



# final report

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## **Bindaree Beef Group Collaborative Innovation Strategy Partnership Program**

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## Abstract

In April of 2016 Bindaree Beef Group (BBG) entered into an agreement with Meat and Livestock Australia (MLA) to commence a Collaborative Innovation Strategy Partnership Program (CISP).

The focus of the program was to support the development of BBG's high value growth strategies in both domestic and export markets via a range of innovative products, packaging, processes and value chain concepts that extend from paddock to plate.

An Innovation strategy was developed as part of the CISP program that was aligned and integrated with BBG's overall business strategy and included measurable performance indicators which identified the contribution of innovation to the bottom line and achievement of key business objectives.

BBG identified a number of initiatives across the value chain that the CISP program could support. Key business initiatives identified included improvement in areas such as:

- Operational Efficiency
- New Products and Markets
- Marketing and market access (including a separate arrangement to engage in the collaborative marketing program)
- New business systems and models
- Supply chain innovation

During the 3-year period a range of strategy development and project implementation were planned to include (but not limited to):

- Documentation of key objectives and innovation initiatives in each of the above key business areas
- Quantifiable innovation performance targets in each of the key business areas, including the development of baselines and measurement systems to monitor progress
- Development of innovation skills and resources plan to build capability to effectively implement the innovation strategies
- Initiatives to support the cultural change required to deliver against innovation objectives.

The program was managed by a steering committee made up of BBG executives and an MLA steering committee representative. A fulltime Innovation Manager was assigned for managing the outcomes of the program.

The following report will detail the outcomes of the CISP program.

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# **1 Background**

## **1.1 Bindaree Beef Group**

Bindaree Beef Group (BBG) is a large vertically integrated beef company. The business was founded by JR McDonald and grew out of the Northern Rivers region. In more recent history Bindaree Beef has processed beef at its Inverell abattoir processing site for over 20 years.

Over this period the business has grown and expanded operations from a core as an abattoir processing operation to now include within its operations livestock production (Backgrounding + Feedlot operations), retail ready processing (Dedicated Retail processing site at Burleigh Heads) and sales distribution channels into both domestic and export markets. The last 10 years has seen a rapid business expansion.

In 2017 Bindaree Beef completed an equity raising through the sale of a 51% of its business to the Hong Kong based Shimao Group controlled by the Hui family. Since completing this transaction, the business has reassessed its operations and narrowed its focus from a broader commodity approach towards business growth in strategic high value streams. This reassessment of business strategy has seen the winding up of the Sanger Trade business as well as the sale of the Retail outlet 'The Australian Meat Emporium'.

The freeing up of this capital has enabled the business to focus on strategic growth across the value chain including ongoing investment in; China operations and distribution capability, Retail operational processing capability, supply chain security and efficiency through investment in backgrounding operations. The business has also looked into capital investment back into improving operational efficiency through its abattoir processing facility at Inverell.

## **1.2 The CISP program**

As fore-mentioned, BBG has in the last 5 years moved through a period of rapid change in both its value chain design and in business ownership. The business has rapidly developed from a core abattoir processing operation to a vertically integrated value chain with business acquisitions both upstream and downstream of its abattoir processing operation.

BBG has never been short on developing innovative ideas, with a rapid recent change in the BBG value chain and forecasted business expansion, BBG saw it as an opportune time to develop some structure and due diligence around how it manages and develops innovative ideas through into executable projects and business growth. The business saw the CISP program as an ideal opportunity to setup and support the setup of this framework.

## 2 Project objectives

### 2.1 Objectives

The main objective for BBG was to develop and implement an innovation strategy with key focus in the following areas:

- Develop and implement Innovation resource planning and people management
- Review of areas within the business where gains could be made within operational efficiency
- Investigate areas from our environmental sustainability could be improved
- Focus on review of the marketing strategy and investigate areas for which market access may be improved. (A separate contractual agreement is in place for the Collaborative marketing program).
- Design / build new business systems and models (E.g. Value chain innovation, new strategic alliances)
- Develop supply chain innovation (including such areas as; eating quality, information management, supply chain alignment and supply chain assurance)

During the 3-year period a range of strategy development and implementation activities were planned to include:

- Documentation of key objectives and innovation initiatives in each of the above key business areas
- Setting of quantifiable innovation performance targets in each of the key business areas including the development of baselines and measurement systems to monitor progress
- Development of an innovation skills and resource plan to build capability to effectively implement the innovation strategies
- Initiatives to support the cultural change required to deliver against innovation objectives

### 3 Methodology

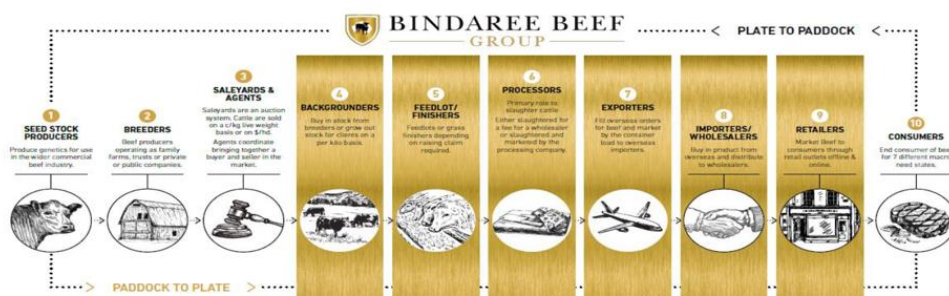
#### 3.1 Innovation Manager

At the commencement of the CISP program an Innovations Manager (IM) role was created. The primary focus of this role was to implement the Innovation Strategy as developed by the Steering Group. The major activities undertaken by the IM included:

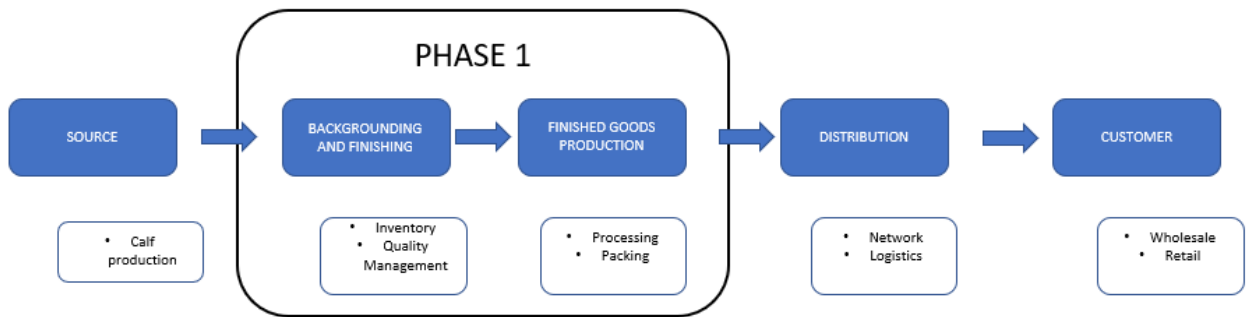
- Provided leadership and vision regarding implementation of an innovation strategy across the business
- Made sure that innovation strategy aligned with the business strategy
- Worked as the interface between the innovation strategy and the core business strategy and in doing so worked to provide foresight regarding innovation, identify global trends and map capability needs in order to identify the specific opportunities for gaining competitive advantage
- Assisted in developing and monitoring project performance indicators and other measures of impact as agreed by the Steering Group.
- Worked to ensure the scope of the innovation strategy extended to producers and suppliers to drive benefit across the value chain.
- Developed and co-ordinated innovation projects across the three-year term of the agreement.
- In collaboration with MLA, worked to determine funding mechanisms for agreed projects
- Managed and monitored expenditure as well as tracked benefits and outcomes generated from R&D / Innovation projects and activities
- Managed external relationships with research partners, research providers, equipment suppliers, processing sector and value adding sector.
- Participated in MLA organised training and conferences
- Prepared regular project reports and quarterly innovation reports

To assist with the development of this role and development of key objectives across the value, the business saw an opportunity to engage consultancy firm EPRAKT to map the BGG value chain and identify both waste and opportunities for enhancing outputs.

#### BBG VALUE CHAIN



## Mapping the value chain



### 3.2 Engagement with the business

The IM worked with key stakeholder groups within the business to ensure that there was stakeholder engagement across the value chain.

A process for the innovation function was setup. The function of the role was defined and mechanisms to drive the function within the business were outlined.

Key mechanisms highlighted included; allocation of capital to fund projects, senior management sponsorship, time allowance for key stakeholders from various parts of the business to engage in ideation, objective setting for projects as well as necessary involvement.

Beyond the fore mentioned mechanisms, the innovation function also included detail on:

- Definition of the team members required to participate in the process. The roles and departments from which they represent within the value chain
- Responsibility matrix outlining individual stakeholders' involvement in the process
- Definition of the stage gate process required to progress ideation through to project management.
- Required meeting rhythms, defining who is required and when they were to be involved in the process.

### 3.3 KPI and executive review

Key KPIs were developed which tracked progress monthly and reported to at an executive level.

KPIs were developed to track the progress of the innovation function over the course of the CISP program. Business KPI's sort to provide a dashboard illustrating progress of innovation process from ideation sessions through to business case to project approval. The dashboard also provided a financial snapshot of input costs as well as expected project benefit to determine an expected ROI to the business.

Throughout the program regular meetings and reports were prepared with the Steering committee. The quarterly review assessed the progress of the program to ensure key deliverables were being met with STOP/GO decision points to be passed through.

## **4 Results**

### **4.1 Innovation Project work**

Over the course of the 3-year CISP agreement BBG engaged in a wide range of Innovation investigation and initiation. Project work included MLA PIP funded projects, internally funded CAPEX projects, engagement and investigation of ideas with various universities and technology providers.

#### **4.1.1 PIP Projects**

Over the duration of the CISP agreement BBG investigated and engaged in a large number of Innovation initiatives across the value chain from livestock production, processing efficiency through to sales and marketing.

Some of these initiatives qualified for MLA co funding support through the PIP pathway. PIP projects engaged with throughout the CISP program included:

PIP.0519 – Bindaree Beef Value Chain Mapping research

PIP.0518 – IFFA Technology Exhibition Study Program and Global IP Scanning

PIP.0517 – Young Food Innovator Program

PIP.0540 – Grain Fed Friesian Steer Program

PIP.0554 – Research and feasibility study into design and technical requirements for a value chain interactive platform

PIP.0556 – Study tour research processing automation, processing traceability and packaging

The PIP process has worked as an enabler for BBG to develop innovation research into core business strategy. Several PIP projects have progressed from PIP project form into core business for BBG. Of note;

The Grain Fed Friesian Steer program provided BBG with the opportunity to investigate a waste stream from the dairy industry into a high value revenue stream for both producer and processor. This program developed from pilot trial phase into a core operation at our Myola feedlot.

The work completed into research on feasibility and design technical requirements for a value chain interactive platform provided the IT team with a list of potential project streams for the business to engage with. Work from this project has flowed into the development of infrastructure to support BI development and stakeholder software support.

#### **4.1.2 AMPC + University + Industry engagement**

Beyond the MLA pathway BBG was also able to lend support to several AMPC driven projects.

BBG was engaged with AMPC project 'Integrated Robotic Picking and Packing of Primal Cuts' (Project Code 2017 – 1065). Through this project BBG supported Strategic Engineering with access to meat for testing, consultation on processing flow throughout packing room operation. BBG spent time with Strategic Engineering during the prototyping phase of an automated pick/pack processing line providing critique of the process.

BBG also lent assistance through consultation on AMPC project 'Feasibility into a high-volume cellular processing plant' (Project code 2017 – 1054). This project sort to investigate the pros and



cons of moving away from continuous chain processing while looking at whether the change of process could be adopted or retrofitted to existing processing facilities.

Beyond engagement with the processing industry BBG also engaged with both Sydney University and UTS to explore whether there was opportunity to bridge the gap between the academic world and the commercial world. Through this engagement an opportunity became available to host a UTS MBA group in short sprint program designed to understand the BBG value chain and suggest alternative value propositions for the retail arm of the business.

Tied closely to the CISP program was the employment of a full time Innovation resource under the YFI PIP program. Through this resource and the and structure of the program BBG was able to gain exposure to Design Led Innovation philosophy as delivered by a range of universities and institutions across Australia and New Zealand.

Beyond the fore mentioned project work BBG also attended industry information days and forums as a means to maintain engagement with industry and to keep up to date with trends. BBG representatives attended events hosted by the MLA, CSIRO and Rabobank as well as trade shows both domestically and abroad.

#### **4.1.3 Internal project work**

Further to the project work that qualified for industry funding, the Innovation Manager was actively involved in the investigation and building of business cases for several internally funded CAPEX projects. The project scope was wide and varied across the value chain. In each of the below examples identified BBG was not a first mover within the industry however saw the potential for improvement to efficiency or potential for waste reduction.

Some of this project list has progressed into realised project implementation and new business process, others have been parked for discussion at a later time and some have been ruled out.

Projects identified included:

- Blade Stop Bandsaws in the boning room: Bandsaws present one of the most high-risk pieces of equipment in a meat processing environment. The Bladestop bandsaw presents a mechanical solution to reducing risk of injury to operators. The IM was involved in presenting the CAPEX business case to CAPEX committee. Approval was granted for the installation of several units into the boning room.
- Spray Chilling: The IM was involved in early discussions to quantify the potential benefit of spray chilling to the processing operation. Analysis of shrink by body type and chiller was completed to quantify the potential benefit to yield of installing spray chilling. A business case was developed and green lighted in to a CAPEX project which was completed and commissioned in 2019. This project was cash flow positive within 12 months and is currently returning an improvement in red meat yield of better than 1.5%.
- Solar Power: BBG initiated discussion with several solar providers to understand potential benefit and payback to current energy agreement. Serval arrangements were investigated including upfront capital outlay as well as purchase buy back agreements.
- Halal Slaughter and use of electrical stunning in a high value meat environment: BBG Investigated the option of changing its kill process to Halal slaughter. As part of the

discussion through Carne Technology we investigated the potential use of electrical stunning in high value beef streams as a means of Halal stunning. The project was put on hold on the basis that BBG decided not to progress with Halal slaughter at the present time.

- MSA optimisation: Several meetings were held with the MSA team to discuss potential improvements to MSA grading. Options discussed included change of process to electrical stimulation, hang time, PBR line setup, handling of livestock. This continues to something that is monitored and re addressed on a need's basis. As a part of this process BBG also underwent a CBA on potentially switching to a tender stretch program for some streams of northern cattle.
- Automation of knife sharpening and objective measurement of manual knife sharpening: An investigation was held into the improvement of knife sharpening facilities and process. Highgate were invited to attend the Inverell site and present both their objective knife sharpness measurement system and their automated knife sharpening system
- Chilled Offal recovery: BBG converted several offal cuts from frozen to chilled. A review of the process and potential upside of chilled offal collection was conducted, and process was changed.
- By product transfer to rendering: BBG investigated a change in waste transfer from blow pipe method through to suction system. A potential cost saving was highlighted however with uncertainty to rendering plant upgrade the system was not adopted
- Co2 Alternative chill down process: BBG currently chills down all fresh bulk packed trim via Co2. This chill down process is at considerable cost to the business each year. There have also been issues to the consistency of supply in recent years. An alternative idea looking at the use of impingement freezing was investigated as an option to both reduce cost and improve reliability of chilling process.
- Automated loin recovery: There is room for considerable yield loss when removing the chine bone from the loin during the boning process. BBG engaged Scott Technologies to test and investigate the use of a mechanical solution to the boning of the loin. Unfortunately, the loin mechanical solution was deemed inconsistent at chain speed.
- DEXA objective carcass measurement: BBG has engaged with the MLA, AMPC and Scott Technologies through the DEXA process. At the moment BBG remains an interested observer to the potential benefits to objective carcass measurement and potential for downstream automation.

## 5 Discussion

The CISP program coincided with an interesting period for BBG. At the commencement of the program BBG was on the cusp of completing an equity raising with a Chinese partner. The money generated from this raising would have provided the ideal capital platform from which innovation and CAPEX projects might have been funded from.

Unfortunately, this deal fell over and due to adverse seasonal conditions cattle supply tightened and with the tightening of cattle supply accessible capital for capital projects also became difficult to secure.

Through this phase the business was actively pursuing new equity partner options. Many projects were investigated, and ideas were formulated on business strategy and potential high value growth streams. The CISP program provided a resource from which project investigation across the value chain could be leveraged from.

In September of 2017 a new equity deal was struck through Archstone Investment. This equity raising provided opportunity for some of the project investigations that had been occurring to be transformed from ideas and into active projects.

Several PIP projects were initiated as well as investment into some plant infrastructure projects. A major business investment into value-add processing was also initiated. A purpose-built retail processing facility at Burleigh Heads was fitted out and commissioned. This facility has provided increased operational capability into retail and value-added retail ready foods into both domestic and export markets. It has also allowed BBG to diversify from a beef processing company in a business with a broader focus into alternative protein streams.

BBG found that the PIP pathway provided an opportunity to de-risk exploration into innovation through relief of some of the financial burden through co funding arrangements. The business has undergone rapid change in ownership, management and business strategy in recent times, which has provided a challenging environment to initiative innovation from. That being said, BBG has an aggressive growth strategy that it is looking to continue to pursue. With growth comes opportunity, BBG sees that it will need to continually challenge the status quo to keep progressing in a competitive and challenging processing environment. Continuing to provide

## 6 Conclusions/recommendations

BBG has worked through a period of restructure across its value chain. The business has seen the shift from a trade focus into channelling product into value added streams with a focus on growth markets.

Since the completion of the CISP agreement, the business has decentralised the innovation function. With a wide and diverse value chain BBG has decided that innovation be initiated and progressed through individual business units. BBG has established a central CAPEX committee which is responsible for determining the merit of each project, prioritising and allocation of capital to project work.

With a restructure and refocus of business operations BBG is in a strong position to continue to invest into innovation aligned to business strategy.

The business will continue to look for options to leverage off its retail processing facility in Burleigh Heads and to diversify the offering from the facility. This purpose-built facility will provide opportunity for innovation into both new product development as well as processing development. The team up Burleigh have a dedicated NPD team which works closely with our sales and marketing team as well as external vendors to develop an ongoing portfolio of new ideas in packaging and food development. The plant has run through a rapid throughput expansion phase, however there are ideas emerging on improving process efficiency and processing capability.

Beyond our retail processing operation there is no shortage of potential investment and innovation options for both the Inverell Processing site and into our livestock production supply chain.

Our livestock team have been proactive in working with the MLA to look at innovative solutions to automate feed delivery systems and have an active project list which they are working on for better ideas in improving livestock performance and animal health.

Our Inverell processing site also has a list of processing improvement projects that it will start to work through over the coming years.

While the structure in how the innovation pipeline is managed may change, BBG has developed an 'innovation culture' across all levels of the business. There is significant opportunity and desire for growth, and to continue to grow, BBG as a business will need to continue to challenge the traditional processes and mindsets in its aim to move from a commodity driven opportunistic business.