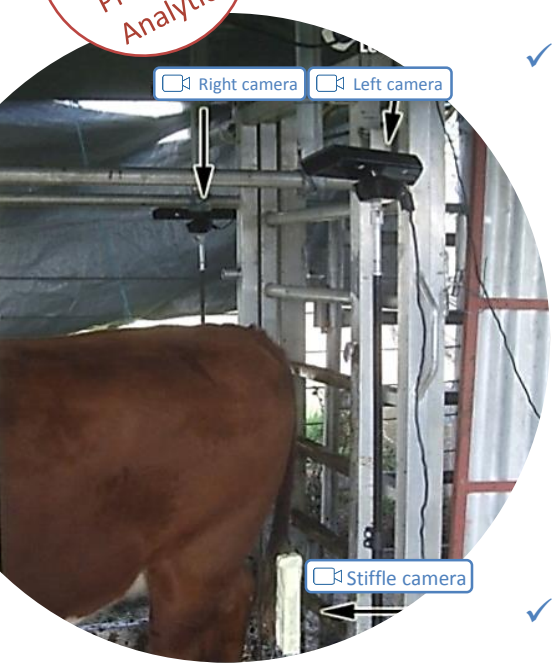
A new approach to live animal and carcass grading

Remote 3D Imaging Livestock Management

A New Efficient, Fast and Low-Cost Quantitative Live Animal and Carcass Grading Tool

Remote Sensing / Predictive Analytics



- ✓ Lifecycle monitoring on farm
- ✓ Predictive grading in live animals
- ✓ Use in post-slaughter process automation
- ✓ Live Animal and Carcase assessments
- ✓ Safe: operator doesn't touch the animal
- ✓ Easy to setup and maintain
- ✓ Grading performed within seconds
- ✓ Accurate, based on phenotype
- ✓ Repeatable, consistent, reliable results
- ✓ BeefSpecs compliant
- ✓ Developed by NSW DPI, MLA and UTS

Producers

- Welfare measures
- Improved management
- Condition scores
- Reproduction capacity

Saleyards

- Accurate stock assessment:
  - Muscle score
  - Fat content
  - Hip height
- Improved stock valuations
- Reduced transaction risks

Feedlots

- Reduced input costs
- Reduced variability in herd
- Meet market specs
- Optimised timing for sale
- Tailor drafts for different finishing regimes based on predicted performance and target market

Abattoirs

- Reduced transaction risks
- Quality control of boning-out
- Meet customer specs
- Open up new markets
- Estimated Retail Beef Yield
- Value based marketing

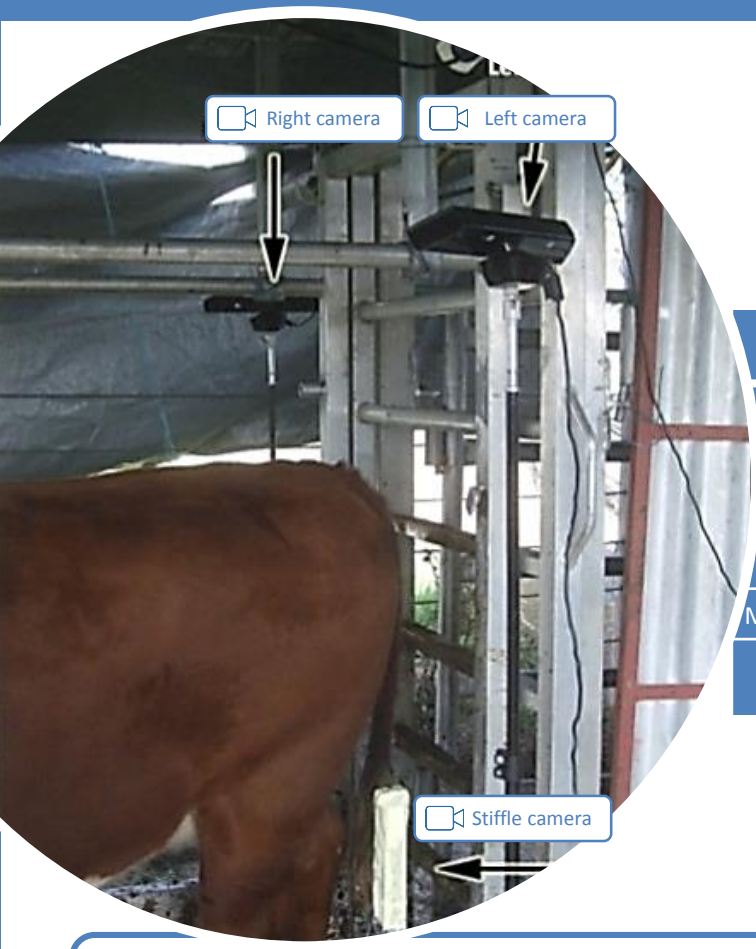
DEVELOPED BY:

UTS

NSW GOVERNMENT Department of Primary Industries

mla MEAT & LIVESTOCK AUSTRALIA

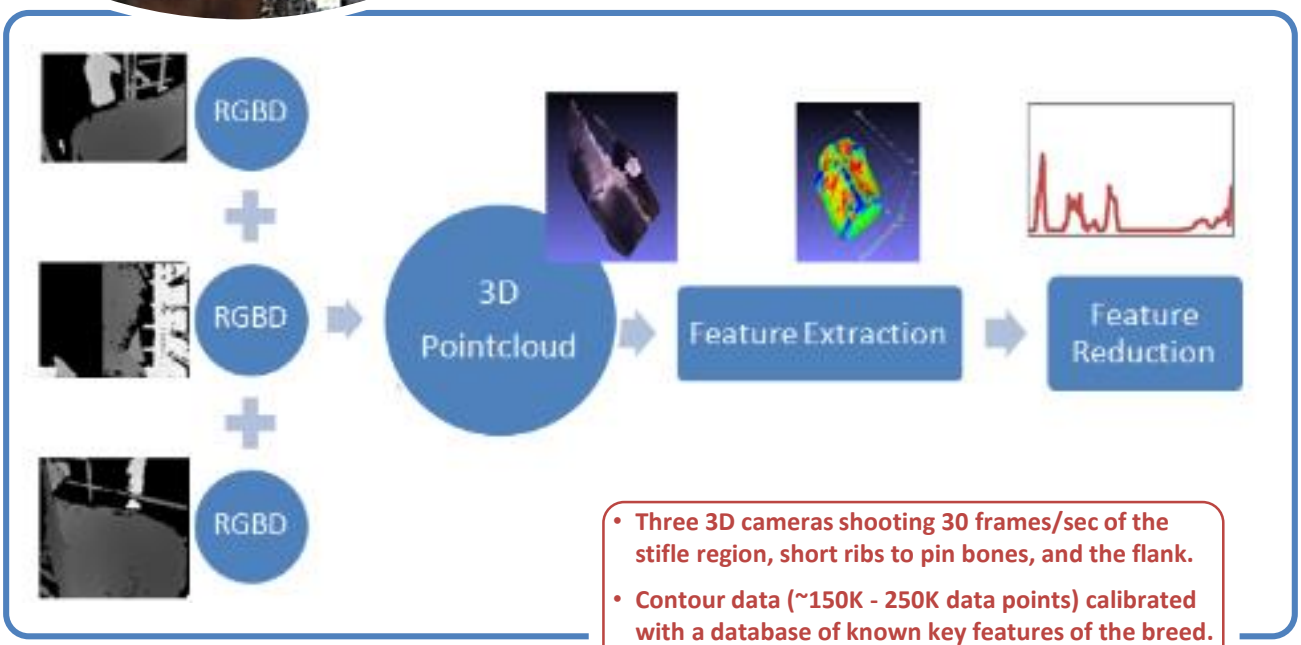
How it works



Accuracy of the measurements

	Steers		Cows	
	Mean Bias	RMSE	Mean Bias	RMSE
Rib Fat	0.14 mm	1.1 mm	1.1 mm	3.0 mm
P8 Fat	-0.93 mm	1.7 mm	1.1 mm	4.2 mm
Muscle Score	-0.35 units	1.8 unit	-0.08 units	1.4 unit

Non-contact measurement in steers accurate to 2mm on key grading features



- **Three 3D cameras shooting 30 frames/sec of the stifle region, short ribs to pin bones, and the flank.**
- **Contour data (~150K - 250K data points) calibrated with a database of known key features of the breed.**
- **Predictive Analytics is used to derive measurements of the underlying components of body composition.**

For more information:

Amanda McAlpine, Commercialisation IP Manager
P: +61 2 9463 9228
E: amcalpine@mla.com.au

Meat and Livestock Australia
Level 1, 40 Mount Street
North Sydney NSW 2060