



FINAL REPORT

Meat Processing Engineering Network

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
1.0 EXECUTIVE SUMMARY	4
2.0 INTRODUCTION	5
3.0 PROJECT OBJECTIVES	6
This project seeks to:	6
4.0 METHODOLOGY.....	6
5.0 PROJECT OUTCOMES	7
5.1 Meetings	7
5.2 Agendas and presentations	7
5.3 Attendees and presenters.....	8
5.4 Developing communication channels between the parties involved	8
6.0 DISCUSSION.....	9
7.0 CONCLUSIONS/RECOMMENDATIONS	9
8.0 BIBLIOGRAPHY	10
9.0 APPENDICES	11
9.1 Appendix 1	Error! Bookmark not defined.
9.2 Appendix 2	Error! Bookmark not defined.



1.0 EXECUTIVE SUMMARY

AMPC has invested in technical innovation and the application of automation to some of the industry's most pressing human capital issues. New automated technologies offer significant opportunities to solve problems such as improving productivity, increasing yield recovery, Workplace Health and Safety (WHS) performance and attracting people with new skills into the industry.

Likewise, the increasing community and regulator demands for corporate environmental responsibility have meant that industry via AMPC has funded the development of engineering solutions to minimise environmental impacts in the meat processing industry.

Developing and implementing appropriate technology solutions is critical to improving a processor's bottom line and ensuring the sustainability of the industry. AMPC is committed to fostering creativity and supporting technology providers and processors to innovate and develop new safer, sustainable and cost-efficient solutions to problems affecting the industry.

However, investment in successful innovation also requires that new developments are communicated to and evaluated in a systematic way with industry practitioners. In addition to the current communication processes such as fact sheets, conferences, plant visits etc, the engineering networks now provide a structured consistent approach to industry extension.

The main functions of the Meat Industry Engineering Network are centered around:

- providing a communication channel for AMPC to keep industry abreast of the latest R&D projects in terms of proposals, progress and outcomes
- providing a forum for researchers, regulators, industry bodies and company representatives to discuss issues of mutual interest
- providing service providers with a way of displaying new and innovative products.

The Meat Industry Engineering Network this financial year consisted of two state based networks of industry engineering personnel, researchers, and trainers. The two meetings proved an efficient method of distribution of new information and providing a very useful forum to explain, explore and discuss new issues and innovations.

The network can in the future continue to provide a means of showcasing initiatives being undertaken by meat processing plants and related industries in the nominated areas of transformational technologies, new and modified products and process developments. Specific areas of interest include robotics, processing aides, automation and professional development opportunities for engineers and trades persons working in the industry.

Each meeting's agenda included:

- updates from AMPC contractors in relation to current projects
- displays of new technologies/developments
- agenda items requested by the attendees

- MINTRAC update, including current relevant training matter
- identification of professional development requirements.

Documentation was provided to attendees and included AMPC fact sheets and technical sheets from service providers and regulators as well as other written information as appropriate.

Each meeting was minuted and minutes distributed to attendees and other interested stakeholders on request. Presentations were be loaded onto the MINTRAC website (with permission from presenters).

Recommendations are made as part of this Final Report.

2.0 INTRODUCTION

The Meat Industry Engineering Network consists of industry personnel, researchers, regulators and trainers and represents an efficient method of distribution of new information for processing plant engineers. This network provides extension services for AMPC research and development activities. It gives plant-based engineering personnel, researchers and regulators a very useful forum to explain, explore and discuss new issues and innovations.

The network also provides a means of showcasing initiatives being undertaken by the meat processing industry in the nominated areas of transformational and disruptive technologies, new and modified products and process developments. Specific areas of interest include robotics, processing aides, and automation as well as refrigeration.

While new technologies such as automation offer significant opportunities to solve problems such as improving productivity, increasing yield recovery, remuneration levels, Workplace Health and Safety (WHS) performance and attracting people with new skills into the industry, lack of attention to the underpinning human capital requirements has inhibited effective roll-out.

Developing and implementing appropriate technology solutions is critical to improving a processor's bottom line and ensuring the sustainability of the industry. AMPC is committed to foster creativity and support technology providers and processors to innovate and develop new safer, sustainable and cost-efficient solutions to problems affecting the industry. This project seeks to address the human factors associated with such developments.

MINTRAC has run run two regional network meetings over a twelve month period.

Each meeting has included:

- updates from AMPC and MLA (when available)
- presentations from current researchers or in relation to current projects
- displays of new technologies/developments
- agenda items requested by the attendees
- input from regulators, as appropriate
- input from service suppliers, as appropriate

- MINTRAC update, including current relevant training matters
- identification of professional development requirements.

Documentation provided to attendees has included AMPC Snapshots and other written information as appropriate.

3.0 PROJECT OBJECTIVES

This project seeks to:

- serve as an extension arm for AMPC's technology project outcomes
- enhance the ability of the industry to manage its engineering responsibilities
- increase the dialogue between industry engineers and the researchers
- facilitate professional development activities to enable engineers to expand their skills and knowledge bases
- ensure the timely and structured dissemination of R&D outcomes throughout the industry.4.0

4.0 METHODOLOGY

The network provided a means of showcasing initiatives being undertaken by meat processing plants and related industries in the nominated areas of transformational technologies, new and modified products and process developments.

Each meeting included:

- updates from AMPC and MLA
- presentations from current researchers or in relation to current projects
- displays of new technologies/developments
- agenda items requested by the attendees
- input from service suppliers, as appropriate
- MINTRAC update, including current relevant training matters; and identification of professional development requirements.

All meeting documentation, including agendas and minutes, were submitted to AMPC for approval before distribution.

5.0 PROJECT OUTCOMES

5.1 Meetings

The objectives of the project have been addressed through the maintenance of an Engineering Network which centered on two state-based network meetings with invitees consisting of plant engineers, researchers, regulators and trainers. This approach was adopted as it replicated the methodology employed in the other AMPC industry networks. The concept of networks based on regional meetings has proved an efficient method of distribution of new information and providing extension services for AMPC research and development activities.

In this project the aim has been to provide plant-based engineering personnel, researchers and regulators with a useful forum to explain, explore and discuss new issues and innovations. The network also provided an opportunity to invite service providers or individual meat processing plants to showcase initiatives. The nominated areas included:

- robotics / automation training
- processing aides
- role of engineers in an Emergency Animal Disease outbreak
- ammonia refrigeration operation and safety
- CO² refrigeration.

Over a twelve month period, two meetings were held in Perth and Brisbane. All publications and materials disseminated to industry received approval by AMPC and branded as per the AMPC style guide.

5.2 Agendas and presentations

Each meeting included the following agenda items.

- updates from AMPC where applicable
- presentations from current researchers or in relation to current projects
- displays of new technologies/developments
- agenda items requested by the attendees
- MINTRAC update, including current relevant training matters
- identification of professional development requirements

Documentation provided to attendees included:

- AMPC SnapShots
- other written information to support presentations.

Each meeting was minuted and minutes distributed to attendees and other interested stakeholders on request.

The agendas and minutes for the two meetings form Attachment 1 to this Report.

5.3 Attendees and presenters

The first engineering meeting was held on the **13 September 2016 in Perth** and followed by a site visit to Talloman. This meeting was attended by 13 participants. Attendees at this meeting were given updates, presentations and information on the following topics.

- AMPC Presentation
- AMPC Technology provider presentation
- Ammonia Refrigeration progress report
- MINTRAC activities and services.

The second engineering meeting was held on the Wednesday **12 April 2017** in Brisbane at the Colmslie Hotel Morningside, Queensland. This meeting was attended by 14 participants. Attendees at this meeting were given updates, presentations and information on the following topics.

- Ammonia Refrigeration Training
- CO² Refrigeration systems
- Certificate IV in Industrial Automation and Control
- Maintenance manuals and technical training of tomorrow
- A plant engineer's role in the event of an emergency animal disease outbreak
- MINTRAC activity update.

Outcomes from this meeting have identified some areas that could be considered for the next round of engineering network meetings included:

- Energy and Water Model Design
- Leveraging Strategic Energy Products
- Rollout of automation training
- Circulation of job cards for engineers in an EAD outbreak.

5.4 Developing communication channels between the parties involved

MINTRAC has continued to develop the database of engineering contacts which has enabled ongoing communication and allowed information and updates to be sent out to engineers and maintenance managers. During the meetings, participants were encouraged to share contact details and develop a network amongst engineers and maintenance personnel within different plants.

6.0 DISCUSSION

6.1 Outcomes from Meetings

6.1.1 Future topics

Other issues that were requested as topics for future meetings included:

- Industrial automation and control training for engineers and tradespersons in the meat processing sector
- Seeing robotics in other industries
- CO² refrigeration training for industry and refrigeration technicians
- Augmented reality training manuals
- Advanced hydraulics and pneumatics training
- Energy and Water Model Design
- Leveraging Strategic Energy Products
- Professional development for engineers and certified refrigeration plant operation
- AMPC Environment videos.

6.1.2 Improving participation

Making plant visits part of the agenda in particular requires a great deal of preparation, to ensure they are in-keeping with AMPC's priorities for extension and are of general interest to the bulk of the engineers in the particular state.

Generally speaking the need to get agreement from the plant to have a site visit is aided if that was part of the original research agreement with AMPC.

The MI&QA and Training Networks have taken years to build and the Engineers' Network will require a routine and predictable timetable to restore ongoing contact with plant engineers particularly when it comes to states that have not had meetings for some time.

6.1.3 Increasing the effectiveness of R&D extension through the network

The critical issue is that if there is going to be an effective extension strategy associated with an R&D project it is essential that the R&D contract should bind researchers and or participating plants to extension activities as:

- site visits
- presentations at network meetings
- development of supporting videos and or webinars

In the event of this not being the case R&D contractors and participating plants are likely to be disinterested in the roll out through extension.

AMPC's continuing commitment to extension through the network is also essential. AMPC will need to continue identify the most promising projects for extension and to drive presentations and discussions at network meetings.

6.1.4 Professional development for engineers

The meetings identified the following opportunities for PD for engineering staff including:

- Ongoing professional development for ammonia plant operators
- Industrial automation and control
- Advanced hydraulics and pneumatics training
- The role of engineers in EAD outbreaks.

7.0 CONCLUSIONS/RECOMMENDATIONS

7.1 Locations and timing

MINTRAC should organise four network meetings each year. Meetings scheduled in WA and SA should be combined into joint Engineering and Environment meetings, since in these States these functions are usually carried out by the same person. The other two meetings should be scheduled for locations in southern Queensland and Victoria.

Actual locations should be determined in conjunction with AMPC by proximity and access to possible site visits.

Recommendation 1

It is recommended that four network meetings with joint environment/engineering being held in South Australia and Western Australia.

Recommendation 2

The entire year's schedule of meetings should be developed and advertised at the beginning of the program.

7.2 Professional development

It is essential that the network deliver training opportunities for plant engineering staff. This year the strong support for the ammonia refrigeration plant operator training is indicative of the real demand for PD.

This year the stand out demand from the industry is for accredited training in industrial automation and control for plant engineers and trades people. This training needs a critical mass of students in a particular region allowing the plants to access training at a reasonable cost. This also allows RTOs or technical experts to develop a viable delivery proposal.

In this instance, Queensland TAFE should be encouraged to make their Certificate IV Automation and Control available in a format that suits the industry and with the course structure applicable to meat processors. Given that AMPC is investing heavily in this area it is essential that plants have the technical skills to adopt and maintain innovations successful. Likewise, there is an ongoing need for professional

development in ammonia refrigeration operation.

The servicing of both these needs will strengthen the networks and foster interest in the networks from plants not yet participating.

Recommendation 3

It is recommended that the professional development needs of plant engineers and trades personnel should be considered by AMPC as a high priority program as without this the long term viability of many innovations will be compromised.

7.3 Activities between meetings

MINTRAC should engage in a variety of activities between meetings including:

- review of AMPC R&D outcomes as they become available
- liaise with researchers and service providers to identify initiative and changes in the area
- facilitate communication between engineers and respond to issues raised out of session
- facilitate participation in PD exercises out of session.

8.0 APPENDICES

8.1 Appendix 1

Perth Engineering Network meeting – Minutes

8.2 Appendix 2

Brisbane Engineering Network meeting – Minutes

Appendix 1

Minutes of the Engineering Network Meeting (Perth)

Minutes

Date: 13 September 2016
Location: Ascot Racecourse, Belmont, WA
Time: 10.00am – 3.00pm

1. Attendance and Apologies

Attendance

Ben Baron	Craig Mostyn Group (Talloman)
Mike Campbell	Fletcher International
James Darcy	Craig Mostyn Group (Talloman)
Peter Gill	Fletcher International
Nigel Goodchild	Wellard Meat processing
Mark Harper	UEEA Training Council
Jenny Kroonstuiver	MINTRAC
Gabriel Maritz	Harvey Industries Group
Brad Mathers	FFTITC
Steve Ogilvie	Dardanup Butchery Co
Clive Richardson	MINTRAC
Michael Riese	Cold Logic
Alan Simpson	Fletcher International

Apologies

Paul Oosthuizen	V&V Walsh
Dimitrios Georgakopolous	Swinburne University

2. AMPC Presentation

Short overview of AMPC R&D programs

Presented by Brad Mathers, AMPC

Main points and discussion arising

Brad provided an overview of the current R&D projects being funded by AMPC. These are also described in the handout tabled at the meeting.

3. AMPC Technology provider presentation

Presented by Michael Riese, Cold Logic CO₂ systems

Main points and discussion arising

- Michael provided a brief overview of the role, history and scope of Cold Logic; core business is food and beverage refrigeration
- Have put in Australia's first ammonia heat recovery plant in an abattoir
- Received funds from AMPC around harvesting post combustion CO₂ and liquification to be used as snow
- Plan was to collect CO₂, and if feasible integrate with an ammonia/CO₂ cascade system
- Project sought to combine harvesting and modification of CO₂ using existing equipment (such as cascade systems)
- Project sought to find out if the compressed CO₂ could be fed into the refrigeration cycle
- BUT: couple of issues – food grade CO₂ is used for snow – requires extra purification to be run through refrigeration system (much more expensive); and refrigeration system has an oversized plate heat exchanger
- So, came up with a system that uses another set of plate heat exchangers; still uses the existing refrigeration system
- ROI period is critical – preferred is less than 18 months; financial modelling considered a range of operational scenarios
- Final report has gone to AMPC and will be available on the AMPC website in the near future
- will be able to populate model with plant-specific data
- Quickest repayment estimated is 22.8 months – but varies according to the inputs
- Modelling has enabled the removal of variables which have minimal impact on ROI
- Found: original system is technically viable, but not financially
- Modified system is technically feasible and was used for the financial model
- Most useful ROI scenario was where size system is run at full capacity to cover current and future projected needs
- Still need to assess the technical risks of implementation, and the space requirements.
- Next step, which has now been contracted by AMPC, includes:
 - will address the technical issues and space requirements with an industry partner(s)
 - outcome will be to identify the high risk items
 - due to be finished by 1 May 2017
 - now confidently expect that results will enable abattoirs to reduce dependence on third party suppliers
- discussion - is some CO₂ still released in the end? **Yes**

4. Ammonia Refrigeration progress report

Presented by Clive Richardson, MINTRAC

Main points and discussion arising

- Clive provided an overview of why the ammonia refrigeration training had come about
- WA courses are scheduled to be held in Bunbury on 15-16 Feb; 15-16 March; 19-20 Apr; 17-18 May;

5. AMPC Technology provider presentation

Unfortunately Dimitrios Georgakoloulos was unable to attend the meeting.

6. MINTRAC Activities and services

Jenny and Clive provided a brief overview of current MINTRAC activities.

This included the showing of the short films on the Oakey Gas project and Greenhams use of pyrethrum briquettes in their boilers – these are part of a series of short films being prepared as art of the AMPC Environment Network.

7. Other business and wrap up

- Hydraulics and pneumatics (Harvey)
- Waste Water Skill Sets – some interest in these (most present were irrigating)

8. Information placed in folders

AMPC

- AMPC Core Program Overview
- 2014/1052 Fact Sheet: Absorptive capacity
- 2016/1025 WHS contractor management Snapshot
- 2016/1028 Disease and contamination library Snapshot
- 2016/1075 Distant Markets Snapshot
- 2016/1014 Engineering Network Snapshot
- 2016/1015 Meat Inspection and Quality Assurance Network Snapshot
- 2016/1016 Meat Processing Professional Development Program Snapshot
- 2016/1018 Development of Training and Assessment support materials – Snapshot

Other handouts

- Exercise Odysseus – Executive summary
- MLA Food Safety achievement report 2015-2016

9. Site visit – Talloman

The group attended a site visit at Talloman.



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Appendix 2

AMPC Engineering Network Meeting – Brisbane

Date: Wednesday 12 April 2017

Location: Colmslie Hotel, Wynnum Road, Brisbane

Time: 11.00 am to 3.00 pm

Minutes

1. Attendance

Attendance

Justin Caldwell	Oakey Beef exports
Ade Ariantika	Oakey Beef Exports Pty Ltd
Bruce Hall	Australian Country Choice
Scott Moloney	Primo Smallgoods
Steve Smith	JBS Australia
Greg Williams	Northern Cooperative Meat Company
Michael Bellstedt	Minus 40
Roger Lawrence	Vice Versa Reality
Julian Wade	TAFE Queensland Skills Tech
Clive Richardson	MINTRAC
Rachel Murrell	MINTRAC
Dr. Joan Lloyd	Animal Health Australia
Dr. Sam Beckett	Animal Health Australia
Bruce Hall	ACC

2. Ammonia Refrigeration Training Presentation

Presented by Clive Richardson and Michael Bellstedt

- Industry ownership of training, world search for best practice lead to RETA, alliance with RETA to use training materials, lined up with Units of competency, converted materials to SI and then meeting at Lismore to work out course structure
- Key refrigeration bodies in the USA, RETA fits in as home for technicians and operators, way for them to get together and train or network.
- RETA have two training courses – Certified Assistant Refrigeration Operator (CARO) and Certified Industrial Refrigeration Operator (CIRO). Four training books Basics, Advanced, Trouble shooting, US Standards
- Use RETA books one and two for Ammonia Refrigeration courses

- Two TAFE modules, RETA books one and two cover most of the requirements of the TAFE modules, updated RETA powerpoints, adding water treatment, developed new powerpoint material to complement RETA material and cover gaps.
- Current course structure – two day workshops over 8 sessions including exams, divided into part one (Introductory) and part two (more technical), align closely with the RETA books
- RETA books contain some inaccuracies, cover redundant technology, don't cover new technologies, some inaccuracies in homework so generally requires update
- Want to update resource material and slides and develop resource material on Australian standards (equivalent of RETA book 4)

3. CO² Refrigeration systems

Presented by Michael Bellstedt, Minus 40

- Why is CO² coming back and why is it a good idea? It's future proof – no phase outs, phase downs, taxes levies etc. lowest overall running costs (saves energy and fuel), cheapest way of generating refrigeration (20% to 50% cheaper than equivalent ammonia systems, easy and quick to build – skid system moving them around world) and safe (essentially non-toxic and non-flammable)
- Future proof – all synthetic refrigerants will be gone by 2035 because of regulations, phase down starts 2018 but they will be in short supply and very expensive before then
- The gases we use for refrigeration will be the first ones that we will need to get rid of
- CFCs all gone by 1998, HCFC phased out by 2016, HFCs still available but phase down from 2018, pure HFCs limited availability, not suitable for low temps in refrigeration, flammable, used in AC systems. HFO/HFC blends becoming available but expensive and short term option. Post 2035 uncertain future, limited availability, and expensive
- Options?
 - Ammonia – efficient, low cost but expensive to install, toxic, needs operator but suitable to large applications
 - CO² – efficient, cheaper, non-toxic and non-flammable, good for small applications to very large ones
 - Hydrocarbons – efficient, less well known, low cost but highly flammable, very good for small systems
 - Pure HFCs – not suitable for refrigeration system
- CO² - efficiency gain and cost reduction has made it valuable for large systems
- Types of systems – one stage (chilling only), two stage (chilling, freezing and hot water), heat pumps and chillers (can build chiller that generate cold water at one end and hot water at the other end), two stage with parallel compression (chilling, freezing, hot water and air conditioning)
- Hot climate suitability – can operate in subcritical or trans-critical modes depending on ambient conditions, use less power under subcritical but lose hot water, evaporative cooling is efficient even in hot weather, air cooled trans-critical operation for cooling only is not efficient in hot weather, even in hot climates a full CO² system is still more efficient than a Freon system and generate hot water, can also be more efficient than an ammonia system

- Systems all built as packages, can fit into containers for transportation and fitted straight into plant
- CO² systems ideal for generating hot water, very high discharge temperatures, up to 100% recoverable for heating water – all other refrigerants lose most of their heat by condensation
- What is the value to the meat processor? Can provide a range of cooling and heating services, for a medium processor all needs can be provided for by CO², not toxic, replaces refrigeration and boiler in one system, cost effective

Questions

Do they put anything in it so you know if there is a leak? Floor mounted sensors as CO² is heavy and will sink. Technically difficult to put odours in

What are challenges at the moment? Training, massive problem for industry, re-educating fridgees, training not subsidised by government

When will keep industrial suppliers start supplying these systems? Big guys will do it quickly but masses in the middle will be the problem

4. Certificate IV in Industrial Automation and Control

Presented by Julian Wade, TAFE Queensland Skill Tech

- Put together business case for automation project but when project is finished there is often a lack of skills to keep project running
- Easy to justify the automating the process, improved productivity, reduced labour costs, improved safety, payback often less than a year
- Once justified handed over to project team to set budgets and targets, generate the specifications etc. The contractor often designs and builds the systems and may provide training but doesn't get into the reasoning behind the systems so makes it difficult to maintain the system.
- Once project is finished need to maintain system, may have received training but don't have understanding of base skills and knowledge required to maintain system, solve problems etc
- Cert IV Automation and Control to address this problem - teaches first principles of automation including networking, VSD, PLC programming, SCADA, HMI, report writing and instrumentation
- Skills shortage identified. Being offered at \$400 for limited time (QLD residents only as funding through QLD government, QLD residential address needed) but normally \$15, 600, designed for electrician and engineers, takes approximately 12 months part time and 3 months full time, RPL also offered
- If you're looking at moving into this area now is the time to start training, before you actually start putting the technology into place – take long term looking at what type of training you might need
- Next semester starts in July

Questions

- How do we get it moved to other locations? Problem is that there is only three people registered to deliver this qualification so limits ability to deliver plus plants are spread around. As a collective you could look at delivery model and work out way to train within industry – part RPL or depending on skill level or divided up into parts
- What types of industries have gone through so far? Glass companies, food companies, soft drinks companies etc anything that is automated really.
- MINTRAC will talk to TAFE about how to run courses around country for meat processors.

5. Maintenance manuals and technical training of tomorrow

Presented by Roger Lawrence, Vice Versa Reality

- Virtual reality shaped by what we see in movies but reality is different. Virtual reality is told through stories either utopian or dystopian but not likely future
- Opportunity of virtual and augmented reality for business
- What is augmented reality? Heads up display, been around for about 30 years in digital, dynamic form. Used in military planes eg Top Gun, Marker based AR use phone camera to see 3D pictures from marks on paper, location based AR eg Pokemon Go
- In its purest form just digital information placed on a screen when you move phone or head image moved with it
- Holographic computing. When you mix digital with reality – thing you are looking at doesn't actually exist – when you move your head it stays where it is
- Virtual reality – been around for around 40 years eg flight simulators etc. World is entirely fabricated, total sensory immersion in a virtual environment. Now much cheaper to use than previously
- Augmented reality devices:
 - heads up devices in cars
 - detail – looking at things through devices, but not good if you need to be hands free
 - mobility – display through glasses means you can be hands free
 - fashion – wear as fashion accessories like sunglasses, ability to see marking etc
- Mixed reality or holographic devices are now available usually in headsets but also in phones. Mainly use batteries but can also be tethered to computer and power point
- Virtual reality – Mobile VR uses phone, Google cardboard (good but only for short periods of time) Samsung VR headset (uses phone), Google Daydream (best display at the moment, has controller so you can start navigating your VR experience)
- From training perspective can use it to put virtual reality experience into classroom situation in a cost-effective way. But have heat problems and power problem. Has 3 degrees of freedom but you can't translate forwards, backwards or sideways. If you want to move around you need to use your controller to teleport which can make people sick
- Fixed or tethered VR – PlayStation VR is only for gaming not suitable for training, Oculus has room scale VR which means you can walk around in a room and actually experience the room you are in, HTC VIVE has full room scale experience on a large scale. All have 6 degrees of freedom can go forwards, backwards and sideways
- Can now buy these sorts of devices today, around \$1000 and up

- Business drivers – every business wants to grow, reduce costs and comply with regulation. Where can AR and VR help business? Through the supply chain – strategic insight (reading lots of data), field services, sales and marketing, education and employee engagement
- AR replacing manuals – can look at three dimensional images rather than reading about it or looking at static images
- AR to record best practice – using best people to describe what they are doing on the floor and students in classroom experiencing it through VR
- AR for assessment and guidance – can do real time assessment criteria and provide guidance
- VR for critical immersive training
- Automated guidance
- Camera based algorithms

Questions

What is impact in terms of eye strain etc? Research being done on people that use their eyes a lot for work eg pilots etc. At the moment not deemed to be harmful or not more harmful than staring at a screen. However, in time problems may arise

From an educational perspective don't necessarily want to go to do a three-month course but do need to learn a particular skill so great way to upskill people, give them practical skills alongside theoretical skills.

6. A plant engineer's role in the event of an emergency animal disease outbreak

Presented by Dr Joan Lloyd and Dr Sam Beckett, Animal Health Australia.

- What is an emergency animal disease? Mainly exotic to Australia or endemic or emerging disease that have significance to an industry or a population
- Different categories for emergency diseases:
 - Category 1 disease have large impact on human health and/or environment and lessor impact on livestock industry
 - Category 2 disease don't have as much impact on people or environment but large impact on Australian meat industry (socio-economic impacts)
 - Category 3 disease don't have impact on people or environment but do have impact on trade
 - Category 4 diseases have impact on livestock industry
- Funding for controlling and getting rid of these diseases is split between industry and government depending on where impact is eg government funding higher for category 1 diseases and industry higher for category 4 diseases
- Australian Veterinary Emergency Plan (AUSVETPLAN) is the nationally agreed emergency animal disease plan managed by Animal Health Australia, made up of series of manuals and guidance documents
- Decontamination manual – gives overview of common decontamination agents, approved procedures eg for personal decontamination, premises, vehicles and machinery, etc
- Disposal procedures manual – things to be considered when disposing of waste including carcasses and animal products, discussion of burial etc

- Enterprise Manual for Meat Processing includes measures that can be taken by an abattoir when it is either outside the area where the outbreak is occurring, inside the area but not infected or suspected of being infected, or infected or suspected of being infected
- Declared areas and premises classifications:
 - declared areas are areas of land created under emergency disease legislation to help control an emergency disease outbreak – can follow council, regional or state boundaries but can change as outbreak progresses – two types, restricted area where disease is, control area is buffer between restricted area and area free of disease
 - premises classifications tell how risky premises are which then determines how they will be managed – within a restricted area or a control area every premise has a classification – all about the agent being on premises not necessarily infected animals
- Declared areas and premise classifications are managed by the state or territory Chief Veterinarian
- Everyone has to comply with their state or territory Emergency Disease Legislation
- For plants operating outside the outside area it is all about risk reduction and contingency planning
- Plants inside the infected area but not infected – even more important to look at risk reduction also need to look at whether they can keep operating
- Plants inside the infected area that are infected – scenario has 3 stages – investigation stage (suspect animal is found) alert stage (disease found) and operational stage (local animal disease control centre will tell the abattoir what it can and can't do)
- Need to keep in mind that emergency disease outbreak isn't always about the plant that has been infected
- Engineers responsibilities during an outbreak can be found in the AUSVETPLAN

Questions

How many events have we had where a site supervisor had to come and take over a plant? Not sure about meat plants but during recent prawn outbreak it happened. Also during equine outbreaks had lock downs at sites and events.

7. MINTRAC activity update

MINTRAC staff provided a brief overview of the AMPC Upskilling Scholarship.

The meeting closed at 2.45pm.