Final report

P.PIP.0764 Digital Value Chain Officer

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1 Abstract

There is a large amount of data that is currently collected across several sectors of the supply chain, however there is a lack of analysis, linkage and effective utilisation of this information which limits its value to industry and delays progress and productivity.

The project enabled the employment of a digital value chain officer (within Teys Australia) to review current data available to livestock suppliers and business members and use insights to develop a series of analytic projects to provide better information and uncover value for all stakeholders.

The deployment of new tools and development of case-studies was not fully achieved as the project was put on hold due to the employee holding the position taking personal leave. During that time, extenuating circumstances within the team resulted in a change in resources within the business which meant that position was no longer able to be filled by the business. The decision was made to terminate the project so only some of the original objectives have been met.

The foundation work completed through this project clearly established a need to improve the data linkage both within the business and across the value chain and identified several key focus areas to deliver these in a way that will bring more value to key stakeholders across the red meat value chain.

2 Executive summary

Background

There is a large amount of data that is currently collected across several sectors of the supply chain, however there is a lack of analysis, linkage and effective utilisation of this information which limits its value to industry and delays progress and productivity. By establishing a strategic partnership with supply chain participants through this project, it will allow opportunities for industry benchmarking and integrated data platforms to be explored. The intention of this project, is to understand what is important to our producers and their businesses, identify key drivers of on-farm profitability and harness the information to help them make more informed decisions.

Aims/objectives

Teys Australia employed a digital value chain officer to review current data available to Teys livestock suppliers and business members and use insights to develop a series of analytic projects to provide better information and uncover value for all stakeholders. This was achieved and reported under the Milestone 2, 3 and 4 reports.

New tools will be piloted with producer champions to develop case-studies and assist with adoption. Recommendations will be provided to assist Teys Australia business with more efficient use of data as well as work with other key stakeholders to identify any data sharing arrangements for mutual benefit. The deployment of new tools and development of case-studies was not achieved as the project was put on hold due to the employee holding the position taking personal leave. During that time, extenuating circumstances within the team resulted in a change in resources within the business which meant that position was no longer able to be filled by the business. The decision was made to terminate the project so only some of the original objectives have been met.

Methodology

A data stock-take was conducted, and key stakeholder insights captured. These detailed insights enabled a series of suitable data projects to be identified across several key areas including data automation and reporting, livestock buyer tools and data analysis solutions, data efficiency (eNVDs) and improved producer feedback tools. These projects were prioritized by key stakeholders and initial work commenced on key priority areas.

Results/key findings

Several opportunities were identified to explore data automation and reporting to improve the accessibility of information and allow for improved efficiencies, increased data accuracy and flow of feedback information along the value chain. The foundation work completed through this project clearly established a need to improve the data linkage both within the business and across the value chain and identified several key focus areas to deliver these in a way that will bring more value to the business and broader red meat industry.

Recommendations

This project was put on hold (personal leave) and subsequently terminated due to extenuating circumstances with resourcing in the business, however the work completed to date provides a very strong foundation for future data analysis projects. Several of the data analysis projects were not completed in full so this has left great potential still to be harnessed.

Improvement of feedback systems to producers is a key area that will drive future productivity gains and efficiencies across the red-meat industry, however it is vital that these tools are developed in a way that can drive practice change for these gains to be realised. There is significant potential for future work in this area around improving data linkages and providing data analysis tools to bring increased value across the red meat value chain.

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1. Background

1.1 Data linkage opportunities across the value chain

There is a large amount of data that is currently collected across several sectors of the supply chain, however there is a lack of analysis, linkage and effective utilisation of this information which limits its value to industry and delays progress and productivity.

This project will allow the development of a role within Teys Australia to focus on reviewing the current data available to producers and the business. It will identify opportunities to improve current information supplied. Case-studies will be developed with producer champions that will link data back to actions that can be implemented on-farm to increase value. These producer champions will cover a range of geographical areas and production systems.

A series of analysis projects, with input from producer insights will be developed to undercover the value of linking data pools within the organisation and across industry.

By establishing a strategic partnership with supply chain participants through this project, will allow opportunities for industry benchmarking and integrated data platforms to be explored.

The intention of this project, is to understand what is important to our producers and their businesses, identify key drivers of on-farm profitability and harness the information to help them make more informed decisions. This is critical to the company strategy of connecting its suppliers with its customers.

The extent and scope of the large number of suppliers to Teys, highlights the importance of enabling strong communication and development of a trusted relationship, on which this role will build on, to foster collaboration through shared information and knowledge.

1.2 Digital Value Chain Officer Role

The project facilitated the employment of a digital value chain officer within Teys Australia to enhance digital capability, specifically through the provision of advanced analytics of data sets to generate new insights for the business.

The position will analyse the value in linking existing and new company data with other data sets to generate value and new opportunities. The position will provide the company with new expertise and resources to ensure that digital opportunities are identified, investigated and where relevant implemented.

2. Objectives

Teys Australia employed a digital value chain officer to review current data available to Teys livestock suppliers and business members and use insights to develop a series of analytic projects to provide better information and uncover value for all stakeholders. New tools will be piloted with producer champions to develop case-studies and assist with adoption. Recommendations will be provided to assist Teys Australia business with more efficient use of data as well as work with other key stakeholders to identify any data sharing arrangements for mutual benefit.

The defined project objective was to employ a digital value chain officer, within the Teys Australia business (on a 0.75 FTE basis) * for a four-year period who is responsible for:

- Stocktake and review of current data available within the company and any existing linkages. Investigate and understand current data available to Teys livestock suppliers and business members and how effectively it is utilised and identify any gaps or inhibitors.
- Identify producer champions across range of environments (i.e., northern vs southern production systems) and production system (i.e., feeder cattle vs slaughter cattle) to provide insights on effectiveness and utilization of current data.
- Compile producer insights and use to develop series of analysis projects to provide better information for business and producers, to uncover the value of linking data pools within the organisation. Use producer champions to pilot any new tools and provide feedback and recommendations to improve implementation and application. Develop case-studies with producer champions to link back to actions that can be implemented on-farm to increase value to assist with adoption.
- Provide recommendations for how data can be more used efficiently within the business and be responsible for the implementation of the agreed recommendations.
- Work with customers and suppliers to identify data sharing arrangements for mutual benefit
    - Explore opportunities for industry benchmarking and integrated data platforms
    - Assist with execution of MLA Data Strategy by providing insights and identifying data sharing opportunities.

This project was put on hold due to the employee holding the position taking personal leave. During that time, extenuating circumstances within the team resulted in a change in resources within the business which meant that position was no longer able to be filled by the business.

As such, the decision was made to terminate the project so only some of the original objectives have been met. However, the work completed to date lays a strong foundation for potential future work and provides an effective roadmap going forward on how to best target the opportunities identified to date through this project.

3. Methodology

3.1 Project milestones

The project milestones were set up to ensure a logical approach to the project and allow insights captured through the initial stages to help inform and direct the development a series of analysis projects.

3.1.1 Data stocktake

The project set out initially to conduct a data stocktake to investigate and understand the current data available to livestock suppliers and the business (integrated feedlots and livestock buyers) as well as utilization rate, effectiveness, data linkages and identify any gaps or inhibitors. A range of producers would be identified, across a range of environments and production systems to provide insights on the effectiveness and utilization of current data. This was successfully completed and reported as part of Milestone 2 report.

3.1.2 Analysis projects

These insights were used to identify and develop a series of analysis projects to provide better information for both producers and the business and uncover extra value by linking these pools of data. This was successfully completed and reported as part of the Milestone 3 & 4 reports.

3.1.3 Producer champions

Producer champions would be used to pilot any new tools and provide feedback and recommendations to improve implementation and application. Various case-studies would be developed to link back to actions that can be implemented on-farm to increase value and assist with adoption of new tools. This was planned to be undertaken in conjunction with other producer engagement activities, however, was not yet completed under the project.

3.1.4 Data-sharing

Another key part of the project was to identify opportunities for data-sharing arrangements for mutual benefit with industry that could be further explored. Several opportunities had been identified as part of the work in the completed milestones and prompted further discussion between the business and Integrity Systems Company (ISC) to explore some of these areas further. A separate project exploring animal health data was subsequently developed because of the initial discussions and foundation work completed through this project.

4. Project outcomes

4.1 Data Stocktake

The Teys Australia business covers 6 primary processing facilities located across QLD, NSW and SA and 3 integrated feedlot operations based in QLD, NSW and VIC. The large number of producers Teys works with across their plants and the integration with company feedlots, presents a unique opportunity to explore data linkages and identify opportunities to improve data utilisation to enable better production decisions both on-farm and at the feedlot level.

A stocktake for current data collected across the Teys business (in relation to livestock purchases) was conducted. There is a huge amount of information collected at both the feedlot and plant level. However, these are collected across a range of systems with variations in how this data is linked together across the business.

The data stocktake identified several opportunities that could be developed into further analytic projects. These are outlined further in the Discussion section of the Milestone 2 report. In addition, insights were sought from the various key stakeholder groups to provide further evidence to support the design of these projects and identify any other new opportunities.

In relation to livestock procurement, there are several key stakeholders including producers, agents, company buyers, feedlot managers, plant livestock managers and business managers. These stakeholders all have slightly different requirements in terms of what level of information they need, based on their role.

A series of survey questions were developed to provide a base level of understanding for each group on what data was currently available to them; how effective this information was, both in terms of data value and format; and how often they utilized it. Stakeholders were also asked several questions to explore if there were any new opportunities, they could identify that could be developed to further assist them within their role to bring more value to the business and industry.

As each stakeholder group has a different role, the survey questions were adjusted appropriately to suit each group. Information was collected around region and production system to provide context and identify any potential variations or sub-groupings.

4.2 Survey results

A range of opportunities were identified as part of the data stock-take. Further insights were then captured from key stakeholders including a range of Teys Australia livestock buyers, plant livestock managers and feedlot managers. These insights covered a range of buying regions across QLD, NSW, SA, and VIC. Majority of the cattle purchased by this team were direct consignment and included both feeder cattle and slaughter cattle. This survey work has allowed for a more detailed insight to be gathered which has enabled a series of suitable data analysis projects to be identified.

Given there are several other projects currently engaging directly with producers, it was felt the producer survey work should be done in collaboration with these activities, rather than done separately. Producer insights would be captured at several planned producer engagement activities and workshops. There were also plans to engage some of the producers who participate in the various carcase and feedback competitions associated with Teys, to get further insights. These producers are not always Teys clients but are considered “early adopters” and are proactively seeking ways to get more information to assist their businesses so could also provide a useful perspective.

Some key themes were identified including the timeliness of reports, such as feeder cattle performance, downgrade reports and marbling performance. There are some gaps with providing feedback to producers within a suitable timeframe around the feeder cattle feedback. There is also an opportunity to pick up any concerns or issues with more regular and consistent reporting. A range of both current and potentially new reports were identified, however the timeframe around how often these reports should be provided was varied. It is suggested that this can be reviewed within the pilot trials.

Some users like the current reports provided by the internal business data analytics tool however there is a need to review the training and support options provided to ensure these reports are used effectively. Furthermore, options to automate these reports (i.e., they are sent directly to the user or provided in a dashboard setup) could make this information easier to access and utilize in day-to-day decisions. Given most of the buying team operate remotely, the ability for reports and dashboards to be mobile view friendly was identified as very important to ensure information provided will be utilized.

The booking process for both feedlot and plant is reasonably manual and paper based. There are several ways this process could be improved to assist with efficiencies. There is work underway under with an internal project that is looking at business requirements around a booking system platform that is mobile/tablet friendly that buyers can use out in the field. There are also opportunities to use technology such as SMS or app notifications to help improve communications between all parties (plant/feedlot – buyer- producer) around confirmation of delivery dates and documentation.

With the increase in the number of different branded programs available and the need for more declarations to meet branded program claims, there is an increasing number of forms and declarations that producers need to complete and send when consigning livestock. This information is critical for food safety, program compliance and price premiums, and can cause issues when not provided or are completed incorrectly. Integrity Systems Company (ISC) have released an Electronic National Vendor Declaration (eNVD) which allows producers to complete their NVD, MSA and NFAS documents online, however there is no option to include any of the other declarations required for company specific programs. There is a big opportunity to move this information into a more digital format and look at options to include company program declarations.

4.3 Data analysis projects

Based on the insights received from a range of stakeholders across the business and information gather through the data stocktake work, several key focus areas have been identified for potential data analysis projects that could be further developed. There were outlined in detail in Milestone 4.

These key focus areas and associated data analysis projects were presented to key stakeholders and prioritized to ensure the projects aligned with the digital strategy of the business and provide value for both the company and livestock suppliers.

4.3.1 Data automation & reporting

- There are several reports currently available that are done manually across the business so key initiatives that were explored as part of this focus area was to identify reports that could be automated and test these across the business. This aimed to provide some quick wins and help the broader team to understand the value that data can bring to the business and industry.
- A new version of the carcase downgrade reports was designed within the data analysis program using information from the data warehouse. Required business users were then able to “subscribe’ to these reports to receive them on a specified schedule, removing the need for these to be generated manually each week.
- Development of animal health benchmarking reports to assist with the Animal health project were identified as another opportunity to explore in future work.

4.3.2 Livestock buyer tools & data analysis solutions

- Develop reports and data visualization tools to support the livestock procurement team with insights around how their suppliers are performing. This can be used to allow team to be more proactively engaged with their suppliers and provide better support around how they can improve their grading performance outcomes.
- This focus area was identified as a key priority as this will help increase engagement with the procurement team and bring value to the business. Getting the procurement team involved and comfortable with these data analysis tools will also assist with future development of producer feedback systems.
- Progress was made to improve the automation of feeder cattle feedback tools. These upgrades improved the accessibility of the information and allow for improved flow of feedback information back to feeder cattle suppliers. The upgraded feeder cattle feedback

tools were rolled out with various training and support materials to the livestock procurement team. A review was planned to be conducted with both business users and producers to gauge the success of the enhancements delivered and identify any potential areas for future improvements, however this part of the project was not progressed due to the project going on hold.

4.3.3 Data efficiency (eNVDs)

- Many errors occur with the current paper based NVD system which can have significant ramifications on the supply chain when documentation has not been completed correctly. Many branded programs now also require the use of extra declarations; however, these are not currently able to be included in the industry-provided eNVD system developed by ISC. A project to develop a company eNVD system that would include all the company specific declarations, as well as incorporate the industry eNVD requirements was identified as a key priority.
- An internal project ideation was submitted and approved by the business to explore the concept of developing a company-specific eNVD solution. Ideally the solution will allow Teys suppliers to submit all the required industry documentation including NVD, MSA declaration, NFAS delivery docket (if required) as well as the company specific declarations such as the Teys Grasslands Vendor Declaration (for Grasslands eligible consignments) and Teys Certified Angus Program Vendor Declarations (for Angus program eligible consignments).
- Business requirement documents were developed, various vendors engaged, and several tenders received. A funding application for the project was put forward within the business for review but due to outside factors the project was put on hold within the business and development of the proposed solution was not progressed, however has been identified for future work.

4.3.4 Producer Feedback tools

- There are several opportunities to improve the way feedback is currently provided to producers. By improving these tools, it will provide producers with more actionable feedback to help them make changes on-farm that will have a positive impact on their business. There is also an opportunity to provide more benchmarking for producers to help them understand their cattle performance and identify areas for improvement.
- This focus area will look to support the VBM project in terms of providing appropriate tools for producers to get the VBM feedback. These VBM signals for producers will be important in the future. A draft VBM payment model (grid) was developed, along with respective producer feedback and analysis reports. A pilot group of producers were selected to take part in the initial trial. Overall feedback from producers was positive with many producers very interested in the concept and how the VBM feedback gave them a clearer indication around carcase compliance across various commercially relevant traits.
- There are several other projects underway within the business including Objective Carcase Measurement & Animal Health that would provide further information for producers and appropriate tools need to be developed to help communicate this information effectively for producers. These were identified as potential future focus areas within the Digital Value Chain

project and the DVC officer planned to continue to collaborate closely with the other Teys project leads around this.

- A producer feedback report with individual animal health information has been implemented and rolled out to all company processing sites. This provided with the carcase grading feedback results, provided a producer with more accurate information to help make more informed decisions on-farm or at the feedlot level. Further work was planned around the development of benchmarking reports, but this was not completed as the project was put on hold.

4.4 Data sharing

During discussions with the ISC team, it was suggested there might be an opportunity to work more closely with ISC to share data around animal health. The initial discussions were put on hold due changes in business priorities in relation to COVID-19 but since has been explored with some data-sharing arrangements put into place and development of some other projects to explore the utilization of that data for industry benefit around disease management.

4.5 Professional development

Several professional development opportunities were undertaken as part of the Digital Value Chain officer role including attending industry forums, extension and facilitation training and digital value chain group workshops. These are detailed further within the Milestone reports. These experiences enabled the digital value chain officer to continue to build strong networks across industry as well as continue to develop new skills which was another key outcome of the project role.

5. Conclusion

The foundation work completed through this project clearly established a need to improve the data linkage both within the business and across the value chain and identified several key focus areas to deliver these in a way that will bring more value to the business and broader red meat industry. This will enable all key stakeholders to make more informed decisions and build a stronger red meat industry.

Several opportunities were identified to explore data automation and reporting to improve the accessibility of information and allow for improved efficiencies, increased data accuracy and flow of feedback information along the value chain. Opportunities for data-sharing will enable industry to work more closely together to create a stronger red meat industry.

Several key learnings were identified through the project process particularly around stakeholder engagement, delivery, and successful implementation of new tools.

5.1 Benefits to industry

The project identified a range of key focus areas including development of reports and data visualization tools that could provide better insights and engagement around supplier grading performance. Implementation of improved feedback tools has significant potential to drive productivity improvements across the red meat industry.

Since the project was put on hold and the identified data analysis projects were not taken to final completion, there is still significant opportunity to be captured for industry in this area.

6. Future research and recommendations

This project was put on hold and subsequently terminated due to extenuating circumstances with resourcing in the business, however the work completed to date provides a strong foundation for future data analysis projects. Several of the data analysis projects were not completed in full so this has left great potential still to be harnessed.

Improvement of feedback systems to producers is a key area that will drive future productivity gains and efficiencies across the red-meat industry, however it is vital that these tools are developed in a way that can drive practice change for these gains to be realised. There is significant potential for future work in this area around improving data linkages and providing data analysis tools to bring increased value across the red meat value chain.