

final report

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Commercialisation Plan – 3D imaging for instant cattle measurements

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Abstract

Meat & Livestock Australia (MLA), the NSW Department of Primary Industry (NSWDPI) and University of Technology Sydney (UTS) have partnered to develop 3D Imaging livestock management tool (“**3D Tool**” or “**Tool**”), comprising of multiple cameras coupled with a smart software system.

This tool has been developed towards providing a remote objective estimate of live dimensions and body composition for animals primarily in feedlots, large cattle properties, live animal assessment for on-line auctions, sale yards and potentially processors with real time interactive livestock data to inform livestock management, product management and sales.

Preliminary proof-of-concept test results have demonstrated that the 3D Tool has greater accuracy and greater reliability than alternate methods, principally Expert Opinion and Ultrasound.

This preliminary commercialisation study was undertaken to determine market opportunities within key industry segments as well as gauge likely commercialisation pathways. This report summarises the results of this preliminary commercialisation study.

Executive Summary

A 3D imaging tool for instant cattle measurements (“**3D Tool**” or “**Tool**”) has been developed to provide an objective estimate of live dimensions and body composition for animals primarily in feedlots, large cattle properties, live animal assessment for on-line auctions, sale yards and potentially processors with real time interactive livestock data to inform livestock management, product management and sales.

The Tool utilizes remote sensing technology and is therefore non-invasive. Preliminary proof-of-concept test results have demonstrated that the 3D Tool has greater accuracy and greater reliability than alternate methods, principally expert opinion and ultrasound.

This preliminary commercialisation study was undertaken to determine market opportunities within key industry segments as well as gauge likely commercialisation pathways. The study utilised a combination of expert opinion, market interviews, as well as extensive and comprehensive web research to identify:

- potential licensees
- competitors
- potential customers
- possible technology suppliers to assist in the commercialisation process

The Tool facilitates value based transactions throughout the entire supply chain (thus fairer profit sharing). In addition each of the various market segments have their own prime value proposition as follows:

- Producers:** Facilitates improving management decisions to meet market specifications and improve profitability
- Saleyards:** Improved profitability of the transaction process with better quality, and timely information

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- Feedlots:** Increased efficiencies in animal selection, management and sales to meet customer specifications
- Abattoirs:** Higher profitability through estimating retail beef yield, and feedback to assist in processing (i.e. bone out options) that meet (new) market specifications

In addition to these individual benefits that accrue to those who invest in the Tool, there are industry-wide benefit related to the following areas:

1. Improve rates of compliance to carcass specifications and improve profitability through using tools such as BeefSpecs
2. Providing carcass objective measurements that will assist abattoirs report retail beef yield and determine boning out options for specific markets
3. Defending and building beef's market share by providing integrated quality control and reliability of product
4. Improving information transparency and quality throughout the value chain

Of particular importance is that any gains in efficiency can be largely internalized and capitalized at the point of investment and does not unduly accrue to industry participants further down the value chain. For end-users this makes acquiring the Tool easier to justify.

While the early results of the proof-of-concept are very encouraging, there is still a lot of work to be done before the Tool can be made available commercially. However these are known issues and there is a clear development path to overcoming these issues.

This estimated time to adoption is around 3 – 4 years.