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MDC AT A GLANCE

WHO IS MDC?
MLA Donor Company Limited (MDC) is a fully-owned subsidiary of Meat & Livestock Australia.

MDC accelerates innovation across the value chain so the Australian red meat and livestock industry can remain competitive on the world stage.

It does this by attracting commercial investment from individual enterprises and others that share a mutual interest to co-invest in innovation that will benefit the industry.

FUNDING
MDC attracts co-investment from individual enterprises and others that share a mutual interest with MLA to co-invest in innovations that will benefit the Australian red meat and livestock industry.

The Australian Government matches voluntary partner contributions in projects that address industry and government priorities and benefit the Australian community.

MDC projects include an access fee to cover costs associated with early stage feasibility studies, seed funding, industry dissemination and operational costs.

STAKEHOLDERS
MDC attracts investment from every part of the red meat and livestock value chain, including processors, value-adders, breed societies, large pastoral companies, international collaborators and technology providers. MDC works in partnership with these value chain partners and the Australian Government to deliver products and services to the cattle, sheep and goat industry (see Figure 1).

MDC also works with the Australian Meat Processor Corporation via the Plant Initiated Project initiative, to develop projects that address key processing issues and support the development of innovation capabilities within this sector.

STAFF
MDC does not directly employ any personnel. Activities are managed and undertaken via MLA with these personnel and operational costs funded from the collection of the MDC access fee. MDC activities are overseen by the MDC Board and CEO Dr Christine Pitt.

Directors and office bearers of MDC are as follows:

Directors
Richard Norton
Geoffrey Maynard
Robert Fitzpatrick
Chris Mirams
Dr Michele Allan
Alan Beckett
George Scott
Erin Gorter
Steven Chaur
Allister Watson
CEO
Dr Christine Pitt
Company Secretary
Clare Stanwix

Figure 1: The role of MDC

Investment by...

Australian Government

Processors

Value-adders

Pastoral companies

Breed societies

Technology providers

International collaborators

State governments

Universities

Entrepreneurs and investors

Innovations delivered...

Automation

New high value red meat products

Animal disease test

Technologies that foster sustainability

Pain relief products

New products from co-products

Health and safety tools

Digital solutions

Objective measurement technologies

*Sourced from the Impact Assessment of MLA Expenditure 2010-11 to 2014-15 – Economic quantification of benefits by the Centre for International Economics, ISJ Investments and AgStrat.

PURPOSE
MDC was established in 1999 as a fully-owned subsidiary of MLA.

MDC is incorporated under the Corporations Act 2001. The principal activity of MDC is to act as an approved donor under s61 (1) of the Australian Meat and Livestock Industry Act 1997 for research and development matching funding purposes.

MDC supports MLA’s strategic purpose of fostering the long-term prosperity of the Australian red meat and livestock industry via:

- extending MLA’s strategic priorities into future-focused, transformational impact areas
- facilitating capability and adoption of innovation by industry
- acting as a catalyst to accelerate the development of innovations with new types of provider partnerships
- partnerships that facilitate “big picture” change in the industry
- engaging leading global providers and entrepreneurs that bring new ideas and new value to the industry
- attracting new investment partners to co-develop key priority areas.

MDC has the same vision, mission and values as MLA (see mla.com.au/about-mla/who-we-are).
CHIEF EXECUTIVE OFFICER’S STATEMENT

MDC IS IN A STRONG POSITION TO REALISE ONGOING EXPANSION AND SUPPORT THE ACHIEVEMENT OF KEY INDUSTRY AND MLA STRATEGIC PRIORITIES.

MDC has a unique opportunity to attract additional voluntary contributions from partners willing to co-invest in a range of innovation projects aimed at improving whole of industry competitiveness in our markets here and around the world.

This opportunity is due to MLA having access to more Australian Government funding than it can match with levies alone. A decline in levy income and an overall increase in the value of the red meat industry have led to a significant increase in available funds. In recent years, MDC’s program of work has been worth around $30 million a year. The extra funding available will enable MDC to potentially more than double that investment in 2016-17.

MDC partners with public and private investors, from Australia as well as globally, who have a willingness to invest in food and agriculture. The investments flow across the R&D continuum from strategic basic and applied research through to industry adoption and capability building.

I am pleased to say that MLA’s forward thinking has seen an expanded MDC strategically positioned to capitalise on a convergence of opportunities the red meat industry cannot afford to miss.

This Strategic Business Plan provides a broad overview of the direction that MDC investments are anticipated to take over the next four years, aimed at accelerating and extending achievement of MLA and industry priority goals. It also provides details of the current areas of MDC investment within the 2016-17 financial year.

MDC has more than 150 innovation projects currently underway across the entire red meat and livestock value chain, valued in excess of $115 million over the life of the projects. In 2016-17 alone, more than $40 million worth of activity is already contracted.

EXCITING OPPORTUNITIES

We know the innovation space is changing rapidly due to enormous global interest in food and agriculture, with investment driven by rising worldwide demand for protein. MDC is deeply engaged in the application of design-led innovation, which features partnerships with world-leading research and technology providers, extensive end-user consultation and rapid prototyping to ensure innovation investments deliver real and tangible benefits within accelerated timeframes. Key to our success will be the engagement of industry partners along the entire value chain, aimed at building capability and delivering high-value business growth outcomes.

In response to the pressure for industries to become more agile to deal with increased market volatility and complexity, MDC is developing a new innovation and entrepreneurship platform, HE CONNECT. This platform is designed to accelerate the identification and development of new and disruptive ideas and create commercially viable solutions. This approach will seek to tap into new forms of investment from venture capital and private equity funds, develop new partnerships within the global AgTech and FoodTech accelerator and incubator community, and attract entrepreneurs and start-ups. HE CONNECT will deliver transformational change and help future proof our industry.

In closing, I’d like to recognise the contribution made by our partners and collaborators. Their vision, courage and commitment to the red meat and livestock industry are humbling and always integral to our continued competitiveness and success.

Dr Christine Pitt
MDC Chief Executive Officer

<table>
<thead>
<tr>
<th>MLA PILLAR</th>
<th>MDC PRIORITIES</th>
<th>I+E CONNECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consumer and community support</td>
<td>• Animal health and welfare</td>
<td>• High value food frontiers</td>
</tr>
<tr>
<td>2. Market growth and diversification</td>
<td>• Supply chain logistics</td>
<td>• Productivity and profitability</td>
</tr>
<tr>
<td>3. Supply chain efficiency and integrity</td>
<td>• Objective measurement</td>
<td>• Farm and feedlot productivity</td>
</tr>
<tr>
<td>4. Productivity and profitability</td>
<td>• Value chain digital strategy</td>
<td>• Precision agriculture</td>
</tr>
<tr>
<td>5. Leadership and collaborative culture</td>
<td>• Enhanced traceability and integrity systems</td>
<td>• Livestock genetics</td>
</tr>
<tr>
<td>6. Stakeholder engagement</td>
<td>• Through-chain automation</td>
<td>• Collaborative Co-innovation Program</td>
</tr>
</tbody>
</table>

Table 1: Our new strategic investment portfolio is directly aligned to extending the achievement of the Meat Industry Strategic Plan 2020 and MLA’s Strategic Plan 2016-2020.

In addition, our new Producer Innovation Fast-Track program will help innovative producers accelerate the adoption of cutting edge technologies and processes, develop and commercialise AgTech solutions and equip them to become value chain leaders of the future.

I am excited that MDC is working on these and other initiatives, ensuring that the Australian red meat and livestock industry can benefit from and participate in innovation by bringing together new ideas and new partners. We will be seeking industry feedback on these planned initiatives as well as the ongoing development of our strategic investment portfolio.

Dr Christine Pitt
MDC Chief Executive Officer
INVESTMENT SUMMARY

THIS SUMMARY REPRESENTS MDC’S PLANNED INVESTMENTS FOR 2016-17.

The MDC Strategic Business Plan will be updated each year to progressively show annual investments over the 2016-20 plan period.

<table>
<thead>
<tr>
<th>PILLAR</th>
<th>PRIORITY</th>
<th>MLA DONOR COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MDC PARTNERS</td>
</tr>
<tr>
<td>1. Consumer and community support</td>
<td>Animal health and welfare</td>
<td>5,090</td>
</tr>
<tr>
<td></td>
<td>Supply chain environmental sustainability</td>
<td>3,225</td>
</tr>
<tr>
<td>2. Market growth and diversification</td>
<td>High value food frontiers</td>
<td>3,250</td>
</tr>
<tr>
<td></td>
<td>Supply chain logistics</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>Objective measurement</td>
<td>2,908</td>
</tr>
<tr>
<td></td>
<td>Value chain digital strategy</td>
<td>259</td>
</tr>
<tr>
<td></td>
<td>Enhanced traceability and integrity systems</td>
<td>1,000</td>
</tr>
<tr>
<td>3. Supply chain efficiency and integrity</td>
<td>Farm and feedlot productivity</td>
<td>2,757</td>
</tr>
<tr>
<td></td>
<td>Precision agriculture</td>
<td>2,451</td>
</tr>
<tr>
<td></td>
<td>Livestock genetics</td>
<td>4,502</td>
</tr>
<tr>
<td></td>
<td>Through-chain automation</td>
<td>3,502</td>
</tr>
<tr>
<td>4. Productivity and profitability</td>
<td>Collaborative Co-innovation Program</td>
<td>2,417</td>
</tr>
<tr>
<td></td>
<td>Producer Innovation Fast-Track</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Food value chain innovators: emerging leaders initiative</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>Digital Value Chain Officers</td>
<td>25</td>
</tr>
<tr>
<td>5. Leadership and collaborative culture</td>
<td>Engagement with producers and stakeholders</td>
<td>15</td>
</tr>
<tr>
<td>6. Stakeholder engagement</td>
<td>I+CONNECT</td>
<td>4,500</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>36,900</td>
</tr>
</tbody>
</table>

R–research dollars
Totals may not add up due to rounding
*Comprised of $250k sourced from producer levies and $250k from MDC producer partners
THE LIVESTOCK INDUSTRY IS A RESPONSIBLE AND EFFECTIVE CUSTODIAN OF AUSTRALIA’S NATURAL RESOURCES AND THE WELFARE OF LIVESTOCK.

The community places a high – and growing – expectation on the Australian red meat and livestock industry to look after the environment and the welfare of livestock. Meeting these community expectations is essential for the industry to maintain its social licence to operate.

Industry must continue to proactively address and promote the welfare standards for livestock, the environmental impact of livestock practices and the role of red meat in a healthy diet.

This pillar invests in research to produce compelling evidence on the superior nutritional properties of red meat. It also invests in research and development to enhance the industry’s animal welfare, disease control and environmental practices. This includes the communication of these actions and commitments by the industry to the community.

MDC will focus on two key areas:

- A strategic partnership for animal welfare research, development and adoption, predominantly funded via MDC projects with a number of universities and public research institutes. MDC provides a mechanism to attract new money to this important priority area and to support novel, broad and potentially valuable research ideas and proposals.

- The active pursuit of partnerships focused on the development and implementation of a supply chain sustainability strategy in areas including natural resources, energy, greenhouse gas emissions and waste streams. These partnerships will provide the leverage to accelerate innovation through the availability of additional funds, and support new routes to adoption and commercialisation.

2016-2020 OUTCOME

The community continues to support and trust the Australian red meat and livestock industry, with industry practices in step with community expectations.

MDC PRIORITIES

ANIMAL HEALTH AND WELFARE

The community has high expectations about the way livestock are treated and how animal welfare standards are applied in the industry. It is important for the industry to continue to improve the welfare of livestock by enhancing husbandry practices through the adoption of new research. This priority also seeks to improve welfare by ensuring the continued freedom of herds and flocks from exotic diseases and minimising the impact of endemic diseases.

These improvements must be clearly communicated to the Australian and global community to instil confidence and maintain support for the industry.

SUPPLY CHAIN ENVIRONMENTAL SUSTAINABILITY

Livestock production relies on natural resources. Future increases in production will depend on effectively managing soil health, weeds, invasive animals, water, methane emissions, biodiversity and climate variability. These themes will provide focus for future research and development, assisting the industry to improve its productivity and sustainability.

Maintaining the industry’s environmental footprint in line with community expectations is a primary goal. This is achieved through industry engagement with consumers to demonstrate it is an ethical and responsible custodian of livestock, land and natural resources.

Past success (2015-16): Covered anaerobic lagoons helped to generate energy, reduce greenhouse gas emissions and improve the quality of water discharged from Thomas Foods International’s Murray Bridge plant.
**ANIMAL HEALTH AND WELFARE**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
continuing the large foot and mouth disease (FMD) preparedness campaign together with the Rural R&D for Profit program; commencing a large integrated program of animal welfare R&D; and commencing projects addressing cattle tick, buffalo fly and novel approaches to disease resilience.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal welfare indicators</td>
<td>a large program of work under the Animal Welfare Strategic Partnership commenced</td>
<td>870</td>
</tr>
<tr>
<td>Animal husbandry</td>
<td>Animal Welfare Strategic Partnership established</td>
<td>6,325</td>
</tr>
<tr>
<td>FMD preparedness</td>
<td>FMD risk management plan underway</td>
<td>1,036</td>
</tr>
<tr>
<td>RD&amp;A collaboration: endemic diseases</td>
<td>five or more new projects that address the economically important diseases of sheep and cattle underway</td>
<td>1,948</td>
</tr>
<tr>
<td><strong>Total MDC investment</strong></td>
<td><strong>10,179</strong></td>
<td></td>
</tr>
</tbody>
</table>

**SUPPLY CHAIN ENVIRONMENTAL SUSTAINABILITY**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
increasing environmental performance through supply chain optimisation enabled by enhanced information systems; using biological processing systems to convert waste from feedlots and red meat processing into valuable products; driving adoption of innovation that improves management of water, energy, waste, greenhouse gas emissions, soils and weeds; and exploring a carbon neutral red meat supply chain.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumen energy capture</td>
<td>Rumen energy capture strategic partnership established</td>
<td>2,044</td>
</tr>
<tr>
<td>Emission abatement productivity</td>
<td>Emission abatement productivity</td>
<td>494</td>
</tr>
<tr>
<td>Resource use efficiency: supply chain</td>
<td>Resource use efficiency: supply chain</td>
<td>2,743</td>
</tr>
<tr>
<td>Weed management technologies</td>
<td>Weed management technologies</td>
<td>1,968</td>
</tr>
<tr>
<td><strong>Total MDC investment</strong></td>
<td><strong>6,449</strong></td>
<td></td>
</tr>
</tbody>
</table>
PILLAR 2
MARKET GROWTH AND DIVERSIFICATION

DEEP MARKET INSIGHTS REGARDING CHANGING CONSUMER BEHAVIOURS AND EMERGING GLOBAL FOOD TRENDS WILL INFORM MORE STRATEGIC INNOVATION INVESTMENT DECISIONS (AT BOTH INDUSTRY AND VALUE CHAIN LEVELS) AND ULTIMATELY LEAD TO INCREASED DEMAND AND VALUE FOR RED MEAT PRODUCTS.

Assisting food value chain businesses and producers to engage effectively with new higher value markets is critical to the sustained growth of the Australian red meat sector. Identifying new innovation opportunities and supporting high value growth activities will build demand for Australia’s red meat products in both mature and emerging export markets and market segments.

MDC initiatives will support MLA’s 2020 focus of countering the historical trend of reducing per capita red meat consumption in the domestic market, while also growing red meat consumption in high value markets in Asia and the Middle East.

Insights research has identified key emerging global food trends and consumer behaviours that offer clear opportunities for the Australian red meat industry. In addition, Asian markets are demanding higher levels of integrity and traceability, and there is potential for new technologies and value chain designs to support industry to achieve much higher premiums in these markets.

High value food frontiers is MDC’s key mechanism for delivering innovations in support of MLA’s market growth and diversification strategic pillar. MDC activities will be complemented by initiatives funded within the Rural R&D for Profit Insights2Innovation grant project, and a relatively small amount of MLA industry-funded investments leveraged at least 5:1 via MDC.

2016-2020 OUTCOME
Increased consumer and customer preference and premiums for Australian red meat and associated products across multiple markets driven by high value innovation.

MDC PRIORITIES
HIGH VALUE FOOD FRONTIERS

An analysis of global food trends suggests there is an opportunity for red meat to capture significantly increased profitability through the creation of new value added product and packaging concepts that meet consumer requirements. Research identified trends including: health and wellbeing; convenience, including snacking, high protein, and targeted demographic needs such as ageing population and infants. These opportunities apply in both mature (domestic) and emerging markets like China, ASEAN and the Middle East.

Increasing pressure from low-cost competitors is also challenging the current predominantly commodity-based business models and further fuelling a desire by the industry to move into higher value product offerings.

It is anticipated that new B2B and B2C business models/value chain designs will be required as the red meat industry transforms from a commodity focus to a high value food focus.

To address these opportunities, MDC has launched a series of new initiatives including: 2Morrow’s Food and China Insights2Innovation, which invite industry partners and research providers to engage in activities that will develop new ways to create and capture high value growth over the next two to five years. Through the I+E CONNECT platform, MDC will also seek out and encourage the entrance of new food entrepreneurs and start-ups to bring disruptive new ideas and products to the industry.

Key enablers include developing insights, engaging industry, developing a network of strategic partnerships and building sophisticated design-led innovation capabilities.
HIGH VALUE FOOD FRONTIERS

THE 2016-17 PROGRAM OF WORK INCLUDES:
- designing business models for emerging markets, segments and competitors; connecting with food entrepreneurs and the food innovation community; investing in emerging science and technology platforms; and introducing new innovation methodologies such as design-led innovation and lean launch-pad.

PROGRAM DESCRIPTION | 2016-17 BENCHMARK KPI OR MILESTONE | 2016-17 BUDGET
---|---|---
Insights2Innovation | three new value adding/packaging solutions identified and engaged via MDC | 6,500
Insights2Innovation initiatives and investments, including 2Morrow’s Food and China Insights2Innovation, that deliver global innovation strategies to increase demand and build value chain capability | | |
Insights2Innovation | five new value chain partners actively engaged in emerging market innovation initiatives | |
Insights2Innovation | three new food entrepreneurs/start-ups engaged | |
Insights2Innovation | one non-red meat company attracted to the industry | |
Insights2Innovation | seven new high value red meat offerings ready to launch | |
Insights2Innovation | 1:4 benefit cost ratio from MDC investments in this program | |
Total MDC investment | | 6,500

2MORROW’S FOOD

MDC’s new 2Morrow’s Food program is designed for Australian red meat value chain participants looking to develop high value growth strategies to target evolving global food trends.

To prepare for this program, MDC commissioned research into high value, emerging global food trends. Some of the trends presenting opportunities for the Australian red meat industry that were identified include:

- Snacking: in the US, 75% of consumers snack more than twice a day and some of the fastest growing snack brands contain red meat.
- Technology: smart packaging has the ability to generate greater value through guaranteeing provenance and creating interactive relationships with consumers.
- Health and wellbeing: longer life expectancy, increasing obesity rates and greater consumer awareness are driving demand for products that deliver a sense of health, prevention, treatment or wellness.
- Active agers: a large baby boomer population with greater disposable income and higher life expectancy than previous generations is exhibiting different characteristics and focusing on lifestyle maintenance.

CHINA INSIGHTS2INNOVATION

China Insights2Innovation provides a partnership mechanism for red meat value chains to develop future high value growth opportunities in China.

Increased competition in the Chinese red meat market, including the re-entry of beef from Brazil and the US, could significantly undermine Australia’s current market position. In-depth research into the China market identified the most attractive cities for the Australian red meat industry and potential target consumer segments as well as provided insight into how to best structure value chains to work with common China business models. The findings are being used to create decision-support tools for partners, such as interactive databases on Chinese cities and retail store meat pricing.

MDC plans to extend this program, with the research team turning their focus to the ASEAN region, followed by the Middle East.

Both 2Morrow’s Food and China Insights2Innovation programs provide partners with support in the form of co-investment funding, assistance with value chain and business model design, and access to market insights and industry experts.
SATISFIED CUSTOMERS AND INDUSTRY PARTNERS ARE SIGNS OF A WELL-FUNCTIONING VALUE CHAIN.

The red meat and livestock industry strives to achieve this through Meat Standards Australia, which guarantees consumers a minimum eating quality of their red meat purchases, and also through integrity systems that underpin clean, safe, natural and traceability claims. The industry has an opportunity to enhance this win-win for customers and value chain partners through new measurement technologies, information exchange and value-based pricing, where consumers pay the true value of the products they purchase and industry is able to increase the value of each carcass.

MDC partnerships will make a significant contribution in this area with a wide range of initiatives in measurement technologies, digital, data exchange, and product integrity and traceability spanning the entire value chain. We already partner with leading global technology and invention providers to find and develop new ideas and solutions that will leverage additional funding to accelerate the achievement of key industry priorities. In addition, MDC’s new HE CONNECT platform will provide access to the latest ideas in the rapidly emerging AgTech and FoodTech space and will attract disruptive new entrepreneurs and start-ups to the industry.

2016-2020 OUTCOME
Increased returns through the value chain, with participants and customers confident in product quality, pricing and integrity systems.

MDC PRIORITIES

SUPPLY CHAIN LOGISTICS

There are a number of challenges in the red meat industry in terms of supply chain logistics related to both the movement of live animals and temperature sensitive goods. Technological advances in vehicle-to-vehicle and vehicle-to-infrastructure connectivity, as well as increasing affordability of monitoring and tracking devices over the next decade, provide a platform for productivity gains in a section of the supply chain currently hindered by a lack of innovation. In addition, the application of sophisticated supply chain optimisation modelling presents opportunities to provide the industry and government with decision support tools that better inform infrastructure investment decisions as well as resource optimisation.

OBJECTIVE MEASUREMENT

Value chain objective measurement (see Figure 2) will require the development of a wide range of enablers in areas that will include: objective sensing solutions; sensing analytics; enterprise optimisation software (including interconnectivity hardware and software between measurements, and enterprise decision making systems); whole of value chain tracing and tracking systems; value chain reporting standards and templates; industry standards and calibration protocols; and capability building.

VALUE CHAIN DIGITAL STRATEGY

The value chain digital strategy will require the development of a wide range of digital solutions, platforms and technologies that: support data collection and analytics to enable improved decision-making at the enterprise level (at all/any points along the value chain), and also support benchmarking between enterprises; support greater efficiencies along the value chain (e.g. livestock transport logistics); enable the exchange of information between different parts of the value chain (e.g. Livestock Data Link) and underpin new payment systems (e.g. value-based marketing); underpin industry integrity systems (e.g. eNVD, LPA e-learning and re-accreditation process); support the aggregation of data sets (e.g. National Livestock Identification System); and support improved data exchange and engagement with end customers and trading partners. The strategy will also identify and address key capability and cultural change issues.

ENHANCED TRACEABILITY AND INTEGRITY SYSTEMS

For years, Australian red meat has been marketed as clean, safe and natural, underpinned by its disease-free status and advanced food safety and integrity systems. As our competitors build their own capabilities to deliver a similar product claim, it is essential to enhance our systems and technologies to keep ahead of our competitors and maintain our point of difference. Raising the bar of our integrity systems also helps Australia capture price premiums from discerning consumers and customers willing to pay more for higher levels of product assurance.
**SUPPLY CHAIN LOGISTICS**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
- Establishing an industry-wide representative steering committee to guide developments and whole of value chain adoption, leveraging previous investments by MDC in the area of processing automation to upgrade measurement systems to evolve them into objective measurement solutions (e.g., MSA to DEXA upgrades). In situ demonstration and evaluation to industry of evolving solutions, specifically focused on how best to package and present outputs from objective measurement systems, aligning with global solution providers to source ideas that enable MLA’s Value Chain Objective Measurement Strategy.
- Seek out and secure partnerships to deliver ITS to the red meat industry.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision making tools: supply chain logistics</td>
<td>locate and evaluate innovative providers (both domestically and internationally); at least one partnership established to develop and pilot a methodology to test in a red meat value chain</td>
<td>200</td>
</tr>
<tr>
<td>Logistics business models</td>
<td>Investigate new infrastructure and business models based on the exchange of supply chain information to underpin Intelligent Transport Systems (ITS) technology</td>
<td>300</td>
</tr>
<tr>
<td>Objective measurement technologies</td>
<td>Lamb technology providing producer feedback, in at least one location; two beef technologies developed and ready for value chain trials; all 2016-17 Rural R&amp;D for Profit objective measurement project outcomes achieved</td>
<td>5,176</td>
</tr>
<tr>
<td>Global eating quality</td>
<td>Scope international research collaborators to build international datasets using common consumer protocols; develop two new cut by cook combinations for inclusion in the MSA model</td>
<td>562</td>
</tr>
<tr>
<td>Infrastructure and business models</td>
<td>Three supply chains trialling objective carcass measurement technology for MSA grading; three supply chains trialling integrated information systems; 8,000 producer visits to the myMSA website</td>
<td>78</td>
</tr>
<tr>
<td>Total MDC investment</td>
<td></td>
<td>5,816</td>
</tr>
</tbody>
</table>

**OBJECTIVE MEASUREMENT**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
- Establishing an industry-wide representative steering committee to guide developments and whole of value chain adoption, leveraging previous investments by MDC in the area of processing automation to upgrade measurement systems to evolve them into objective measurement solutions (e.g., MSA to DEXA upgrades). In situ demonstration and evaluation to industry of evolving solutions, specifically focused on how best to package and present outputs from objective measurement systems, aligning with global solution providers to source ideas that enable MLA’s Value Chain Objective Measurement Strategy.
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<td>200</td>
</tr>
<tr>
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<td>Investigate new infrastructure and business models based on the exchange of supply chain information to underpin Intelligent Transport Systems (ITS) technology</td>
<td>300</td>
</tr>
<tr>
<td>Objective measurement technologies</td>
<td>Lamb technology providing producer feedback, in at least one location; two beef technologies developed and ready for value chain trials; all 2016-17 Rural R&amp;D for Profit objective measurement project outcomes achieved</td>
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<tr>
<td>Infrastructure and business models</td>
<td>Three supply chains trialling objective carcass measurement technology for MSA grading; three supply chains trialling integrated information systems; 8,000 producer visits to the myMSA website</td>
<td>78</td>
</tr>
<tr>
<td>Total MDC investment</td>
<td></td>
<td>5,816</td>
</tr>
</tbody>
</table>

**VALUE CHAIN DIGITAL STRATEGY**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
- Appointing an agri-food (red meat) design thinker-in-residence to support engaging industry stakeholders in the development of the digital strategy; connecting with the global AgTech community to source ideas aligned to the digital strategy; instigating global ‘digital challenges’ to source solutions to industry priorities, and attracting new digital entrepreneurs and start-ups to work in the Australian red meat industry.
- Seek out and secure partnerships to deliver ITS to the red meat industry.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information systems: supply chain</td>
<td>Facilitate the development and adoption of information exchange systems and tools to inform decisions throughout the supply chain</td>
<td>300</td>
</tr>
<tr>
<td>Value-based pricing (VBP) models</td>
<td>Develop and trial new business models that assist price differentials under VBP</td>
<td>500</td>
</tr>
<tr>
<td>Decision making tools: supply chain</td>
<td>Initiatives to improve decisions and actions throughout the value chain and analyse the impact</td>
<td>458</td>
</tr>
<tr>
<td>Total MDC investment</td>
<td></td>
<td>518</td>
</tr>
</tbody>
</table>

**ENHANCED TRACEABILITY AND INTEGRITY SYSTEMS**

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
- Finding new animal identification and in-market traceability technologies; sourcing innovative solutions for livestock traceability and identifying the next generation of livestock identification and traceability systems; and working directly with industry partners to adapt and adopt electronic technologies (e.g., eNVD) to enhance red meat and livestock integrity through the supply chain.
- Seek out and secure partnerships to deliver ITS to the red meat industry.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrity systems: food safety</td>
<td>Ensure integrity systems are underpinned by rigorous food safety research and development and science-based evidence</td>
<td>371</td>
</tr>
<tr>
<td>Electronic technologies</td>
<td>eNVD trials completed and rollout commenced with 10% of consignments to be eNVD only</td>
<td>558</td>
</tr>
<tr>
<td>Next horizon technologies</td>
<td>Identify next horizon product and system integrity attributes and new technologies that address customer and consumer assurance issues</td>
<td>1,071</td>
</tr>
<tr>
<td>Total MDC investment</td>
<td></td>
<td>2,000</td>
</tr>
</tbody>
</table>
INCREASING PRODUCTIVITY AND PROFITABILITY ACROSS THE INDUSTRY WILL ASSIST RED MEAT AND LIVESTOCK PARTICIPANTS TO RAISE THEIR COMPETITIVENESS AND LONG-TERM SUSTAINABILITY, AND HELP OFFSET THE LONG RUNNING COST-PRICE SQUEEZE.

Encouraging the value chain to increase its productivity requires a new approach to adoption. Providing producers, lotfeeders, live exporters and processors with compelling commercial benefits to implement research and development is a key focus, as is supplying timely, accurate and relevant tools, technologies and information to better inform business decisions.

MDC partnerships will continue to make a significant contribution in this area, building on the MDC-funded processing automation strategy and strategic partnerships with global technology providers over the past 10 years. This has seen the development and commercial uptake of world leading lamb boning and slaughter automation and the early development of beef automation technologies. MDC will also continue to co-invest in key livestock genetics initiatives via a substantial contribution to the new National Livestock Genetics Consortium. New areas of MDC co-investment will focus on automation on-farm and the development and introduction of a range of precision agriculture technologies. An initial review of global trends in investment in AgTech suggest an important role for MDC’s I+E CONNECT platform in attracting entrepreneurs and start-ups from the US, NZ and Israel to our industry.

2016-2020 OUTCOME

Productivity gains through the value chain from the adoption of tools and technologies.

MDC PRIORITIES

FARM AND FEEDLOT PRODUCTIVITY

For producers and lotfeeders to remain competitive and sustainable in the long-term, research, development and adoption programs need to deliver outcomes that improve their financial bottom line. This priority is focused on providing producers and lotfeeders with options to improve the efficiency of their operation through programs including feedbase, reproduction, animal nutrition, compliance to market specifications and feed efficiency.

This involves a range of activities leading to economic benefits derived from improved management of feed resources, growth efficiency, market specifications, reproduction and business enterprises. The activity is aligned with MLA investments through improved business skills and research. It includes northern and southern grassfed beef, sheep, feedlot beef as well as goats. Projects have the potential to tackle significant issues in the industry in the long term and remove some traditional productivity limits. Technological aids and solutions that improve farm profitability will be incorporated.

PILLAR 4

PRODUCTIVITY AND PROFITABILITY

PRECISION AGRICULTURE

Precision agriculture is a fast developing field and is anticipated to grow into a multi-billion dollar industry in Australia. Benefits will include more efficient management of animals, better matching to market specifications, opportunities for assurance (e.g. in welfare and environment), reduced labour inputs and increased safety on-farm. The devices and practices will both collect digital data and rely on digital resources including analytics. A major outcome will be to underpin decision making on-farm, including how producers optimise benefits across the value chain. Some aspects of precision agriculture will migrate from other agricultural industries, while others will be specifically developed to work across the vast areas of Australia. The contributors range from large providers to smaller local innovators.

LIVESTOCK GENETICS

Investment in genetics and genomics aims to double the rate of genetic gain in Australia’s red meat livestock industry by 2022. A National Livestock Genetics Consortium (NLGC) has been developed as a vehicle to increase collaboration, transparency, communication and investment in livestock genetics research, development and adoption in Australia. MDC investment will accelerate the development and adoption of beef and sheep genetic and genomic technologies. This will be achieved through investment in disruptive technologies, culture change through improved adoption, open data platforms and world leading research and development. The NLGC is governed by a skills-based taskforce who will review and recommend projects for funding. All projects relating to genetic and genomic investments presented to the MDC for funding will have been recommended by the NLGC taskforce.

THROUGH-CHAIN AUTOMATION

Automation and technology ensure Australia’s high-cost production and processing sectors increase returns through improved efficacy and efficiency.

The outcomes to be achieved by 2020 include x-ray sensing featuring carcass composition and precision cutting lines and the continued uptake of LEAP lamb boning technology. In addition, investments commenced with industry host sites arising from the collaborative MLA/AMPC Beef Boning Strategy will continue. The program will aim to develop solutions and attract associated technology providers in areas such as: on-farm walk-over-weighing and sorting; on-farm data capture systems; feedlot-based automated animal induction systems; feedlot based automated feed distribution and related hygiene clean-up systems; automated beef, sheep, lamb, and goat, processing systems; processing-based enterprise optimisation software (including interconnectivity between measurements and enterprise decision making systems); manufacturing data generation from integrated automation and sensing platforms; whole of value chain tracing and tracking systems; value chain reporting standards, and industry standards on equipment service and support, high reliability protocols, and automation technology industry capability building.
THE 2016-17 PROGRAM OF WORK INCLUDES: commencing the Northern Business Mentoring Program; scoping the potential to automate the feedlot induction process; and releasing the first results of the Pasture Variety Trial Network to industry.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture productivity</td>
<td>• New research and development projects that improve northern feedbase productivity including legume production • Farm mapping company established • Management products developed for improved grazing management outcomes in Queensland’s beef catchments</td>
<td>2,646</td>
</tr>
<tr>
<td>Production efficiency: beef</td>
<td>• Research and development projects to improve growth and market compliance through use of supplements and objective measures • Progress of the Northern Business Mentoring Program • Initiate joint producer and researcher participation in Farm Innovation Networks to enhance adoption • Equip feedlot to prepare for future trials</td>
<td>1,948</td>
</tr>
<tr>
<td>Mixed farming systems: sheepmeat</td>
<td>• Scoping study completed</td>
<td>920</td>
</tr>
</tbody>
</table>

Total MDC investment 5,514

THE 2016-17 PROGRAM OF WORK INCLUDES: improving traceability and monitoring of animals and estimates of feed availability.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved traceability and monitoring of animals</td>
<td>• Prototype eartag developed and tested for durability • Feasibility of adapting industrial logistics on farms</td>
<td>3,802</td>
</tr>
<tr>
<td>Tools to improve estimates of feed availability</td>
<td>• Enhancements to satellite imaging • Development of pasture measures app</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Total MDC investment 4,902

THE 2016-17 PROGRAM OF WORK INCLUDES: accelerating the development and adoption of genetic and genomic technologies for the northern and southern beef industry and the sheep industry. A major initiative is the formation of a National Livestock Genetics Consortium (NLGC), led by a stakeholder driven, skill-based taskforce made up of commercial producers, researchers, breed societies and representatives from the red meat value chain. The NLGC will establish a longer term investment plan that will provide a platform to achieve the acceleration in genetic gain for the red meat industry.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetics and genomics: northern Australia</td>
<td>Accelerate the development and adoption of beef genetics and genomic technologies for the northern beef industry</td>
<td>3,502</td>
</tr>
<tr>
<td>Genetics and genomics: southern Australia</td>
<td>Accelerate the development and adoption of beef genetics and genomic technologies for the southern beef industry</td>
<td>3,502</td>
</tr>
<tr>
<td>Genetics and genomics: sheepmeat</td>
<td>Accelerate the development and adoption of sheep genetics and genomic technologies for the sheepmeat and lamb industry</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Total MDC investment 9,004

THE 2016-17 PROGRAM OF WORK INCLUDES: commencing the first module of beef automation with a processor (aligned to beef boning automation strategy); and initiating the first stage of an integrated lamb automation system with a major processor incorporating producer feedback. The beef boning strategy will feature a number of anticipated automated machines featuring modularity, scalability and compatibility with beef boning systems currently utilised domestically.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing efficiency technologies</td>
<td>Maintain at least 80% of expected program outcomes from processing efficiency technologies achieved</td>
<td>7,004</td>
</tr>
</tbody>
</table>

Total MDC investment 7,004
PILLAR

5

LEADERSHIP AND COLLABORATIVE CULTURE

SECURING THE POTENTIAL OF THE AUSTRALIAN RED MEAT AND LIVESTOCK INDUSTRY AND SUCCESSFULLY DELIVERING ON THE MEAT INDUSTRY STRATEGIC PLAN REQUIRES STRONG LEADERSHIP, A CAPABLE WORKFORCE AND ATTRACTING THE BEST AND BRIGHTEST MINDS.

MDC makes a key contribution in this pillar via the engagement of industry participants in a range of capability building initiatives that accelerate innovation adoption, increase the level of industry investment in innovation, and facilitate cultural change. More specifically, MDC programs in this area:

» Create a clear and compelling platform for industry transformation, via facilitating the adoption of major innovation initiatives by a critical mass of key opinion leaders. For example, whole-of-chain automation, value chain digital strategy and the transformation of the industry from a commodity supplier to purveyor of premium and high value products.

» Expand the footprint and impact of MLA’s 2016-2020 Strategic Plan and fast-track the delivery of outcomes.

» Create the opportunity for MLA to move into more disruptive 2025-2030 innovation opportunities with a level of industry engagement that underpins our thought leadership position and provides a ‘licence to operate’.

2016-2020 OUTCOME

Industry participants are agile, ready to face challenges and capture opportunities in the future.

MDC PRIORITIES

» COLLABORATIVE CO-INNOVATION PROGRAM

MDC will launch the ‘Next Generation’ Collaborative Co-innovation Program to support leading Australian red meat value chains to fast-track their innovation and growth strategies. The program will offer an integrated suite of modules which can be customised to match the specific business goals of participating enterprises and their value chains. MDC will support partners with a range of services and co-investment initiatives. Any enterprise from within an Australian red meat and livestock value chain is eligible to participate, with the focus being on whole-of-chain innovation.

» PRODUCER INNOVATION FAST-TRACK PROGRAM

This program provides a direct mechanism for producer levy payers to drive the innovation agenda and secure partial funding for high priority initiatives that they have identified as providing benefit for their businesses (and ultimately the broader industry). The program is targeted at innovative producers who are:

» actively seeking and adopting new innovations to improve on-farm productivity, sustainability and profitability

» creating high value branded products, closer market connections and new value chain relationships

» developing and trialing new AgTech solutions via new ventures

» FOOD VALUE CHAIN INNOVATORS: EMERGING LEADERS INITIATIVE

The Young Food Innovators program is a sub-project within the MLA-led Insights2Innovation project, part of the Rural R&D for Profit Programme. It is aimed at assisting the red meat, horticulture, seafood and dairy industries attract, develop and retain new talent. The specific aim is to attract well-qualified young professionals from diverse backgrounds to the industry and assist them develop whole-of-chain (plate to paddock) strategic value chain thinking and capabilities. A key objective is to equip them with the skills to work within value chains that are seeking to innovate and grow high value opportunities in both domestic and export markets.

» DIGITAL VALUE CHAIN OFFICERS

This new initiative assists companies within the red meat value chain to develop a whole-of-value chain digital strategy that leverages the best solutions and ensures they are well positioned for new and evolving digital enablers. The resulting impact is a structured approach to engaging the value chain and remaining at the forefront of the global digital agriculture revolution. MDC will co-fund these officers within red meat industry value chains that are willing to commit to ensuring their enterprise is ready for digital agriculture by developing an enterprise digital strategy.
### COLLABORATIVE CO-INNOVATION PROGRAM

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
developing and launching 17 modules within this new program.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evolution of Collaborative Innovation Strategies Program (CISP) to the new Collaborative Co-Innovation Program</td>
<td>Increase participation in the program from 13 to 20 value chain participants</td>
<td>4,834</td>
</tr>
<tr>
<td></td>
<td>partner survey and evaluations demonstrate significant benefits</td>
<td></td>
</tr>
</tbody>
</table>

Total MDC investment 4,834

### PRODUCER INNOVATION FAST-TRACK PROGRAM

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
developing and implementing the pilot of this new program with successful recruitment of, and participation by, producers to the full amount of $4 million (total value, not expenditure in 2016-17).

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-investment program for producers seeking to:</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>optimise farm performance via innovation adoption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>engage directly in markets and value chains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>develop new entrepreneurial AgTech ventures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total MDC investment 1,000

### FOOD VALUE CHAIN INNOVATORS: EMERGING LEADERS INITIATIVE

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
continuing the implementation of the two-year cross-sectoral Young Food Innovators program with 15 participants; and designing and launching the second round focused on engaging young professionals in the program.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young Food Innovator traineeship</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>retention of red meat industry participants in the program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>recruitment of 10 young professionals into the program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>satisfaction of host companies of benefits of the program</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total MDC investment 500

### DIGITAL VALUE CHAIN OFFICERS

**THE 2016-17 PROGRAM OF WORK INCLUDES:**
identifying potential opportunities to create value along the entire value chain in areas such as: growing the volume and quality of beef, lamb and goatmeat; developing better relationships through reliable feedback across the value chain; exposure to the latest research in digital technology and process changes; tapping into the value of evolving measurement systems and automated production, processing and retail consumer systems; and building R&D capacity within the business.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-investment program for value chain partners seeking to build capability in digital innovation</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>scope the opportunity of Digital Value Chain Officers within at least three companies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>develop a program for a Digital Value Chain Officer position with pilot partners</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total MDC investment 50
The successful delivery of MLA’s Strategic Plan 2016-2020 will require an enhanced level of collaboration with its many stakeholders.

This pillar focuses on extending the breadth and depth of stakeholder engagement across MDC. Genuine two-way consultation and collaboration will be mutually beneficial for the delivery of MDC’s marketing, research and development services to industry. This pillar also includes the delivery of MDC’s corporate reporting responsibilities within a culture of continuous improvement.

MDC’s contribution to the outcome of this pillar is to:

- Attract voluntary investment partners to the industry
- Clearly articulate how MDC investments are complementary to, and align with, other MLA investments
- Deliver research, development and adoption outcomes for the Australian red meat industry
- Maintain strong collaboration with Government.

2016-2020 Outcome

An increased understanding of the MLA Donor Company, and its role in accelerating innovation, amongst the Australian red meat industry.

MDC Priorities

Engagement with producers and stakeholders

MDC has already implemented an active communications plan which included the development of a range of educational and promotional materials including:

- Industry case studies
- Media releases
- Program brochures
- Final reports
- Evaluation series
- Articles in Feedback.

We have also improved MDC’s presence on the MLA website: mla.com.au/mdc.

However, as was noted in the recent MLA/MDC Performance Review, there is a need to increase efforts to ensure that MLA/MDC stakeholders are aware of MDC initiatives; the benefits to industry derived from MDC projects; and the opportunities for all industry participants to actively engage in MDC activities.

In addition, as the footprint of MDC continues to play a more significant role in the delivery of MLA’s Strategic Plan, it will be important to develop and execute a more sophisticated MDC marketing and communications plan.

Marketing and communications activities being undertaken in 2016-17 will focus on:

- Building stakeholder awareness of both existing and new MDC initiatives
- Actively encouraging stakeholder participation in MDC initiatives
- Enhanced reporting including streamlined access to final reports and a clear articulation and demonstration of the benefits of MDC activities to the whole industry.
ENGAGEMENT WITH PRODUCERS AND STAKEHOLDERS

THE 2016-17 PROGRAM OF WORK INCLUDES:
launching the inaugural MDC 2016-20 Strategic Business Plan; developing MDC communications materials for prospective partners and new MDC program investment areas; developing a global presence through an upgraded digital persona; and releasing multimedia versions of outcomes from existing MDC programs.

<table>
<thead>
<tr>
<th>PROGRAM DESCRIPTION</th>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder engagement</td>
<td>increased understanding of MLA Donor Company activity as measured via MLA producer survey</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>improved government satisfaction with level of transparency and communication regarding MLA Donor Company</td>
<td></td>
</tr>
<tr>
<td>Total MDC investment</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

In 2016-17, MDC will continue to build stakeholder awareness of the outcomes and benefits of MDC investments.

- **AUTOMATED ROBOTIC BEEF RIB CUTTING**
  - The first automated robotic beef rib cutting prototype was developed, which calculates precise cutting lines, objectively estimates the lean meat yield of the carcase and offers the option of value-based pricing of livestock.

- **RED MEAT FROM VENDING MACHINES**
  - MDC supported an innovation by Australian lamb processor Frewstal to value-add lamb by developing ready-to-eat meals from vending machines.

- **GENETIC GAIN IN NORTHERN HERDS**
  - The Tropical Beef Technical Services project was completed in 2015-16. Over the six years of the project, the rate of genetic progress of the partner breed associations increased. The average BreedObject selection index of animals rose by $4.63/cow mated between the 2009 drop and 2014 drop calves.

- **GRAB-AND-GO BEEF**
  - Hot, cooked beef products were rolled out to 900 Woolworths stores nationally, providing an opportunity to use 800 tonnes of outside-ribs, delivering $5.5 million/year in new profit for the red meat industry.

- **ACID TOLERANT LUCERNE**
  - MDC research has added confidence to recommending lucerne for acidic soils in south-eastern Australia, where increased growth could have a large impact on increasing livestock production and reducing supplementary feeding.

- **RED MEAT FROM VENDING MACHINES**
  - MDC supported an innovation by Australian lamb processor Frewstal to value-add lamb by developing ready-to-eat meals from vending machines.
I+E CONNECT

THE PRESSURE FOR ALL INDUSTRIES TO BECOME MORE AGILE TO DEAL WITH INCREASED MARKET VOLATILITY AND COMPLEXITY HAS SEEN A GLOBAL SHIFT TOWARDS INNOVATION, ENTREPRENEURSHIP AND THE ADOPTION OF DISRUPTIVE IDEAS AND TECHNOLOGIES.

To support the Australian red meat industry in making this important transition, MDC is developing a new innovation and entrepreneurship platform – I+E CONNECT.

The I+E CONNECT platform will be a mechanism that enables industry participants to connect and engage with the global entrepreneurial community, as a strategic focus within their broader organisational innovation strategy. It will accelerate the identification and development of new and disruptive ideas, and create commercially viable solutions which will result in unique competitive organisational innovation strategy. It will accelerate the identification and development of new and disruptive ideas, and create commercially viable solutions which will result in unique competitive positions for our industry.

This platform will seek to tap into new forms of investment from venture capital and private equity funds, develop new partnerships within the global AgTech and FoodTech accelerator and incubator community, and attract entrepreneurs and start-ups.

MDC, through this platform, will also enable the Australian red meat industry to realise the substantial benefits of developing corporate venture activity and working with start-ups and entrepreneurs. These include the rapid development of novel solutions to specific business challenges, the ability to explore new opportunities without distracting from core operations or investing heavily in internal development, and the sourcing of products and technologies to fill or transform product pipelines.

I+E CONNECT will deliver transformational change and help future proof our industry.

I+E CONNECT OFFERINGS AND PROGRAM OF WORK

INNOVATION SCOUTING

Fast-track generation and attraction of ‘big ideas’

» establish strategic partnerships through which we can identify global innovations with applications relevant to our industry

» effectively communicate industry pain points and opportunities to attract ideas ‘in’ from diverse sources

» become a magnet for global entrepreneurs in AgTech and FoodTech, and food innovation disruptors to encourage them to bring new ideas to our industry

» implement fast-paced open innovation challenges

» manage commercialisation of innovations through accelerator programs

ENTREPRENEURSHIP ACCELERATOR

Develop and implement accelerator services for MLA, industry partners, providers, entrepreneurs and start-ups.

» introduce new tools and methodologies to MLA/MDC strategy development and implementation including design thinking, sprints, lean start-up, business model canvas and rapid prototyping

» appoint MDC agri-food design thinker-in-residence to support the above and the development of accelerator models and services

» develop global strategic partnerships with accelerators and incubators

» engage users (particularly producers) in solution design

» mobilise external entrepreneurial teams with challenges to accelerate specific innovations within MLA portfolio

CORPORATE ACCELERATOR AND VENTURE MODELS

Help industry partners build internal capability to disrupt and fast-track innovation.

» develop corporate venture offerings to assist industry partners build internal capability and support internal entrepreneurship

» develop and demonstrate pilot corporate accelerator/venture activity within industry

EARLY STAGE VENTURE CAPITAL

Connection to early stage venture capital, private equity and angel investors.

» develop strategic partnerships with private equity, and VC investment community

» explore opportunities to create, invest in and influence agri-tech and food-tech venture funds – including partnerships with other sectors

» support development of and co-invest in new agri-food corporate venture funds in the red meat industry

PROGRAM DESCRIPTION

<table>
<thead>
<tr>
<th>2016-17 BENCHMARK KPI OR MILESTONE</th>
<th>2016-17 BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>I+E CONNECT platform</td>
<td>» I+E CONNECT platform launched and partnerships established with Australian red meat industry and global entrepreneurial community</td>
</tr>
<tr>
<td>Total MDC investment</td>
<td>9,000</td>
</tr>
</tbody>
</table>

$9,000
CORPORATE GOVERNANCE FRAMEWORK

MDC operates under MLA’s corporate governance framework which is set by the board, having regard to the best interests of MLA’s members, the values of the organisation, MLA’s obligations set out under its statutory funding agreement with the commonwealth of Australia (DEED) and in accordance with the ASX corporate governance council’s corporate governance principles and recommendations (3rd edition).

This long-established framework has been implemented to ensure MLA remains accountable to its stakeholders, and stakeholder interests are protected. MLA’s governance arrangements are reviewed regularly to reflect industry developments, stakeholder expectations, and regulatory and legislative changes.

STRATEGY AND PRIORITY SETTING

MDC follows the MLA annual investment plan (AIP) and all investments align to MLA key milestones and major initiatives. The MDC board approves an MDC AIP that outlines targeted focus areas of investment. The budgets developed for MDC are indicative values in portfolio focus areas. They are subject to periodic review as the nature of the MDC co-investment mechanism means that if the partners do not invest in certain focus areas, MDC cannot invest in those areas.

PROGRAM AND PROJECT APPROVALS

MDC is a part of the MLA governance process for all program and project approvals with the MDC board approving projects over $1 million and the MLA leadership team approving all other projects.

To manage the MDC ‘pipeline’ and to inform new project approvals, the MDC board determines the preferred portfolio balance including a maximum allocation of funds for specific program initiatives where considered appropriate. Program managers are required to submit program strategy papers as determined by the board.

MDC and Australian Meat Processor Corporation (AMPC) have developed a joint process to approve plant initiated projects (PIPs) as follows:

- AMPC and MDC have merged the project review and approval process for both organisations in order to streamline and address governance concerns in a united way.
- Budget meetings are merged and reporting is streamlined in order to improve timeliness and effectiveness of progress reporting, and to meet AMPC governance requirements.
- The program embraces a single process in order to eliminate any disparity between AMPC and MDC applications. This has simplified the application and review process for processors applying to the program.

MEASUREMENT AND EVALUATION

MDC investments are evaluated within an overall ‘path to impact’ measurement and evaluation framework. This is based around the input-output-outcome-impact logic model, which is generally considered to be best practice for impact assessment and delivery.

This model is focused on the delivery of outputs (or products) that have attributable outcomes (via adoption) and generate impact. Outcomes and impacts relating to MDC investments are measured via a variety of approaches, including ex ante (forecast) and ex post (actual) independent cost/benefit analyses. While impact measurement is primarily focused on productivity and demand creation benefits within the Australian red meat industry, triple bottom line benefits are also considered both at an individual product, product group and pillar/priority level.

In some cases, both MLA levies as well as MDC investments (inputs) have contributed to delivering outcomes and impacts. MDC based inputs are clearly identified in the evaluation process and hence the contribution of the MDC to broader industry impacts can be assessed using a variety of tools such as partial and general equilibrium economic modeling.

“ALL MDC CONTRACTS ARE SUBJECT TO A RIGOROUS COST/BENEFIT ANALYSIS AND EVALUATION PROCESS. THIS IS FOLLOWED BY FURTHER IMPACT/ BENEFIT ANALYSES AT REGULAR INTERVALS DURING THE LIFE OF THE RESEARCH AND DEVELOPMENT PHASE OF THE PROJECT, AND THROUGH THE SUBSEQUENT INDUSTRY ADOPTION AND COMMERCIALISATION STAGES.”

Dr Christine Pitt
MDC Chief Executive Officer