



Digital Value Chain Strategy Forum and Workshop Summary Report

Meat & Livestock Australia is leading the development of a digital strategy for the Australian red meat and livestock industry. The strategy aims to enable the capture, integration and interpretation of data generated within the livestock industry through a range of increasingly popular, new technologies. This strategy is designed to empower participants at every point in the value chain through data-driven commercial decision making. It will also address the cultural change required across the value chain to embrace the digital strategy and resulting technology and innovations.

As a key part of the strategy's development, MLA gathered input from stakeholders by hosting the *MLA Australian Red Meat Industry Digital Forum and Workshop* in Brisbane in early October 2016.

Approximately 300 attendees at the forum heard presentations from leaders in the field of digital technology, and were asked to offer feedback on the challenges and opportunities involved in adopting a digital value chain strategy. A similar process was conducted with about 90 stakeholders who attended the industry workshop held on the following day.

This report collates the information presented and industry feedback gathered, and outlines the next steps toward developing a digital value chain strategy to roll-out projects across the industry.



In total, 17 speakers presented the latest information and opinion on digital value chain integration during the forum. Four sessions were presented exploring what digital agriculture means, where opportunities exist along the value chain, how digital may disrupt the red meat industry in the future and what needs to be done to realise opportunities.

An overview of the speakers & links to the video and presentations is summarised in [Appendix 1](#)

Industry feedback

Feedback collated through surveying forum and workshop attendees found that 99% of participants support the development of a digital value chain strategy, listed a wide-range of opportunities that could arise from the strategy and considered the challenges facing development and roll-out.

Feedback from the forum

Forum participants were surveyed for feedback in three key areas:

1. Where do you see the greatest opportunities for the red meat industry resulting from a digital value chain strategy?
2. What do you see as the key priority areas for this strategy?
3. If this strategy was to deliver one outcome for industry in the next 12 months what would it be?

Overall, providing greater information and feedback to all sectors of the supply chain was a key opportunity, mentioned by about 60% of respondents surveyed at the forum, while increased transparency was predicted to create immense efficiency gains and a reduction of costs.

Key priorities for the strategy centred on data collection, implementation, how information would be protected and who would own the data and how it would be shared, with about 37% of respondents mentioning this issue. Stakeholders felt data collection platforms needed smart analysis and interfaces that were simple to use and issue-focused.

Connectivity was a critical factor, with about 23% of respondents mentioning it as an issue, as was digitalisation, with about 41% of respondents mentioning digital technology and data collection. Some surveyed urged that the government be asked to prioritise mobile and internet coverage to regional areas and enable connectivity for all of the red meat industry, from producers to processors.

Consensus on a strong vision and having a “clear road map” was identified by about 18% of respondents. While some called for the strategy to get underway, others were more cautious and said it was important to ensure time and resources were spent getting the basics right before work began. It remains important to continue to encourage collaboration and accountability across a broad range of stakeholders, and keep the strategy industry-led and enabled by government.

New opportunities included gaining agreement on data standards and metatags across all agricultural industries and developing a framework for the seamless transfer of information across the value chain. Developing a standard platform for how data was stored and accessed was also a desirable outcome, mentioned by about 35% of those surveyed.

Continuing to facilitate discussions with key stakeholders to develop a framework and roadmap for an integrated strategy and create a set of deliverable actions was an identifiable theme, as well as establishing a standards committee with engagement from whole of industry, including the IT sector. This would help to develop a cooperative understanding and effort to apply the digital value chain strategy, and create a vision that was embraced, shared and promoted by all.

Feedback from the workshop

The Digital Workshop was held the following day with direct industry participants. 10 groups worked through key issues that could be addressed through an industry digital strategy, which included pinpointing themes, attributes and activities, and identifying 5 bold steps to achieve a digital future.



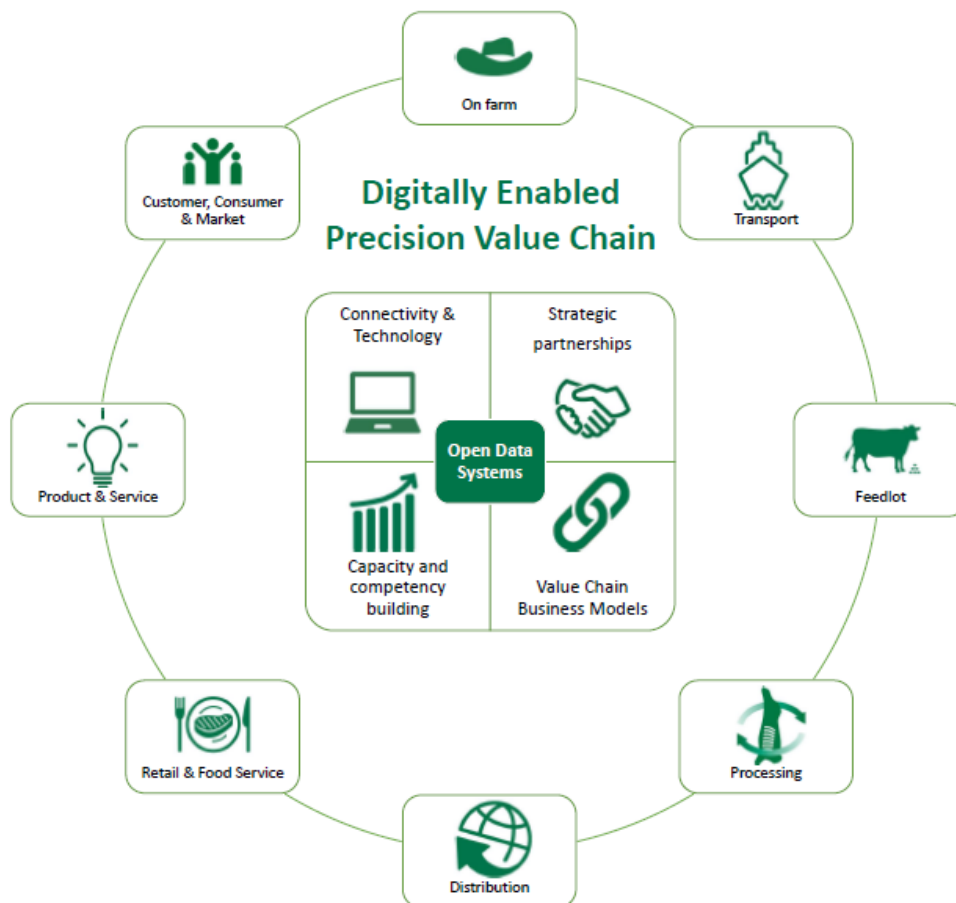
About 90 industry stakeholders identified key issues in building digital infrastructure, with the top 10 focus areas that would drive development of a digital strategy including:

- **Ethical production of red meat and its marketing.** Key themes identified included ethical, humane production; better communication; consumer disengagement from farming; the poor image suffered by farming and the need to manage animal welfare concerns. (68 responses)
- **The need for producers to better understand the consumer.** Consumer attitudes and their changing needs were flagged, in particular the need to link consumer feedback to production. (55 responses)
- **The pain of regulation.** Regulation is complex, confusing and too numerous, requires too much time, and government departments are not helpful. (50 responses)
- **Getting the right market information at the right time.** Concerns included ineffective market indicators from saleyards, the need for more transparent livestock price signals and the fact that producers currently receive limited or no feedback. (41 responses)
- **The importance of consumers knowing the product.** Themes included the perceived health status of red meat, label accuracy, product safety and global competitiveness. (39 responses)
- **The challenge of meeting market compliance with a variable product.** Red meat production fluctuates – concerns included sourcing stock to meet market specifications, improved reliability of stock supply, variability of product quality and understanding market needs. (38 responses)
- **Concerns about sharing or exchanging information.** Attendees felt information was not shared “well”, and there was a poor information flow and poor data exchange. (37 responses)
- **Increasing business costs.** This included a lack of business financial incentives, the cost of feeding stock, managing the environment, increasing general costs and access to capital. (35 responses)
- **On-farm decision-making.** Common themes included animal health, improving genetics, more effective use of land, and managing climate variability. (35 responses)
- **Traceability.** Focused on tracking product and integrity, full traceability of the animal through the supply chain, and the need for consumers to know the provenance of the product. (33 responses)
- **The requirement for improved connectivity.** Responses included concerns about unreliable or non-existent mobile or internet connectivity and connectivity impacts on business and the need for offline solutions. (32 responses)

A summary of all bold steps and key industry issues are presented in **Appendix 2**

The way forward

MLA has used industry feedback to develop a draft vision for the digital strategy: “By 2025, value chain stakeholders are connected through open sharing of data, utilising the world’s best digital technology”. The strategy aims to transform industry through developing a value chain data sharing culture, initiating innovative business models, and increasing the agility of data driven decision-making that translates into increased value chain efficiency and profit.



Eight key areas for development within the strategy have been identified to address industry issues or problems through digital technology. Each of these priorities will be assessed and outcomes delivered under the strategy.

1. addressing connectivity issues
2. scoping and initiating an open data ecosystem /platform
3. precision technology across the value chain (through the farm, feedlot, processing, logistics/transport, distribution, retail/food service to consumers)
4. value chain optimisation, agility and innovation
5. leveraging digital technology to get closer to the consumer
6. digital technology to support our social license to operate
7. developing industry competency and personal development
8. regulation – making life easier for producers

Next steps and timeframes

MLA aims to move quickly to develop the strategy and build on the momentum of the industry input provided to date. The strategy will continue to be co-developed with a wide group of industry stakeholders, including researchers and solution providers.

MLA has charted a timeline of activities through to the end of March 2017, outlining how the digital value chain strategy will be progressed.

Development of the Digital Value Chain Strategy

The full strategy document will build on the themes and attributes from the Forum and Workshop and identify the goals, high level outcomes, and critical success factors for each of the priorities at a horizon 1 (within 1 year), horizon 2 (within 3 years) and horizon 3 (within 5 years) level. The strategy will also clarify domestic and international collaboration opportunities; what funding is needed to address the goals and where those funds might be sourced and the ongoing evaluation framework for monitoring the key performance indicators of the strategy.

It will be circulated to industry for comment before its final release in March 2017.

1. industry engagement and co-development

A key element of bringing the strategy together will be continuing the strong industry engagement conducted to date. A Red Meat Digital Taskforce will be developed, along with a network of solutions providers in parallel with the rollout of communication activities early in 2017.

2. integration with collaborative programs

Development of the strategy will involve interaction with existing MLA strategic partnerships, including the MLA Donor Company, Rural R&D for Profit projects, CRCs and other industry collaborative programs, such as Project 150.

Key Priorities for development under the strategy

1. gap analysis of precision value chain segments

MLA will complete a review of digital solutions, both internally and externally, by February 2017 to ensure all elements are considered based on the innovation provided. MLA has started internally scoping opportunities in precision technology to identify a list of key, tangible digital solutions that already exist and the gaps within the value chain segments.

2. developing the foundations of an open data eco-system

MLA will engage with industry and other stakeholders to identify the foundations of a secure open data ecosystem that enables data security, privacy and interoperability for the entire red meat and livestock industry. This will involve reviewing international systems, consultation with world leaders, engagement with industry and service providers and leveraging strategic partnerships.

3. partnering with others to enhance connectivity of the farm office and the farm

MLA is partnering with others across all agricultural sectors, through projects like the Rural R&D for Profit 'Precision to Decision' project, to investigate opportunities to enhance the connectivity of our stakeholders. A workshop is being developed for early 2017 to ensure a whole of agriculture approach.

4. develop and deliver quick-win projects

A series of digital projects will be progressed quickly to demonstrate the value proposition for better data linkages across the value chain in areas such as precision agriculture, genetics, and MLA services. Specific projects currently on the table include 4-5 prototype precision value chain projects; enhancing the LDL platform and looking at how industry data can be made more accessible in a secure manner.

For more information on the Digital Value Chain Strategy, please contact Sam Gill, Meat & Livestock Australia 0428 248 552 and sjill@mfa.com.au

Appendix 1: Overview of the Digital Forum

1. What does Digital Agriculture mean and what are the big picture opportunities for the red meat industry?

Welcome address for the Australian Red Meat Industry's Digital Forum

Richard Norton, MLA Managing Director

MLA's role is to connect the data and systems it has and build on that to allow industry, stakeholders and entrepreneurs to provide a value proposition back to industry. The customer is king and everything MLA does must add value to the customer and make it seamless for people along the value chain to interact. Data is only useful if we start to look at how we might link it to the benefit of industry.

Big data and Agriculture – what's the outlook?

Prof Steve Sonka, University of Illinois

Presentation [slides](#) & [video](#)



Those working in the digital world need to expect surprises, so strategy must move forward and be ready for the unexpected in digital technology. The digital Ag sector is dynamic and complex but producers need easy access to analysis. There are pressures for adoption, including producer efficiency and profitability, the food system downstream and upstream, and responding to regulation.

An Australian Perspective on Big Data

Dr Drewe Ferguson, CSIRO, Research Director – Productive and Adaptive Livestock Systems

Presentation [slides](#) & [video](#)



Digital technologies will transform the red meat industries. It's about how the sector connects – realising the potential of the digital revolution in agriculture requires a vibrant ag-tech sector, and closer engagement between R&D providers and ag-tech companies. The sector needs to focus on how it uses and captures value from data, and how it automates and creates efficiencies in the system.

What are the current opportunities and experiences for digital technologies, both on the farm and in the supply chain?

What's the uptake of agri-tech in Australia?

Ben van Delden, KPMG, Head of AgTech

Presentation [slides](#) & [video](#)



There is no reason why Australia cannot be a world leader in ag-tech, but it is not there yet. Opportunities for Australian ag-tech include sustainable resource use, improved productivity, new investment opportunities, new exports and job creation. Challenges for Australian ag-tech include focused alignment and leadership, infrastructure, collaboration, research impact, private investment, commercialisation, access to talent and adoption. Most importantly agriculture needs direction, capital and connectivity.

What is your current experience with digital technologies, and what more do you want it to do?

Pastoral Company view - Dr Gerard Davis, AACO, General Manager Innovation & Technology

Presentation [slides](#) & [video](#)



Across the AACO business, data sources are many and varied, and many are unstructured. It is important to have a digital model, not just focused on data capture and collection, but with the capability to analyse and use that information to help with decision-making. The Australian red meat sector needs process analysts and engineers to help with this digital transformation. Interconnection is critical to realise the value this technology offers the sectors and standards need to be set for this.

Producer view - Mark Branson, Branson Farms

Presentation [slides](#) & [video](#)



Precision Ag (PA) has expanded significantly thanks to smartphones and tablets allowing producers to access information such as temperatures and soil moisture via monitors. Digital technology can identify variability in technology and help identify and fix problems. The majority of savings from Mark's use of PA are nutrient savings through digital technology. He earns \$57 more per hectare from controlled traffic farming and PA – equivalent to an extra \$51,271 per year. He suggests producers only use a digital or PA tool if it will "fix a problem".

Processor view - Tom Maguire, Teys Australia

Presentation [slides](#) & [video](#)



Variation within animals being processed can be managed by the collection and constructive feedback of data. The next phase will be post-mortem data collection and feedback which is expected to occur by March 2017. Analysing data from the supply chain and presenting it in an actionable form will be the key to success. The industry needs to stay focused on the "why" – knowledge is power and accurate feedback relays value.

NZ view - Rob Ford, Landcorp NZ, General Manager – Innovation and Technology
Presentation [slides](#) & [video](#)



It is all well and good to talk about technologies that are available, but you have to understand intrinsically all of the problems that need to be solved, and start at the farm level first. There are lots of technologies on the marketplace at the moment, and there is a lot of demand coming from China in particular. The world is moving at a fast pace and agriculture must keep up.

2. How might digital technologies ‘disrupt’ our industry in the future?

Objective measurement – a catalyst for change

Dr Graham Gardner, Murdoch University
Presentation [slides](#) & [video](#)



Objective carcass measurement in the red meat sector will create a catalyst for change and improve transparency. There has been good progress in LMY measurement: DEXA is one option, but cheaper alternatives are needed for smaller processing plants. Ultimately these new technologies will underpin industry and help producers get paid for what they produce.

How will digital agriculture interact with the banking sector?

Michael Whitehead, ANZ, Director of Agribusiness Research
Presentation [slides](#) & [video](#)



Banks will continue to remain integral to the Australian red meat sector. Producers should know the value of their operation at every moment and digital agriculture will improve their ability to do so, whether it's through paddock sensors, new technology, or infrastructure technology. Technology is changing course exponentially and the Australian red meat sector needs to embrace an active supply chain facilitation – its current state is passive – to create a sustainable future state.

Why the digital consumer is a reality that can't be ignored

Tracey Gosling, Gosling Skein Innovation Group, Founder & Consultant

Presentation [slides](#) & [video](#)

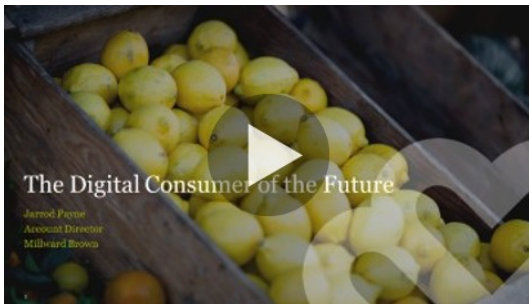


There have been significant changes in consumer behaviour since 2008 in Australia. With more than 15 million mobile phones in Australia, smartphones have changed how people shop and interact. Alibaba (a Chinese company) created a 'singles day', which generated \$A18 billion in trade in 24 hours, three-quarters of sales for this promotion were via mobile phones. The industry must understand consumer wants and deliver.

The digital consumer of the future

Jarrod Payne, Millward Brown, Account Director

Presentation [slides](#) & [video](#)



In the future devices will help people decide what they want to eat in a digitally connected world. The Australian red meat industry must embrace and be at the forefront of new technology, otherwise new proteins and technologies will take over its retail position and Australian dinner plates. The industry needs to determine new ways to communicate with consumers, as reliance on traditional media is not viable going forward.

3. What are the key challenges that need to be addressed to position our industry to capitalise on these opportunities?

What are the legal implications of digital agriculture?

Prof Paul Martin, University of New England, Australian Centre for Agriculture and Law, Director

Presentation [slides](#) & [video](#)



The red meat industry needs to be positioned to maximise digital opportunities while managing or minimising digital risks. It is important to continue to modify and adapt the strategy that is developed. The industry needs to commit to:

1. creating the pie before competing for the pie
2. focusing on industry strategy not 'boy's toys'
3. involving industry and governance stakeholders.

What can we learn from others in terms of making data talk to other data?

Peter Richardson, Maia Technology, CEO
Presentation [slides](#) & [video](#)



Australia is a world leader in dryland grazing and has the potential to be a world leader in dryland grazing technology. Interoperability architecture for livestock agriculture requires:

- common information models and vocabulary
- ag-based metadata standards and APIs
- standardised infrastructure building blocks
- consistent authorisation/access control.

Andrew Cooke, Rezare Systems NZ, Manager
Presentation [slides](#) & [video](#)



Key questions for the Australian red meat sector are: who owns data in the supply chain, how is it shared and how is it leveraged for value? If the sector wants to progress, now is the time to act. Rezare's farm data code of practice demonstrates commitment to industry best practice provides peace of mind to farmers and aligns with industry standards. Another Rezare system is 'Data Linker' which provides a framework to share data with farmer permission.

The implications of Digital Agriculture for Australia

Mick Keogh, Australian Farm Institute, Executive Director
Presentation [slides](#) & [video](#)



Facilitating digital agriculture requires government and agencies to "open the cupboard" and share knowledge. Digital applications represent a substantial change in the way industry accesses information and acquires knowledge. Australian farmers are encouraged to collect and freely share production data to help deliver future productivity gains.

Video and presentations from the forum are available on the MLA website [here](#)

Appendix 2: Bold steps identified during the Digital Workshop

Create the strategy	1. Lead from the front
	1. Identify responsibilities regarding implementation of strategy
Deliver simple and paperless traceability /	1. Remove all paper records by 2020
	1. Effective co-regulation
	2. Go paperless

regulation	2. Product traceability system by 2020
	3. Active NLIS devices by 2020
	5. NVD Smart forms on phone
	6. Make traceability systems seamless and invisible
All farms connected to the internet	1. All red meat producers are online – equitable to city businesses
	1. A connection available for every farm
	2. Business case for full connectivity
	3. Pilot technology to solve connectivity
	5. Every farm, every yard connected to the internet
Industry databases are connected in an open platform	1. Everyone will share data on integrated database
	2. All industry databases are connected
	2. Digital supply chain prototype
	2. Open access data standards
	4. Fully linked and open industry database
	3. DNA testing in one database
Address industry data interoperability	1. Data Dictionary
	1. Common data standards
	2. All industry agreed on data supply and access standards
	3. Open data protocols
	5. Join up with NZ on data standards for regional approach
	5. Standardise objective measures
Better use of industry information	3. Producers adopt best data & value supply chain practice
	3. Mobile first for industry tools
	3. Develop and implement industry data assurance plan
	4. Develop an “opt out” approach
	4. Work out how to harness soft data
	5. Data ownership and use
Selling the story to consumers	2. Partner with potentially disruptive industries and social networks
	3. Selling Australian story across multiple channels
	4. Hearts and minds campaign

Increased investment into digital agriculture	1. Increase industry investment to capture 5% GVP
	4. Ask Government for tax incentives for agritech initiatives till 2020
	4. Accelerate innovation, decrease risk aversion, risk awareness
	4. Incentivise information based value chains
	5. Develop investment partnerships
	5. Implement value based transactions along the chain
	7. Investment plan linked to each theme
Industry has the right skills for digital agriculture	2. Build a network of digital evangelists
	3. Lift the average
	4. Digital agriculture training and adoption strategy
	4. Whole of industry uptake of OM methods
	6. Develop and implement skills and resource development strategy
	8. Adoption target of the top 20% then bring the others along
New business models	5. A secure digital broker (Blockchain)
	5. Bring tech providers into the game – align technology + price signals + extension
Provide new ways to connect to consumers	3. Develop greater knowledge of the customer
	5. Customer insights project
	4. Bring farmers closer to the customer - animal signals and price signals
	7. Give QR codes to all MLA members for free
Maintain the social licence to operate	2. Social licence to operate
	6. MLA sets up provenance for all members by June 2017
	6. License to operate

Key industry issues that could be addressed by a digital strategy

