

# final report

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# Review of APM/MLA Collaborative Innovation Strategies Program Stage 1

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# Abstract

Argyle Prestige Meats (APM) is a vertically integrated producer of quality beef and lamb from grazing and fattening to processing, distribution and marketing for branded retail and food service products across Australia, ASEAN, Korea, Middle East and China. APM's success is enabled by its operational excellence approach to quality, efficient, flexible and responsive product and service offerings generated through its 'fit to market needs' operation and value-adding capacity and capability.

In July 2016, Argyle Prestige Meats (APM) and MLA Donor Company (MDC) commenced a three-year Collaborative Innovation Strategy Program (CISp), which has been retitled "Co-Innovation Program". The focus of the program was to develop an innovation program tailor made to APM's business model and aligned with the company's future business goals and MLA's Strategic Plan.

This report communicates this CISp program progress against agreed goals and benefits of the program of APM and the Australian red meat industry, including:

- Achievement against agreed innovation priorities;
- Quantified benefits of the innovation program to the company and Australian Red Meat Industry;
- Key innovation system implemented at APM;
- Methodologies used; and
- Key case studies and lessons learnt for APM and industry

An outline for a potential Stage 2 program is also presented, which builds on outputs, outcomes and impacts delivered over the first three years of CISp stage 1.

# **Executive summary**

MLA's Collaborative Innovation Strategies Program (CISp) aims to strengthen the innovation capability of organisations across the value chain in the Australian red meat sector. The APM/MLA CISp program was to assist APM to develop and implement an innovation strategy in such a way that it could be integrated into the company's overall business plans and provide measurable performance indicators, which identify the contribution of innovation to the bottom line and achievement of key business objectives. Ultimately, the innovation strategy's objective is to contribute to the long-term profitability, competitiveness and sustainability of APM business and subsequently to the Australian red meat Industry.

Commencement of the Stage 1 CISp program in July 2016, was the catalyst for APM to develop an innovation investment strategy, undertaking a portfolio of 41 innovation projects to date (Table 1), in the areas of system & people capability, environmental sustainability, operations efficiency, marketing & value adding and livestock.

Table 1. Projects were planned and undertaken in CISp Stage 1 (uncompleted projects are highlighted in red)

Key Focus	Projects Initiated	No. of	Projects Completed	No. of	% of
Areas		Projects Initiated		Projects Completed	Completion
System and People	<ol> <li>Staff engagement initiatives communicating benefits of process improvements</li> <li>Employment of suitably qualified or experienced professionals</li> <li>Build relationships with cutting edge research organisations</li> <li>Establishing supply chain OH&amp;S program</li> <li>Establishing Stage Gate innovation system from concept to launch</li> <li>Introducing digital People &amp; Performance tool</li> <li>Introducing Graduate Program</li> </ol>	7	<ol> <li>Staff engagement initiatives communicating benefits of process improvements</li> <li>Employment of suitably qualified or experienced professionals</li> <li>Build relationships with cutting edge research organisations</li> <li>Establishing supply chain OH&amp;S program</li> <li>Establishing Stage Gate innovation system from concept to launch</li> <li>Introducing digital People &amp; Performance tool</li> <li>Introducing Graduate Program (on-going)</li> </ol>	6	86%
Sustainability	Tapping into Manildra biogas supply pipeline     Primary energy plant upgrade     Using recycled water for motor chilling     Wastewater characterisation     Co-funded project with Manildra Installation     of solar energy system     Cardboard recycle system Installation	6	Tapping into Manildra biogas supply pipeline     Primary energy plant upgrade     Using recycled water for motor chilling     Wastewater characterisation     Co-funded project with Manildra Installation of     solar energy system (completed trial)     Cardboard recycle system Installation	3	50%
Operational Efficiency	<ol> <li>Floor layout optimisation</li> <li>Farm asset management</li> <li>Sales process, operations and procurement planning</li> <li>Traceability: live animal and product</li> <li>Ct product management</li> <li>Optimising packaging gas mixtures, temperature</li> </ol>	6	I. Floor layout optimisation     I. Farm asset management     S. Sales process, operations and procurement     planning     Traceability: live animal and product (completed     the project scoping)     S. CL product management     Optimising packaging gas mixtures, temperature	4	67%
Marketing and Value Adding	<ol> <li>MLA Co-marketing program</li> <li>Product labelling alternatives</li> <li>Converting hide membrane into collagen</li> <li>Supporting local Farmer strategy</li> <li>Bonded eye fillet</li> <li>Steaks with butter concept</li> <li>Red meat products with flavour profiles</li> <li>Shabu concept</li> <li>Wagyu value adding</li> <li>EOG value adding</li> <li>Slow cook strategy</li> <li>Secondary cuts utilization and value adding</li> </ol>	13	<ol> <li>MLA Co-marketing program</li> <li>Product labelling alternatives</li> <li>Converting hide membrane into collagen</li> <li>Supporting local Farmer strategy</li> <li>Bonded eye fillet concept</li> <li>Steaks with butter concept</li> <li>Red meat products with flavour profiles</li> <li>Shaub concept</li> <li>Wagyu value adding</li> <li>EQG value adding concept</li> <li>Slow cook strategy</li> <li>Secondary cuts utilization and value adding</li> </ol>	10	77%
Livestock	<ol> <li>Preferred supplier initiatives</li> <li>Build supplier database</li> <li>Involvement in LDL: enhanced feedback to producers</li> <li>APM/MLA Supply chain workshop</li> <li>EQG on farm grain feeding and MSA grading</li> <li>Supplementary</li> <li>HGPF program</li> <li>Digital data integrity Stocktook</li> <li>Howstin cattle</li> </ol>	9	1. Preferred supplier initiatives (on-going)     2. Build supplier database (on-going)     3. Involvement in LDL: enhanced feedback to producers     4. APM/MLA Supply chain workshop     5. EQG on farm grain feeding and MSA grading     (scale up in process)     6. Supplementary (on-going)     7. HGPF program (completed by the other fund)     8. Digital data integrity Stocktook     9. Howstin cattle (pilot trial)	4	44%
Total		41		27	65%

In the CISp Stage 1, the overall project completion rate was 65%. The major achievement in relation to each key business area and the potential benefits to a broader industry are highlighted as following:

- **System and People Capability** achieved biggest result among the 5 key business focus areas, in which, 86% of the projects were completed (Table 1). The major success in this sector was the introduction and implementation of PeopleGoal tool and the establishment of innovation system.
- In the **Marketing and Value Adding** sector, 77% of the projects were completed within the Stage 1 CISP (Table 1). During the course, APM have produced approximately 10,260 tonne of red meat finishing products with economic benefit of \$12.40M, in where, approximately 25% of the total benefits were generated by incremental innovation (products and service), as a result, it added further value to the Australian red meat industry and its supply chain, such as farms, feedlot, slaughter house, distributors and logistic companies.
- 67% of the project completed in relation to the **Operation Efficiency** sector (Table 1), the outcome has been evaluated by KPI's deliveries each year. APM also self-financed value adding plant upgrading and commissioning projects within the Stage 1 CISp program, including installation of automated mincing line, label applicator, new portion cutter and small footprint skin pack machine. This has resulted of a 10% labour efficiency gain in the value adding plant, which have the potential to benefit production processes in the Australian industry outside of AMP.
- Projects in relation to **Sustainability** were due to the restriction from the shared manufacturing site with Manildra, therefore, only 50% of planned projects were undertaken (Table 1). Even though, the energy saving from 3 months solar panel trial has reduced 10% of the electricity bill, the potential cost energy savings with full installation of solar system will be 25% per annum.
- The **Livestock** projects achieved 44% completion rate (Table 1), apart from the major project of Stockbook installation, the other projects are still on-going.

In addition, the CISp Stage 1 made it possible for APM to invest the necessary resources and practical system to develop an innovation strategy that had an impact on the overall business growth, at the same time it helped driving a culture of innovative thinking within the organisation. The Australian red meat industry will continue to benefit from APM Australia's participation in the CISp program through the further development and implementation of innovation strategies.

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# 1 Background

# **1.1** Overview of APM's Innovation Strategy

Argyle Prestige Meats (APM) is a diversified end-to-end Australian red meat business, with farm operations at Harden in New South Wales, value adding operations at Bomaderry in New South Wales and marketing operations located in Sydney and Hong Kong. Over the last decade, APM have been actively reviewing expansion opportunities in the highly evolving meat trading market, the business strategy includes the development of domestic and export markets through the expansion it's capabilities and capacities in packaged value-added beef and products in retail ready fresh meat case and food service markets.

APM has committed to invest in innovation, to extend beyond the farm gate, bringing benefits to the whole value chain, and ensuring it's able to operate at optimum levels. The innovation strategy in summary as following:

- Grow demand and market access, by innovative product development
- Implement sustainable cattle farming, and implement a risk management strategy for drought
- Implement a digital traceability system from 'paddock to plate'
- Increase the efficiency throughout Argyle's business value chain (Figure 1)
- Transform Bomaderry case ready facility with new and updated equipment
- Establish a digital people management tool, and a robust innovation system & process for value adding stream



Figure 1. APM's Value Chain

# **1.2** The Synergy with MLA Collaborative Innovation Strategy

The MLA CISp program is customised to the industry partner's capability development priorities, it traversed the whole spectrum of MLA initiatives, corresponding to key components along the red meat supply chain, as depicted in Figure 2. It demonstrates that MLA aims to increase the scope of collaboration with companies across the supply chain.

Participation in the MLA CISp provides a more structured focus on innovation from top down -- board, staff and members. This focus influences investment priorities to ensure human and financial resources are made available to pursue new concepts and opportunities across the value chains.



Figure 2. MLA Red Meat Supply Chains

The integrated innovation strategies between MLA and APM are summarized as following:

- Develop plan for innovation projects over 3 years
- Identify strategic opportunities for research and development projects
- Identify gaps in company's capability to manage, plan and achieve results
- Develop action plans to address capability gaps
- Identify additional resources e.g. Innovation Manager and cross functional innovation teams
- Establish baseline measures and people performance management processes
- Development of a successful enterprise level innovation system.

# 2 Project objectives

The primary objective was to support the development of APM's red meat high value growth strategies in both the domestic and global markets to be achieved via a range of innovative products, packaging, processes and value chain concepts that extend from the paddock to the plate, secondly, was to support the establishment of a sustainable innovation culture and capability within organization and its members that results in the rapid application of knowledge, tools and systems to enhance the value chain. Implementation of the innovation strategy was via the following 5 key focus areas, which was:

- Innovation resource planning and people management
- Operational efficiency
- Environmental sustainability
- Marketing, market access and value adding
- Livestock supply and management.

A requirement of the program was to report on the outputs, outcomes and impacts to APM and Australian red meat industry. Therefore, this project provides an independent evaluation to help measure the outputs, outcomes and impacts of program in the end of stage's report and builds the case for investment in the new Co-Innovation Program.

# 3 Methodology

### 3.1 Program Management

In order to deliver the project objectives, two project groups have been formed, the Steering Group and Implementation Team. The structure of the teams is shown in Table 2, with meetings and discussions between MLA value chain relationship manager and Argyle innovation managers being held to review or implement the 5 points below.

- 1. List the collaborative investment areas and projects completed with MLA;
- 2. Review and refine KPIs and ensure they are measurable, appropriate and provide value;
- 3. Establish baselines for the refined KPIs and evaluate and report the present KPI position;
- 4. Review quantitative and qualitative data from past and present APM's projects;
- 5. Identify value created and how the program has created new value.

Project Group	Member	Function
Steering Group	<ul> <li>APM – Chief Operation Officer</li> <li>APM – General Manager</li> <li>MLA – General Manager</li> </ul>	<ul> <li>Governance and planning</li> <li>Go/No Go decision</li> <li>Closure and review</li> </ul>
Implementation Team	<ul> <li>APM Innovation Manager</li> <li>MLA Value Chain Relationship Manager</li> <li>MLA – Technical Experts</li> </ul>	<ul> <li>Execute, set up and control         <ul> <li>KPIs</li> <li>Measurement system</li> <li>Baselines</li> </ul> </li> <li>Documenting and reporting         <ul> <li>Innovation Strategy on a Page</li> <li>Quarterly report</li> <li>Final report</li> </ul> </li> </ul>

Table 2. APM/MLA CISp Project Management Team Structure

# 3.2 Process Measurement and Tracking System

#### 3.2.1 Key Performance Indicators

Once the scope process was developed, with initiatives in key focus areas for the innovation strategy, the measurement tools are in place to be set up for successful implementation. Key Performance Indicators (KPIs) are the most effective means of measuring progress and success. In the Table 3, KPIs in relation to Focus Areas incorporating baselines were set up at the commencement of the program, the evaluation was carried out at the end of each financial year. Based on the previous year's performance, the baselines were adjusted for the next year. The overview of KPI measurement of each year are detailed in the Table 3.

# Table 3. KPIs in relation to key focus areas set up for each FY.

Focus Areas	Innovation resource planning &	Environmental	Operational efficiency	Marketing, market access &	Livestock
	people management	Sustainability		value adding	
Measurable KPIs (FY 16/17)	<ol> <li>2 of process improvements initiatives sourced by staff</li> <li>5 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system established</li> <li>Digital People Performance Management system established</li> <li>2 graduates in the Graduate Program</li> </ol>	<ol> <li>Approx. \$70K cost of energy consumption per annum</li> <li>10% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>150 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$5K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.2/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.10/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>500 tonne meat (as finishing products) sold by NPD</li> <li>\$16/kg Average selling price</li> <li>10% of NPD in average</li> <li>5 skus of domestic and more than 30 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>300-400 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.6kg/hd day weight gain)</li> <li>95% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>
Measurable KPIs (FY17/18)	<ol> <li>3 of process improvements initiatives sourced by staff</li> <li>2 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system implemented</li> <li>Digital People Performance Management system implemented</li> <li>1 graduate in the Graduate Program</li> </ol>	<ol> <li>Approx. \$65K cost of energy consumption per annum</li> <li>15% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>130 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$10K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.0/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.20/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>1,500 tonne meat (as finishing products) sold by NPD</li> <li>\$16/kg Average selling price</li> <li>15% of NPD in average</li> <li>5 skus of domestic and more than 30 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>300-400 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.8kg/hd day weight gain)</li> <li>97% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>
Measurable KPIs (FY18/19)	<ol> <li>3 of process improvements initiatives sourced by staff</li> <li>2 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system established</li> <li>Digital People Performance Management system implemented</li> <li>1 graduate in the Graduate Program</li> </ol>	<ol> <li>Approx. \$60K cost of energy consumption per annum</li> <li>15% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>100 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$15K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.0/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.20/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>2,000 tonne meat (as finishing products) sold by NPD</li> <li>\$18/kg Average selling price</li> <li>20% of NPD in average</li> <li>5 skus of domestic and more than 40 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>400-500 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.8kg/hd day weight gain)</li> <li>97% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>

#### 3.2.2 Process Tracking and Reporting

KPIs are presented in an 'Innovation Strategy on a Page' form for annual Steering Group review, including following details:

- Summary of progress of RD innovation project underway
- Update on each of the broad areas of focus within the overall Innovation Strategy
- Details of baselines, measurement systems and progress regarding key performance indicators
- Specific details on implementation of the Innovation Strategy in relation to the key areas

The full information of **'Innovation Strategy on a Page'** is attached in the Appendix 2. **Quarterly reports** were submitted to Steering Group for status update for every quarter, information captured in the report are:

- Details of the stage deliverables, including timing of and responsibilities for delivery
- Key prerequisites, dependencies, constraints and assumptions
- High-level project timeline
- Key controls to be adopted in relation to the stages
- Activities proposed for next quarter.

Based on a quarterly report review, a 'go or non-go' decision was made by Steering Group. This approach allowed the governance team to identify how the program created new value to the company and red meat industry.

The **final report** is produced through the accumulation of 3 years results and submitted to the Steering Group at the end of Stage 1. Measurable KPIs and results are gathered from various innovation activities initiated and executed by APM and interpreted directly into financial value benefits. In addition to this, consideration is given to the non-tangible benefits, in areas such as innovation capability building and people performance management, with alignment to strategic vision and the delivering of culture change.



Figure 3. Process tracking and reporting system

### **3.3** Innovation Driver and MLA Innovation Network

#### 3.3.1 Innovation manager

The primary focus of the APM's Innovation Manager (IM) role, was the implementation of the APM/MLA Innovation Strategy, developed by Steering Group. The major activities to be undertaken by the full time IM include:

- Provide leadership and vision
- Develop and align the Innovation Strategy with the company's business strategy
- Assist in developing and monitoring KPIs
- Develop and co-ordinate an agreed number of innovation projects
- Manage and monitor funding and resources allocation
- Develop and evaluate innovation tools
- External relationship building and management throughout the value chain
- Participate in MLA's innovation network workshops and meetings
- Attend MLA's training and conference
- Innovation team development
- Prepare project report and presentation
- Participate and facilitate cost benefit analyses as required.

#### 3.3.2 Innovation Manager Workshop

Building the skills and knowledge of individuals and enterprises, throughout the value chain, are the keys to sustaining productivity and a competitive advantage. The Innovation Managers Network was created as a supportive mechanism to enable industry, and MLA Innovation Managers, to develop the skills and experience required to undertake this new role. Membership of the Network is included for all companies participating in MLA's CISP program. The network delivers information and idea development to the Innovation Managers to ensure they have access to cutting edge technology/tools, personal and professional development, and the ability to interact with the idea generators globally.

The annual innovation network meetings were a 2 days conference, and included guest presentations, with workshop being held afterwards. Topics covered included,

- Innovation communication tool Facebook Workplace
- Innovative team building
- Building capability for innovation
- Defining strategic objectives for innovation
- Elements of an innovation strategy
- Systematic innovation

# 4 Results

Forty-one projects were considered as APM's Stage 1 CISp. Most of project focus was on System & People Capability building and Marketing and Value Adding (Table 1 and Figure 4). The focus on enhancing people performance and building a robust innovation system, is the number one factor to implement initiated innovative activities and achieved expected results. Followed by focus of Operation Efficiency and Environment Sustainability, in order to maintain profitability within the existing business model due to high raw material cost and low profit margins. Plant and equipment upgrading projects were self-financed with \$1.5 million of APM funds being used with \$60,000 of MLA co-funding.



Figure 4. Overview of projects were completed in Relation to Key Focus Area

# 4.1 Innovation Resource Planning and People Management

#### 4.1.1 PeopleGoal – A Performance Management Tool

PeopleGoal is a digital Performance Management tool, that was introduced and delivered across the leadership levels of the organisation, for all supervisor roles. It drove the implementation of resource planning, and performance, as well as project management that included innovation resources on different operational sites. This self-service solution led to improved accuracy of Performance Management information, and increased efficiency, through less time being spent on administrative activities. The solution has also transformed the way of engaging with each other and has allowed employees and managers to move away from time consuming paperwork, into the easy to use online application that PeopleGoal offers.

In the Figure 5, the PeopleGoal's process flow chart shows the interaction between an employee and manager, through the digital tool.



Figure 5. Process Flow of PeopleGoal Performance Management Tool

This digital people management tool provides a bond in between employees and managers by reporting progress and providing regular feedback respectively, as everyone in the team has to make an effort to keep the tracking process flowing (Figure 5), especially managers must let every team member know on a regular basis, their hard work isn't going unnoticed. As a result, since the PeopleGoal installed 18 months ago, the employee retention in the innovation team was 85%. Now the team rely on this digital tool for project status tracking purpose, as most of the time the project team members in the business are remoted from each other geographically.

#### 4.1.2 Stage-Gate Innovation Development System

The purpose of the innovation development system is to introduce a more desirable product into the market, with less uncertainty in respect to its success. Innovation development is a progression from the intangible product idea, embodied in a product statement or concept, to the tangible product being developed, with all the attributes stated in the concept, and ready to be tested in the marketplace. There are several distinct phases and stages throughout the concept to launch process, as different phases and stages represent an evolving change in the thinking of new product development, as well as appropriate skill set and resource involvement. Therefore a structured and integrated approach is needed for the innovation development process to manage different phases (described as stage in Figure 8), as well as putting screening process in between the phases (described as gate in Figure 8) for evaluation, and the reduction in missed opportunities and value benefits. Stage-Gate process (Figure 8) was introduced to the APM innovation team in the beginning of 2018, and from that time all NPD projects, under the CISp program, have gone through this process. From this implementation we have seen the success rate of NPD launches go beyond all expectations. Our goal was to achieve a 10% success rate of NPD projects per annum, the actual rate was 25% for last 18 months.



*Figure 8. Stage-Gate Innovation Development Process* 

As depicted in the Figure 8, a series of parallel events happen in the Gate sector, in accordance to the data obtained throughout the development process, and go or no-go decisions must be made, at each gate. It was quite common among the projects under CISp programs, that many changes in the direction of product development had to be made, and this resulted in numerous projects having to return to Stage 1 for further development. This allowed APM to capitalize on what they did right, or to avoid errors for application in future development programs.

# 4.2 Operation Efficiency and Environmental Sustainability

Most of the project focus and expenditure was on Operational Efficiency or Sustainability. The focus on operational excellence and sustainability was the number one factor in maintaining profitability within the existing business model, due to high raw material cost and low profit margins.

#### 4.2.1 Operation Efficiency

•

- Maintain cost of processing \$1.20/kg
  - o automation of the mince line by introducing a de-nester to the line
  - automation of label application
- Reduce cost of packaging \$50K
  - Reduced micron of the film
  - Reduced footprint of the tooling
  - Reduce cost of RM into plant below the market price
  - Farm integration into raw material sourcing, EQG program
- Improved shelf life to 28 days in skin packaging and 21 days in thermo packaging
- Increased visibility of operational departments
  - Strategies S&OP process, People Goal digital tool and monthly colleague communication

#### 4.2.2 Environmental Sustainability

- Renewable Energy: Increase use of renewable energy
  - o solar panels on factory roofing
  - reduce shift during the weekend
  - reduce the energy bill of approx. \$100K for 3 years
  - Wastewater management: Using recycled water for motor chilling
    - reduce water bill of \$500 per month

### 4.3 Value Adding and Market Access

Value-add is the process of taking a raw food material and changing its form to a higher-value (or premium) product. The value attributed to the product by consumers can come from a range of factors such as convenience, brand, origin, or after sale services etc. Value-add processes are comprised of a broad range of factors, including governance, labour, quality control, logistics and storage. When these factors are managed strategically and efficiently, risk is reduced, and the product is more likely to meet consumer expectations and increase or improve trade. Customers (value-chain business partners or collaborators) and consumers are more likely to pay premium prices such as multiples of 1.5-2 times the input commodity price (Figure 9).

APM currently utilize available commercial value adding processes, to transform source beef cuts to value added product lines, that meet demands in key retail and foodservice market channels. Consistent consumer related product performance is a vital requirement, and it is critical to better understand the link between initial raw material quality, and the value adding process treatments. A detailed knowledge of such interactions will enable consistent quality product to be produced, by either control and procurement of raw material specifications, or by adaption of the value adding process to best create and capture value.



Figure 9. Comparison of price/kg in between primal and retail pack to overseas market In the last three years, the most successful marketing strategy of domestic market was the 'locally produced beef' concept under the program of 'Supporting NSW Farmers'. The concept differentiated Argyle beef amount the competitors and proved a full traceability from carcase to retail pack. This concept is highly regarded by Coles, IGA and the other specialty supermarkets. 10 SKUs in total were launched in 2017, and generated \$7.5M revenue to the business, and increased production volume rapidly (Table 4).

Growth in the international markets, has also been a core focus of the business channels in retail, foodservice and digital sales. At the start of the CISp program, APM's retail ready channel were 55% domestic and 45% international. For 18 months APM worked on a number of innovation strategies, and Co-marketing programs with MLA, to establish an Argyle beef offering to the global market, with a main result coming from Hong Kong, Taiwan, Korea and ASEAN countries. As a result, Table 3 shows that the overall performance of our international market development increasing volume from under 1000 tonne per annum to over 2500 tonne. This drove a shift in the breakdown of retail ready sales to 40% Domestic and 60% International. APM is looking to further build their process capability via an alternative value adding plant. The detailed market access of APM's retail ready strategy, to the international market, is described as a Case Study in Appendix 1.

Table 4. The production volume and market development of APM's value adding plant during 3	years
of CISp program stage 1	

	Production Volume of Value Adding Products (tonne)DomesticInternational		% Market Shift	
			Domestic	International
Year 2016/2017	1,188	972	55%	45%
Year 2017/2018	2,646	1,134	70%	30%
Year 2018/2019	1,728	2,592	40%	60%
Total	5, 562	4, 698		

# 4.4 Livestock

Currently Argyle is using Practical Systems -- Stock Book computer program to provide full traceability from when calves are born, or purchased, through to back loading slaughter data. Each animal is tracked through an EID and allows data to constantly be recorded on the animal. The program can record data such as feed intake and weight gain. This then allows management to allocate a cost per animal and issues reports with how much each individual animal has cost AFG. The stock book program records all husbandry procedures which is helpful when running HGP and antibiotic free programs.

Each animal has an EID tag applied when it arrives at the farm or when the animal is first processed through the yards. This EID is unique for this animal, and can only be allocated to this animal, and is scanned every time the animal is processed through the yards, with their data being updated at each husbandry procedure undertaken. The EID is also scanned when the animal is getting loaded to leave the farm for slaughter, it is recorded with the feedback sheets received from NCMC abattoir, and MSA grading data. This then allows AFG to have a full lifetime traceability of the animal with post slaughter data added in. Farm management can then assess how the animal performed, and which circumstances the animals were exposed to. This can then determine which is the most efficient and

cost-effective way to produce the highest quality carcasses. Through these reports' performance can be measured against genetics and the other factors' action can be taken accordingly.

This program allows AFG to run reports on each individual animal that is on farm at Argyle. By tracking the food intake and husbandry procedures this allows farm management to allocate animals to each program and ensures that these programs (grass fed, HGP free, Antibiotic free) can be followed without error. This ensures that the product that we are serving the end consumer has 100% traceability.

# 5 Discussion

The Stage 1 CISp resulted in the development and management of initiatives meant to build innovation capability within APM's business operations. This innovation strategy included five core business components: People Management & Innovation System, Operational Efficiency & Sustainability, Value Adding and Market Access, and Livestock on Farm. However, APM sometimes conflicted internally through a separation between the overall market innovation strategy, and the site operation strategy. This caused a loss of focus on how to make innovation strategic within the Stage 1 CISp program.

Over the last three years, APM has implemented a significant change in their corporate structure, and how we go to market. This has caused a change to our processors and production, driving fragmented case ready processing, very broad product quality and a wider brand portfolio. These changes were at first difficult for the site director to accept and caused a gap between the production and innovation teams. As a result of building a high performance innovation team on site, whose primary goal is to promote innovation across all levels of the business, the wider group of employees have gained a renewed sense of ownership over the business' success, which has in turn led to more collaboration, engagement, and adoption.

Further improvement to foster a creative culture, and a systematised innovation process, is required across all operation sites via:

- Head of department involvement in the starting point of the innovation, and their willingness to help problem-solve, and identify new ideas to improve current operation and process
- Evaluate preliminary key strategic focus areas, and the associated investment within each of these
- Determine the organisational capability gaps, considering the innovation objectives
- Review innovation management systems within the organisation and provide recommendations against best practice.
- Within the strategy, address best practice risk management recommendations regarding the innovation program.
- Market, financial and technical analyses are necessary screening procedures for reducing uncertainties in the innovation development process.

# **Conclusions/recommendations**

# 5.1 Conclusion

Overall APM has made significant progress in development of R&D process developments & systems. A number of R&D opportunities have been identified and implemented to enhance capability. Specifically, key focus areas are more formal structure around managing ideas and networking within APM and with external provider. The accountability lies with APM, but engagement and support from MLA in the Co-Innovation Program was enormous. This MLA support was in developing viable and jointly fundable innovation projects, as well as insights and learnings from MLA on wider industry insights.

- APM implemented a robust innovation system and process to implement NPD project
- APM established value adding strategy in last 18 months with great market access to drive the business growth
- APM completed the Stocktook installation and laid foundation for the further digital traceability blockchain
- MLA facilitated a number of collaborative workshops involving the partner's senior management team to establish and document the strategic objectives of the business and develop corresponding objectives for the innovation capability program.
- MLA reviewed APM/MLA CISp progress at each milestone and provided valuable feedback in the meetings
- MLA supported APM innovation strategies with comprehensive and latest market insights

The effectiveness and overall outcomes of Stage 1 of the CISP have been reviewed in conjunction with APM commercial director and CEO. Learnings from Stage 1 will be incorporated into Stage 2 proposal. The learnings identified during Stage 1 included:

- The need to quickly amend the timing in relation to focus areas and specific actions when business changes and external factors impacted priorities
- That Stage 1 of the CISP project has assisted in the development of an broader innovation culture within the organisation
- The developed KPIs are expected to have the potential to deliver significant business benefits, and need to be regularly reviewed and outputs monitored

# 5.2 Recommendation

To create the competitive advantage APM needs to compete globally, continuing the CISp program Stage 2 becomes one of the priorities, so as to build a collaborative network of innovation champions and enablers. It is understood that the next stage of the Co-Innovation program is intended to be undertaken over a further 3-year period, and based on the learnings from Stage 1, it is recommended that the program for Stage 2 should be as follows.

Initial Action: Identify focus areas and specific innovation areas known at that time and incorporate into an Action Plan on the basis of what specific projects/studies will be undertaken within the next 12 months, and what areas/projects will be considered during years 2 and 3.

Process: Undertake regular reviews of the program and KPIs on a six-monthly basis, identifying or amending identified projects for the following 12 months. This will allow early changes to identified projects and/or priorities to be amended quickly to suit business or market changes.

Further R&D projects for APM CISp Stage 2:

- Carryover projects from Stage 1
- MEQ Probe
- Implement digital traceability into international market and then domestic market
- Continuously build high value adding product concept pipelines to current market channels
- Harris Farm value adding product launch
- Coles value adding strategy
- Woolworths Metro store strategy
- Woolworths ethnicity meat cuts product and process development
- Slow cook and cooked red meat concept development
- Market research on meat snack
- Research and development of Frozen Thawed model on MAP products.

# 6 Key messages

APM has been investing in R&D, to extend its business beyond the farm gate, and ensure the whole value chain is able to operate at optimum levels. The growth into the international market, is the core focus of the business, into the retail, food service and digital channels.

APM must build capability and capacity, technically and commercially, to be able to supply Australia beef to the world markets. This will continue to create opportunities for the Australian red meat industry. The outcome and findings obtained from this project will benefit to exporters, processors and producers who are looking to capture a share of the value adding strategies.

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# **10** Appendix

# 10.1 Case Study -- APM's Retail Meat Solution in Overseas Market

APM has strategically focused on Hong Kong and Taiwan as the two most influential markets to establish strong brands and relationships. Similarly, in Taiwan Argyle is the major branded retail pack supplier to Welcome Taiwan, the major beef supplier (Branded Primal & Retail pack) to Carrefour Taiwan and the exclusive supplier of long shelf branded retail pack to PX Mart (collectively 70% market share in Taiwan). The result gives retailers that are not familiar with red meat, a simple profitable solution to supply traceable, branded chilled red meat with good meat colour, extensive shelf life, minimal shrinkage and attractive GP without the complications of needing educated staff to manage this NEW but rapidly growing category.

Value proposition

- In-house expertise in providing retail-ready protein solutions and long-life fresh packaging solutions
- Brand Focus: Health Hormone free, antibiotic free, 100% natural
- Replicating our AU state-of-the-art technology to offer consistency and quality control at every stage of production
- Thorough knowledge of the entire supply chain
- Established brands and strong customer base in Asia (supplying to >2,000 retail stores)
- Supply Chain Security: fully integrated supply chain from our own cattle up to processing and supply to the retailers (guaranteed 100% imported material)
- Traceability from paddock to plate
- Direct control over own cattle and sourcing cattle across multiple grades of beef and lamb from our established AU producer group

# Retail Meat Cabinet SOLUTIONS

Argyle is at the forefront of chilled and frozen meat packaging. Meat is packed to maintain freshness and guarantee longer shelf life with full traceability

- Food integrity and packaging
- Focus on IP and value added production
- Customized food service and retail solutions:
  - O Customised Packing
  - o Brand Solutions
  - o Sales & Marketing Support
  - o Product Development
  - o Tailored Food Service solution
  - Retail Meat Cabinet Solutions

 INCREASED SALES > IMPROVED CATEGORY MANAGEMENT > ENHANCED PRODUCT RANGE & GP



# Argyle MASS MARKET PRODUCTS

Argyle's successfully supplies quality product to the 'mass market' at a competitive price point, allowing Argyle for example to compete with cheaper Canadian beef



#### Argyle product in Wellcome:

- HKD 49.9 for a 200 gram sirloin steak
- HKD 59.9 for a 200 gram chilled ribeye steak
- To meet the mass market price point, Argyle
- Sources lower value healthy, clean, hormone and anti-biotic free meat
- Uses smaller portion sizes
- Uses automated slicing, packaging and labeling technology to minimize production cost
- Utilizes state-of-the-art long shelf life packaging to reduce shrinkage and retailer Gross Profit
- This results in a similar price per kg compared to Canadian beef

Products shown are displayed in Wellcome HK and Taiwan

# Argyle PREMIUM POSITIONING

Argyle achieves a price premium versus a similar size US product through (1) better product positioning and packaging and (2) different processing, resulting in a much more attractive product



#### eight mile gf ang ribeye stk (440gm)

#186718 **\$128.00** Quantity 1

us andus

#### Argyle product:

- Full traceability: farm to fork
- Attractive packaging
- Product is fully visible
- Chilled processing results in more natural look, good color improved texture, tenderness and juiciness of the steak
- $\checkmark$  Single freezing process pre-consumption ensures better eating experience
- Primarily targeted at educated consumer which understands meat products and is more health (traceability) conscious

#### US product:

- Cheaper and less appealing packaging
- Actual product cannot be seen
- No information about which farm the product comes from
- Primals are shipped in from the US or Canada and are processed (while frozen) in Hong Kong using a band saw
- / Band-sawed product inside, which looks like an un-attractive block of frozen meat
- Primarily targeted at price conscious consumers

Products shown are displayed on Wellcome HK website



# 10.2 Innovation Strategy on a Page over 3 Year Program

	novation offategy on one rage (r	10/11/			
Focus	Innovation resource planning &	Environmental	Operational efficiency	Marketing, market access	Livestock
Areas	people management	Sustainability		& value adding	
Initiatives	<ol> <li>Promoting continuous improvement in processes</li> <li>Employer of choice</li> <li>Documenting workplace safety</li> <li>Academic relationships / partnerships</li> <li>Training and apprenticeships</li> </ol>	<ol> <li>Utilities management</li> <li>Upgrade treatment of wastewater stream (piping to farm)</li> <li>Increase use of renewable energy</li> <li>Cardboard management</li> </ol>	<ol> <li>Reduce cost of processing</li> <li>Reduce cost of raw material landed plant</li> <li>Automation of labelling system</li> <li>Yield management</li> <li>Reduce cost of packaging</li> <li>Increase average daily gain on farm</li> <li>Improving shelf life</li> </ol>	<ol> <li>Market growth in both domestic and international</li> <li>Further processing in China</li> <li>Establishing direct supply chain with major new customer in Taiwan and HK</li> <li>Develop market in SE Asia (Cambodia, Thailand, Singapore)</li> <li>Value adding NPD strategy</li> </ol>	<ol> <li>Improve supply reliability</li> <li>Enhance traceability systems (Livestock Data Link)</li> <li>Efficient supplementary feeding system</li> <li>Genetic improvements</li> <li>Improve MSA compliance &amp; benchmarking</li> </ol>
Measurable KPIs (FY 16/17)	<ol> <li>2 of process improvements initiatives sourced by staff</li> <li>5 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system established</li> <li>Digital People Performance Management system established</li> <li>2 graduates in the Graduate Program</li> </ol>	<ol> <li>Approx. \$70K cost of energy consumption per annum</li> <li>10% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>150 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$5K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.2/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.10/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>500 tonne meat (as finishing products) sold by NPD</li> <li>\$16/kg Average selling price</li> <li>10% of NPD in average</li> <li>5 skus of domestic and more than 30 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>300-400 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.6kg/hd day weight gain)</li> <li>95% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>
Projects	<ol> <li>Staff engagement initiatives communicating benefits of process improvements</li> <li>Employment of suitably qualified or experienced professionals</li> <li>Build relationships with cutting edge research organisations</li> <li>Establishing supply chain OH&amp;S program</li> <li>Establishing Stage Gate innovation system from concept to launch</li> <li>Introducing digital People &amp; Performance tool</li> <li>Introducing Graduate Program</li> </ol>	<ol> <li>Tapping into Manildra biogas supply pipeline</li> <li>Primary energy plant upgrade</li> <li>Using recycled water for motor chilling</li> <li>Wastewater characterisation</li> <li>Installation of solar energy system (on Manildra site)</li> <li>Cardboard recycle system installation</li> </ol>	<ol> <li>Floor layout optimisation</li> <li>Farm asset management</li> <li>Sales process, operations and procurement planning</li> <li>Traceability: live animal and product</li> <li>CL product management</li> <li>Optimising packaging gas mixtures, temperature</li> </ol>	<ol> <li>MLA Co-marketing program</li> <li>Product labelling alternatives</li> <li>Converting hide membrane into collagen</li> <li>Super Fresh (smoke gas treatment)</li> <li>Supporting local Farmer strategy</li> <li>Bonded eye fillet</li> <li>Steaks with butter concept</li> <li>Red meat products with flavour profiles</li> <li>Shabu concept</li> <li>Wagyu value adding</li> <li>EQG value adding</li> <li>Slow cook strategy</li> <li>Secondary cuts utilization and value adding</li> </ol>	<ol> <li>Preferred supplier initiatives</li> <li>Build supplier database</li> <li>Involvement in LDL: enhanced feedback to producers</li> <li>APM/MLA Supply chain workshop</li> <li>EQG on farm grain feeding and MSA grading</li> <li>Supplementary</li> <li>HGPF program</li> <li>Digital data integrity stocktook</li> <li>Howstin cattle</li> </ol>

APM/MLA Innovation Strategy on one Page (FY 17/18)						
Focus Areas	Innovation resource planning & people management	Environmental Sustainabilitv	Operational efficiency	Marketing, market access & value adding	Livestock	
Initiatives	<ol> <li>Promoting continuous improvement in processes</li> <li>Employer of choice</li> <li>Documenting workplace safety</li> <li>Academic relationships / partnerships</li> <li>Training and apprenticeships</li> </ol>	<ol> <li>Utilities management</li> <li>Upgrade treatment of wastewater stream (piping to farm)</li> <li>Increase use of renewable energy</li> <li>Cardboard management</li> </ol>	<ol> <li>Reduce cost of processing</li> <li>Reduce cost of raw material landed plant</li> <li>Automation of labelling system</li> <li>Yield management</li> <li>Reduce cost of packaging</li> <li>Increase average daily gain on farm</li> <li>Improving shelf life</li> </ol>	<ol> <li>Market growth in both domestic and international</li> <li>Further processing in China</li> <li>Establishing direct supply chain with major new customer in Taiwan and HK</li> <li>Develop market in SE Asia (Cambodia, Thailand, Singapore)</li> <li>Value adding NPD strategy</li> </ol>	<ol> <li>Improve supply reliability</li> <li>Enhance traceability systems (Livestock Data Link)</li> <li>Efficient supplementary feeding system</li> <li>Genetic improvements</li> <li>Improve MSA compliance &amp; benchmarking</li> </ol>	
Measurable KPIs (FY17/18)	<ol> <li>3 of process improvements initiatives sourced by staff</li> <li>2 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system implemented</li> <li>Digital People Performance Management system implemented</li> <li>1 graduate in the Graduate Program</li> </ol>	<ol> <li>Approx. \$65K cost of energy consumption per annum</li> <li>15% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>130 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$10K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.0/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.20/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>1,500 tonne meat (as finishing products) sold by NPD</li> <li>\$16/kg Average selling price</li> <li>15% of NPD in average</li> <li>5 skus of domestic and more than 30 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>300-400 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.8kg/hd day weight gain)</li> <li>97% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>	
Projects	<ol> <li>Staff engagement initiatives communicating benefits of process improvements</li> <li>Employment of suitably qualified or experienced professionals</li> <li>Build relationships with cutting edge research organisations</li> <li>Establishing supply chain OH&amp;S program</li> <li>Establishing Stage Gate innovation system from concept to launch</li> <li>Introducing digital People &amp; Performance tool</li> <li>Introducing Graduate Program</li> </ol>	<ol> <li>Tapping into Manildra biogas supply pipeline</li> <li>Primary energy plant upgrade</li> <li>Using recycled water for motor chilling</li> <li>Wastewater characterisation</li> <li>Installation of solar energy system (on Manildra site)</li> <li>Cardboard recycle system installation</li> </ol>	<ol> <li>Floor layout optimisation</li> <li>Farm asset management</li> <li>Sales process, operations and procurement planning</li> <li>Traceability: live animal and product</li> <li>CL product management</li> <li>Optimising packaging gas mixtures, temperature</li> </ol>	<ol> <li>MLA Co-marketing program</li> <li>Product labelling alternatives</li> <li>Converting hide membrane into collagen</li> <li>Super Fresh (smoke gas treatment)</li> <li>Supporting local Farmer strategy</li> <li>Bonded eye fillet</li> <li>Steaks with butter concept</li> <li>Red meat products with flavour profiles</li> <li>Shabu concept</li> <li>Wagyu value adding</li> <li>EQG value adding</li> <li>Slow cook strategy</li> <li>Secondary cuts utilization and value adding</li> </ol>	<ol> <li>Preferred supplier initiatives</li> <li>Build supplier database</li> <li>Involvement in LDL: enhanced feedback to producers</li> <li>APM/MLA Supply chain workshop</li> <li>EQG on farm grain feeding and MSA grading</li> <li>Supplementary</li> <li>HGPF program</li> <li>Digital data integrity stocktook</li> <li>Howstin cattle</li> </ol>	

APM/MLA In	APM/MLA Innovation Strategy on one Page (FY 18/19)					
Focus Areas	Innovation resource planning & people management	Environmental Sustainability	Operational efficiency	Marketing, market access & value adding	Livestock	
Initiatives	<ol> <li>Promoting continuous improvement in processes</li> <li>Employer of choice</li> <li>Documenting workplace safety</li> <li>Academic relationships / partnerships</li> <li>Training and apprenticeships</li> </ol>	<ol> <li>Utilities management</li> <li>Upgrade treatment of wastewater stream (piping to farm)</li> <li>Increase use of renewable energy</li> <li>Cardboard management</li> </ol>	<ol> <li>Reduce cost of processing</li> <li>Reduce cost of raw material landed plant</li> <li>Automation of labelling system</li> <li>Yield management</li> <li>Reduce cost of packaging</li> <li>Increase average daily gain on farm</li> <li>Improving shelf life</li> </ol>	<ol> <li>Market growth in both domestic and international</li> <li>Further processing in China</li> <li>Establishing direct supply chain with major new customer in Taiwan and HK</li> <li>Develop market in SE Asia (Cambodia, Thailand, Singapore)</li> <li>Value adding NPD strategy</li> </ol>	<ol> <li>Improve supply reliability</li> <li>Enhance traceability systems (Livestock Data Link)</li> <li>Efficient supplementary feeding system</li> <li>Genetic improvements</li> <li>Improve MSA compliance &amp; benchmarking</li> </ol>	
Measurable KPIs (FY18/19)	<ol> <li>3 of process improvements initiatives sourced by staff</li> <li>2 of suitably qualified or experienced professionals</li> <li>3 of new relationships formed with cutting edge research organisations</li> <li>Supply chain OH&amp;S program established</li> <li>0 of injuries across business</li> <li>Innovation system established</li> <li>Digital People Performance Management system implemented</li> <li>1 graduate in the Graduate Program</li> </ol>	<ol> <li>Approx. \$60K cost of energy consumption per annum</li> <li>15% of renewable energy per annum</li> <li>100% compliance with local council and EPA regulations</li> <li>100 m<sup>3</sup> Volume of solid waste to landfill</li> <li>\$15K rebate collected by Cardboard recycle system installation</li> </ol>	<ol> <li>&lt;\$4.00/kg product processed</li> <li>\$2.0/kg packaging in average</li> <li>Yield 80% in average</li> <li>Functioning traceability system in place</li> <li>Raw material 75% of sales</li> <li>Average \$1.20/kg labour</li> <li>Shelf life days 28 days for portion cuts, 21 days for value added products</li> </ol>	<ol> <li>2,000 tonne meat (as finishing products) sold by NPD</li> <li>\$18/kg Average selling price</li> <li>20% of NPD in average</li> <li>5 skus of domestic and more than 40 skus of export new contracts attained</li> <li>0 skus from domestic market and 0 skus from export market received out-of-spec customer complaints (raw material or / and labelling)</li> </ol>	<ol> <li>400-500 Head processed per week</li> <li>3 of preferred suppliers</li> <li>20% of supplementary feed internally sourced</li> <li>Establishment of new value- based payment system (DEXA linked to LDL)</li> <li>Key carcass traits (1.8kg/hd day weight gain)</li> <li>97% of carcase met MSA minimum requirement</li> <li>55-58 Average MSA Index score</li> </ol>	
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