The following notes provide a summary of the discussion and outcomes from the Forum. Copies of the presentations will be forwarded to Forum participants.

The morning sessions provided an overview of
- the National Primary Industries RD&E Framework (Bruce Kefford);
- where / how the Animal Welfare RD&E Strategy fits within this National Framework (Geoff Kroker);
- the major Themes within the Animal Welfare RD&E Strategy (Michelle Edge).

This was followed by presentations on Investor (Darryl D'Souza) and Provider (Clive Phillips) RD&E needs and opportunities.

Outline of investor priorities
- All of us are involved in the space and have views which are important to capture;
- Outline of the pork RD&E Strategy – focus on infrastructure and also capturing ideas from other forums and disciplines.
- Opportunity to avoid duplication
- We do not want a series of small projects – we need broader focus
- Efficiencies can be brought from collaboration as well as getting ideas and learnings from a number of people
- Example of High Integrity Australian Pork
- Example of pork existing priorities and the relationship with opportunities for cross sector funding.
- Examples of current movement within the Pork RD&E Strategy – for instance the commitment to the 3 year research position at the University of Melbourne with AECL and Chicken Meat RIRDC
- The importance of coming to the table and looking for priorities for collaboration going forward
- This model provides opportunities including the national recognition of RD&E and capability

Outline of provider perspectives
- What is important to RD&E providers? The ability to conduct research in priority areas, independence of research and the opportunity to publish, maintenance of capability.
- As a provider, there is thought around how many animals are affected, the degree of impact and community interest and the rigorous nature of the science
- The importance of capability – researchers are trained, and then if there is no continued funding, they are lost and the process starts again.
- Having access to industry is important also for applied research.
- Sensitivity around the issues can also be a consideration.
- Identifying priorities is done via consultation (as with the RDCs), through national forums like this one and through surveys and market research.
- Why are we doing research? To improve animal welfare, to improve industry profitability, satisfy Government and the community, to generate knowledge and to improve our scientific profile.
- The numbers of papers in animal welfare science are increasing.
- In examining the priority areas, there are many collaborative opportunities – and many have been in place for some time. There is significant overlap between the priorities of the various provider groups; there is collective thinking already e.g. animal welfare methodology, public attitudes, painful husbandry, housing and management.
- There are also new areas emerging such as reproductive interactions, productivity gains and nutrition, animal-animal interactions (as a follow on from human-animal interactions), industry structure and welfare provision and comparisons across ethics and morals.

- Novel methods for assessing welfare, welfare methodology in science and the development of field tools, effective state analysis and biological fitness parameters are further key focus areas.
- Independent research is a high priority.

Presentations were provided on possible collaborative project ideas on Themes 1 (Ian Colditz) and Theme 5 (Grahame Coleman).

Measuring Animal Welfare – Theme 1

Suggested Project 1:
- To further develop and refine affective state methodologies
- Experimental methodologies
- Interactive framework to assess affective states

Suggested Project 2:
- Methodologies for integrating multiple objective measures (physiology, behaviour, affective states) into an index
- Other opportunities are clear in terms of auditing and accrediting. The EU quality program provides an example of a different approach utilising animal behaviour and validated measures.
- The question of repeatability and accuracy around enforcement in the future will need some clarification. There are strengths and weaknesses in the system, but Australia could consider how a risk assessment might be developed.

Suggested Project 3:
- Risk assessment methodology for auditing accrediting and managing animal welfare
- This would be taking the outcomes of 1 & 2 and putting in a field setting.
- Another area for opportunity is the risk assessment – whole of life assessment approaches rather than a single point in time assessment – future auditing tools may also consider this.
- The next step is developing on farm measures, practical approaches and field tools, as some of the measures identified as important may only be able to be done in experimental settings.

Suggested Project 4:
- Framework for describing ethics of farming practices.
- Ethical domains are reasonably understood – but there may need to be a way that various 'highly specific claims' are better defined and aligned to the more dominant ethical criteria that are identifiable. Then we might be able to say that a particular product has identifiable claims that are better understood. This is a type of "ethical" quality assurance system – providing the purchaser of assurance that we are meeting community requirements. It might allow us to put into perspective the various issues e.g. health, sustainable agriculture, organic etc.

Public Attitudes, social science and community – Theme 5
Suggested project 1:
- Develop a public attitude monitoring scheme to monitor public attitudes to inform animal welfare policy development e.g. Eurobarometer
  - Community knowledge surveys show a low level of knowledge and highlight misleading information
  - Some are guessing – there is not that good a knowledge base from people expressing their views
  - Sources of information show the media is the major source of information on animal welfare
- Why are we interested in public knowledge – many reasons including impacts on market, perception of industry etc?
- Attitude monitoring – there are surveys that have been done – and there is a substantial generic component to this work – hence a good opportunity for collaboration
- This work will identify issues to be addressed in both industry and community
- Cross industry collaboration to identify key information required and targeted reporting requirements from stakeholders
- It is important to shift the research from just consumers to broader community views
- The approach provides the opportunity to monitor issues over time, provide information to Government.

Suggested project 2:
- Public attitudes – understanding public perceptions of farm animal welfare issues and develop strategies for managing public perception in the broader community and inform Government, industry and welfare groups.
- Recent work on sheep example.
- How do we consider approaching the public to get rid of mis-information OR shape information and public response?
  - A Eurobarometer style tool will permit issues and trends to be identified
  - Responding to these is complex and multi-faceted
  - Values do change both in the general community and in the livestock industries
  - Community perceptions are based on limited direct knowledge and experience
  - People attribute the media with having a significant influence
  - Perceptions tend to be polarised
  - Community knowledge may be mediated by opinion leaders – social arrangements in the community influence outcomes also.
- Changing perceptions – who to target, how to target, managing demographics, school children, farming community, adults, legislators
- Examining what stands out e.g. Codes of Practices, current knowledge on animal welfare, current practices.
- What to say – values that people relate to, ethical principles, duty of care approaches, - this may provide some convergence in attitudes between the general community and the various stakeholder groups.
- How to then achieve this "general education":
  - Generic mass media – a long term approach but has a significant role on changing values (large long term investment)
  - Opinion leaders – do they exist and who?
  - Individuals are the most effective for rapid change
    - E.g. extension activities or outreach from veterinarians
    - Who's for cats campaign
  - Education in schools – still important – but remains a challenge.
- In summary, it is important for the industries to carefully analyse community views and develop both short and long term strategies.
- Cross industry collaboration to identify target groups and content and clarify clear outcomes.

Table groups were asked to discuss the possible project ideas presented, provide feedback on these and to identify if there are other nationally significant project ideas that need to be considered. Based on Forum discussion 5 priority project ideas were identified – the Forum then broke into small groups to scope each of these project ideas.

Draft potential collaborative projects

Theme 1 Project 1
Project title: Identify and integrate measures of Animal Welfare that meet the needs of animals and society.
(note – this project started as two separate ideas:
1) improve methods for assessing Animal Welfare with a focus on developing a framework for interpreting the importance of affective state;
2) integrate and harmonise objective measures of Animal Welfare

Problem definition?	Consensus of measures – within science (first step) / then within community – across species.
Project objectives / outcomes?	Stocktake on current research (including international work) – stress models → validity. Desktop integration → identify range of measures.
Deliverables?	• Identify a range of scientific measures. • Where further research is required – on some approaches.　　　　Peer reviewed. (Research and Review). • Identify community (and industry) acceptance ← (nb. Can do this in another project).
Broad methodology / methodological considerations?	Stress models, multi-species (but limited – pigs, dairy cows, sheep, poultry, beef cattle); – fish (using international info). Whole of life measures. Published and in-progress research. Subsequent activities – further development of some approaches? -Validation in field. (- community stuff). - thresholds!
Timelines?	12 months.
Potential collaborators?	Australia & New Zealand
Potential investors?	Livestock R&D. Providers.
Indicative resources required?	People (in-kind) and $.

Theme 1 Project 2
Project title: Risk assessment methodology for auditing, accrediting and managing animal welfare

Problem definition?	Need an integrated system to measure and manage AW to improve AW and give community confidence that AW needs are monitored and met.
Project objectives / outcomes?	1. A practical measurement and improvement of AW. 2. Community confidence that AW needs are met.
Deliverables?	Methodology to develop an AW measurement framework which is common across sectors.
Broad methodology / methodological considerations?	1. Review existing risk assessment frameworks. 2. Characterise the measurements (likelihood, magnitude, duration) which will indicate which of the groups / systems are salient. (nb. this work should inform other projects such as under Theme 5)
Timelines?	Case studies. 18 months.
Potential collaborators?	1. Risk assessment CoE and UoM 2. AWSC 3. CSIRO
Potential investors?	RIRCs $
Indicative resources required?	Risk Assessment 18 months - ~$120k plus in-kind.

Themes 1 and 5 Project 3
Project title: Framework for describing the ethics of animal production practices.
(nb. This project was described as an overarching and a bridge between Themes 1 and 5)

Problem definition?	To establish the Framework for describing ethics of animal production practices as regards animal industries. Need to define parameters within the Framework across species and across types of production systems within an industry.
Project objectives / outcomes?	• Provide linkages to Industry and the consumer – takes a big picture approach. • Regarding Industry - potential for audits; setting Industry standards; and potential for marketing. • Regarding community / consumer – provide complete picture as regards purchasing decisions; educating consumer as regards agriculture; and illustrates the complexity of production issues. • Tool for improved communication.
Deliverables?	• Ethical matrix for agriculture. • Ethical matrix for each livestock industry. • Improved communication and education tool.
Broad methodology / methodological considerations?	• Focus group discussions. • Literature reviews. • Industry experts. • Experts in welfare, business, animal health, marketing. • Writing group (nucleus group) to supervise drawing together of matrix in a coherent and qualative fashion. • Development of template to use for other industries. • Test-run an industry. • Internet availability.
Timelines?	Two years.
Potential collaborators?	Nucleus group involving –Industry background (RDC and sector); Social science background; Marketing background; Animal welfare background.
Potential investors?	• Livestock industries internationally and nationally. • Animal welfare groups internationally and nationally. • Federal Government and State Governments.
Indicative resources required?	• Time! • ~$220k/yr.

Theme 5 Project 1
Project title: Developing a public attitude monitoring scheme (ie monitoring public attitudes to inform animal welfare policy development, similar to Eurobarometer).

Problem definition?	Collect data on drivers for community attitudes - • We don't know the drivers. • We cannot track them over time. • We don't track community knowledge and attitudes to husbandry practices. • We don't know attitude to aspects of commercial fishing and aquaculture.
Project objectives / outcomes?	1. Identify the drivers 2. Reliable indicators for the drivers and behavioural outcomes and demographic data. 3. Monitor change over time. 4. Establish a model of community attitudes and outcomes
Deliverables?	• Tailored report for each industry. • Extension and adoption tools for industry.
Broad methodology / methodological considerations?	• Advisory group (cross sectoral). • Recruit a survey consultant (to do the survey). • Develop the set of questions from new and existing sources. • Sample size 1,000 stratified (rural vs urban; gender etc) • PCA, correlation, descriptive statistics,
Timelines?	12 months initially. Thereafter 6 months. Every 2 or 3 years.
Potential collaborators?	All animal production industries UQ, Monash, others? State DPI's.
Potential investors?	All animal production industries, UQ, Monash, State DPI's, others?
Indicative resources required?	Year 1. Survey consultant ($50K). Advisory committee ($20K). Research Assistant (RA) ($60k). Approximately $20K from each Industry in Year 1. Chief Investigators in-kind (universities). Later years - Survey (~$50K). RA ($30k) i.e., approximately $12k. p.a. per industry (& DPI?) → equal contributions from each industry?

**Comment -What about identifying community opinion leaders? – some discussion as to whether this was possible – or that this overloads the project!

Theme 5 Project 2
Project title: Understand public perceptions of farm animal welfare issues in order to develop strategies for managing public perception in the broader community and to inform government, Industry and welfare groups on animal welfare.

Problem definition?	Management of public perceptions to maintain our social licence to farm, keep producing food, remain sustainable, maintain market access and productivity –ie. Key messages across all sectors in terms of how we do it / need to do it. Communication to the community to achieve this. Examples - Centre for Food Integrity Mike Cahill & Assoc.
Project objectives / outcomes?	To understand public perceptions so as to develop strategies for managing public perceptions to inform Government, Industry and welfare groups.
Deliverables?	To encourage a well informed debate, knowledge in the community to then have well formed views and therefore reasonable / robust policy development approaches that are credible and support industry and market access, economic status of Australia and community benefit.
Broad methodology / methodological considerations?	1. Through the broader project identify public perceptions, influences and knowledge and gaps that we need to influence. 2. From this, establish communications messages / methods to target identified groups. 3. Be able to validate claims. 4. Document and include communication channels and their specifics.
Timelines?	Dependent on 5.1
Potential collaborators?	Government, industry, AFGC, Food Strategy → linkage with industry advocacy groups to ensure integrated communications.
Potential investors?	
Indicative resources required?	Joining together with a consistent message on farming / primary industry. Been tried before – risk was getting tarred with brush of other industries.

NB – 5.1 and 5.2 = Understanding public perception and Develop strategy to manage – could (should) be collaborative.
- Should provide information which informs the livestock sector as a whole and should also drill-down to specific industry sectors. Needs to account for "bigger" platform of people and issues nationally.

General discussion:
- There is a need to define clearly the expectations around assessment and analysis of public attitudes and the outcomes that the various Industries hope to achieve in investigating this. There was support for the Eurobarometer approach, with assessment of attitude (public, farming community, schoolkids etc) and analysis of behaviours/knowledge.
- There was support for a national approach to education – but a clear need to identify from the attitude study on who to educate, coupled with analysis of the effectiveness of current programs.
- Several project "scopes" suggested the need for a steering group – discussion indicated that this could be the AW Strategy Steering Ctee or a subset of this Ctee – either way there could be one group with oversight of all projects to ensure alignment and interaction between the projects.
- People emphasised the importance of understanding the differences between consumers and wider community perceptions as well as "Duty of Care" (Industry) perspectives.

Final steps:
- The next step is for the steering committee to determine, based on the information raised, and outcomes recommended, how to pursue the further development of project ideas with potential investors and the methodology that could be used.
- The Forum advised on costs, scope, specifics as a large group, which can be used for the further development of project scope for each of the potential projects.
- Participants at the Forum will be included in future correspondence on the AW Strategy

Forum participants

Keith	Adams	AAWS
Mary	Bennett	DPIPWE Tasmania
Julie	Bird	RIRDC New Animal Industries
Dominique	Blache	University of Western Australia
Mick	Blake	Dairy Australia
Peter	Box	Facilitator
Ian	Colditz	CSIRO
Grahame	Coleman	AWSC Monash University
Teresa	Collins	Murdoch
Matthew	Crane	NSW DPI
Greg	Cronin	University of Sydney
Angus	Crossan	Australian Egg Corporation Limited
Laurie	Dowling	DEEDI, Qld
Darryl	D'Souza	Australian Pork Limited
Michelle	Edge	Australian Meat Processors Corp
Theresa	Frankel	La Trobe University
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Geoff	Hinch	Univ New England
Phil	Hynd	University of Adelaide
Lesley	Irvine	Tasmania Ins of Ag Research
Bruce	Kefford	DPI Victoria
Vivien	Kite	RIRDC Chickenmeat
Geoff	Kroker	DPI Victoria
Jane	Littlejohn	Australian Wool Innovation
Lindsay	Matthews	AgResearch NZ
Brett	McCallum	Pearl Producers Association / FRDC
Su	McCluskey	Council of Rural Research and Development Corporations
Pat	Mitchell	Australian Pork Limited
Bruce	Mullan	National Wool RD&E Strategy
Simon	Murnane	DAFF
Bridget	Peachey	Dairy Australia
Clive	Phillips	University of Queensland
Gary	Sansom	RIRDC Chickenmeat
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Kevin	Stafford	Massey University NZ
Keith	Walker	Meat and Livestock Australia
Peter	Wynn	Charles Sturt University