Final Report

AMPC
AUSTRALIAN MEAT PROCESSOR CORPORATION

Innovation and Systems Leadership Phase 2

Understanding an Innovation Culture and its Effect in Australian Red Meat Processing Plants: An Application of Systems Leadership - Stage 2

Project Code
2020-1019

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Date Submitted
17/5/2023

Published by
AMPC

Date Published
17/5/2023

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Executive Summary

The project found that Australian meat processing plants can be resistant to the adoption of innovation and change. Plants participating in the first phase of the project (Stage 1) were found to have poor to moderate innovation systems, symbols and mythologies with leadership behaviours often impeding the adoption of innovation within a plant. Plant systems affect how people view (symbols) and discuss (mythologies) plant innovation and change. Thus, improvements in plant systems and leadership behaviour will have a direct effect on innovation and change within a meat processing plant.

The second phase of the project used a Systems Leadership framework to facilitate innovation adoption. Key focus points were: individual plant leadership, the design of innovation systems, the training of key staff in Systems Leadership and the development of a wide range of projects that could be utilised by plant leadership to enable change. An important part of this process was allowing senior leadership to take the lead in the brainstorming and actioning of a large range of projects rather than an external consultant dictating one or two projects they should progress. A facilitator should not be the expert. Their job is to lead participants through the change process. The utilisation of nonlinear facilitation techniques can help the leader to rationalise change in their own mind and this enhances adoption (Cooksey 2011).

The project also conducted innovation learning programs for board and senior management as well as programs for supervisors and leading hands. Essential to the innovation learning programs was the PIP development process to embed the innovation systems into the business. The fundamental premise was that innovation is driven by a broad range of people within the business. Engagement across the plant is fundamental to improve the interdependency between the social and technical aspects of the business. In creating this improvement, the commercial aspect underpins the understanding for people in the business to improve their work.

How people are led can have a significant impact on the operations of any organisation, especially with regards to adoption of innovation and change. It is important that managers understand that employees each have varying levels of capability and capacity, as through recognising this, individuals can be assigned to jobs that are compatible with their level of thinking. By empowering employees to work at their level of capability, leadership can maximise the efficiency of their business through facilitating effective collaboration between levels. As such, this project also assisted plant leaders to implement systems that allow employees to at work the level of their role.

Two case studies are provided in this report to demonstrate the value of embracing an innovation culture. Both projects achieved significant success by utilising Systems Leadership to facilitate change and innovation within the plants leading to a 48 times, cost-benefit analysis for the project. This is a highly successful outcome, and a demonstration of the power of Systems Leadership applied to facilitate change within an organisation. Overall, the project engaged with 27 plants across Australia, trained 189 managers in Systems Leadership and develop 541 project ideas for the plant leadership to consider. Numerous project ideas become PIPs or internal plant projects.

1.0 Introduction

The research conducted by the Response Research group has outlined significant issues within Australian meat processing plants with respect to adoption of innovation and change including a lack of leadership ability and a lack of systems to underpin adoption. The results determined that all levels of management within the meat processing plants have moderate to good levels of underlying values and behaviours compared with poor to good innovation leadership, systems, symbols and mythologies.

The systems focused on innovation and change within the plants significantly affect how people view innovation and change (symbols) and discuss the plant innovation and change (mythologies). The research methodology included cultural audits across a number of plants to gain an understanding of the baseline for the plants in the study.

The project included initial innovation engagement programs for board and senior management in conjunction with programs for supervisors and leading hands. Essential to the innovation learning programs is the PIP development process to embed the innovation systems into the business. The fundamental premise for this project is that innovation is driven by a broad range of people within the business. This allows the staff to create a demand for innovation to improve their work. This engagement is fundamental to improving the interdependency between these social and technical aspects inside the business. In creating this improvement, the commercial aspect underpins the understanding for people in the business to improve their work.

2.0 Project Objectives

The project objectives outlined in the research agreement were to:

- further develop an understanding of the symbol, systems and behaviours in relation to innovation;
- provide a significant data set on vital industry issues from a cultural perspective;
- assist program staff to communicate with meat processing businesses and plants to create an innovation “pull” scenario with staff in the plants;
- work with 17 plants across Stage 1 (6 plants from 2019-1046) and Stage 2 (11 new plants for 2020-1019) to implement systems and behaviours that are expressed through symbols or mythologies, each process will be individualised for each plant considering the outcomes of the individual culture audit;
- develop systems both inside 18 plants and also at the organisational level to facilitate innovation adoption with a focus on the opportunities within the PIP process;
- work with the boards and senior leadership groups within the organisations to complement the development of innovation not only from a top-down but from a bottom-up approach;
- engage with staff within the business to enhance the adoption of new technologies and processes within the business from an operational, commercial and social perspective;
- upskill staff within the 18 individual plants to create a conversation around innovation and the ability to engage with multiple industry stakeholders across the plant;
- embed these systems and behaviours in the 18 plant through training and mentoring;
- implement a PIP process inside the 18 plants within the innovation system to enhance productivity and profitability; and develop an industry wide commercial evaluation framework demonstrating the profitability outcomes for the research investment.

The plants all required different levels of engagement. There is no one way to work with an organisation. It is fundamental to create a non-linear discussion (Cooksey 2011) and create engagement between the various levels of management and ownership within the plant.

3.0 Plant engagement

	Culture audit	Organisational leadership	Staff Leadership	Systems design	PIP Development
1.	x	x		x	
2.	x	x	x	x	
3.	x	x	x	x	x
4.	x	x		x	
5.	x	x		x	
6.	x	x		x	
7.		x	x	x	x
8.		x			x
9.	x	x			
10.	x	x	x	x	x
11.		x	x	x	x
12.		x	x	x	x
13.		x	x	x	
14.		x	x	x	x
15.		x	x	x	x
16.		x	x	x	x
17.	x	x	x	x	x
18.	x	x	x	x	x
19.	x	x	x	x	x
20.					
21.	x	x	x	x	x

22.	x	x	x	x	x
23.	x	x	x		
24.	x	x	x		
25.			x		x
26.					x
27.					x

Table 1 Plant Interactions with the project

4.0 Methodology

Organisational Leadership Process

Response Research's program takes a holistic approach aimed at clearly understanding the context in which the framework sits and works vertically to provide tangible models and tools for the leadership team. The program seeks to underpin staff engagement throughout the plant to ensure future innovation includes staff knowledge and acceptance. For example, Systems Leadership provides models for:

- The disciplines and rigor of systems design and management, which include technical, commercial and social aspects running concurrently. This strongly supports leadership behaviours and management building blocks at the appropriate level;
- The Levels of work model (level 5) for core role accountability and authority required at the level of work of role. This generally aligns with the levels in the Organisational Leadership Program;
- Leadership as a specific work accountability for anyone in a management or supervisory role; and
- Disciplined processes for task assignment, at all levels of complexity, team process, the work and behaviours of both team leader and team member.

LEVEL	THEME	CHARACTERISTICS	TIME FRAME (OF DISCRETION) *
1	Direct output	Hands on with quick feedback. Known routines and troubleshooting.	1 day – 3 months
2	Diagnosis and improvement	Diagnosis and improvement of existing systems and processes.	3 – 12 months
3	Whole system design	Design of new systems from optional flows.	1 – 2 years
4	Integration	Integration of sets of level 3 systems (optimisation).	2 – 5 years
5	Business boundaries	Managing the shape, size and type of business and its major systems & boundary relationships.	5 – 10 years
6	Global business	Type, location, size and function of businesses in global framework. Working to change boundaries.	10 years +

Table 2 Levels of Work

Systems Design and Implementation Process

The systems design workshop creates a clear understanding of system design and a design framework for future business systems development. By developing an understanding of systems design, staff can apply these principles to ensure systems will be productive and supported by the organisation. This exercise is further enhanced by developing an innovation framework for the business. This process will develop the opportunity for multiple levels of innovation facilitated by the senior management, where the system is well designed and implemented. People are essential to the process and therefore the process needs to be owned by staff and driven by the executive.

The process considers the processes currently working at each plant. It looks to identify and enhance unauthorised systems and where a system does exist apply a wider understanding of what the system drives in the workplace.

Initial staff engagement

Essential to the development of a structured innovation process within a plant is the enhancement of staff leadership skills to engage effectively. There is currently a skills gap for staff to understand innovation with particular reference to a project's operational, commercial and social context. The enhancement of these skills within the innovation system that is designed in previous project components will allow for improved identification, planning, development and implementation and evaluation of innovation within their work area. This component will develop a significant number of PIPs and internal plant projects.

The Workplace Innovation Skill Set addresses the skills, knowledge and performance requirements to use collaborative processes in the workplace to develop innovative ideas, it is for staff to adopt a leadership role in managing innovation within their area of influence. The subjects include:

- Promote innovation in a team environment - it applies to individuals who play a proactive role in demonstrating, encouraging or supporting innovation in a team environment;
- Develop teams and individuals - it applies to individuals with a broad knowledge of learning and development who apply their skills in addressing development needs to meet team objectives; and
- Implement continuous improvement - allows managers to have an active role in implementing the continuous improvement process to achieve the organisation's objectives.

Final staff Innovation development

Levels of work

A focus of the current staff innovation leadership process is the levels of work model. This is an important component of the innovation program as it provides a framework for understanding the level at which a project should be categorised, based on complexity. Lastly, this process provides a detailed framework for the development of projects at all levels of work inside the plant.

What are levels of work?

We all know intuitively that some jobs are more complex than others. However, most organisations lack a shared way of identifying and articulating what makes one task / role more complex than another. Levels of work is a model inside the systems leadership methodology that seeks to clarify how many levels might exist in an organisation (from a vertical sense) and the type of work that should be undertaken at each level.

Basic principles of levels of work

The difference between each level of work is the complexity of the task being undertaken (e.g. doing is different to planning). In general, more complex work should be performed at the higher levels of an organisation and practical, hands on work performed on the floor. Each additional level of work should add value, eliminate rework, allow for discretion and development, and not micro-manage or frustrate. This is not a judgement about the importance of the work, just the difference in work complexity.

Why levels of work are important for your role as a leader

Overall, defining levels of work aims to make organisations more efficient and effective. The process can:

- Ensure everything gets done – Employees need clearly defined roles. If an organisation does not delineate tasks clearly then task assignments may overlap, leading to redundancies, doubling up on tasks and important tasks being overlooked.
- Improve performance - By understanding that some jobs are more complex than others, and what makes them so, you can get people thinking at the right level and make them more effective at what they do.
- Reduce work stress by setting clear expectations - A lack of clarity regarding task requirements and expectations can cause confusion and stress from people deliberating, undertaking the work of another level or performing the wrong tasks. By working at the right level, that energy becomes accessible for the right purposes.
- Help you select the right person for the right job - By defining the levels of work in your organisation, you can also begin to look at a person’s ability to handle certain levels of work, and ensure you not only find the right person for the job but improve the employee's experience and job satisfaction.

Level	Responsibility	Action	Timeframe	The Program
Level 5	**Board and Chief Executive Officer**	**Create an overarching innovation culture**	**5 to 10 years ahead**	**Organisational Leadership Program and Culture Audit**
Level 4	**Chief Executive Officer and Senior Management Team**	**Innovate by conceptual modelling across multiple systems**	**2 to 5 years ahead**	**Systems Design and Culture Audit**

Level 3	**Senior Management Team**	**Innovate by improving individual local specific systems**	**1 to 2 years ahead**	**Staff Innovation Leadership and Implementation**
Level 2	**Managers and Supervisors**	**Innovate by analysing groups of like events**	**3 months to 1 year ahead**	**Staff Innovation Leadership and Implementation**
Level 1	**Supervisors, Leading Hands and Staff**	**Propose possible improvements to set tasks**	**Up to 3 months ahead**	**Participate as a team member**

Table 3 Levels of Work and the Innovation Process

Why the three models in the initial training

There are numerous models (Appendix 2) that can be utilised in the Systems Leadership Theory and applied to individual meat processing businesses. The issue is always the leaders of the plant taking time away from the plant to better understand change within the organisation. One of the most effective use of models in Systems Leadership Theory is the utilisation of the working together program. At every organisation the thought of taking three days to work on leadership was rejected. One experience with the senior leadership team of a multi-plant business was for the leaders just to stand up and walk out of the room. Where the models were effectively utilised significant change occurred within the plants as outlined in later sections of this report.

Important in the delivery of this model is the utilisation of nonlinear discussions (Cooksey 2011). The senior leadership team of plants are working at the coal face every day and know all aspects of the business. From a domains of work perspective, specifically the technical and commercial, these managers are extremely knowledgeable and understand the interrelationship between these perspectives. Where significant variation occurs is in their knowledge of the social and technical interrelationship and the social and commercial interrelationship. The use of nonlinear discussion can significantly enhance the uptake of change by providing a pathway for people to understand the potential for change.

The underpinning models for implementation of Systems Leadership at a plant level was the utilisation of:

- levels of work - the utilisation of this model allowed plant general managers to understand the performance required from each level of the organisation to enable change. The best demonstration of this understanding occurred at three plants;
- team process - allowed the general managers of each of the plants to work more effectively with their team to achieve the objectives of change within the plant. From a worker perspective, because there was increased clarity regarding project outcomes they were able to contribute actively and critically to the planning and implementation of the individual projects
- task formulation and assignment - provided clear assigning of the work after the completion of the team process and allowed the assignee and assignor to clearly understand all aspects of the project to be delivered.

An outcome of the project was the development of the innovation learning model (Figure 4) where management decisions are based on research conducted through the culture audits and finally adopted through learning at a plant level. The middle process is in fact a facilitatory activity focusing on leadership and change. Many programs assume a direction with little foundation in research. The opportunity is for managers to utilise an understanding of the plant mythologies in determining the current culture of the organisation to utilise behaviours, systems and symbols to create positive change inside an organisation. This model utilises Systems Leadership to create positive social cohesion within each of the individual plants.

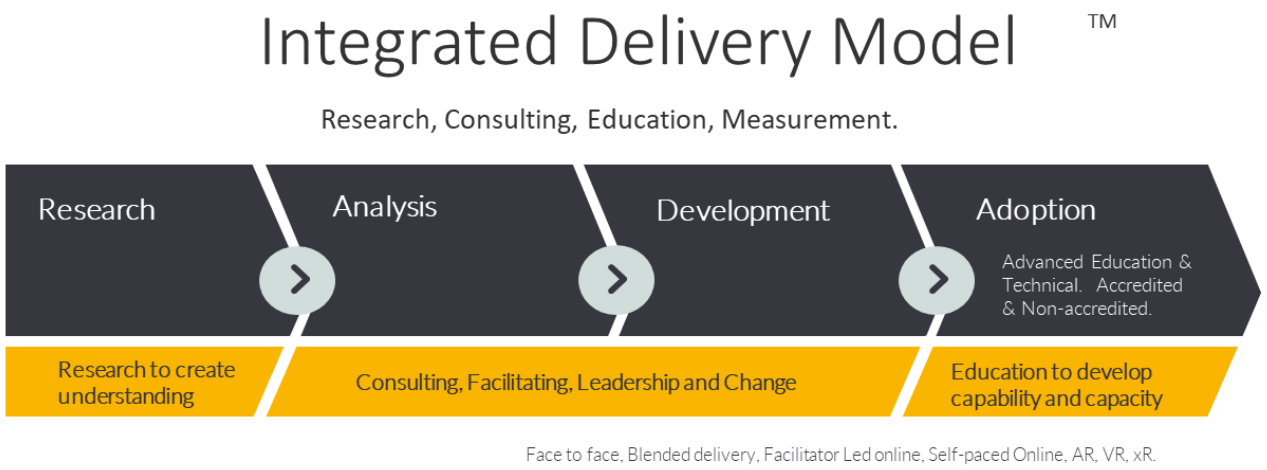

Figure 4 RGI's Innovation Learning Model

PIP and Internal Project Development Process

Throughout the project development process, the team leader must employ systems leadership theory principles to create a collaborative and productive team environment that focuses on social cohesion; as they are dealing with people, not only a technical or commercial issue. This includes encouraging open communication, empowering team members to make decisions, and building a shared sense of purpose and commitment to the project's goals. By effectively managing team processes (Figure 1), the team leader can achieve a successful project outcome. The greatest success in a project is complete adoption by a team and its integration into an organisation.

From a systems leadership theory perspective, project development involves working with the effective leadership behaviours, the process in the team and the organisation’s symbols and its systems to achieve the desired organisational outcomes. Team process is critical and the team leader must ensure that the team develops a clear understanding of the project's context, including the use of non-linear conversations to develop team member's understanding of the problem or issue that needs to be addressed within the organisation. This may need to be addressed at different levels of work and needs to include all of the technical, social and commercial domains to achieve an outcome. Let’s break this down.

Project context

In the project there was a continual focus on context and issues were always considered from perspective of the three domains. Issues or problems rarely demonstrate themselves from a single perspective. Issues can be perceived from multiple perspectives including:

- a technical-social perspective;
- a technical-commercial perspective;
- a social-commercial perspective; and
- a technical-commercial-social perspective.

Our meat plants are highly complex environments and as such taking a simple engineering approach may not work. Most plants are very good at a technical-commercial perspective and as we have seen in the project this can lead to ineffective outcomes for the organisation. The consideration of these perspectives within the context of the project will allow an improved understanding by team members. The utilisation of nonlinear discussions, or in general terms a conversation, will allow people to gain a broad understanding of what we're trying to achieve.

As a team leader we have a number of tools available to us to assist in the creation of this understanding. These leadership tools include our behaviour, the systems that support this behaviour and the symbolism we utilise to increase the understanding of our team members. All of these are considered with the universal values, that is the way our staff make judgements about decisions from the perspective of the values continuum with an understanding of the effect on trust, fairness, honesty, love, courage and dignity. These are the tools that should be continuously utilised throughout the team process model.

Critical issues

The level of work is crucial in understanding the complexity of the issue that needs to be projectised. The higher the level of work the more complex a problem is because of the interrelationships that exist between complex problems and issues. For example, the issue of technical replacing of a Cryovac machine will be minor in comparison to the plant effect of the replacement of the Cryovac machine. Manning levels at a single station might be simpler than the understanding of manning levels from a plant perspective. The leaders at different levels should consider these from a different perspective. Each will have different critical issues that must be addressed from multiple perspectives. The longer the time we spend on the context and critical issues the more we find the barriers to project adoption will decrease.

Critical issues need to be drawn from every team member and will sometimes be expressed as roadblocks to the viability of the project. This is a crucial stage of the project adoption as breaking down the barriers for project success is an important step in total project success. We have found in the project that we cannot tell a team member the answer to their critical issue, they must discover that for themselves. The level of work will determine the level of nonlinear discussion required. People with a higher level of understanding will require a greater level of communication around the project outcomes.

Simple projects will require less conversation due to the complexity of the project itself. For example, the critical issues around the implementation of a Cryovac machine within a processing line may be simpler than the understanding of the

implementation of a new Cryovac machine from a plant perspective where we need to consider the integration of the technical, social and commercial perspectives at a plant level.

Project purpose

Upon creating an understanding of the project through context, limits and the identification of critical issues, we can set a clear purpose for what we want to achieve in a particular project. This purpose statement is a single sentence that captures the essence of what we are trying to achieve in an individual project and why.

From a line perspective, sub teams in the Project will, for their sub task, have specific and different purposes from that of the senior leadership team in the implementation of the overall project. Although they will need to be nested in the Project's purpose. Again, as an example, we can consider a Cryovac machine, a boning room team will look at the project from the perspective of its output in relation to the speed of the line. A senior leadership team will look at the Cryovac machine from the perspective of the plant over the next 10 years and the technical, social and commercial implications of the new machine and its implications for other decisions in that time. Each will have a different purpose statement from their perspective.

Project contributions

Effective utilisation of individual contributions is fundamental in gaining the support of the team in the development of the project. Contribution can be verbal as well as non-verbal depending on the individuals within the team as some find it easy to express themselves in this situation and others will find it difficult. It is the leader's work to determine the process to be used to best generate individual contributions. There are a number of traps associated. These include the leader:

- getting over involved in the action;
- being the technical expert;
- feeling like they have to provide an answer;
- not taking the leadership role for fear of standing out;
- not seeing a problem from a team member's perspective;
- fixating on a particular issue; and
- ignoring social and programming issues.

It is important at this stage to respectfully deal with all contributions as they will be from the individual team member's perspective. A team leader's work in the project process is to draw together contributions of team members so that, as much as is feasible, they support the decision with the future change. Obviously, it may not be possible to ensure that all team members are on board on all issues and decisions will need to be made to move the project forward. In general terms, the more complex a project the more varied the contributions will be from the individual team members. Post this stage it's now up to the team leader to make a decision on the plan and explain the project process.

The project process

The project process is a series of work steps that are undertaken from an action learning perspective; i.e. plan, act and review. Most projects are a series of steps that are undertaken to organise the project. Task assignment is often the most poorly done part of the project process.

An effective approach to project development from a systems leadership perspective is as follows:

1. Define the Project: The team leader must clearly define the project's goals, objectives, scope, timeline, and budget. This will help the team members understand the purpose of the project and their individual roles and responsibilities. This is often completed after the team process as the contributions of the team will be built into the project process.
2. Identify the Team: The team leader must identify the team members with the appropriate skills, knowledge, and experience required to complete the project successfully. It is essential to have a diverse team that can bring different perspectives and ideas to the project. Each of these team members must be present during the team process component of the project development.
3. Establish Team Norms: The team leader must establish clear norms and expectations for how the team will work together. This includes communication protocols, accountabilities and authorities and conflict resolution strategies. It is important to create a collaborative and respectful environment that encourages open communication and constructive feedback.
4. Define Roles and Responsibilities: The team leader must define each team member's roles and responsibilities and ensure that they align with the project's goals and objectives. This includes clarifying individual tasks, timelines and deliverables.
5. Develop a Plan: The team leader must work with the team to develop a comprehensive project plan that outlines the project's timeline, milestones and deliverables. This plan should include contingencies for unforeseen challenges or risks. An important component of this section is task assignment. The task assignment component includes reinforcing the project:
    a. context
    b. purpose
    c. output (in terms of quality and quantity)
    d. resources (available to the team member to complete the task)
    e. time to completion

    Each will affect the completion of the individual task within the project.
6. Monitor Progress: The team leader must regularly monitor the project's progress and provide feedback to team members. This includes tracking milestones, identifying risks and challenges, and making adjustments as necessary.
7. Review, capture learnings and celebrate success: The team leader must lead a process to review what can be learnt for the organisation from the Project. It’s also important to celebrate the team's successes and recognise individual contributions. This creates a sense of accomplishment and motivates the team to continue to work towards achieving the project's goals.

5.0 Project Outcomes

Organisational Leadership Process

The development of the plant leadership was an important contribution towards the development of the individual plants. Leadership engaged in different ways in this process within the section we will discuss a number of examples. The project will concentrate on the plant general managers as they were the principal drivers of change within the plants. The project was conducted during the COVID 19 outbreak and significant issues occurred in the engagement with the plants. Organisations also have a different perspective on the role of the project and their organisational development.

The organisational leadership process was developed from a levels of work perspective within Systems Leadership theory. From this perspective we worked on:

- an outline of the business;
- business context - the individual managers perspective of the operation of the plant;
- business purpose - an overview of the key achievement expected over the next 10 years; and
- from a level 4 perspective looking at the future 10 years for the plant.

The outcomes of this process were communicated to AMPC managers to allow for a longer term understanding of plant development. Using the Systems Leadership process we were able to expand thinking on the strategic development of the facilities to 10 years. This is an important organisational process as there is a direct link between capital expenditure and the useful life of assets and the strategic process.

Organisational Leadership Example – Plant 11

Plant 11 is one of the largest and most efficient meat processing facilities in Australia. The Group Operations Manager and the Plant Manager are in support of continual innovation. In line with this position, the Plant Manager has introduced and articulated several commercial and technical systems since commencing in their position. They also outlined additional commercial and technical targets that the plant hopes to accomplish in the next 10 years.

However, to continue to innovate and improve the plant's efficiency moving forward, they recognised that more work need to be done regarding the social elements of the plant. Specifically, it was recognised that to operate at maximum efficiency, the organisation needs to integrate the social, commercial, and technical elements together when organising work throughout the plant. With respect to change and innovation at Plant 11, it is also important that all staff, from floor personnel to managers, advanced through their levels of thinking. In particular, the managers need to become more effective at working at level 3, and Supervisors need to become more effective at working at level 2.

Business Context

- There has been a significant redevelopment at the plant in that it now operates 2 shifts, processing an average of 1500 head per day, equating to 25% service kills
- In previous years, the management team have focused their attention on innovation.

Business Purpose

A 10-year focus will allow Plant 11 to continue to develop and effectively integrate the technical, commercial and social processes in the plant. Integrating these elements will assist their plans to expand their business opportunities. Accomplishing these goals will involve:

- Devoting particular focus to the social and team processes/systems throughout the plant
- Ensuring that staff also consider the social elements when looking at the technical and commercial aspects of the plants
- Advancing staff through the levels of thinking
- Revising and articulating their systems around supervision and training
- Improving their measurement and reporting of retention and mentoring
- Growing their product range to accommodate local, domestic and international market demands
- Continue to cross-train employees to work interchangeably throughout departments (e.g., load out, boning room, kill floor)

Plant 11 – 10 Year Targets and Asset Growth

From a plant perspective we considered the targets and asset growth in relation to the broader organisational strategies being undertaken. This needed to take into account the various departments within Plant 11 and their effect on this plant. This process was utilised at all locations who undertook this activity.

Year	Target
2022	• Redevelop the boning room to enhance productivity using Systems Leadership theory
2024	• With assistance from Response, Plant 11 may look at sourcing more employees from the Philippines.
2030	• Expand their commercial opportunities. • Improve their technical and operational processes at the plant

Table 4 Plant 11 - 10 Year Targets

Year	Asset
2022	• Boning room upgrade • Load out to evolve to robotic palettising
2026	• Knocking box upgrade • Chillers increased
2030	• Value adds – different limited shelf but more specialty cuts. Will involve a basic boning room and a second room for further cuts • Digester • New rendering facility • Port of Brisbane facility

Table 5 Plant 11 - Key 10 Year asset growth

A key focus at Plant 11 was the planning the Port of Brisbane facility. Loadout continues to be an issue at most plants Australia wide due to the complexity and physicality associated with these departments. The creation of the Port of Brisbane facility is a carton handling facility, rather than a pallet facility, which will significantly streamline the plant processes.

Systems Design and Implementation Process

Several organisational issues were found. These included:

- Systems being designed at too low a level;
- The difficulty of successful implementation and cost of operation were underestimated;
- System designers tend to underestimate or even ignore the significance of systems with regard to values (Social Process); and
- If I cannot convince people to hold positive mythologies about the system over time; then I will not get the behaviour which was wanted from the system.

The innovation systems design took into account the Systems Leadership framework on systems and the utilisation of the 20 questions and determining the structure of the system. The following system was developed at Plant 1 and is used as an example for the project. These will be demonstrated in outcomes from a small (Plant 1) and a large plant (Plant 3). The 20 questions were:

- Stage 1 – Business Case
    1. Why has the system been chosen?
    2. What is the purpose of the system?
- Stage 2: - Scoping
    3. Who is/should be the owner?
    4. Who is/should be the custodian/designer?
- Stage 3: - Design
    5. What are the current ‘benefits’ of the system?
    6. Is the system one of transfer or transformation?
    7. Is it a system of equalisation or differentiation?
    8. What is the underlying theory?
    9. What are the boundaries of the system?
    10. What are the linkages with other systems?
- Stage 4 – Design
    11. What structural boundaries does it cross?
    12. Has the social process analysis been done?
    13. Are authorities and accountabilities consistent with role?
    14. How is it to be measured?
    15. Are there proper controls built into the system?
    16. Is there an effective audit process?
    17. Is there a fully outlined flowchart?
    18. Is there full system documentation?
- Stage 5: - Implementation planning
    19. What is the implementation plan?
    20. What is the final cost of design and implementation?

Significant effort was put into the development of systems at the individual plants because there was a lack of systems from a change perspective. Those that had an innovation system in place lacked the communication and feedback loops for people conducting the projects. This was clearly evident at Plant 3 where an unarticulated project ideation process was in place. When questioned, many leaders within the plants did not know the existence of the process. This was also evident at Plant 20 where the QC and the QA managers both had a different understanding about the existence of a framework. Further work is required on this process in the future by the plants.

Small plant system design example – Plant 1

No.	Design Criteria	Current State	Future State
Stage 1 – Business Case			
1	Why has the system been chosen?	There is currently no innovation system in place at Plant 1 and a lack of communication between Board and Senior Management.	The system will have a significant effect on the business as change and continuous improvement is lacking. A professional approach is required to lift the business from its current position to meet the needs of new markets.
4	What is the purpose of the system?	There is no system in place, there is a disconnect between board and senior management on change and business direction.	The innovation system is required to manage growth through innovation and continuous improvement.
Stage 2: - Scoping			
2	Who is/should be the owner?	There is no owner.	The owner of the system should be the Managing Director.
3	Who is/should be the custodian/designer?	There is no designer.	The custodian and designer should be the CEO.
Stage 3: - Design			
8	What are the current ‘benefits’ of the system?	The current beneficiaries are some of the board members of the business.	The beneficiaries of the systems should be the board members from a shareholder perspective and staff through improvements in their workplace.

12	Is the system one of transfer or transformation?	The current system is one of transfer with very little transformation.	The system should be one of transformation where significant change occurs within the workplace.
5	Is it a system of equalisation or differentiation?	The system is current one of differentiation where some individuals have a larger share of the system.	It will be a system of equalisation where all individuals in the organisation have a say.
6	What is the underlying theory?	No theory.	Total factor productivity and employee driven innovation.
9	What are the boundaries of the system?	Unclear organisational boundaries.	Clear linkages to organisational elements.
10	What are the linkages with other systems?	Currently no linkages exist.	Linkages will be created to operational, human resource management and finance.
Stage 4 - Design			
11	What structural boundaries does it cross?	There are no structural boundaries.	Operational, human resource management and financial boundaries.
16	Has the social process analysis been done?	No social process analysis been done.	A social process will create a clear communication processes to the Board and to the key staff within the plant.
13	Are authorities and accountabilities consistent with role?	No authorities and accountabilities are in place.	The authorities and accountability will lay with the Managing Director.
7	How is it to be measured?	No measurement system in place.	The program will be measured from an operational and financial perspective through the current systems, and socially through the culture audits.

14	Are there proper controls built into the system?	No controls are built into the system.	Controls will be facilitated by the CEO under direction from the Managing Director.
15	Is there an effective audit process?	There is no audit process in place.	A process will be developed to implement an action learning cycle to ensure an audit process is enabled.
17	Is there a fully outlined flowchart?	No flow chart has been done.	Complete a flowchart with the implementation of the new system. Flowchart design is listed below and is a simplistic version given the plant size.
18	Is there full system documentation?	There is no system documentation.	System documentation will be completed with the new system.
Stage 5: - Implementation planning			
19	What is the implementation plan?	There is no implementation plan.	System documentation will be implemented with the new system.
20	What is the final cost of design and implementation?	No design cost has been done.	System costs will be developed with the system documentation.

Table 6 Systems design at a small plant

The following is a system that was developed at a small plant to take into account development projects within the organisation.

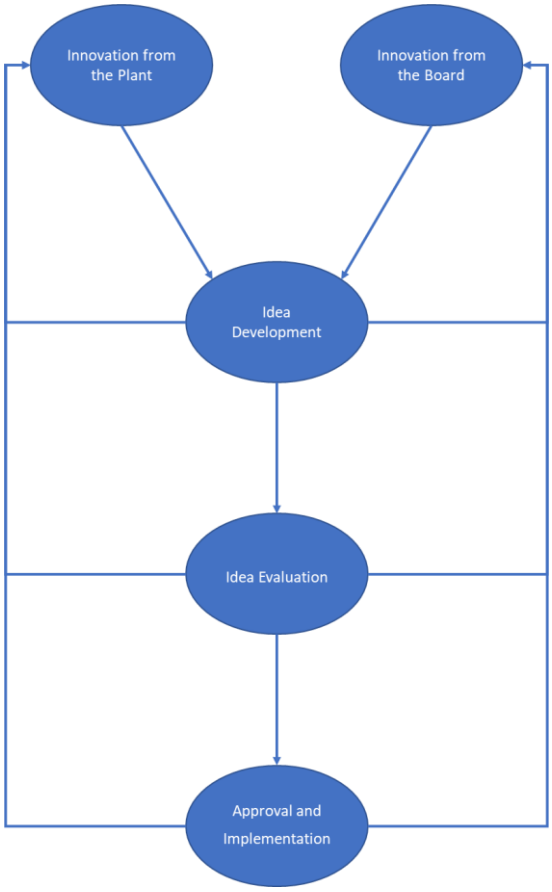

Figure 1 Plant 1 Innovation Systems Design Process

This is a very simple process for a small plant to adopt to manage innovation and importantly engage owners and staff at the plant. A key component of this system is the feedback loops to the project initiator. It was found in numerous interviews in the qualitative research and the first innovation project that people were not receiving feedback in relation to ideas put forward and losing interest in the development of further ideas within the plant. In plants such as Plant 20 in the first innovation project people were often given financial rewards for proposed changes, this was a Cargill innovation system.

Large plant system design example - Plant 3

No.	Design Criteria	Current State	Future State
	Stage 1 – Business Case		
1	Why has the system been chosen?	The system has been developing over the past two years. The current system is driven by the ideation process. This is a strong process for capital projects but it lacks strong social process to engage effectively with the plant to improve productivity and profitability.	The plant has strong values and importantly a culture underpinned by trust. An enhancement to the system will drive innovation plant-wide.
4	What is the purpose of the system?	The current system is lacking in social process, particularly communication through the supply chain. To date there has been a focus on productivity with competition between plants Australia wide. Any ideas at plants have been driven by group support up until two years ago. The change in management at this point facilitated a hands on approach.	Enhance the current system with a focus on social process (communication and feedback).
	Stage 2: - Scoping		
2	Who is/should be the owner?	Group support.	Plant General Manager.
3	Who is/should be the custodian/designer?	Group support.	Plant Senior Management Team.
	Stage 3: - Design		
8	What are the current ‘benefits’ of the system?	Numerous departments at group support have a significant effect on change within the plants. There seemed to be a silo mentality. Individual ratings have been given to the different departments with ratings varying from 3 to 8 out of 10. The system is currently authorised and not productive.	Future benefits will be enhanced through the organisation and the plant to share ideas targeted to plant productivity and profitability. The new system can be authorised and productive.

12	Is the system one of transfer or transformation?	The majority of projects are currently a transfer from group support to delivery inside the plant.	The future system is based on transformation.
5	Is it a system of equalisation or differentiation?	The current management have built a system of equalisation compared to a system of differentiation two years ago. All staff on site now have a say on the operation of the plant.	A continued system of equalisation where all staff are engaged in the innovation process.
6	What is the underlying theory?	The current theory is underpinned by direct project management driven by engineering in a unitary fashion.	An innovation framework enhanced by systems leadership theory and employee driven innovation.
9	What are the boundaries of the system?	The current project boundaries are estimated to be 80% ownership from group support with 20% ownership from Plant 3.	Increased ownership within the plant (80% plant; 20% organisation).
10	What are the linkages with other systems?	There are currently significant linkages at the Plant 3 plant. There is a feeling that there are linkages to group support.	The linkages with other systems will be enhanced with a communication framework
Stage 4 - Design			
11	What structural boundaries does it cross?	As discussed, the boundaries that are crossed within the organisation occur between group support and Plant 3. There is currently a perception that this service from group support is not seamless.	The development of seamless boundaries between the organisation and levels of management within the plant.
16	Has the social process analysis been done?	There are numerous examples of social process in place.	Social process as a part of all plant activities.
13	Are authorities and accountabilities consistent with role?	Numerous examples of authorities and accountabilities in place.	Authorities and accountabilities are in place for all roles from an innovation perspective.

7	How is it to be measured?	Numerous management systems are in place.	This process will need to be developed with the national company.
14	Are there proper controls built into the system?	Numerous controls are in place.	All controls should be in place in the new system particularly in relation to communication and feedback.
15	Is there an effective audit process?	Technical and commercial aspects are audited.	There needs to be an additional audit of social process to ensure outcomes are communicated.
17	Is there a fully outlined flowchart?	There is a flowchart in place.	There is a flowchart proposed.
18	Is there full system documentation?	There is full documentation in place.	There will be documents in place including communication and feedback loops.
	Stage 5: - Implementation planning		
19	What is the implementation plan?	There is currently an implementation plan in place.	There will be an implementation plan and communication plan in place.
20	What is the final cost of design and implementation?	The cost is currently being born by the national organisation.	The project under AMPC will bear the cost of the final design and implementation.

Table 7 Systems design at a large plant for Plant 3

Based on the table above the senior leadership team then set down and redesigned the ideation process within Plant 3. The key feature of the change model is feedback loops associated with the development of projects. It was found that without the feedback loops staff became disengaged as they thought their efforts to change went unrewarded from a professional sense.

An increase in communication at the plant had a significant effect on the overtime levels per head. At the start of the process the cost of overtime was $20.20 per head. This was reduced to $0.60. This of course was not a single project but a series of projects within the plant that led to this significant cost production change of over $4 million. Unfortunately, the productivity outcomes were not measured in this exercise.

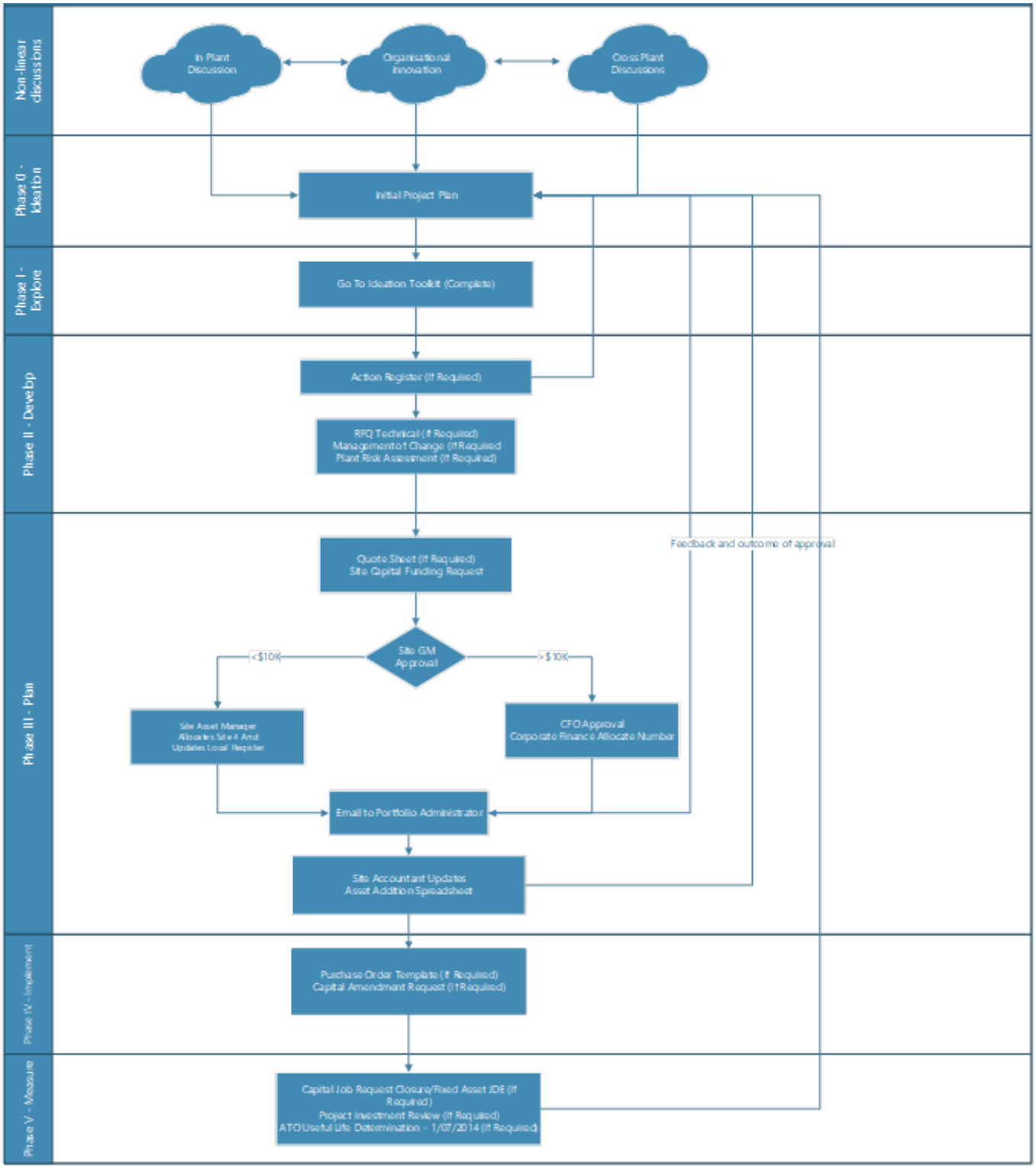

Figure 2 Plant 3 System Re Design

A crucial change to the project ideation process is the inclusion of feedback loops to enhance internal communication. As this internal communication is not detailed in the ideation process it can sometimes be overlooked within the operation of the plant.

Medium plant example – Plant 2

The following is a system that was developed at a medium-sized plant in the development projects within the organisation.

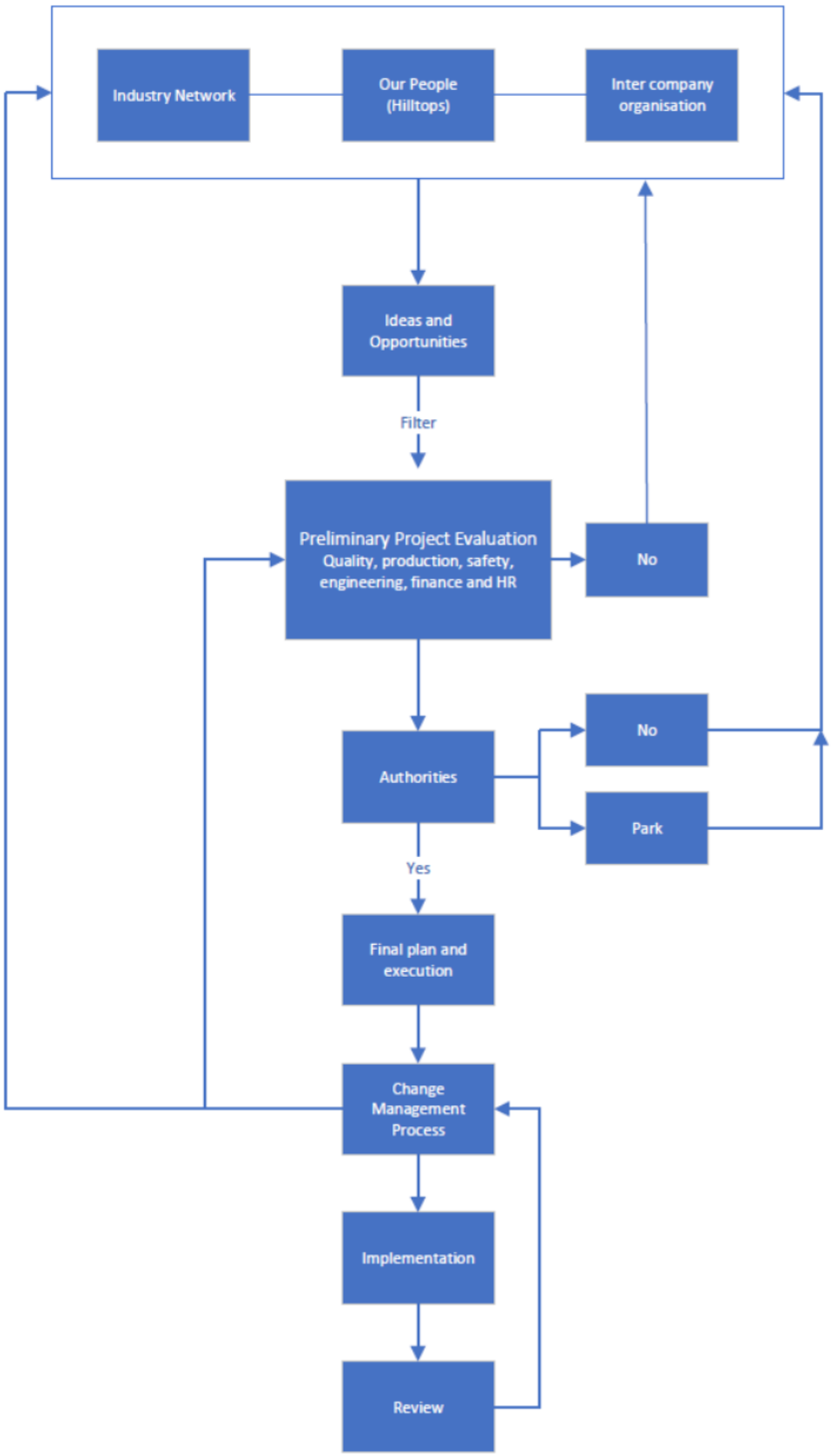

Figure 3 Plant 2 Innovation Systems Design

The process developed at Plant 2 reflects the process flow and feedback systems required to keep a focus on innovation. The process was largely driven by the plant general manager and the human resources manager who have since moved on.

Medium plant example linkage to head office – Plant 18

The following is a decision process that was developed for a medium-sized plant.

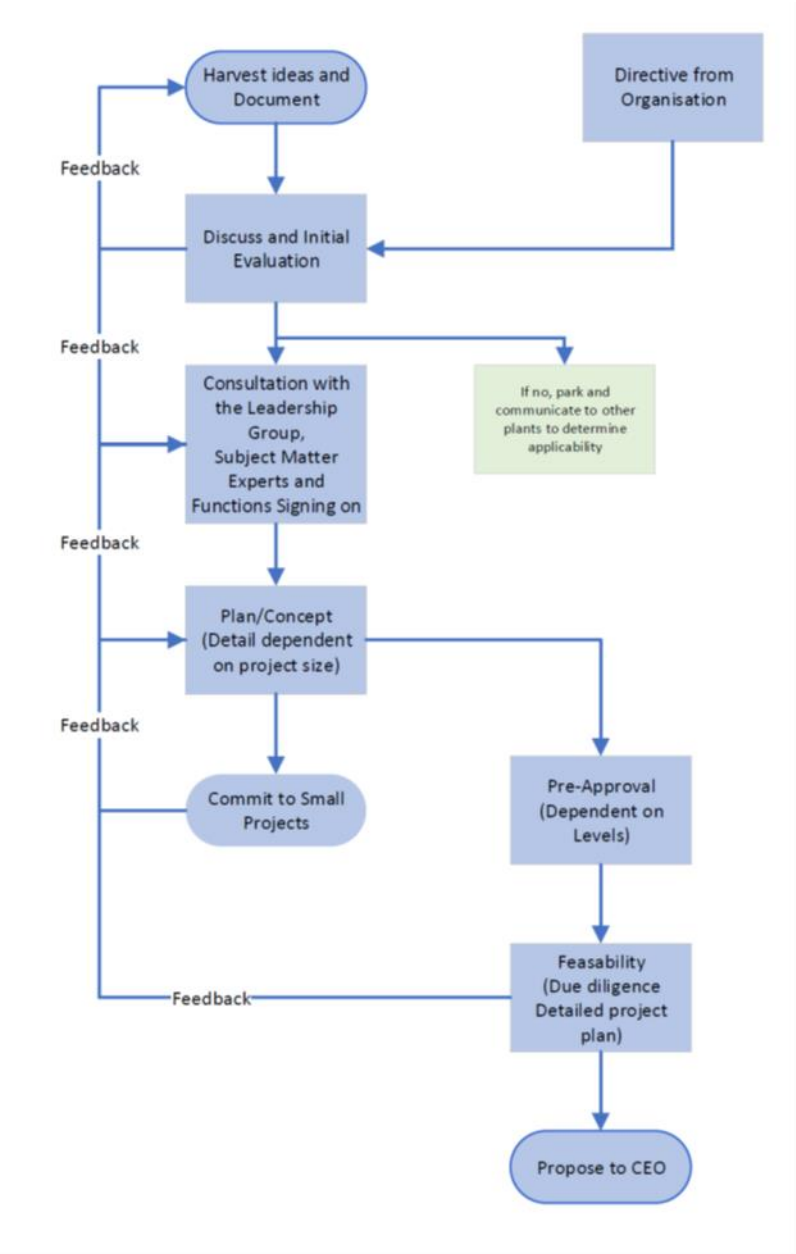

Figure 4 Plant 18 Innovation System Design

The systems design process was largely driven at each of the three sites where a different system was facilitated for each. The project team facilitated a workshop to design a single process for each of the three sites based on their

individual deliberations and to implement a single system that could be easily linked to Plant 18's organisational systems.

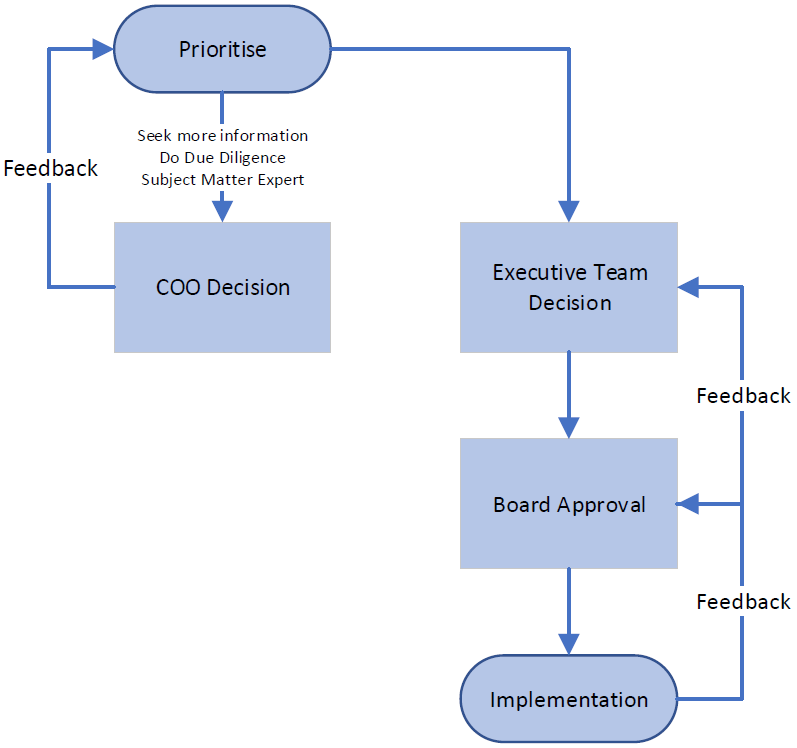

Figure 5 Linkage to Plant 18 Organisation

Unfortunately, the Plant 18 organisation did not engage and the process was shortened by walk out of the senior leadership team. This had a significant effect on the plants moving forward with the project and on the research team as we had clearly communicated the outcomes of what we want to achieve to the senior leadership team.

Plant	Staff Trained
3	33
6	15
7	5
8	6
9	12
10	16
11	4
12	26
13	1
14	26
15	1
16	5
17	7
18	12
19	9
23	3
24	8
Total	**189**

Table 8 Staff Innovation Leadership Process Overview

Due to the outbreak of COVID there was a significant shift after the first year of the project where group training could not be undertaken due to plant restrictions is an essential industry. Some plants embraced an online structure while others refused this medium choosing to wait for one-on-one training. Overall, 189 managers across the industry were given an introductory course in Systems Leadership theory and its application to project development in the plant.

As an action learning process staff were facilitated in project design and development to situationalise the learning at the plant. Anecdotally, the acceptance of the training was highly regarded. The project team will be sending out an evaluation framework for the project to determine its efficacy. The culture of the plant does not change overnight so therefore the project can't be fully evaluated during its term. Rather a longer-term view is required to determine the social efficacy of the project. As we have found in other projects the training of this type has a significant effect on the culture of the plant. This was outlined in the national retention project undertaken by Response Research.

PIP and Internal Project Development Process

As outlined in the previous section a project process was a key component of the learning and development associated with this project. From an action learning perspective staff were facilitated on the development of projects associated with their own individual work area. Overall, 541 project ideas were developed as a part of the learning associated with this project, this learning is in line with the research model design by the Response Group.

	Systems Leadership		
Company	**Social**	**Technical**	**Commercial**
0	4	0	0
3	12	4	8
4	0	7	0
5	2	4	0
6	4	3	0
8	1	6	2
9	11	13	5
10	11	18	9
11	12	10	3
12	28	2	23
13	3	6	6
14	9	15	15
15	29	5	10
16	15	8	9
17	12	26	5
18	12	26	5
19	8	17	8
21	0	8	0
22	0	8	0
23	5	8	6
24	16	13	5
25	4	6	0
28	6	1	4
TOTAL	204	214	123

Table 9 Systems Leadership Project Themes

It was continually communicated to the plant leaders that the development of multiple projects at an early stage was preferable over the development of a single idea. This allowed plant leaders to evaluate a best answer rather than a only answer. All too often within a plant a leader will come with a potentially good idea and develop this idea rather than seek project ideas from their team. The development of a wide range of project ideas allows the senior leadership team to consider a range of projects from multiple perspectives from a technical, social and commercial perspective.

AMPC Themes					
Company	Adv Manufacturing	People & Culture	Sustainability	Tech Market Access	Product & Process
0	0	0	0	0	4
3	2	9	5	0	5
4	3	0	2	0	4
5	0	2	0	0	4
7	0	4	0	0	3
8	4	1	3	0	2
9	5	5	4	2	7
10	15	9	8	0	7
11	6	8	6	1	4
12	2	27	6	0	10
13	4	3	4	1	3
14	6	10	6	0	18
15	2	24	6	0	10
16	3	9	1	3	6
17	0	11	5	0	17
18	2	9	11	0	29
19	1	12	13	1	22
21	0	0	1	0	6
22	3	0	3	0	2
23	1	5	6	0	8
24	2	14	5	0	14
25	0	4	0	0	6
28	0	3	2	1	6
	61	**169**	**97**	**9**	**197**

Table 10 AMPC Pillars Project Themes

The projects developed within this process were operationalised at numerous levels including receiving state and national funding and a significant number were internally funded by the plants, these included:

- Plant 11 boning room efficiency project that led to an 11% increase in operational efficiency;
- Plant 14 HR development project that was internally funded to the tune of $300,000;
- Plant 3 Project to enhance innovation in the boning room that improved overtime cost from $20.20 per carcass to $0.60 per carcass;
- A $250,000 Queensland government grant for plant upgrades;
- Queensland government grants were written to develop a boning room;
- Plant 7 - the development of two PIP's for ERP and workplace health and safety;
- Plant 23 received $300,000 from MLA for the implementation of the Econolisers into the new production facility;
- a training program to enhance worker knowledge was developed as a PIP for Plant 17 and
- a leadership development plant program was developed for Plant 15 to facilitate change within the organisation.

6.0 Discussion

The innovation project was largely undertaken during the Covid 19 period and as such plants were able to work with the project according to their own constraints and legislative requirements. During the pre-COVID period significant work was conducted with plants and this was severely curtailed due to individual plant and government policies. This of course changed at the end of the COVID period when group work was able to be undertaken with plants. A limiting factor during this period was also the significant changes in the plant labour structure and the high cost of stock. As outlined in the plant engagement section each plant chose its own path on engagement and included different engagement for plants within the same organisation. Due to the pressures associated with COVID 19, the shortage of labour and high cattle prices plant engagement with the project varied greatly.

Organisational leadership and systems design

An essential component of plant performance within the project was the ability for the project team to facilitate thinking beyond 10 years. During the project term numerous meetings were held with the AMPC team to outline the future direction of the individual businesses and plants. The provision of capital expenditure funding from an innovation perspective is ineffective when the innovation thinking from the senior management team is below two years. As per Systems Leadership models associated with levels of work a plant general manager should be thinking beyond 5 years in line with the capital expenditure associated with innovation. Innovation within an extremely complex system is not simple and as such the implementation of larger capital expenditure can be problematic when we don't consider the system as a whole. The focus of this project was to prepare people for the innovation process or system and to facilitate major or minor changes within a plant system to facilitate significant change.

The results of the Plant 11 plant were significant and it was due to the understanding of the general manager and his use of the Systems Leadership models to facilitate change. The simple task of facilitating change at the different levels of management created an opportunity for significant change within the plant. The general manager noticed that every level of management was working down a level and as such it pulled the level of thinking within the whole organisation down with it. The same occurred at Plant 3 where the facilitation of change within the plant was enabled as leaders within the organisation were ready for and responded to the change process.

Many plants associated with the project did not engage with the project team at the right level due to a number of perceptions, situations and constraints. Some saw the program as nothing more than a way to enhance staff ability and felt the project team could not work at their individual levels. Other managers were not able to engage due to time pressure while others had a belief in their own ability to get the job done. An assumption made by the project team at the beginning was that every plant is different and it seems every plant manager is also different.

This was most evident in the engagement with Plant 27. During the life of the project three different managers engaged with the project. The first manager did not engage and left the project to the assistant manager. He engaged enthusiastically and facilitated a great change in the plant before becoming the acting manager. Then another manager engaged with the project, again doing so enthusiastically, and moving the plant to a profitable position for the first time in

decades. It is not to say that this was due to the efforts of the project team but is an indication of a manager thinking long-term about the business.

Staff leadership and training

Due to the constraints of COVID 19 the delivery of this program had to change significantly over the project term. Firstly, we saw the development of staff in the traditional workshop format with a focus on frontline Management leadership training with a focus on Systems Leadership. The team had to adapt to the new environment and change of workshops to individual to two hour training sessions for individuals. Although more time consuming this seem to have a higher level of engagement and assisted in the facilitation of plant project ideas.

The training process was an essential component of this change as it created an understanding and an opportunity for managers to understand the process of innovation within the plant. Essential to this process was the project facilitation process that provided a real understanding of the application of the learning to an individual's experience. All plant managers who engaged with the project saw this as a positive experience for the plant. And time and time again the project team was invited back to work with the staff from the individual plants.

In New South Wales this program was extended with Boost funding for over 100 participants. This allowed further Systems Leadership development for staff and the implementation of a significant number of research outcomes in the individual plants.

PIP and project facilitation

The usual model for adoption is for a specialist to engage with a person or organisation with a view to enabling the technology implementation. The utilisation of facilitation was an important activity in the project as it produced a wide range of project ideas that could be facilitated into a major project outcome. The success of the project was demonstrated in the numerous small projects that led to significant outcomes for the individual plants. This was enhanced by the individual managers at different levels work to enhance their own work environment. The project process undertaken by the team on many occasions included the facilitation of:

- Context - a deeper understanding of the issues in relation to a project idea from a number of stakeholders;
- Limitations - what are the constraints associated with achieving project outcomes;
- Contributions - involving critical stakeholders in project development and communicating project outcomes;
- Literature review - work with the individual to understand the work that has been conducted before to ensure the latest research is adopted.

The utilisation of this process was an essential component of the project development. Projects were funded by the individual plants, state governments, federal governments and AMPC PIP's. An important project developed during the project process was an industry 5.0 project as part of the MMI funding. The project sought to highlight the opportunity in linking people to the opportunities associated with automation in a virtual reality environment through digital twinning. A

project of this type can have a significant effect on the adoption of technology within an organisation by engaging with individuals and allowing them to understand the opportunities associated with change.

7.0 Conclusions / Recommendations

The project overachieved in relation to original project outcomes and the original 19 plants to be engaged. As discussed, the project engaged with 27 plants across Australia, trained 189 managers in Systems Leadership and develop 541 project ideas for the plant leadership to consider. Numerous projects resulted in PIPs or internal plant projects. In discussions with plants in relation to the project process the project team believe that a further stage III is an option for the project team to further implement these project outcomes.

Two plants from the project generated an estimated gain of approximately $97m in direct improvements for a $1.94m project investment. These project outcomes have been communicated in case studies associated with the project. Projects such as industry retention and absenteeism were important outcomes of stage 1 of the innovation project.

The implementation of industry 5.0 is an important outcome from the project. By more effectively engaging with people within a plant we can create a greater experience with future technology. The engagement of people was an important outcome from this project and the experience of people understanding change. The development of an industry 5.0 project within a virtual framework could allow a greater adoption of these technologies inside the plant. The assets could be delivered through the knowledge hub. As most learners within the meat industry are activists this could be an important process in the adoption of technologies.

It is recommended that a training program be undertaken for AMPC program managers in relation to the opportunities associated with Systems Leadership in change and in the adoption of technology. The information forums conducted throughout the project was seen as a positive experience to many of the program managers within AMPC.

8.0 Bibliography

9.0 Appendices

The author should any supporting documentation which has been referenced in the report. Each Appendix must be named and numbered.

Appendix 1 - PIP and Project Development with Plants

1. Export Innovation Manager - $500k
2. Infectious Disease Management Program - $1m
3. Digital Transformation Program - Industry 4.0 - Stage 1 - $5.5m
4. A symbol, systems and behaviours audit to underpin future social development - completed
5. Develop social cohesion and SLT innovation alignment
6. Improve the attraction, absenteeism and retention
7. Senior Leadership Team Meetings Rhythm
8. Plant Management Meeting Structure
9. $60 million with the upgrades into the technical side of the business that includes:
10. Boning room – $14m
11. Replacement freezer stores – $14m
12. Upgrade to rendering facility – $11m
13. Palletising – $3m
14. Upgraded chillers to handle the increased capacity – $3m
15. To ease of pinch points between Slaughter floor and boning room
16. Boning room cryovac and palletising - major pinch point
17. Balance tanks
18. Transformer upgrade
19. The implementation of the TMS
20. Commercial plan
21. Server room and fibre optics
22. Social plan
23. Upgrade amenities for people given the amount of people they need to attract
24. Discussions are underway about housing workers given the housing shortage
25. Irrigation Dam
26. Irrigation Centre Pivot
27. Plate Freezer Commissioning

28. Cold Store and Load Out
29. Spray Chilling
30. Back Up Boiler
31. Sealed Roads around abattoir
32. Alternate Energy Solar Power
33. Centre Pivot Irrigation
34. Pasture Development
35. Feed Mill, Silos, Commodity Shed
36. Fending Upgrade
37. Weighbridge
38. Expand Backgrounding Facility by additional 10,400 head
39. Stage 1 Abattoir Build
40. Load Out Auto Carton Labeller Machine for Trim Line
41. Gluing Machine for Trim Line
42. Cold Stores Plate Freezer Auto Loading
43. Cold Stores Holding Freezer/Chiller
44. VA Value Adding Room
45. Spray Chilling
46. Stage 1 Wet Rendering
47. Livestock Upgrade of existing livestock yards
48. Maintenance Electric Energy (PV)
49. Maintenance Solar Hot Water
50. Operator ownership and accountability of the operation of machinery
51. Enhance the efficiency of Co-Products
52. Enhance the productive relationship between QA and the Boning Room Team
53. Enhance the efficiency of the lamb floor
54. Sign and install an organisation wide communication system
55. Enhance the efficiency of the boning room
56. Clip and stick (before Bleed)
57. Lamb chilled carcass stillage transfer
58. Use of Ultraviolet light
59. Removing Skins
60. Whole Lamb Carcass Vacuum Packed
61. Services, Insights, Reduction
62. Transformer upgrade
63. Introduce AAO
64. Triton Production system role out
65. Rendering
66. Market Access
67. New Brand

68. Increase Chiller holding capacity
69. Spray chilling
70. Slaughter floor Stage 2 upgrade
71. Blast Freezing
72. Increase Lairage Holding
73. Waste water recycling
74. Increase red offal recovery
75. Upgrade staff amenities
76. Off site Car park
77. Auto/Robotic stockinet
78. Auto weigh and scanning carcass (tickets) at loadout
79. Introduce DEXA or similar
80. Business Analytics
81. On boarding Inductions
82. Inline shearing of cutting lines
83. Uptake of some of the industry advanced manufacturing themes
84. Staff Development and retention
85. Accommodation facility
86. Succession planning
87. Formalize a staff wellbeing strategy
88. More area to store 1800 under cover = cleaning out pens
89. Rotation systems for staff for OHS – only a few good people
90. Product development for non-marketable skins
91. Skin rendering
92. Wool harvesting
93. Modernisation of the area 40 years old – project plan – fellmongering lesser quality skins
94. Need another tumbler for the skins
95. Involvement in the selection process – Ag Farms don't send information through create local alliances
96. Training staff
97. Improve weekly and monthly reviews on maintenance – pressure on the maintenance systems – animal welfare and OHS standards
98. Movement of sheep through top lairage into race and stunning – return race problem with the retain rail – one level
99. Waste treatment for manure
100. Interaction standard – everyone is on the same level – culture within the plant
101. Animal health issues back to producers
102. NVD some issues
103. Animal welfare issues – water for stock – NVD movements – animal welfare communication to the sale system
104. English for industry project

105. Partnership model of training and development
106. Training processes To improve access and systems through filing and training processes
107. Training procedures To have training procedures that maintain and train in key areas.
108. Training outcomes - QA To develop a training program that enhances QA
109. Moving operators/knife hand Ensure adequate training of knife hands.
110. Customer feedback Reduce product fix errors and improve customer relations.
111. Pumping air To make boning of beef easier.
112. Recycle plastics To get a financial return from recyclables rather than paying
113. BSM Refining To refine the BSM Export Ordering System
114. Bleed Chain/Stimulator Change stimulator so bodies continually move while being stimulated instead of stopping. Try to implement a design that works well with keeping bodies stimulated while still moving along the bleed chain.
115. Productivity of initial slaughtering Change from cradle to a moving table so that the process is sped up.
116. Consistent flow of cattle Make entry door bigger so cattle are more inclined to walk in.
117. Induction Introducing all areas of company into inductions i.e. QA regulations, health & safety
118. Training Having more skilled workers and being recorded properly
119. QA Training Training of QA staff to be multiskilled across the whole establishment in monitoring.
120. Solar power generator To install solar power and manage storage of this power within the proposed budget
121. Kill floor water Discuss possible technologies to reduce water consumption and research skimmer technologies
122. Battery storage To install a battery storage unit to ensure backup during any potential power failures.
123. Knock box To install a new knock box to ensure better throughput and animal welfare.
124. Paunch pusher/puller To install a paunch pusher/puller or a U/Table to allow better workflow of product and improved wellbeing of the worker.
125. KPI Offal To collect daily or live information reading offal production to improve yields and increase understanding and knowledge of the offal market.
126. Frozen Reworks To find a new label machine to put in loadout. If any reworks need to be done, this should occur during loadout so as to not stunt production.
127. Label Machine To find a labelling machine that prints both label and secondary label and sticks on carton
128. Finger Bagger To install an additional finger bagger to reduce build up, as well as speak to employees to find a better solution
129. Reduced breakdowns To reduce breakdowns and repetitive maintenance tasks. A system to maintain inventory, track tasks, receive works request
130. Semi-automatic conveyor gates Eliminate manual handling of lift up conveyor gates

131. Filtered plant water Clean water throughout site and reduced breakdowns
132. Floor boy access Safer manual handling, comply with arranged agreements
133. IT Data Up to date forms/data, take away double handling of forms
134. H Bone Puller To install a h boner puller to reduce pain during movement and manual handling
135. Knocking box bum side pusher No slip in box. Cows fall out of box better. No gaps in chain knocker and sticker can keep up
136. Splitting saw steriliser More cow chain not stopping.
137. MSA camera - grading Greater transparency. Less over time. A better tool to measure traits on MSA cattle
138. Installation of pallet wrapping machine Better presentation of product. Customer satisfaction. Less chance for back injuries
139. Dashboard and rolled up as a consolidated dashboard Utilise dashboards to improve the measurement of key performance indicators within each of the plants and the organisation as a whole
140. Profit and Loss - Budgeted and Actual for the plant Implement financial measures on a day-to-day basis to improve commercial outcomes
141. Succession - 3 deep in positions - Creation of a flexible workforce - To develop our staff to underpin our management framework and provide a pathway for staff inside the plant
142. Document MTC and Delivery Dockets - No handwriting Development of digital process for MTC and delivery dockets
143. Progression for senior managers Develop progression pathways at all levels of management within the organisation
144. Weekly sales, marketing and production hook-up - backed up by consolidated dashboard Strategic and tactical framework in conjunction with plant and department managers
145. Senior leadership has ambitions to implement automation in the mince room
146. Create a safe workplace in the plate freezers, including the instalment of laser sensors
147. Changing the procedure and flow of the plant floor to facilitate the effectiveness of their through-puts
148. According to the demands of the market, the plant will begin either freeze or chill their primals
149. Conduct value stream mapping
150. The plant was previously using an Eagle in load out but will soon be re-initiating a metal detector in this process
151. The management team is going to consider automatic robotic loaders and pallet stackers
152. The plant has recently manipulated the processes in the boning room so that fewer employees are in each other's way
153. The management team recognises how effective it may ben to implement the Marel system
154. Plans to hire a new marketing team
155. Plans to analyse the international market and investigate the feasibility of sending primals to other markets
156. Identify the best places to send products to maximise profitability
157. Foster and promote relations with outside customers

158. Moving forward, the plant is going to have to revise and update their budgets to deal with the product mark ups and shipping issues that have arisen due to COVID-19
159. Developing a comprehensive understanding of the culture of the plant
160. Fostering a freely communicating business to minimise issues and conflict amongst staff
161. Consult workers for valuable employee input - collectively work together to build a better plant
162. The plant has undergone a major management restructuring with new plant, livestock, HR and accounts managers
163. The leaders acknowledge that they need to improve their succession planning
164. Gain self-reliable housing for employees
165. Complete a drainage overhaul to negate bacterial problems and drain blockages
166. Implement a new cleaning structure
167. Complete a training overhaul – gather input from the operators regarding the structure and necessary improvements of training
168. Establish comprehensive HR systems – the plants HR officer is currently working with a company called Employsure to provide the plant with work instructions, WHS programs and SOP's
169. Install a hot water efficiency and collection system
170. Redesign the lead up so it is easier on the cattle and for stockmen to run the cattle into the yards
171. Improve the boning room operations
172. Update the settle in ponds and wastewater program
173. Achieve ARA accreditation
174. Installation of a DAF facility
175. Move to renewable energy
176. Change to a 1-megawatt boiler supplemented by solar power or a smaller boiler also supplemented with solar power but using hot water pumps to the sterilizers
177. Established a strong international market base and explore if they can expand further into bigger branches
178. Currently selling to Costco – look at selling to Walmart
179. Potential to add on a cold boning storage area
180. Build a different chilling room
181. Potential for acquiring a feed lot which may also make it possible to produce their own cattle
182. From an innovation perspective, there are aspirations to change their buying by approaching over hook clients instead of auctions to enhance market reliability
183. 0Move to net zero carbon
184. Chilled sortationDevelopment of the loadout facility to allow the development of facility to process 900 head
185. Plate Freezer Optimisation of plate freezers to enhance chilling capability at the plant
186. Centralised freezing Cold rooms and freezers are currently issue at the plant in addition to the optimisation of loadout

187. Rendering Rendering is currently a significant issue due to the age of the plant. Rendering room requires moving to allow for the development of the boning room
188. Offal expansion Offal recovery is a significant opportunity for the plant to enhance productivity and profitability
189. Enhanced data management systems Currently data management systems do not allow the effective management of key aspects of the plant
190. Drying out – understanding the range of options available to plants in relation to spray or fog chilling
191. Energy – what are the opportunities for plants to reduce energy consumption or cost
192. Refrigeration CO2 – understanding refrigeration including the opportunities for CO2
193. NILS – updating technology in line with the changes that will be occurring in the end of 2020
194. Training – seeking to understand the training options available including online training through the new LMS
195. Labour – understand the opportunities to enhance labour and the plants including PLS workers
196. Waste – understand the opportunities to reduce waste costs in plant either through technology or improving logistics for waste companies.
197. AQIS accreditation
198. WHS accreditation
199. AA submitted
200. Simplify Processing
201. Boning simply with some new products
202. Significant loin boning room and product development
203. Bio medical room
204. Getting the cuts right
205. Making sure the WI and SOPs are perfect
206. Quality of the product is to the market
207. Dry aged product into containers
208. Background research product development
209. Maintenance system - Mex
210. Commercial elements
211. Product development budgets
212. Communicate the new production system to the sales team – what we can do for you
213. Can we enhance opportunities for the sales team
214. Procurement set up
215. Costs for service kills – variable, step and fixed
216. Knowing our plant wide variable costs
217. Social elements
218. People identified
219. Building the right culture
220. Leadership development and training

221. Staff skill development
222. Communication – systems in the plants
223. Application and interview process – induction – initial work assignment – ongoing development
224. OHS
225. Industrial relations
226. Industrial manslaughter
227. Training records
228. Safe work assessments
229. Risk assessments
230. Staff Retention Improve operational performance through staff retention
231. Performance processes - COO Dashboard Link plant dashboards to a whole of business approach
232. Value proposition performance measurement Develop the business management system
233. Linkage operations and sales Strategic and tactical framework in conjunction with plant and department managers
234. PIPs utilization Reduce the risk associated with change inside the business
235. Offal Room tables To lift the trim tables to a comfortable working height
236. Water saving hide puller To save water
237. Box machine To save time and money by having a box machine to feed the offal and tripe rooms with boxes as needed
238. Safe work environment To have a safe, effective, practical work environment.
239. New product Developing a new product to sell which is quality and profitable
240. Customer relations Improve customer relations through communication.
241. Customer feedback To give the best quality product to customers with the best shelf life
242. Work force Improve work force communications
243. Main office moved to front of plant To move the office (very little information provided on this project - no reasoning given)
244. Covered area freezer to loadout To improve the quality of cartons by covering the freezer to loadout area
245. Turnstile/Security To improve on site security
246. Production/Processing excess To see if taking on extra production is viable and beneficial. Must take into account freezer capacity and overtime capability.
247. Cleanliness of cattle To create a new automated wash bay.
248. Unloading ramp To install a better system to unload cattle, taking into account the truck drivers, cattle and environmental conditions.
249. Blow tank Remove the blow tank and design a screw system to get waste from the boning room over to by-products.
250. Chilled tunnel To install a chilled tunnel for product to increase shelf life.
251. Hide Puller transition To gather data on water wastage during this process, and to find a water saving solution for this issue, whilst still keeping hide integrity and hygiene.

252. Box Transfer To improve box transfer from offal room to plate freezer/loadout bay
253. Automatic hook To install auto hook return from boning room to slaughter floor including hook wash. This will alleviate the need to manually return hooks to slaughter floor causing cross contamination.
254. New online system/software for training & induction All information (training files, employee information) in one place. Access by all management password protected. iPads for users (2 or 3) several people could use at the same time
255. Cooling system for slaughter floor Cooler working environment for workers. Increase worker morale by improved working conditions
256. Communication to home Happy/content/satisfied workers, retention of workers
257. Yard communication Less mistakes with lots through the day (kill sheet)
258. Hide pull safety mechanism Safety. Product not falling onto ground
259. Saw rise and fall stand Saw operator to complete role properly
260. 3D Mapping Conduct a 3D mapping process within the plant to understand the implications for change
261. Slaughter Floor Improve the long-term planning inside the slaughter floor by trialling process options in conjunction with 3D mapping
262. 10 Year Business Plan for the Plant Understand the implications for change on the plant with a particular focus on the return on investment for different innovation strategies
263. Succession - 3 deep in positions To develop our staff to underpin our management framework and provide a pathway for staff inside the plant
264. Profit and Loss - Budgeted and Actual for the plant Implement financial measures on a day-to-day basis to improve commercial outcomes
265. Creation of a skilled meat worker pathway between Southeast Asia and Australia
266. GM - Housing
267. Other critical projects
268. Manager Human Resources
269. WH&S
270. Boning Room
271. Leading leadership
272. Team process and plant leadership
273. Work with teams to determine information needs
274. Work instructions and communication
275. EU orders
276. Training the lab tech
277. Manning procedures
278. JDE training and licencing
279. Rework and cutting corners – bulging cartons
280. Review current procedures in relation to the movement of cattle
281. Open lining of communication

282. EU orders
283. SOP Shipping from a social perspective
284. New port project – systems development
285. Enhance training systems
286. Enhance communications with the kill floor
287. Kill Offal Hygiene
288. Team development – situational leadership
289. Check power mobile plant
290. Reshaping employee engagement
291. The delivery of a human resource (HR) system to the meat processing industry
292. The development of the new facility
293. Product development for the new pet food facility
294. Induction enhancement of plant
295. Dam integrity
296. Recycling water
297. 3 Deep in management
298. Boning room anti room flow
299. Legging stand air knives
300. Offal room process flow
301. Hot water in the shrink tunnel
302. Absenteeism in the boning room
303. Modify trim belt
304. Implement computer screens on tables
305. Supervisor tablets
306. Time and motion study
307. Bar code applicator
308. Fingerprint scanner
309. Absenteeism
310. Culture and mindset with upper management
311. Attraction process
312. Interview process
313. Induction process
314. Absenteeism improvement
315. Strategic workforce plan
316. Training process
317. Initial work assignment
318. Plate freezer accumulation
319. Loadout scheduling
320. Robot sortation and pallet wrapping
321. Disposable pallets

322. Verification scanner for frozen cartons
323. Robotic pallet wrapping
324. Chilled divert
325. Chilled product retrieval systems
326. Enhance CL data collection
327. Enhance primal cuts data collection
328. Staff training
329. Labour optimisation
330. Thermal product analysis
331. Product appeal
332. Safety culture project
333. Boning room hygiene practices
334. Manual unloading chillers
335. Use of sterilizers
336. Carton and bag size utilisation
337. Fast closing doors boning room gantry
338. Safety chain on rails
339. Reduce ink on product
340. Manning levels
341. Productivity To achieve a plant that has increased productivity with no impact on quality or safety (and hopefully reduce injury).
342. Attendance To improve attendance
343. Retention Increase productivity yields
344. Soft landing for employees Create a better buddy system
345. Retention To improve retention
346. Better class of employees/Workforce To attract quality staff who want to stay
347. WI and SOP updating To create a system of communication for new/changed documentation
348. Personal Hygiene Improve personal hygiene
349. Receival tracking A more effective and accurate receival system to track cattle movements on site to monitor efficiency of processing, cattle location and identify stale cattle.
350. Improved Communication Improve yard communication to increase productivity and safety of staff and cattle.
351. Blunt knives Someone to sharpen knives every day, and swap them out when blunt for cleaner products, less injury, and more attendance.
352. Preventative maintenance spreadsheet To create a spreadsheet to list tools and parts that are being used and need replacing.
353. Offal Room Increase production efficiency
354. Bull Plant Raw Product Increase in product efficacy
355. Recovery of product To collect more aorta and thick skirt by a small change in process.

356. Radio/Tv Ads To gain more long term workers to reduce a loss of production and training costs.
357. Gut table To have one less operator working on guts and viscera and be utilised elsewhere.
358. Hygiene Ensure procedures are being performed as written in SOPs, Wis and PQCs, as well as ensuring area supervisors are monitoring and directing operators in a calm manner to get higher quality product.
359. Training To further train staff for continuous upskilling and monitoring.
360. Labels To implement a label reconciliation database to keep track of all stock to have a 100% label reconciliation system.
361. Tablets for area supervisors Supervisors having access to data & programs on floor which will increase supervision & supervisor presence
362. No cold calves More foetal blood
363. Bull shred trim/belt packing Ensuring large bulls can be processed more efficiently – less stress on packer/belt driver
364. Dehumidifiers - Dehumidifiers installed to stop condensation build up. Less cartons being re-boxed due to wet cardboard creating tears. Not having to have someone squeegee off condensation on roof
365. Remote access for loadout More time on floor directing. Better utilisation of workers. Lower injuries
366. Drive on loadout Less manual labour. Less climbing up and down containers. Less people falling over carrying frozen cartons
367. Kill floor trainer A skilled work environment. A happy workforce. Increased production/quality of product
368. 3rd legging stand kill floor 3rd legging stand in bull plant. Better and safer training. Better production and cleaner products
369. Supervisor radios Better communication between areas. In case of emergencies
370. Rapid roller doors Holding better temps in freezer/chillers. Do away with freezer straps. Better efficiency in refrigeration
371. Loading dock Load more product quicker. To be able to keep up with production

Appendix 2 Systems Leadership models