector:

- a more diverse and profitable manufacturing base for value-added products from red meat will be created
- greater volume of added value products as a proportion of red meat exports
- greater value of red meat sector exports from New Zealand
- increased red meat carcass utilisation and less lower value use
- validated options available for red meat processors to fully utilise carcasses
- a new integrated value chain that provides the red meat sector with more options
- other red meat processing companies emulate products with demonstrated feasibility

The IP agreement between MPI and ANZCO allows ANZCO an exclusive period for the use of any proprietary IP before it must be made available to third parties on commercial terms.

The following important issues arise in terms of the likely influence of success of the FoodPlus programme on the red meat industry.

- Many of the advances being made and likely to be made within the FoodPlus programme are unlikely to involve proprietary IP. As such, ANZCO is not duty-bound to share them with the rest of the red meat industry, although senior management unanimously indicated a longer-term willingness to do so.
- The thrust of review discussions along with a scan of the current state of play confirmed that some companies were still operating according to a traditional meat processing model, while others were exploring and developing a wide range of value-added product and market opportunities.

In the first instance, it cannot be assumed that other meat companies will want to imitate ANZCO's FoodPlus programme. However, given the likely higher margins achievable from value-added products, some are likely to seek to emulate the programme, and there is considerable evidence that a number of them are already doing so on a modest and focused scale.

The products, value chains and market segments that they ultimately address are unlikely to be the same as those targeted by ANZCO. Examples of product development work closely aligned to FoodPlus are rare.

Overall, it is evident that most other leading meat companies are either not adopting a strong value-added philosophy, or are developing products quite different from those within the FoodPlus programme. This product differentiation inevitably restricts the direct transfer of IP or other product development technology and global distribution channels from the FoodPlus programme to the red meat industry.

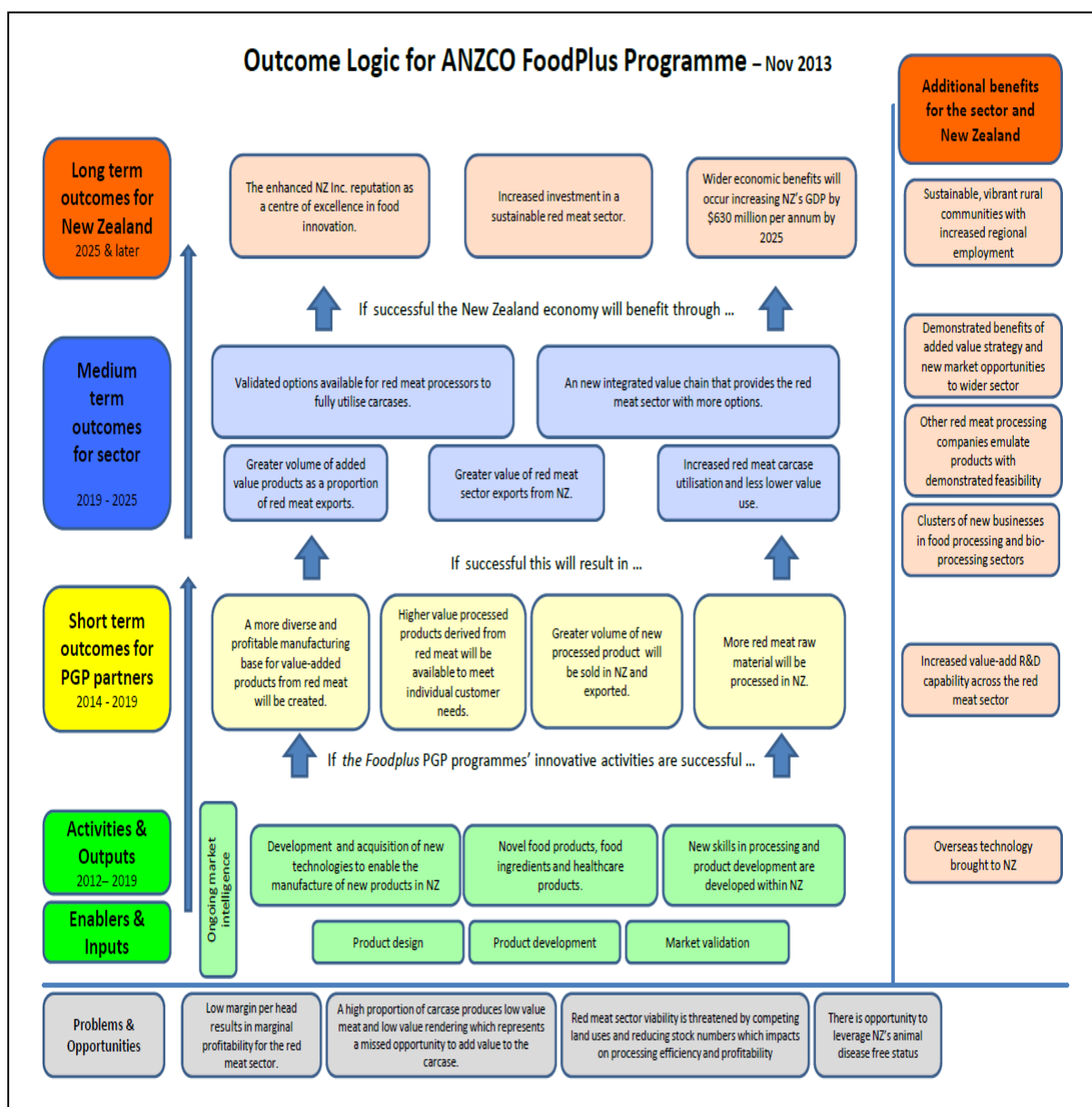
It is the role model that ANZCO's FoodPlus programme represents that is likely to be much more important in generating industry commitment to value-added processing and marketing. The fact

that the products and markets are more diverse than perhaps envisaged by the FoodPlus programme Outcome Logic model is a plus rather than a minus in terms of diversifying product and market risk and thereby adding greater resilience to the New Zealand economy. Also even this product/market industry mix is likely to be dynamic and continuously evolving.

It is essential that the FoodPlus programme is acknowledged by all internal and external stakeholders as extending beyond meat. The focus is on extracting and adding value from the red meat carcass. The advanced foods and healthcare products likely to emanate from the programme will in many cases be far removed from meat, and be directed to entirely different markets. This is the most transformative element of the programme and it is crucial that, while leveraging the in-house supply chain, it is not constrained by traditional meat industry boundaries and thinking. ANZCO has done extremely well to avoid being captured by such constraints.

ANNEXES

Annex 1: FoodPlus - Outcome Logic Model



The 2013 FoodPlus Outcome Logic Model is presently being reviewed to reflect the more focused and smaller scale programme. We are comfortable with the proposed changes which do not substantively change the underlying rationale for the programme.

Annex 2: Lead Reviewer's References

1. FoodPlus Business Plan (2012) and annual plan updates (2013, 2014, 2015).
2. FoodPlus PGP Agreement and variations.
3. Programme Reports.
4. Samples of PSG meeting minutes.
5. Documentation associated with representative products and NPD processes.
6. Other programme outputs of relevance to the review as identified by the review team.
7. Value of proposed shift in focus: the wider economic benefits of ANZCO's PGP proposal. Report to ANZCO. 11 July 2011 (Confidential).
8. Economic contribution of PGP: A cost-benefit analysis of potential impacts. NZIER report to the Ministry for Primary Industries. May 2014.
9. Email from economic advisor to Helen Sillars (MPI), 16 September 2015, reviewing Appendix E - NZIER report - decomposition of estimated impacts from PGP projects (from Reference 8).
10. MPI PGP website.
11. ANZCO website.
12. A sample of other websites of industry and corporate PGP recipients.
13. Issues of Agrigate online outlining progress of PGP programme and FoodPlus in particular.
14. Situation and Outlook for Primary Industries 2015, Ministry of primary Industries, December 2015.