

DEXA technology

Over the past three years MLA has worked with industry, research institutes and technology providers to develop the application of DEXA (Dual Energy X-Ray Absorptiometry), an objective measurement tool which measures meat, fat and bone in a carcass (carcass composition).

This information can help the entire red meat value chain **make more informed business decisions** to **improve on-farm and processing efficiency** and **deliver a product which is preferred by consumers**.

Longer term, investment in DEXA and other objective measurement technologies currently under development will help to reduce the industry's annual multi-million dollar cost of grading.

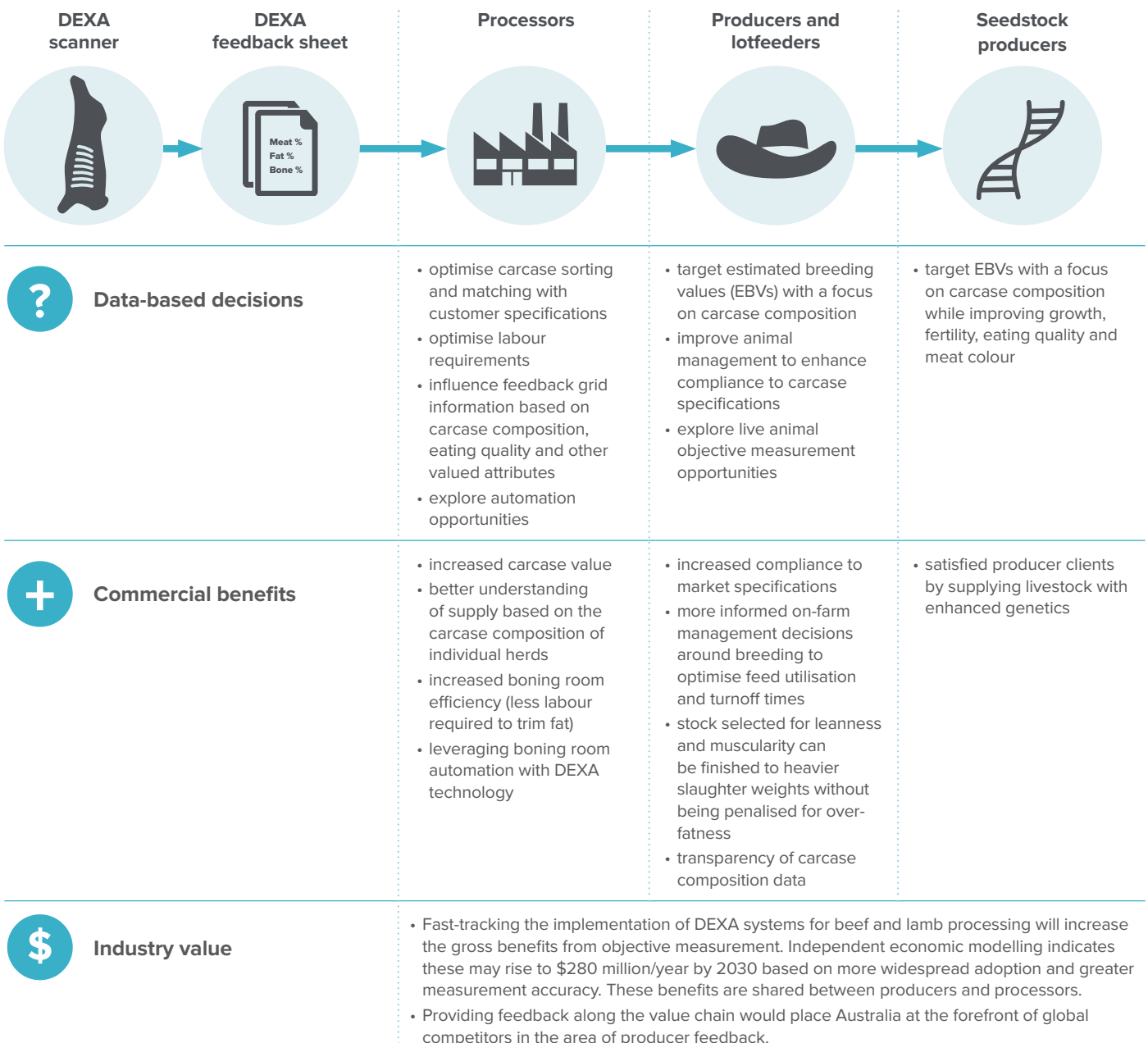
What DEXA does

DEXA has been used for decades in the medical industry to measure bone density and body fat composition. By using an existing mature technology, MLA, in collaboration with industry partners, has shortened the timespan to apply it to lamb and beef carcass scanning.

In the red meat industry, DEXA technology provides timely, accurate, transparent and objective information on the lean meat, bone and fat composition of each carcass which can be added to existing eating quality carcass feedback.

What DEXA enables

Sharing the data provided by DEXA along the value chain to complement other industry systems will allow all sectors to make more informed business decisions based on objectively measured information.



DEXA's use in the red meat industry

DEXA is not new to the meat industry. Some companies use the technology when scanning the chemical lean content of trimmings. However, the adoption of DEXA technology to measure entire carcasses is in its infancy in Australian plants.

The first whole carcass DEXA system was developed by Murdoch University and Scott Automation and Robotics, and is already installed in one Australian lamb processing plant. DEXA is being refined for beef carcasses with the first full beef carcass dedicated DEXA grading solution planned to commence installation in March 2017.

Objective measurement technology is being further refined under the Australian Federal Government's Rural R&D for Profit (RRDfP) program with MLA and the industry. Murdoch University is driving the independent scientific research and evolution of DEXA under both the RRDfP and accelerated adoption program initiated by MLA.

Accelerating the adoption of DEXA

Given the potential widespread industry benefit and the call in the *Meat Industry Strategic Plan 2020* for objective measurement systems, MLA announced a plan in November 2016 to accelerate the adoption of DEXA technology in Australian processing plants and increase the accessibility of the resulting data across the value chain.

During stage 1, the technology to objectively measure the composition of beef and lamb carcasses could be installed in up to 90 AUS-MEAT registered slaughter facilities in Australia.

Delivering the plan would require a one-off \$150 million investment to install DEXA technology in all these facilities. MLA is in discussion with industry to ascertain funding models. MLA is also sourcing global technology providers to ensure DEXA is rolled out in the most cost effective and efficient way across the entire Australian industry. One option would see MLA acquire a commercial loan on behalf of industry.

Processors who opt-in and adopt the technology as part of MLA's plan would be required to provide carcass composition information back to producers as part of a more transparent and efficient red meat value chain.

Next steps

MLA is consulting the peak industry councils on the proposed funding of this plan. MLA is also conducting national consultation in late 2016 and early 2017 prior to any final decision being made. In parallel, MLA is inviting AUS-MEAT Australian registered slaughter facilities to opt-in to the MLA offering. MLA will issue a terms of reference for global technology providers to bid on the roll-out while simultaneously developing an industry project delivery and project governance team.

“ We must remain mindful of the market advantages that can be gained through this technology, and that is why we remain committed to the ongoing collaboration currently happening within the red meat industry. **”**

David Hill, Director, Cattle Council of Australia

“ ...it is taking us in the direction we have been looking to go in for some time on objective carcass measurement, so providing all the ducks lined up, it's the direction we want to go for sure and it fits in with our SISP (Sheep Industry Strategic Plan). **”**

Jeff Murray, President, Sheepmeat Council of Australia

“ Objective carcass measurement will help increase trust between processors and producers and achieve farm production benefits with precise carcass feedback so that will improve returns to the farm gate. **”**

Leonard Vallance, Livestock President, Victorian Farmers Federation

More information

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The main participants in the development of DEXA LMY are MLA, Murdoch University, Scott Technology, Silver Fern Farms, JBS and Teys-Cargill. Other solution providers and researchers include Carometec, DPI NSW, UTS, SARDI, the Danish Meat Research Institute and Meat Image Japan. The Australian Government has also provided matched funding for this research and development.

A recent Australian Government grant of a Rural R&D for Profit Programme has also resulted in a collaborative approach to further develop objective measurements from MLA, Australian Meat Processor Corporation and Australian Pork Limited, with financial resources also provided from JBS, Teys-Cargill and Australian Country Choice.