final report

Project code: P.PIP.0514

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Date published: 16 April 2018

PUBLISHED BY
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Young Food Innovators: Emerging Leaders - Public Report -

This is an MLA Donor Company funded project.

Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government and contributions from the Australian Meat Processor Corporation to support the research and development detailed in this publication.

Abstract

Australian Country Choice (ACC) has a strategic imperative to review current data collection, capture and analyses methods from which business decisions are made. ACC is currently facilitating MLA in the through the Young Food Innovator's program to develop two potential emerging leaders for the ACC business. An induction learning and development program over 13 weeks where the two Young Food Innovators (Agribusiness Innovation Trainee [Joel Bentley] and Processing Innovation Trainee[Glenn Bulloch]) were exposed to all the areas of the agribusiness and processing areas of the business.

ACC participated in the Young Food Innovator Trainee program between June 2016 - May 2018. The overall objective of the co-funded position was to use data and information generated in the business and customer channels to provide insights to identify demand opportunities. This will in turn inform supply strategies through primary processing, further processing and new growth opportunities to create and capture value with a focus on export markets and new market segments

ACC currently operates a number of information systems across a vertically integrated beef supply chain. These systems currently capture data to monitor, control and report on operations across three business units Processing (ACC-P), Intensive Production (ACC–IP) and Rural Production (ACC-RP). Collection of relevant and accurate data is essential to generate decision from data. However, equally important is how freely and efficiently that information flows through the supply chain. For this reason, a deep dive discovery and exploration of the current supply chain information management systems (SCIMS) utilised across ACC's supply chain was undertaken to map out the current state of the SCIMS.

During this discovery phase, all departments within ACC were evaluated to develop an understanding of the end-to-end operation flow of inputs, processes and outputs. The business imperatives & key business improvement focus areas were for the ACC processing business improvement focus were:

- Livestock Production Performance.
- Livestock Procurement
- Mapping NRM Spatial Hub
- Future projects

The project primarily focused on ACC's property data and end-to-end reporting, including managing data collection and integrity and turning data into information. This includes several reports such as, induction summary, vendor reports, selling centre and purchase type reports and monthly ACC-RP report just to name a few. This is all managed and produced through Microsoft Excel. Excel is a good tool to prototype and provides proof of concept; however, this manual system is now ready to be automated.

The project has focused on managing data collection and integrity and turning data into information. The ACC Agribusiness Trainee is working closely with ACC-RP General Manager and ACC Livestock Manager to generate reports weekly, monthly, quarterly, using Excel software. This

process is still manual and has not yet been automated. It is proposed that the manual system will transition to a semi- or fully-automated data capture and analysis.

Also, the Protrace crush-side data capture system was implemented as a result of the project. Protrace was rolled out to four ACC properties, with the remaining two to be installed before end of financial year. To achieve this, the ACC Agribusiness Trainee worked closely with ACC Group Manager of IT, providing feedback on the Protrace system including the likes and/or dislikes and any "bugs". The livestock data (primarily all crush-side) currently collected at properties is linked with procurement. The feedlot and kill data is providing the business with valuable information and insights about suppliers, processes and business performance. The ACC Agribusiness Trainee has also started to give feedback to suppliers on their livestock performance in the feedlot and potentially on the hook after slaughter.

It is an ACC Agribusiness strategic goal to do more with data. Specifically, ACC is looking in the short- to medium-term to integrate and automate data capture and analyses across all properties and feedlot operations. This is a key and vital future project for ACC. ACC recognises that there is an opportunity to invest in this space and deliver significant benefits to the business. Doing more with data has the potential to enable decision makers in ACC Agribusiness to make proactive objective decisions rather than reactive decisions after the fact. This may potentially result in substantial monetary gains and costs savings.

Several Residentials were completed during the learning and development program. Several tools and principles were presented at the various residential schools (six in total). These principles were implemented practically whereby shark-tank approaches were applied to take new red meat concept products to the market.

It was recommended to continue to support further data capture and analysis initiatives (i.e. beyond the project). It is proposed that the next step is overlaying animal performance and health data with environmental, welfare and behavioural data to gain even further insights. Due to the high numbers of animals moving through the supply chain on an annual basis, predictability and forecasting tools will be quickly verified if ACC wishes to further invest in this space. Specifically, the next proposed steps are:

- Integrate current systems to automate reporting
- Discuss and plan what is "next" and keep the momentum going
- Continue trialing Protrace and providing feedback to Protrace developers
- Whole of life reporting
- Work with livestock manager to highlight poor performing suppliers
- Work with external software vendors on integrating data systems

Opportunity exists for ACC to go and talk with other industries and understand how they overcome the challenges that ACC is currently facing with (the overwhelming task of) manual capture and analyses of data. ACC recognises that it needs to engage with key stakeholders to understand what data is critical to capture and analyze. ACC is looking to review options to improve access to information for decision makers to allow them to make more informed decisions that are proactive rather than reactive.

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1 Background

1.1 Company: Australian Country Choice

Australian Country Choice (ACC) is one of the largest vertically integrated beef supply chains and continues to strive for world's best practices across whole of business. ACC remains committed to attracting, developing and retaining staff to achieve this goal and is supportive of MLA's Food Value Chain Innovators: Emerging Leaders Traineeship program - a sub-project within the Insights to Drive Food Value Chain Innovation & Growth project (funded within the Rural R&D for Profit Programme). With key client (Coles) directive to increase production capabilities and capacities across the entire supply chain and to respond to highly changing market and consumer needs, specific focus (of project 3) will be working in an integrated approach on the demand side of ACC-Coles retail domestic and ACC-Coles China markets (including MSA pathways with variable BI content). Focus will be a whole of business improvement approach with metrics design aligned to CISP stage 2. The specific aim of the MLA-ACC traineeship is to assist young professionals to build 'whole-of-chain' (plate to paddock) strategic value chain thinking and capabilities that equip them to work in ACC's value chain to seek innovations to grow high value opportunities in both domestic and export markets based on deep market and consumer insights. It is proposed that the "demand" ACC Processing Trainee will accompany a second "demand" ACC Agribusiness Trainee running concurrently across the ACC and ACC-ACBH business.

1.2 Rural R&D for Profit Market and consumer insight to drive food value chain innovation and growth “Insights2Innovation”

Insights2Innovation is a first of its kind collaboration between Meat & Livestock Australia, Dairy Australia, Horticulture Innovation, Fisheries Research and Development Corporation, Department of Economic Development, Department of Economic Development, Jobs, Transport and Resources, Rural Industries Research and Development Corporation, Wine Australia, Austrade, Department of Agriculture and Food, Western Australia, CSIRO and Australian Pork Limited.

The project intended to address key objectives of the Rural R&D for Profit Program by developing new knowledge and deep market insights that will inform more strategic innovation investment decisions, and ultimately, lead to increased value for primary products.

Specifically, this project focused on capturing market insights, identifying high-value opportunities in export markets and helping producers and their supply chain partners respond effectively to those opportunities. It also looked at building the capacity and capability of Agri-food supply chains to innovate and collaborate for market advantage, by creating easy-to-access tools and strategies.

By collaborating with stakeholders across the Agri-food sector, deep market insights were captured for the China, ASEAN and MENA regions. Crucial to the success of Insights2Innovation was the development of novel and practical approaches to translating these insights into innovation opportunities. Using the participatory action research framework, the project explored and evaluated different models of how to achieve this – one at the enterprise level (Value Chain Flagship Demonstrations) and the other at the individual level (Young Food Innovators).

Value Chain Flagship Demonstrations involved producers and their value chain partners working together to convert market and consumer insights into tangible innovation and growth options. Foundation research outputs and the learnings were embedded in the design of specific strategies targeting identified market opportunities and the development of pilot value chain designs.

Young Food Innovators was designed to help emerging industry leaders in the Australian Agri-food sector develop a 'whole-of-chain' (plate-to-paddock) approach and build their strategic value chain thinking and capability. Delivered through a series of residential workshops, this cohort-based program enabled participants to work with food value chains that were seeking to innovate in order to grow high value opportunities; in both domestic and export markets, drawing on market and consumer insights.

1.3 Emerging Leaders program

The Young Food Innovators: Emerging Leaders program is a sub-project within the Insights to Drive Food Value Chain Innovation & Growth project (funded within the Rural R&D for Profit Programme) and is aimed at assisting the red meat, horticulture, seafood, dairy industries and pork (the participating sectors) to attract, develop and retain new talent. The specific aim is to assist young professionals to build 'whole-of-chain' (plate to paddock) strategic value chain thinking and capabilities that equip them to work with innovative food value chains that are seeking to innovate in order to grow high value opportunities in both domestic and export markets based on deep market and consumer insights.

The focus of the proposed Young Food Innovator's (YFI) Program will be to build and deliver strategic value chain thinking and capabilities on livestock production systems and meat procurement/scheduling and grading models informed by consumer and end customer insights and product supply.

The aims of the program are specifically:

- Excellence in category management and price point planning to create and capture carcass value using portfolio of strategic growth options and methodologies to convert information to insights to innovation strategies informed by emerging consumer/customer trends such as active ageing, snacking and convenience.
- Value chain design development for new markets and modes of operation
    - Evaluation, pilot and implementation of various production data capture and analyses systems such as Ignition.
    - Evaluation and integration of various data management platforms such as Ignition software and ileader as real-time, on-line business decision making tools and threat analyses.
    - Mapping all data management systems across ACC business and evaluate the master framework for measure, monitor and control of data across the ACC business.
    - Value based marketing and further processing design of MSA and/or non-MSA supply.
    - Integration and alignment of beef processing production through to Coles' customers with farm and livestock production systems (jointly with "supply" ACC trainee).
- Value based marketing approach from primary/further processing to retail markets using value chain design that feeds into the "supply" traineeship program.

ACC Trainees, Glenn Bullock & Joel Bentley have been recruited into two separate business areas of ACC (i.e. ACC processing and agribusiness). ACC's Trainees will also work on specific food value chain innovation, marketing and insight projects that are agreed by ACC and the Rural RD4Profit Insights Project Steering Committee (led by MLA). In addition, Trainees will participate in reporting lessons learnt analysis for attracting and retaining young innovators to Agri-food sector.

The key aim of the program is to attract, develop and retain young people with value chain thinking to the Agri-food industry. The contribution of the Young Food Innovator to the overall success of the ACC program will be determined by:

- Evidence of effective implementation of learning from (insights) data in the prescribed insights2innovation theme(s)
- Evidence of contribution to company's innovation culture and (as agreed) improvements in specific company innovation measures
- Efficient project delivery in accordance with budgets and timelines
- Quality of reports
- Contribution to Young Food Innovators Network

1.4 Scope of Work

The focus of the proposed program will be to build and deliver strategic value chain thinking and capabilities on livestock production systems and meat procurement/scheduling and grading models informed by consumer and end customer insights and product supply, specifically:

- Value chain design development from farm gate, to feedlots and through to primary processing systems that encompass ACC and ACBH supply programs using demand driven insights and enabling platforms such as MSA.
- Focus on production potential through developing methodologies on collection, capture, analysis and feedback of livestock and primary processing data and working groups as part of value chain design.
- Value chain design development for new markets and modes of operation
    - Evaluation, pilot and implementation of various production data capture and analyses systems including BeefSpecs, customised ACC and/or ACBH data systems to provide real time on-line business trading decision.
    - Evaluation and application of on-farm and livestock production prediction models and optimisation tools (aligned with processing and production grids).
    - Evaluation and application of beef genetics prediction systems and optimisation tools across ACC and/or ACBH businesses.
    - Value based marketing and further processing design of MSA and/or non-MSA supply.
    - Integration and alignment of beef farm and livestock production systems with processing production through to Coles' customers (jointly with "demand" ACC trainee).
- Value based marketing approach from primary/further processing to retail markets using value chain design that feeds into the "demand" traineeship program.

Trainees will also work on specific food value chain innovation, marketing and insight projects that are agreed by ACC and the Rural RD4Profit Insights Project Steering Committee (led by MLA). In addition to performing relevant value chain innovation roles within ACC, the Trainee will also work on specific food value chain innovation, marketing and insight projects that are agreed by the ACC and MLA. Trainee will be supported by an external mentor (appointed by MLA in consultation with

ACC) and will undergo a targeted training & development program over the two-year period in key focus areas.

Australian Country Choice (ACC) currently operates a number of information systems across a vertically integrated beef supply chain. These systems currently capture data to monitor, control and report on operations across three business units Processing (ACC-P), Intensive Production (ACC–IP) and Rural Production (ACC-RP). Collection of relevant and accurate data is essential to generate decision from data. However, equally important is how freely and efficiently that information flows through the supply chain. For this reason, a deep dive discovery and exploration (D & E) of the current supply chain information management systems (SCIMS) utilised across ACC's supply chain was undertaken to map out the current state of the SCIMS.

During the D & E phase, all departments within ACC were evaluated to develop an understanding of the end-to-end operation flow of inputs, processes and outputs. The scope, goals and objectives of the discovery and exploration phase are shown in Table 1 below.

Table 1: Scope, Goals and Objectives of the discovery and exploration.

Scope of Work: Undertake a deep dive Discovery & Exploration (D&E) of the current Supply Chain Information Management Systems (SCIMS) utilised across the vertically integrated supply chain of the Australian Country Choice (ACC) enterprise.	
Goal	**Objective**
Build an appreciation of the 'operation' flow of Inputs, Processes and Outputs across ACC- P, ACC-IP and ACC-RP business units.	Exposure to the location, function and constraints of business units and operations. Understand primary materials and resources on hand. Discover the processes undertaken to add value to these materials.
Develop an in depth understanding of how information integrates and transforms across business units to unify the Australian Country Choice supply chain to the 'value proposition' expectations of Coles Supermarket.	Map how SCIMS are currently used to deliver value to the ACC supply chain. (Looking Out) Map how SCIMS are currently used to create value to the ACC supply chain. (Looking In)
Identify 'what' are the current supply chain information management systems across the ACC Supply Chain.	Build a comprehensive database of current Data Sets.
Investigate 'how' information is captured for these systems.	Identify if the data is captured electronically or manually. Identify the software utilised by vendors and where possible assign indicative costing. Discuss hardware used in conjunction with software to capture relevant data. Understand Technical Knowledge, Skills and constraints that are currently impacting on the collection of manual and electronic data.
Define 'why' the capturing of specific information relates to operational and management functions of the ACC Supply Chain.	Data to Monitor operations. Data to Control operations. Data utilised to Report on operations

2 Project objectives

The overall objective of the co-funded position was to use data and information generated in the business and customer channels to provide insights to identify demand opportunities. This will in turn inform supply strategies through primary processing, further processing and new growth opportunities to create and capture value with a focus on export markets and new market segments.

The specific objectives were:

- Using data and information generated in the business and customer channels to provide insights to identify demand opportunities that inform supply strategies through primary processing, further processing and new growth opportunities to create and capture value.
- Develop innovation investment portfolios in enabling platforms and new business models and developing demand driven products and markets.
- Develop networks, skills and capability to collect and collate consumer attitudinal, category trading, quality and yield and value data and information to make business decisions and value chain design innovations from insights.
- Assist ACC in the development and implementation of value chain innovation strategy including investment in enabling platforms and new business models and developing demand driven products and markets for beef.
- Develop networks, skills and capability to collect and collate consumer attitudinal, category trading, quality and yield and value data and information to make business decisions and value chain design innovations from insights.
- Support and align to MLA-ACC Collaborative Innovation Strategies Program (CISP) and ACC's whole of business improvement approach and provide support to the current ACC business improvement team where this is consistent with the overall objectives of this program.
- Trainee will also work on specific food value chain innovation, marketing and insight projects that are agreed by ACC and the Rural RD4Profit Insights Project Steering Committee (led by MLA)
- Trainee to also participate in reporting lessons learnt analysis for attracting and retaining young innovators to Agri-food sector.

3 Methodology

The primary aim of the program is to attract, develop and retain young people with value chain thinking to the Agri-food industry. The contribution of the Young Food Innovator to the overall success of the ACC program will be determined by:

- Evidence of effective implementation of learning from (insights) data in the prescribed insights2innovation theme(s)
- Evidence of contribution to company's innovation culture and (as agreed) improvements in specific company innovation measures
- Efficient project delivery in accordance with budgets and timelines
- Quality of reports
- Contribution to Young Food Innovators Network
- Lessons learnt analysis on working within ACC and with nominated industry mentor
- Progress report on prescribed projects as directed by MLA
- Outcomes of the professional development programs

A design led process was applied to identify priority ACC Agribusiness project focus areas. This involved a process of focusing on Define, Design and Develop (D3) phase to identify areas with the Supply Chain Information Management systems (SCIMS) that could provide additional value to the supply chain. These areas were pre-defined by the respective CEO's of both the Processing and Agri-Business division of ACC as pain points to the company. This process aligned within Design Led Innovation themes explored during the MLA Young Food Innovators program (See Figure 1).

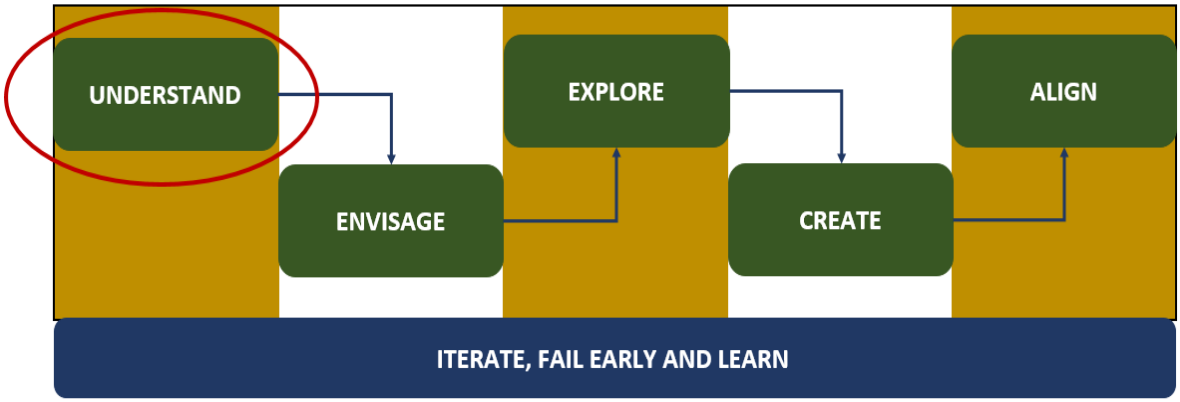

Figure 1 - Themes within the Design Led Innovation methodology.

Agri-business, presented a focus across seven key business imperatives and priorities, which focused on maximising investment efficiency on livestock commodity and improved transparency in identifying the real cost of production within the daily operation of breeding and backgrounding enterprises.

4 Outcomes & Learnings

4.1 ACC Agribusiness Projects Update

During the discovery phase of the project (Milestones 1&2), all departments within ACC were evaluated to develop an understanding of the end-to-end operation flow of inputs, processes and outputs. The business imperatives & key business improvement focus areas for the ACC Agribusiness operations were:

- Livestock Production Performance.
- Livestock Procurement
- Mapping NRM Spatial Hub
- Future projects

The project primarily focused on ACC's property data and end-to-end reporting, including managing data collection and integrity and turning data into information. This includes several reports such as, induction summary, vendor reports, selling centre and purchase type reports and

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Also, the Protrace crush-side data capture system was implemented as a result of the project. Protrace was rolled out to four ACC properties, with the remaining two to be installed before end of financial year. To achieve this, the ACC Agribusiness Trainee worked closely with ACC Group Manager of IT, providing feedback on the Protrace system, including the likes and/or dislikes as well as any "bugs". The livestock data (primarily all crush-side) currently collected at properties is linked with livestock procurement. The feedlot and kill data is providing the business with valuable information and insights about suppliers, processes and business performance. The ACC Agribusiness Trainee has also started to give feedback to suppliers on their livestock performance in the feedlot and potentially on the hook after slaughter.

It is an ACC Agribusiness strategic goal to do more with data. Specifically, ACC is looking in the short- to medium-term to integrate and automate data capture and analyses across all properties and feedlot operations. This is a key and vital future project for ACC. ACC recognises that there is an opportunity to invest in this space and deliver significant benefits to the business. Doing more with data has the potential to enable decision makers in ACC Agribusiness to make proactive objective decisions rather than reactive decisions after the fact. This may potentially result in substantial monetary gains and costs savings.

Several Residentials were completed during this learning and development program. Several tools and principles were presented at the various residential schools (six in total). These principles were implemented practically whereby shark-tank approaches were applied to take new red meat concept products to the market.

The early phases of the project primarily focused on data collection, flow, procedures and analytics. The livestock procurement project was established as an early initiative replacing Microsoft Excel based booking system to an automated system within Protrace. The project will be divided into two components:

1. Booking and messaging system, and
2. Costing and invoicing.

Rural Production (RP) animal management system (data collection, procedures, data integrity and analytics) was thoroughly explored to help the ACC Agribusiness trainee understand the current state of the whole system. This proved invaluable as this allowed the ACC Agribusiness trainee to communicate to senior management in Agribusiness as to where the gaps where with data collection and integrity.

In October 2016, ACC Agribusiness trainee and manager of Redford station attended an industry day for the NRM Spatial Hub. This tool was identified as a possible option to ACC-RP mapping, asset management, capex planning and pasture monitoring and budgeting. ACC Agribusiness Trainee arranged for both Dungowan and Redford to be a part of a pilot program within the Hub, with the ACC Agribusiness trainee to arrange completion of mapping of both properties. A strategic relationship began to form between CQU and ACC Agribusiness via ACC's Agribusiness trainee who helped facilitate several workshops in the form of strategy sessions. During the first 6 months (i.e. Quarters 1 & 2) several areas of operations were identified within ACC-RP that would benefit directly from current technologies and projects within the industry.

These included:

- No objective measure of pastures (quantity, quality and stocking rates)
- Minimise water monitoring costs by utilising current water telemetry systems
- Minimise costs and negative impacts on animal performance – potential use of walk over weighing

CQU were identified early to potentially work with as they have several relevant projects within the Queensland beef industry that align with ACC-RP operations' priorities. The initial meeting in Rockhampton covered their Data Muster platform which encompasses pasture monitoring and budgeting, water monitoring and also walk over weighing. ACC conducted an orientation for CQU to provide them with an understanding of its whole supply chain. This proposed to provide a basis for CQU to prepare a presentation on current and future ACC projects.

4.2 Key ACC Data Projects

The following four projects were identified as priorities for the Trainee to primarily focus on:

- Livestock Production Performance
- Livestock Procurement
- Mapping NRM Spatial Hub
- Future projects

4.2.1 Livestock Production Performance (ACC RP-Data)

Following on from Quarters 1&2 Discovery and Exploration phase, it was identified that ACC Rural Production (ACC-RP) was a key focus area for data collection and reporting. StockIT which is currently the primary information management system for ACC-RP was implemented 18 months ago into the business. StockIT will be replaced as a part of the eNVD project and ACC-RP will develop their information management system with Protrace. A deep dive into each properties respective database was undertaken. It quickly became apparent that a significant amount of data was not "clean", meaning that there were gaps in data sets. However, after talking to the users of each property it highlighted as to why there were so many gaps in data sets.

The key points are:

- No follow up training for staff on StockIT

- No follow up on StockIT Business Rules (Outlies what has to be recorded at each process (Induction, check weigh, dispatch, weaning etc.)
- Hardware breakdowns
- Software breakdowns
- Data produced had never been thoroughly looked at previously, thus never making any property accountable for quality of data going in
- Staff not understanding the "big picture" as to why it is important to collect data
- Following on from previous point, lack of communication around the why and what the data is being collected and used for caused a negative cultural issue around data collection as properties never saw the outcome of the data collection (not a part of the project).

The next stage involved identifying what data needs to be recorded but currently isn't to meet managerial and corporate reporting requirements. By identifying gaps in data collection, whether it is due to human error, hardware and software issues or not recording relevant data to meet reporting requirements, provides valuable lessons learnt as to where the gaps currently are in the data sets and as to why there are gaps. Therefore, this process has been very valuable to the development of StockIT's replacement. The learnings of the project has now highlighted the challenges ACC-RP face with data collection. The next period (beyond the current project) will focus on realigning data capture and minimising current challenges. The next stage will also be looking at technologies that will allow remote data collection such as Walk Over Weighing, biomass sensors and water telemetry just to name a few.

4.2.2 Livestock Procurement (Booking Sheet, Costing and Invoicing)

Livestock procurement system is very manual and has been flagged as key project to streamline the process from buying right through to costing and invoicing. The first stage of the project was to map the current process from booking sheet right through to costing and invoicing. The booking sheet and messaging system were flagged as the first processes to streamline. The booking sheet is currently an Excel based spreadsheet highlighting cattle movements to properties and feedlots. Protrace was chosen as the application for the new booking sheet and messaging system. It is currently been developed by Protrace under the guidance of ACC's Agribusiness Innovation Trainee, Livestock Manager and the IT General Manager. The new booking system is currently under development and is expected to be finished in the short term after the completion of the current Trainee program. Once this component is completed, the costing and invoicing project will be under way.

4.2.3 Mapping NRM spatial hub

ACC-RP is currently using NRM Spatial Hub on a trial basis on Dungowan and Redford. ACC Agribusiness trainee attended an industry day with NRM Hub at the commencement of the trainee program (i.e. October 2016). Since then ACC Agribusiness trainee has comprehensively mapped both properties by visiting each property to map all water points and relevant infrastructure. The next stage of this project is to present on the tools and data analysis capabilities to senior ACC management along with NRM Hub representatives.

4.2.4 Future projects

A series of strategy workshop with the business and MLA & providers (such as Hitachi Consulting and Central Queensland University) to identify projects that would result in cost reduction, optimise animal performance and reduce inefficiencies.

4.3 Business Improvement Opportunities:

The following areas have been continually identified and raised internally as an opportunity to improve productivity and processes (See Table 2):

Table 2: Trainee's observations and opportunities to improve productivity and processes.

Opportunity	Rationale
Objective pasture measurement	- Measure pastures objectively (quantity, quality etc.) to better forecast and budget livestock movements.
Water	- Install remote water monitoring devices to reduce costs and monitor water usage/consumption
Objective animal measurement	- Match like animals with like animals (feedlots & properties) to optimise inputs as efficiently as possible - Accurately forecast turnoffs which in turn allows more accurate forecasting
Intuitive & Dynamic reporting	- Provide decision makers with proactive information no just historical summary data
Communication	- Improved communication is needed to allow better understanding of timelines and expectations of projects
Support	- Identification of human capital and skill gaps and develop a pathway to help lift the ability of the team. - Critical to the new upcoming Animal Management System for ACC properties. For it to be successful staff need to trained initially and supported going forward.

4.4 ACC Agribusiness Trainee (YFI) L&D experience:

The program provides support for learning and development. The following L&D initiatives have been undertaken or planned to be adopted.

- Current projects (on the job training)
- Young Food Innovator's Residential (six in total)
- Mentoring (technical & personal development)
- Conferences & workshops
- Network meetings & technical groups

4.4.1 Current projects (on the job training)

A high level status update is provided in the table below, identifying outcomes, and next steps for a number of the projects in progress. Additionally a number of other projects are underway that will be reported on in future reports (Refer to Appendix, section 9.1 – Detailed project activities).

4.4.2 Young Food Innovator's Residentials (six in total)

ACC Innovation Trainee participated in six workshops that each incorporate 5 days of information and application of learnings over the two year learning and development program. There was a focus on Design led Innovation and Value Chain Design, and these workshops were facilitated by globally recognised organisations.

Residentials were the corner stone for benchmarking progress to date in the Young food innovators program. A number of the tools explored through the previous residential schools were implemented in a mock shark tank approach to ideation, creation and prototyping products to market. Critical to the beneficial outputs of this experience is the need for continued support at the host company level to assist in implementation of tools to help in the delivery of sustainable outcomes to the company. In addition, a focus project, which was an ACC priority and related to the trainee's day-to-day work was nominated to apply the learnings from workshops to leverage innovation within the red meat industry.

Several Residentials were completed during the learning and development program. Several tools and principles were presented at the various residential school (six in total). These principles were implemented practically whereby shark-tank approaches were applied to take new red meat concept products to the market.

4.4.3 Mentoring (technical & personal development)

MLA provided ongoing mentoring and technical support in the form of a dedicated assigned MLA Innovation Account Manager. Technical support was also provided Professor Hamish Gow through several scheduled online chat sessions with the entire Young Food Innovators group. Planning sessions were periodically provided by the YFI's program coordinator (MLA's Stuart Quigley) with work place visits, specifically to provide technical input into our nominated insights projects.

4.4.4 Network meetings & technical groups

ACC provided funding resources for external learning opportunities. A series of networking, learning, and personal development initiatives were undertaken by the Trainee during the course of the two-year program. These were designed to assist the trainee to continuously seek new information to understand problems and identify opportunities. Training and networking was facilitated by ACC. ACC facilitated with their client to demonstrate to the entire Young Food Innovator's group a supply chain initiative (as part of Residential 4 learning in Brisbane). This involved following meat production from farm, feedlot, factory, transport and wholesaling through to a large domestic supermarket chain. The ACC Trainee also attended Hargraves Institute Innovation conferences and several Hargraves events. The Trainee also attended the Beef Week in Rockhampton (the Beef Industry's event which occurs every three years). More broadly, the locality of ACC has provided an opportunity to attend a number of events for learning and networking. Finally, ACC provided in-house training in Project management (2-day course) and Statistics for Industry (5 day session).

5 Conclusions/recommendations

5.1 Conclusions

The project primarily focused on ACC's property data and end-to-end reporting, including managing data collection and integrity and turning data into information. This includes several reports such as, induction summary, vendor reports, selling centre and purchase type reports and monthly ACC-RP report just to name a few. This is all managed and produced through Microsoft Excel. Excel is a robust and practical tool to prototype and provides proof of concept; however, this manual system is now ready to be automated.

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- Future projects

The project has focused on managing data collection and integrity and turning data into information. The ACC Agribusiness Trainee is working closely with ACC-RP General Manager and ACC Livestock Manager to generate reports weekly, monthly, quarterly, using Excel software. This process is still manual and has not yet been automated. It is proposed that the manual system will transition to a semi- or fully-automated data capture and analysis.

Also, the Protrace crush-side data capture system was implemented as a result of the project. Protrace was rolled out to four ACC properties, with the remaining two to be installed before end of financial year. To achieve this, the ACC Agribusiness Trainee worked closely with ACC Group Manager of IT, providing feedback on the Protrace system including likes and/or dislikes and any "bugs". The livestock data (primarily all crush-side) currently collected at properties is linked with procurement. The feedlot and kill data is providing the business with valuable information and

insights about suppliers, processes and business performance. The ACC Agribusiness Trainee has also started to give feedback to suppliers on their livestock performance in the feedlot and potentially on the hook after slaughter.

It is an ACC Agribusiness strategic goal to do more with data. Specifically, ACC is looking in the short-to medium-term to integrate and automate data capture and analyses across all properties and feedlot operations. This is a key and vital future project for ACC. ACC recognises that there is an opportunity to invest in this space and deliver significant benefits to the business. Doing more with data has the potential to enable decision makers in ACC Agribusiness to make proactive objective decisions rather than reactive decisions after the fact. This may potentially result in substantial monetary gains and costs savings.

5.2 Recommendations

It was recommended to continue to support further data capture and analysis initiatives (i.e. beyond the project). It is proposed that the next step is overlaying animal performance and health data with environmental, welfare and behavioural data to gain even further insights. Due to the high numbers of animals moving through the supply chain on an annual basis, predictability and forecasting tools will be quickly verified if ACC wishes to further invest in this space.

Specifically, the next proposed steps are:

- Integrate current systems to automate reporting
- Discuss and plan what is “next” and keep the momentum going
- Continue trialing Protrace and providing feedback to Protrace developers
- Whole of life reporting
- Work with livestock manager to highlight poor performing suppliers
- Work with external software vendors on integrating data systems

Opportunity exists for ACC to go and talk with other industries and understand how they overcome the challenges that ACC is currently facing with (the overwhelming task of) manual capture and analyses of data. ACC recognises that it needs to engage with key stakeholders to understand what data is critical to capture and analyses. ACC is looking to review options to improve access to information for decision makers, to allow them to make more informed decisions that are proactive, rather than reactive.

6 Key Messages

The key messages and learnings were:

- ACC currently has generated more than enough data throughout the supply chain to generate meaningful reports.
- Once data is centralised it is then up to management to make a commercial decision to automate reporting and put smart analytical systems in place to reduce employees excel reporting.
- The company recognises that “Data is king”, however there needs to be the discipline proactively

utilise the data better.

- Culture around data is changing in a positive way with more people being engaged and ACC is better understanding the power of it.
- Data captured now is currently very manual process of integrating data-sets, and the time spent on crunching data far out-weighs the benefits.
- More focus is required automating the collecting and analyses, to allow ACC to focus on further analysing it and deriving greater benefits from its data.
- Potentially will have to engage outside help to complete automation of data and reporting.
- Opportunity exists for ACC to go and talk with other industries and understand how they overcame the challenges that ACC is currently facing with (the overwhelming task of) manual capture and analyses of data.
- ACC needs to do more workshops with key stakeholders to understand what is needed/wanted to ensure projects are aligned with the company's strategy and are efficiently implemented.
- ACC to review options to improve access to information for decision makers to allow them to make more informed decisions that are proactive, rather than reactive.

7 Appendix – Supporting Documents

7.1 Work Plan on a Page (ACC Agribusiness Trainee, Joel Bentley)

Plan on a Page;

Item No.	Description	Deliverable	Outcome	Due Date/ Status
1	Current Projects/Works			
1.1	Data management and reporting	Prototype and generate reports for ACC Agribusiness	Improved insights to the business and eventually automate and dashboard this information	TBA
1.2	NRM Hub mapping (4D Mapping)	Support NRM team	Provide support and train ACC staff on how to use the system	TBA
1.3	ACC Properties software system (Protrace)	Provide support and facilitate stakeholder engagement	Continue to provide support to IT GM and continue live trials of the system	TBA
1.4	Hitachi Project	Provide support when needed	Livestock Management System for on farm	TBA

7.2 ACC Agribusiness Trainee (Joel Bentley) key focus areas

Status Update				
Category	**Scope**	**Deliverable**	**Outcome**	**Next Steps**
1.0 ACC-RP Animal Management System (Animal data capture and reporting)	*1.1 Data capture and reporting system for ACC-RP*	*Workshop with relevant stakeholders to provide insights to development team*	- *Provided document outlining what each interface needs to look like and its functionality for each process*	- *Trial interface at ACC properties*
	1.2 End to End reporting for ACC-RP	*- Provide insights into ACC-RP operations* *- Turning data into information* *- Deliver value to management through insights gained through new data management system*	- *Manually putting together in excel property, feedlot and kill data to create reports*	- *Automate basic reports and no longer rely on Microsoft Excel*
2.0 ACC-RP Mapping	*Implement new mapping system for ACC-RP*	*Finish pilot program present along with NRM Hub to senior ACC & ACBH management*	- *ACC & ACBH decided to implement NRM Spatial Hub throughout all properties* - *Currently using the Hub for Dungowan and Dooloogarah capex projects (water and fencing infrastructure)*	- *Provide NRM Hub with mapping data and help when needed* - *Have all properties mapped* - *Run workshop either as a group or individually when mapping is completed*
3.0 Central Queensland University (CQU) partnership	*Identify organisations that apply industry research to deliver valuable commercial outcomes.*	*CQU to be orientated on ACC supply chain. ACC to visit CQU to understand current projects and capabilities*	- *CQU and ACC gained insights to each respective business*	- *Workshop to be held to understand what are gaps and needs of ACC and how CQU could potentially help*
MLA YFI	*Residential 3*	*Attend Food Innovation Centre Design Led Thinking Workshop in Melbourne.*	- *Gain insights into current food trends* - *Put into practice DLI methods for new product development.*	- *Attend residential 4 in New Zealand*

7.3 ACC-RP additional data capture points

Process	Niella	Redford	Dungowan	Babbiloora	Wellclose
Fuel Log	• Carbon copy fuel log (Person, Vehicle, Use)	• Carbon copy fuel log (Person, Vehicle, Use)	• Carbon copy fuel log (Person, Vehicle, Use)	• Carbon copy fuel log (Person, Vehicle, Use) • Fuel logs maintained for both backgrounding and breeding.	• Carbon copy fuel log (Person, Vehicle, Use)
Stock Supplement Log	• No supplement used.	• Supplement used, no records.	• Supplement used, excel spreadsheet.	• Supplement used, feed supplement book.	• No supplement used.
Purchase Orders/Invoices	• PO created, coded to P+L to manage consumables.	• PO created, coded to P+L to manage consumables.	• PO created, coded to P+L to manage consumables. • Vet Chemicals entered into StockIT inventory.	• PO created, coded to P+L to manage consumables.	• PO created, coded to P+L to manage consumables.
Maintenance	• Vehicle service books.	• Vehicle service books. • Bore Service log.	• Vehicle service books	• Vehicle service books. • Bore book	• Vehicle service books.
WHS	• USB (manual)	• USB (manual)	• USB (manual)	• USB (manual)	• USB (manual)
HR and Training	• Staff competencies and records (filed hard copy only)	• Staff competencies and records (filed hard copy only)	• Staff competencies and records (filed hard copy only)	• Staff competencies and records (filed hard copy only)	• Staff competencies and records (filed hard copy only)
Payroll	• Excel template processed by Cannon Hill	• Excel template processed by Cannon Hill	• Excel template processed by Cannon Hill	• Excel template processed by Cannon Hill	• Excel template processed by Cannon Hill