



AUSTRALIAN MEAT PROCESSOR CORPORATION

FINAL REPORT

Pathways to build the capabilities of maintenance engineers.

Project code:	2014/1028
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Date submitted:	January 2015
Date published:	June 2016

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Abstract

The continuing evolution of technologies and automation of plant in the meat processing industry has impacted strongly on the skills and staffing needs of maintenance engineering departments in industry. These changes have led to the need for more complex and sophisticated skills of maintenance engineering staff to maintain and service the new technologies.

The meat industry and meat processing plants need to take a more sophisticated and strategic approach to attracting, recruiting, developing and retaining maintenance engineering staff to ensure they have the skills they need, to do the work, to industry standards, now and into the future.

This project proposes a training pathway for maintenance engineers predominantly in the vocational education and training (VET) system largely embedded in the Meat Industry Training Package managed by MINTRAC (in addition to the current trades and university training) with the flexibility to be able to meet current and future training needs.

With some support, the training framework can be incorporated by MINTRAC in the current review of the Meat Industry Training Package within two years. MINTRAC can provide on-going management of the framework, together with support for training delivery in the same way that it does for training in the whole meat industry, thus ensuring the sustainability and continuing evolution of the framework.

Plants already struggle to resource their maintenance areas due to the limited numbers of skilled and experienced tradespersons and engineers in the regional locations of plants, and the increasing competition from other local industries such as mining and agrifood. The continuing and growing demand for more complex and sophisticated skills makes it even more difficult for plants to source labour with the skills they need.

The project provides guidance to maintenance managers in meat processing plants on what needs to be done at plant level to plan and meet maintenance workforce needs and attract, recruit, retain and develop maintenance staff to meet the maintenance needs of the companies.

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Executive summary

The continuing evolution of technologies and automation of plant in the meat processing industry has impacted strongly on the skills and staffing needs of maintenance engineering departments in the industry. These changes have led to the need for more complex and sophisticated skills of maintenance engineering staff to maintain and service the new technologies.

Consultation with industry and other stakeholders supported the need for maintenance personnel to gain more complex, frequently cross trade skills, particularly to service and maintain the increasingly automated industry. Currently there are extremely limited opportunities for maintenance staff to gain the skills they need. The training is often not available and if it is available it is not tailored to meet the specific needs of the meat processing sector. If the training is available, it is generally difficult for personnel to access because it is only available in large cities away from the plant. Frequently maintenance staff cannot be spared from their jobs to participate in training due to staff shortages and/or under-resourcing of maintenance areas.

There is no formal training pathway for maintenance engineering in the meat processing sector in the same way that there is a pathway for production staff. This project has identified the skills needs of maintenance staff and identified a training pathway for maintenance engineering from entry level to senior management that provides opportunities for maintenance staff to gain the skills they need currently and into the future.

The proposed training pathway is a pathway in the VET system, largely embedded in the MINTRAC managed Meat Industry Training Package providing proposed qualifications in maintenance engineering at Certificates II, III, IV, Diploma and Advanced Diploma levels as well as maintaining the traditional trades qualifications in areas such as electrical trades and mechanical fitting. Some of the proposed qualifications such as the proposed Certificate III Meat Processing (Maintenance Engineering) may be eligible for government funding, depending on the availability and rules for funding at the time. The proposed new qualifications are **not** proposed as 'apprenticeships' or 'trade' qualifications. They are traineeships in the meat industry designed and tailored to meet the specific maintenance needs of the meat processing industry.

The proposed training pathway enables maintenance staff to gain a progression of competencies from simple to complex, with opportunities to gain cross trade skills and build technical skills, broaden their skills across trades and acquire skills in newly emerging areas such as programming robots, biosecurity, animal welfare and ICT.

It is proposed that the packaging rules for the qualifications allow units of competency from any training package so that personnel have total flexibility to select units that give them the competencies they need to meet the specific needs of their plants. This total flexibility in selection of competency units means that personnel may gain skills across a variety of trades, for example they may have some skills across electrotechnology, mechanical, engineering, manufacturing, construction, plumbing and carpentry. This is particularly valuable for small processing plants who do not have sufficient work for fulltime positions in each of these trades and even if they did, may be unable to recruit to the positions.

The 'Guide to maintenance engineering competencies and training options' is a **guide** for maintenance and management staff in meat processing plants to use to understand the training pathway, range of units of competency and qualifications that may be undertaken. All of the units of competency included in the guide are currently available in the VET system, but some of the qualifications are not yet available. Plants may have difficulty accessing training delivery in the competencies due to their regional locations.

The proposed training pathway may be incorporated in the current review of the Meat Industry Training Package being conducted by MINTRAC. This would make the new qualifications available within about two years. MINTRAC would need some financial support to achieve this goal.

Additionally the industry may need some assistance with setting up meat industry specific training in some of the high priority areas such as ammonia refrigeration, PLCs, hydraulics and pneumatics. This support could be provided to MINTRAC to tender for RTOs to deliver meat industry specific units of competency in the specific topics in regional locations.

Having determined the training needs and methods of meeting those needs through a VET based training pathway in the MINTRAC managed Meat Industry Training Package, the focus of the project then shifted to the plant level.

Plants already struggle to resource their maintenance areas due to the limited numbers of skilled and experienced tradespersons and engineers in the regional locations of plants and the increasing competition from other local industries such as mining and agrifood. The continuing and growing demand for more complex and sophisticated skills makes it even more difficult for plants to source labour with the skills they need. Meat processing plants need to take a more sophisticated and strategic approach to attracting, recruiting, developing and retaining maintenance engineering staff to ensure they have the skills they need, to do the work, to industry standards, now and into the future.

All plant respondents to industry consultation reported skills gaps in their maintenance areas as well as staff shortages or under-resourcing in their maintenance engineering departments. In spite of this only a few of the larger plants take a systematic approach to planning how to go about identifying and meeting workforce requirements. In order to have any chance of meeting critical skills gaps, attracting and retaining maintenance staff, plants need to take a strategic approach to managing their workforce.

Two guides were developed for maintenance engineering managers and other managers in the plants to assist them to conduct the workforce planning process and identify and implement strategies to ensure plants have the right maintenance personnel, with the right skills, at the right time, to do the work required, and the work gets done to industry and plant standards. The two guides are the 'Workforce planning guide for maintenance engineering' and the 'Recruitment and retention guide for maintenance engineering in the meat processing industry.'

Objectives of the project

This project focuses on the changing roles of maintenance engineers in the red meat processing industry as a result of the continuing evolution of technologies on-plant and the need for maintenance engineers to gain the competencies required to service and maintain these technologies. The objectives of the project are to:

- Identify the job requirements of maintenance engineers and the competencies required to perform their jobs, particularly those related to the maintenance and servicing of new technologies
- Match these competencies with the current capabilities and qualifications of maintenance engineers and identify skills gaps and issues that affect the ability of maintenance engineers to undertake the tasks required of their jobs
- Identify training options for maintenance engineers to gain the competencies
- Identify issues that affect the attraction, retention and development of maintenance engineers and propose strategies to address them.

Products of the project

The outcomes of the project are three practical guides for meat processing plants targeting maintenance engineering managers, HR managers and other senior managers in the plants. The guides are:

- A guide to maintenance engineering competencies and training options
- A workforce planning guide for maintenance engineering
- A recruitment and retention guide for maintenance engineering in the meat industry.

Resourcing maintenance engineering



Methodology

The methodology conducted for the project included:

1. Literature review conducted of meat industry and other manufacturing industries publications to identify current and new requirements of maintenance engineers, existing units of competency, training options and issues
2. Four site visits conducted covering domestic and export meat processing plants to identify the main issues around competencies required, skills gaps, training options, upskilling and attracting and retaining maintenance engineers, and issues

that impact on the ability of maintenance engineers to undertake the tasks regularly

3. Survey conducted with plant management and plant maintenance engineers (with 17 respondents to the survey), to assess:
 - a. Maintenance engineering work in meat processing plants
 - b. Risks to the plant of new technologies in terms of access to and availability of replacement parts, competencies to undertake servicing and maintenance, risks to output resulting from technology being out of action, availability of alternative or back-up systems if technology is out of action, cost/benefit analysis etc
 - c. Current competencies required of maintenance engineers
 - d. Qualifications and learning opportunities for maintenance engineers
 - e. Issues associated with maintenance engineers undertaking training
 - f. Competency needs and skills gaps
 - g. Identifying future directions of new technologies
 - h. Identifying issues associated with attracting, recruiting, retaining and developing maintenance engineers and possible strategies to resolve the issues
 - i. The issues that affect the ability of maintenance engineers to undertake tasks on a regular basis
4. Consultation with eight plant maintenance engineers who comprise a steering committee on ammonia refrigeration
5. Interviews and consultation conducted with key stakeholders including new technology companies, MINTRAC, MLA, industry skills councils and tertiary education institutions to try to identify future directions of new technologies and future competency needs for maintenance engineers in regard to installation, maintenance and servicing new technologies into the future
6. Outcomes of the research, site visits, survey and consultation with other stakeholders, combined into the three products of the project which are the three guides for plant management .

Results and discussion

Overview of meat processing industry workforce

As at 2012, employment growth in the meat processing industry at 3.4% is lower than for all industries at 9.5%. Employment of meat boners, slicers and slaughterman (at 13,200) contracted by 9.9%. The declining numbers of production staff may in part be due to the increasing automation of production with a concomitant rise in the need for more highly skilled maintenance engineering staff to support the increasingly automated industry. The industry survey conducted in this project reflected that the majority of plants stated they were under-resourced and/or had skills shortages in their maintenance areas.

Employment in Meat and Meat Product Manufacturing is expected to grow modestly, by 1600 (or 3%) by 2015-16. This is well below the all industries average of 11% growth, but is similar to the rate of growth experienced by the industry over the past 5 years. Employment opportunities in maintenance engineering exceed those in production.

The age profile of the meat industry is slightly younger than average, with 32% of workers aged 45 years and over, compared with 38% for all industries. However, in line with the ageing of the workforce as a whole, the age profile of the meat industry workforce is becoming older particularly those in the meat processing sector. This is also true of maintenance engineering areas where there is a significant proportion of older tradespersons.

Research shows that 'the longer a person is with an organization, the more likely they are to stay. Length of service is one of the best single predictors of turnover.'¹ All plants surveyed reported a lower turnover of staff in maintenance departments than in production areas.

With the supply of labour slowing in Australia, an ageing population and increasing competition for labour² it is critical for companies to not only attract the people they need, but to nurture, support and develop them when they do. Securing and keeping maintenance staff to meet the company's needs is essential for the continuing sustainability of the meat industry.

Overview of maintenance engineering in the meat processing industry

Maintenance personnel in the meat industry are traditionally trade qualified, with long experience in the industry, with many having worked in a single plant for much of their working life.

All plants surveyed employ electricians and mechanical fitters. They may also employ other trades. In the industry survey, a 'typical' maintenance engineering team in a large plant was described as:

- 'Larger proportion of mechanical fitters
- Half as many electricians as fitters
- Only a few sites with plumbers and boilermakers
- Trade or diploma qualified supervisors and planners
- Degree qualified plant engineers (who are difficult to attract to the industry).'

Generally maintenance engineering departments undertake a broad range of activities across many trade disciplines not only encompassing those outlined above but also including areas such as building and construction, refrigeration, project management, environment, information and communications technology. Because of the broad range of activities across trades, personnel undertaking some of these activities may not have formal qualifications in the areas. They may learn the skills from other maintenance staff. This is particularly the case in smaller plants where maintenance staff are generally electricians and fitters who cover other areas as well, with work that requires licensed tradesmen from other disciplines contracted out.

All plants surveyed reported a lower turnover of staff in maintenance departments than in production areas. The reasons reported for the more stable maintenance workforce included:

- Older workforce with high attendance rates

¹ MINTRAC, Workforce retention and training Volume 1, Issue 1

² The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

- Recruitment of tradespersons who are generally seeking permanent employment as distinct from employing more transient groups such as those on temporary visas
- Personnel are settled in the town locally
- Job satisfaction associated with belonging to the maintenance team, the variety of work, the flexibility of their rosters, for example 4 days of 10 hour shifts with 3 days off/week and one rostered day off/month
- Reasonable pay rates (although one comment was that the salary is 'middle of the road' for tradespersons)
- Bonus schemes such as pay linked to gaining competencies or bonuses for keeping production downtime to minimum.

The challenges in maintenance engineering in the meat processing industry include:

- Changes in work associated with:
 - The continuing evolution of new technologies requiring more complex and cross trade skills
 - Changes in customer requirements such as value adding to products requiring new plant and equipment and associated skills
 - Increasing demands on maintenance staff associated with legal and regulatory compliance including QA, hygiene and sanitation, animal welfare, environment, work health and safety
 - More sophisticated approaches to maintenance management systems including preventive maintenance and management information systems
 - Upgrading of plant and equipment and different maintenance and servicing requirements for new plant
- Issues conducting maintenance work including:
 - Difficulties accessing plant without disrupting production leading to need to work out of normal production hours
 - Staff shortages and/or staff not skilled to do the work that needs to be done
 - Contractors and/or equipment parts not available on short notice
 - Under-resourcing resulting in focus on urgent work at the expense of planned preventive work
- Skills gaps with staff not having the skills they need to do the jobs and/or not being able to access the training they need to upgrade their skills
- A chronic shortage of tradespersons and university qualified staff in meat processing plants with all respondents to the survey reporting that they have current vacancies or are under-resourced.

Changes in maintenance work over the last 10 years

Respondents to industry consultation described the main changes in maintenance work over the last ten years as:

- Less reactive and more preventive focused ('but many plants don't have the staff to implement this')
- More 'remove and replace' rather than repair
- More systems focused and strategic
- New plant and equipment more reliable, requiring less maintenance and more preventive focused

- Increasingly compliance focused and driven eg WHS, environment, food safety, animal welfare, biosecurity
- Increasing demands on the knowledge and experience of electricians in automation and control
- Increasing awareness and the need to comply with safe systems of work
- Increasing use of computer maintenance management systems
- Improved contractor use, selection, management and supervision.

Industry respondents reported the outcomes of the changes in maintenance work are that many maintenance engineering personnel currently do not have the more complex competencies to meet needs, or any facility to continually upgrade their skills. There is no pathway to gain the competencies, in a systematic way that enables them to continue to add to their skills throughout their careers, eg progressing from basic to advanced skills in PLCs or pneumatics or hydraulics or gaining skills more broadly across trades to enable, say an electrician to gain say some mechanical skills to help with fault-finding etc.

Generally plants take an ad hoc approach to training whereby personnel do short courses such as first aid, working at heights, confined spaces etc. Some of the larger plants do conduct skills audits and endeavor to meet skills gaps but generally no systematic approach is taken to identifying skills needs of plants and developing training plans for each member of their team to meet the plant's needs. There is generally no systematic approach to enable continuing professional development.

Training is available for short courses but it is difficult to find suitable, industry specific training for more complex skills such as advanced PLCs and refrigeration. Frequently the only suitable providers for the more advanced skills are the new technology providers. Plant personnel are frequently not able to access the training they need if it is available, due to staff shortages, or travel and high cost of training. Additionally it is generally difficult to free plant personnel from their normal jobs to participate in training due to staff shortages and having to meet production needs.

Changes predicted in maintenance work in the next 10 years

Maintenance work in the next 10 years is predicted (by stakeholders in the project) to become increasingly more automated, with new more complex plant replacing more traditional older plant and:

- Increasing utilisation of intelligent systems of control and automation
- Updating of machinery to match production requirements including meeting customer requirements
- Improved reliability, fewer repairs required, more preventive maintenance activities
- Increasing use of network connections by external organisations to monitor, report, fault find
- Increasing reliance on external OEM service providers
- More automation and increased sophistication of plant leaving mechanical fitters and electricians behind.

The new plant is predicted to require less maintenance but more complex preventive maintenance and servicing requirements that require more sophisticated advanced and cross trades competencies of maintenance staff.

Stakeholders also predicted continuing demand to broaden competencies to manage newly emerging areas such as biosecurity, ICT and environment and project manage large projects.

They also predicted that maintenance will be managed more strategically based around computerized maintenance management systems (CMMS) providing more control over work initiation, planning, implementation and reporting through work order and reporting systems.

Skills gaps

The main gaps in skills in maintenance teams reported in the industry consultation included gaps in:

- Meat industry plant and process skills
- Generic skills
- Specific technical skills in respective trade areas particularly advanced skills in areas
- Cross trade skills
- Leadership and management skills
- Strategic systems skills.

Familiarisation with the meat processing industry

The majority of all respondents reported the need for maintenance personnel to have comprehensive knowledge and understanding of meat industry plant and processes. For example they cited the need for understanding of processes such as rendering, waste water treatment, refrigeration, food safety, shelf life, eating quality, edible and inedible areas of plant and cross contamination.

Currently meat industry and plant knowledge for maintenance staff is gained in an ad hoc informal manner generally through a buddy system until a person is 'proficient' in the area.

Generic skills

Industry respondents reported a poor grasp of generic skills required by maintenance personnel. These skills included:

- Problem solving
- Risk assessment and risk management
- Trouble shooting and fault finding
- Project management
- Systematic approaches to work
- Data management and report writing
- ICT skills

Specific technical skills in respective trade areas

Industry respondents reported gaps in advanced skills in specific technical areas in respective trades including:

- Operation, maintenance, fault finding and managing problems in refrigeration
- Basic and advanced PLC skills and motor control
- Pneumatics
- Hydraulics
- Steam utilisation.

Respondents described the need for progression from trade level skills in specific trade areas to advanced level skills, eg for electricians to gain advanced PLC skills.

Some training is available in some of these areas but the training is not tailored to meet the needs of meat processing plants. Respondents particularly identified the need for training tailored to meat processing industry needs.

Cross trade skills

Industry respondents drew attention to the broad range of maintenance activities across many trades that need to be carried out in meat processing plants. Plants may only hire tradespersons who are electricians and mechanical fitters so they don't have qualified tradespersons in all the areas that work is required. Activities in some trade areas such as construction or carpentry may not be complex. Generally staff learn the skills from other tradespersons but they do not receive formal training in the areas.

There is a strong need for the industry to not only have trades qualified personnel but to also tailor a training pathway in meat processing for maintenance engineering staff that gives total flexibility in the selection of competencies to enable personnel to gain the specific maintenance competencies required in their plants across all trades. Staff already carry out these activities, generally without formal training. The proposed pathway would enable the staff to undertake training in the areas and gain the competencies to industry standards under all contingencies. The pathway would incorporate entry level training at Certificate II across a variety of diverse areas to qualify as trades assistants and enable them to undertake the semi-skilled tasks such as spot welding or repairs to stockyards that frees the tradespersons to do the more complex tasks. The flexibility in selection of competencies also suits the smaller processing plants in particular who can train staff in the specific competencies they need in their plants. The proposed Certificate III Meat Processing in Maintenance Engineering would not be a 'trade' qualification but would provide an opportunity for maintenance staff to gain more complex skills and/or broaden their skills base across trades.

Leadership and management skills

Maintenance staff are generally appointed to supervisory positions because of their success in their trade. They are generally not provided with training in supervision of staff. Industry respondents identified the need for leadership and management skills including:

- Team leadership
- Supervision skills
- People management skills
- Team performance management for supervisors.

This is particularly important as research shows that ‘one of the reasons why people leave is because they are dissatisfied with the supervision they receive.’³

Training

The majority of respondents described difficulties associated with their maintenance staff undertaking training. These issues included:

- Staff shortages mean that staff can’t be freed for training
- Not able to release staff from their duties to train. ‘No plants can carry additional capacity to cater for training time’
- Trainers coming to site want large numbers attending – ‘haven’t got the numbers and can’t spare the staff to participate in training’
- Training not available
- Training expensive and no funding available for training
- Training too far away
- Training isn’t industry specific and ‘we don’t get the outcomes we need from the training’
- Some staff don’t want to gain more qualifications and skills.

The types of training reported in the industry consultation were frequently short courses in areas such as CPR, first aid, confined spaces, safety awareness, fire fighting, extinguisher use, breathing apparatus, low voltage training.

Other courses that were cited related to some technical areas such as boiler operators, refrigeration plant operators, hydraulics and pneumatics.

Ways of making it easier for staff to access on-going training included:

- Having resources available to cover absences while training
- Conducting skills audit and being more strategic about identifying and meeting skills needs
- Having specific, agreed and committed training plans
- ‘Conducting training on site specifically tailored to meet industry needs so we can see the real benefits of the training’
- Having accredited training
- Training out-of-hours
- Training conducted locally to make it easier for staff to attend
- Keeping the cost of training as low as possible so there is more chance of justifying training (eg staff not having to travel long distances for training)
- Offsite training
- Industry blocks of training at set dates.

In general the most preferred option for delivery of training was onsite, industry specific training with the opportunity to apply learning to their own plant and equipment. This is consistent with training models currently favoured in the industry for production staff and proposed by MINTRAC for areas such as refrigeration.

Respondents also agreed that the methods of training depended on needs and ‘all methods have their place.’ The methods of training reported included:

³ MINTRAC, Workforce retention and training Volume 1, Issue 1

- Specific industry related training in set blocks delivered regionally
- Small groups preferable
- Online okay
- Offsite preferable (primarily because they are not called back to operational work)
- Mentoring
- Outside expertise.

Maintenance networks

All industry respondents supported networking with other maintenance engineering staff in the meat processing industry. Maintenance personnel from small companies in particular are keen to have the opportunity to meet and build contacts with other plant personnel to discuss and resolve particular industry and plant related issues. They also support site visits to see how other companies are managing areas. Specific items put forward for networking topics included:

- Meetings with suppliers of new technology
- Water processing and waste water treatment
- Power management
- Refrigeration efficiency
- Value-adding
- Robotics
- PLCs
- Cleaning and waterproofing technology.

A few reservations were expressed with proposed maintenance networks:

- Networking opportunities need to be focused on real outcomes to resolve particular issues
- They need to be more than a talk-fest
- Business confidentiality may inhibit meetings.

Maintenance engineering training pathway in the VET system

The results of industry and other stakeholder consultation reflects a crisis in equipping maintenance engineers with the competencies they need to be able to continue to meet the maintenance engineering needs of meat processing plants currently and into the future. In order to address this crisis it is proposed to incorporate maintenance skills needs into the MINTRAC managed Meat Industry Training Package thereby establishing a VET accredited, nationally recognised training and qualifications pathway for maintenance engineering personnel that gives them options to meet their competency needs from entry level to senior management. This would provide maintenance engineering personnel with similar options for continuing development that are already available to production personnel in the industry.

MINTRAC is currently conducting a review of the Meat Industry Training Package over the next year and the proposed options and pathways for maintenance engineers could be incorporated into this review. In order to comply with the requirements of the review there needs to be extensive consultation across the industry and with other stakeholders to demonstrate that the proposal meets industry and other stakeholder needs. The resulting options would then be submitted for recognition as part of the review of the Meat Industry Training Package. With government approval the qualifications could be in

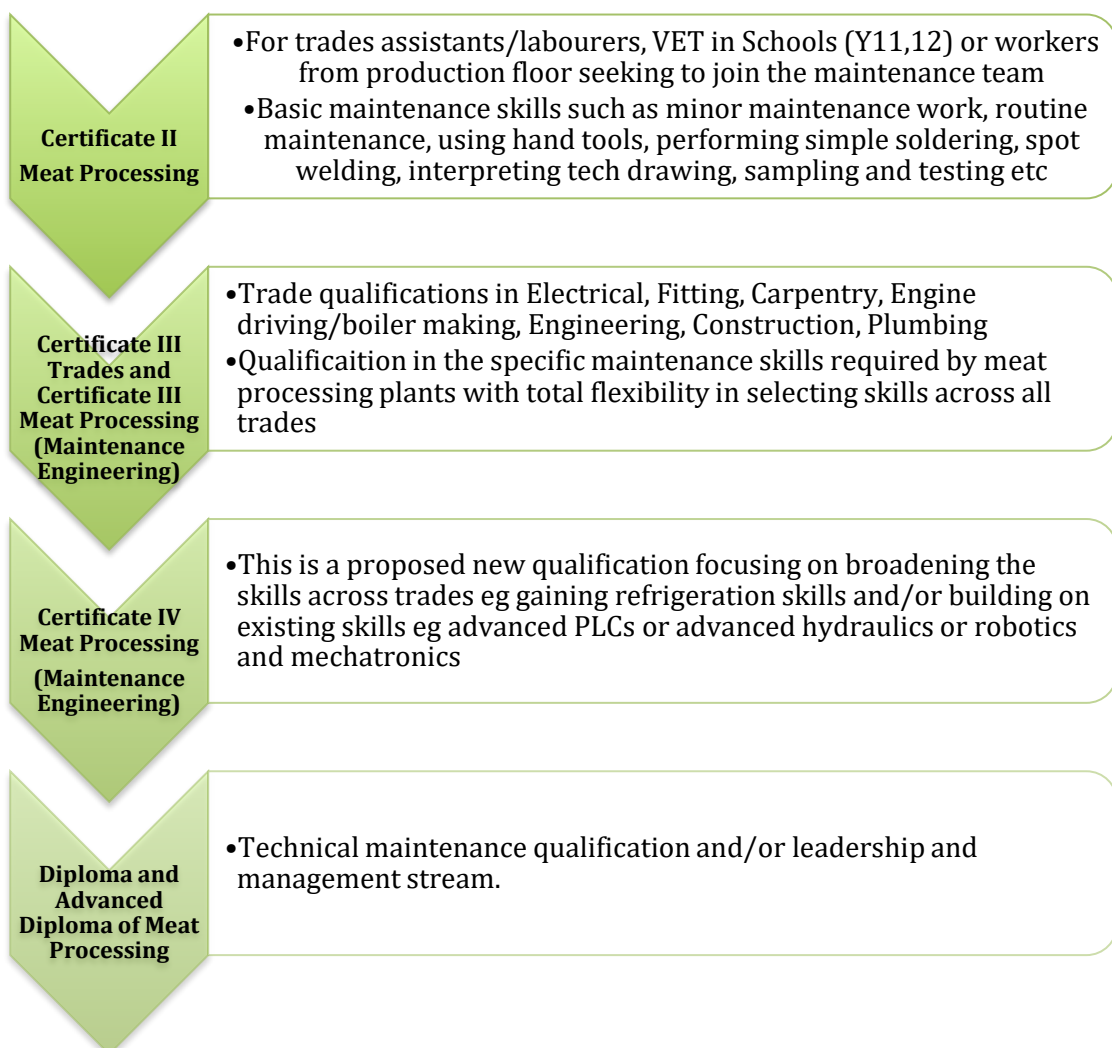
place in about two years. Once they are recognized, personnel could gain qualifications and may be eligible for government funding to assist meeting the costs of training.

In the meantime the majority of the competencies needed by the industry are already available in other training packages such as the manufacturing, electrotechnology and energy training packages. These units of competency may be utilized by the meat processing industry as stand alone units to gain the competencies and/or as part of qualifications in other training packages (eg for trade or post trade qualifications as electricians etc). Currently some units may be used to contribute to qualifications in the Meat Industry Training Package which currently allows several units from other training packages to be used as part of the requirements for qualifications.

While the majority of units of competency needed by the industry in maintenance engineering are currently available, the qualifications offered in other training packages (other than the trade qualifications) do not meet meat industry needs. The qualifications need to be specifically tailored to meet industry needs and this can be achieved through changes to the Meat Industry Training Package.

Proposed training & qualifications path for maintenance engineering

An overview of the proposed training pathway for maintenance engineers in the industry follows:



The industry currently has difficulty attracting personnel to work in the industry. This pathway provides formal training and qualifications for entry to maintenance work in the meat processing industry making it more attractive for personnel to join the industry, and ensuring that personnel entering the industry gain the competencies they need to work in the industry, to industry standards.

Personnel seeking to work in the industry may enter the industry into a maintenance stream through:

- Completion of a Certificate II in Meat Processing or commencement of a trade qualification in years 11 and 12 at school, conducted in association with the plant and the local high schools and/or TAFE college
- Employment as a laborer/trades assistant and completing the Certificate II Meat Processing as a traineeship (not currently available)
- Employment as an apprentice in a trade, with the apprenticeship completed at the plant, and with training conducted by a registered training organisation (RTO)
- Employment as a qualified tradesperson.

The proposed Certificate II conducted in association with the local high schools is currently only available for commencing an apprenticeship in maintenance positions. This pathway enables plants to attract local young people to work in their plants and gain competencies and qualifications before they are employed in the plants.

The proposed Certificate II Meat Processing majoring in maintenance engineering provides a formal training option to support personnel seeking to join maintenance areas in the industry or personnel already working in the industry seeking to transfer from production to maintenance areas to become trades assistants. There is currently no qualification available for maintenance labourers/trades assistants. These positions are important positions because the trades assistants undertake the simpler, semi-skilled tasks that tradespersons would otherwise have to do and so free up the tradespersons to do the more complex tasks. It is also easier to attract personnel locally for these positions and train them on the job. However, in many cases trades assistants have not had formal training or recognition for their competencies and it is important that their competencies are at the level required by the industry.

There will be two options at Certificate III for maintenance engineering. The Certificate III trades qualifications will continue in each of the respective trades required by plants. Plants may recruit apprentices directly and access funding to support them through their apprenticeships working in the plants and attending training through an RTO as required. The additional option that it is planned to make available, is a Certificate III Meat Processing (Maintenance Engineering). This is a proposed new qualification specifically tailored to meet the maintenance engineering needs of meat processing plants. While personnel do not gain a 'trade' qualification they may gain a broad range of skills across a number of trades that are needed in their plants. Maintenance engineering staff already undertake many of these activities without formal training. The flexibility in selection of competencies also suits the smaller processing plants in particular who can train staff in the specific competencies they need in their plants.

A qualification at Certificate IV Meat Processing (Maintenance Engineering) is critical to the meat industry to provide a pathway for maintenance personnel to gain post-trade competencies to meet the diverse needs of plants. Post trade qualifications are needed in each of the major maintenance areas providing for advanced skills in each respective

technical area (ie vertical progressions). Alternatively personnel may select to build their skills horizontally by broadening their skills across trades. This means they will need to gain competencies in other trades at more basic levels. Additionally, personnel may seek a combination of acquiring more complex skills in their own trade, gaining basic skills across trades and/or including some leadership and management skills in their post-trade qualifications. All of the competencies required by plants need to be identified and incorporated into the qualification at Certificate IV.

Meat industry personnel can currently gain Certificate IV qualifications in process manufacturing or electrotechnology or other similar industries. However no single industry covers all the competencies the meat industry needs and generally the requirements for these qualifications are more stringent than the requirements for the meat industry qualifications. For example, the Certificate IV in Process Manufacturing requires competencies in 26 units whereas the Certificate IV in Meat Processing requires competency in a total of 18 units (where 10 are core units). Meat industry personnel are unlikely to gain the qualification if they are required to do 26 units particularly if this means they have to do units that are not a priority simply to be able to meet the requirements for the qualification. The proposed Certificate IV Meat Processing (Maintenance Engineering) is a new qualification designed to specifically meet the needs of maintenance engineering in the meat industry.

All of the qualifications in the proposed maintenance pathway require access to the extensive range of units of competency needed in a large number of other Training Packages across many trades for maintenance and engineering in meat processing plants. These include:

- Metal and Engineering Training Package
- Manufacturing Training Package
- Electrotechnology Training Package
- Sustainability Training Package
- Construction, Plumbing and Services Training Package
- Resources and Infrastructure Industry Training Package.

The easiest way to enable access to any units of competency required for maintenance engineering in meat processing is for the packaging rules for the maintenance engineering qualifications in the Meat Industry Training Package to allow any units from other training packages to be utilised (at the correct level). This allows for total flexibility in selection to meet plant and person needs and can potentially meet future needs that enable personnel to pick up any skills in any other area that may be needed.

While allowing personnel to pick up any of the hundreds of units available in the VET system, it is difficult for personnel to locate the units in the skills areas they want across all of the training packages. For this reason a 'Guide to competencies and training options for plant maintenance engineers' has been compiled that provides a pathway and list of possible units of competency for each of the major maintenance engineering areas in the industry. This guide is attached as Appendix one.

Another option for the proposed new qualifications is to import into the Meat Industry Training Package all the units from other training packages that may be required in maintenance in the meat processing industry. This would involve identifying all the units required by maintenance engineering departments and gaining industry support and

regulatory endorsement of the Package with these units. This option makes it easier for RTOs, plants and personnel seeking to undertake the training to locate the units they need but risks some units being missed and therefore not available. It also does not provide an option for incorporating units into the future.

Some of the units of competency from other training packages needed by maintenance in the meat processing industry are not suitable in their current form. For example, the ammonia refrigeration units include both refrigeration and air conditioning in all the units. This means ammonia refrigeration personnel in the meat processing industry cannot gain the units because they don't do air conditioning as well as refrigeration. MINTRAC needs to modify the existing units to remove the air conditioning parts of the unit. This will require MINTRAC to revise the units and re-name them as ammonia refrigeration units for the meat industry and gain endorsement of the units as part of the review of the Meat Industry Training Package.

Additionally some units of competency for maintenance engineering in the meat industry do not currently exist in any training package. For example this appears to be the case for basic and advanced programming of robots. MINTRAC will need to develop these units and gain endorsement of the units as part of the review of the Meat Industry Training Package.

Training delivery

The delivery of the training remains a challenge. The issues associated with training delivery include:

- Small number of personnel from each plant receiving training at any time making it not cost effective for RTOs to travel to the plant to conduct training
- Difficulty freeing all maintenance staff at the same time to attend training onsite
- The 'remote' location of plants away from RTOs
- The need for maintenance personnel to travel often long distances to undertake training
- The high cost of training
- Government funding for traineeships generally only allowed for a single traineeship
- There may be no suitably qualified RTO who can deliver the training
- The only personnel with competency to deliver and assess the training may be the suppliers of the plant and equipment and they need to be paid to deliver the training
- Difficult for maintenance personnel to attend training off site because they cannot be spared from the plant due to shortage of staff
- Difficulty freeing maintenance staff for training when RTO comes to site because the staff can't be spared from their work
- The absence of learning resources or the unsuitability of available resources to meat industry requirements.

These challenges are similar to those that had to be addressed when the meat industry first introduced formal training in the industry. Creative solutions such as partnerships between suppliers and RTOs and a touring representative of an RTO conducting training regionally, may be negotiated working in association with MINTRAC.

Industry feedback supports the current model of MINTRAC taking a strategic approach to deliver the training and the RTOs offering meat industry specific blocks of training in regional locations across Australia. This ensures plants receive the training they need that is specifically designed to meat industry needs.

Workforce planning

All plant respondents to industry consultation reported skills gaps in their maintenance areas as well as staff shortages or under-resourcing in their maintenance engineering departments. In spite of this only a few of the larger plants take a systematic approach to planning how to go about identifying and meeting workforce requirements. In order to have any chance of meeting critical skills gaps, attracting and retaining maintenance staff, plants need to take a strategic approach to managing their workforce.

The workforce planning process includes:

- Analysing the existing workforce and the current skills gap in the workforce
- Identifying additional needs arising from the company's business plan, eg implications of replacement of a boiler or installation of a robot on the production line
- Determining how to meet skills gaps – by training up existing staff, by recruiting new staff or by out-sourcing specific needs
- Developing a plan to meet workforce needs that will generally combine the options of training current staff, recruiting and outsourcing
- Implementing the plan by undertaking the recruitment process, developing training plans with current staff as part of the performance management process and/or organising contractors.

Guidelines for conducting the workforce planning process are set out in the 'Workforce planning guide for maintenance engineering' developed as part of this project.

Recruitment and retention of maintenance staff

With the supply of labour slowing in Australia, an ageing population and increasing competition for labour⁴ it is critical for companies to not only attract the people they need, but to nurture, support and develop them when they do. Securing and keeping maintenance staff to meet the company's needs is essential for the continuing sustainability of the meat industry.

Plants also need to understand their workforce and be aware of the factors that impact on their ability to attract, recruit, develop and retain their staff and identify and implement strategies to address those factors so that they have the best staff to do their work to industry standards and they stay with the company.

Attracting maintenance staff

Issues with attracting staff

In spite of the reasonably low turnover of maintenance personnel reported by industry respondents, the main issues with attracting staff include:

- Poor image of the industry – the meat industry is the 'last resort for employment'

⁴ The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

- Cultural fit – finding suitable, motivated, experienced people that want to work in the industry
- Working conditions are not always attractive to people from outside the industry
- Requirements to work in holiday periods, eg over weekends when there is no production and over Christmas period when there is maintenance shutdowns
- Regional location of plants in low population areas reducing the availability of suitable people
- Salary is reasonable but considered ‘middle of the road’ for tradespersons
- Competition with other industries such as mining and agrifood for limited pool of tradespersons
- Extremely difficult to recruit tradespersons with experience in any industry let alone with meat industry experience. (Lack of meat industry knowledge and experience is cited as a major issue).
- Extremely restricted options for career progression. There are limited options for progression to supervisory and managerial positions and limited options for progression along technical career paths
- Little formal career planning, succession planning, workforce planning, performance management and training planning and delivery except in some of the larger plants
- No training pathway for maintenance personnel providing them with options to continue to gain skills vertically or laterally throughout their careers.

The incentives for attracting staff

The incentives that help attract personnel to maintenance engineering in meat processing plants include:

- Financial security, stability and predictability
- Training
- Some opportunities to progress in the organisation in technical and leadership roles
- Offering flexible working practices such as flexible scheduling of rosters eg 4 x 10 hour shifts with 3 days off/week and one rostered day off/month
- Living locally

The strategies for attracting staff

The strategies for attracting staff to work in maintenance engineering in meat processing plants include:

- Building the plant and meat industry profile
- Building the plant image as employer of choice in the local area
- Workforce planning that clearly identified workforce needs and plans how to meet those needs
- Establishing relationships with the local community
- Planning your recruitment strategies

Recruiting maintenance staff

Objectives of recruitment

JBS succinctly describes the purpose of recruitment as follows:

'Recruitment needs to be focused on identifying suitable people early on, with the right attitude, willingness and ability to learn. Then implement a training plan to give them the skills to do the job we need them to do.'

Targets for recruitment

Interview and survey responses cited a range of options for recruitment of maintenance personnel including:

- Establishing partnerships with the local schools and RTOs such as TAFE Colleges for years 11 and 12 students to undertake VET in Schools programs leading to a Certificate II majoring in maintenance and/or progressing to a trade qualification in electrotechnology or mechanical fitting and working in the meat processing plant
- Recruiting apprentices and new graduates and continuing their training and development throughout their careers in the industry
- Targeting adult apprenticeships either for internal staff to move from production to maintenance or recruiting from external sources
- Targeting tradespersons in local businesses/industries that are experiencing a downturn or closure, eg mining industry, vehicle manufacturing industry
- Internal recruitment encouraging production staff to join the maintenance team and complete a Certificate II as a trades assistant or commence an apprenticeship
- Targeting specific overseas locations for tradespersons and sponsoring them to come and work in Australia.

Methods of recruitment

Methods of recruitment cited included:

- HR, local papers and SEEK
- Using recruitment agencies or labour hire companies
- Word of mouth
- Internal recruitment
- Recruitment through relationships with training providers such as local schools, TAFE Colleges, Universities

Incentives to join maintenance and stay in the meat industry

Incentives are needed not only to encourage recruits into the meat industry but also to retain the personnel already working in the industry. As expressed by JBS:

'I think we need to concentrate on retention rather than recruitment. We need to make the industry an attractive option for tradesmen, supervision and engineers. Opportunities for training, development, advancement and remuneration all need to be considered.'

In the first instance plants need to raise the industry profile and public perception of maintenance in the meat industry. While working in meat processing plants may not be considered glamorous, maintenance engineering in the industry does provide the opportunity to undertake a trade and gain a broad range of experience in the trade area. Promotional material setting out career options, career pathways and training pathways need to be developed and broadly distributed in schools, TAFE Colleges etc in local areas to plants. This can be reinforced with VET in Schools programs for years 11 and 12 students whereby students gain qualifications working in a plant and with an RTO whilst

still at school and are partly through their trade before they begin work fulltime at the plant when they've finished school.

Plants need to take a systematic approach to training, development, advancement and remuneration that includes workforce planning, identifying skills needs, developing training plans with each member of the maintenance team and supporting them to achieve their training and career goals through performance management and in so doing gain salary increases.

Additional incentives cited (or proposed) to join maintenance teams in the meat industry included:

- Flexible rosters including rotating shift rosters and regular RDOs, eg 4 days x 10 hours/day and 3 days off/week and 1 RDO/fortnight or month
- Bonus schemes such as bonus for keeping downtime to minimum
- Salary linked with skills development and career progression, and performance management that incorporates a training plan and regular review to ensure training plan and skills development is achieved and career development and salary progression is attained
- Training pathway reflecting career path from entry level through to trade and post trade skills defining options for progression to more complex technical skills and/or gaining skills across trades and/or progression to leadership and management. One comment was 'Candidates are usually very interested in further training opportunities and we struggle to convince them that we have an effective training policy and systems in place that will meet their development needs'
- Building a positive industry culture with:
 - Opportunities to advance
 - Being involved
 - Development opportunities
 - Mentoring
 - Salary increases linked with learning
 - Consideration of their family commitments
 - Keeping them informed
 - Providing feedback on performance
 - Having time for them
 - Appreciating their efforts
 - Job satisfaction
 - Being a valued member of a team
 - Creating a challenging environment.

Retaining maintenance staff

'Retaining skilled employees is a significant issue for a business because a high rate of employee turnover results in a loss of business and industry knowledge and skills which can be very expensive.

In today's tight labour market workers will not continue to work in poor conditions or be ill treated. To retain employees you need to know what is important to them and keep

them connected to their work. Connected or engaged employees will be more dedicated and committed to the business.’⁵

Research is consistent about the main reasons for staff leaving employment as reflected in the two following studies.

‘Key reasons for leaving an employer are lack of future certainty, poor leadership and lack of communication, as well as uncompetitive wages and better career options elsewhere.’⁶ A study of turnover in FIFO mining operations in Australia attributed low turnover to ‘a combination of four factors: equitable remuneration; commitment to training and skills development; good management; and developing and maintaining a positive organizational culture.’⁷

The strategies for retaining maintenance staff

The strategies for retaining maintenance staff include:

- Understanding your workforce and responding to risks
- Planning and implementing strategies to manage the first three months of employment as this is the period when new recruits are most likely to leave⁸
- Providing new recruits with intensive training to familiarize them with the meat industry and the meat plant in particular
- Ensuring supervisors are trained in supervisory skills as research shows that ‘one reason why people leave is because they are dissatisfied with the supervision they receive.’⁹
- Reasonable, fair and equitable remuneration
- Formal recognition and rewards program with financial and non-financial benefits
- Improving workplace flexibility with options such as flexible rosters, job sharing, phased retirement, part-time work

Developing maintenance staff

One response in the industry consultation was ‘Candidates are usually very interested in further training opportunities and we struggle to convince them that we have an effective training policy and systems in place that will meet their development needs.’

Plants need to take a systematic approach to training, development, advancement and remuneration that includes workforce planning, identifying skills needs, developing training plans with each member of the maintenance team and supporting them to achieve their training and career goals through performance management and in so doing gain salary increases.

⁵ *Good Practice in Workforce Development Tools & Tips for the Australian Meat Industry*

⁶ The Centre for International Economics and The Ryder Self Group ‘Attracting and retaining staff in Australia’s beef, sheep and pastoral wool industries.’ MLA 2008

⁷ Beach R, Brereton D, and Cliff D (2003), Workforce turnover in FIFO mining operations in Australia: An exploratory study, Centre for Social Responsibility in Mining, University of Qld and Sustainable Minerals Institute

⁸ MINTRAC, ‘Workforce retention and training’ Volume 1, Issue 1

⁹ MINTRAC, ‘Workforce retention and training’ Volume 1, Issue 1

Success in achieving objectives

The continuing evolution of technologies, and automation of plant in the meat processing industry has led to the need for more complex and sophisticated skills of maintenance engineering staff to maintain and service the new technologies. This in turn has impacted on maintenance engineering being able to continue to deliver plant maintenance engineering requirements now and into the future.

The need for maintenance staff with more complex and more sophisticated skills has provided additional pressure on plants that were already facing difficulties resourcing maintenance due to difficulties upskilling current staff and sourcing new staff with the skills they need. There are limited numbers of skilled and experienced tradespersons and engineers in the regional locations of plants, and there is increasing competition from other local industries such as mining and agrifood for the limited numbers of skilled staff who are available. Plants need to operate more strategically, effectively and efficiently to attract, recruit, retain and develop maintenance staff.

Through consultation with industry and other stakeholders, this project focused on determining the priority training and education needs of maintenance engineering roles, particularly those associated with the introduction of new technologies and supporting the development of advanced technological management skills within the meat processing industry. It was identified that maintenance engineering does not have a training pathway in the same way as production staff in the meat processing industry. This project proposes the development of a training pathway leading to formal qualifications for maintenance staff, from entry level to senior management. The pathway is predominantly based in the vocational education and training system and generally embedded in the MINTRAC managed Meat Industry Training Package, but also incorporating the traditional trade qualifications. The proposed training pathway includes units of competency in the full range of trades options leading to a progression of qualifications that give total flexibility for maintenance staff to gain the competencies needed in their plants. With adequate resources MINTRAC can incorporate the pathway in the current review of the Meat Industry Training Package making the whole pathway available to the industry within the next two years.

The 'Guide to maintenance engineering competencies and training options' developed as a product of this project provides maintenance engineering management and staff, other plant management and RTOs with an overview and explanation of the training pathway, the qualifications that are currently available and proposed qualifications. The guide also sets out examples of units of competency in each of the different maintenance areas (such as refrigeration, electrical, mechanical) that may be selected in the proposed maintenance qualifications in line with meeting plant maintenance needs. The units of competency included in the guide are not inclusive. There may be additional skills required by plants.

All plant respondents to industry consultation reported skills gaps in their maintenance areas, as well as staff shortages and/or under-resourcing in their maintenance engineering departments. In spite of this, only a few of the larger plants have taken a systematic approach to planning how to go about identifying and meeting workforce needs. In order to have any chance of meeting critical skills gaps, attracting and retaining maintenance staff, plants need to take a strategic approach to managing their workforce. The 'Workforce planning guide for maintenance engineering' provides management in meat processing plants with an approach to identifying what needs to be done at the

plant level to identify and meet their maintenance workforce needs and attract, recruit, retain and develop maintenance engineering staff.

With the supply of labour slowing in Australia, an ageing population and increasing competition for labour¹⁰ it is critical for companies to not only attract the staff needed, but to nurture, support and develop them. Securing and keeping maintenance staff to meet company needs is critical to the continuing sustainability of the meat industry. The 'Recruitment and retention guide for maintenance engineering in the meat industry' has been developed as part of this project to assist senior managers in the meat processing industry to apply a systematic and practical approach to attracting, recruiting, retaining and developing maintenance engineering staff to meet business needs now and into the future.

Conclusions

The continuing evolution of technologies and automation of plant in the meat processing industry has impacted strongly on the skills and staffing needs of maintenance engineering departments in the industry. These changes have led to the need for more complex and sophisticated skills of maintenance engineering staff to maintain and service the new technologies. The project proposes a training framework that meets current and future training needs. The training pathway is largely embedded in the VET system and is consistent with that for the whole meat industry. MINTRAC can ensure the sustainability of the framework by incorporating the pathway in the current review of the Meat Industry Training Package making the whole pathway available to the industry within the next two years. The training pathway is set out in the 'Guide to maintenance engineering competencies and training options' developed as part of this project.

The meat industry and meat processing plants need to take a more sophisticated and strategic approach to attracting, recruiting, developing and retaining maintenance engineering staff to ensure they have the skills they need, to do the work, to industry standards, now and into the future. The 'Workforce planning guide for maintenance engineering' and the 'Recruitment and retention guide for maintenance engineering in the meat industry' provide guidance to maintenance management to take a systematic approach to planning and meeting workforce needs on what needs and attracting, recruiting, retaining and developing maintenance staff.

Recommendations

The following recommendations are made to ensure institutionalisation of the outcomes of this project:

1. Support needs to be provided to MINTRAC to ensure the proposed training pathway for maintenance engineering is incorporated in the current review of the Meat Industry Training Package. The majority of the elements of the maintenance training pathway can be incorporated relatively easily as the majority of the units of competency are already available in other Training Packages and can be made available in the Meat Industry Training Package through the addition of new qualifications in maintenance engineering in the Meat Industry Training Package. The new qualifications need to have packaging rules for the qualifications that

¹⁰ The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

allow units of competency to be selected from any other training package in accordance with the packaging rules. If the pathway is not incorporated in the current review then it could be another five years at least before the opportunity arises again.

2. There are additional requirements for the development of some new units of competency (such as basic and advanced programming of robots) and the modification of existing units in other training packages to meet the requirements of the meat industry, eg all the existing ammonia refrigeration units also include air conditioning which prevents meat processing personnel gaining the units. These units need to be re-developed for the meat industry with the air conditioning components removed.
3. Maintenance engineering management in the meat processing industry are provided with information on the training pathway and the three guides produced as outcomes of this project. The MINTRAC/AMPC maintenance engineering network meetings provide an excellent opportunity to enable this.
4. The three guides produced in this project have some design work and printing, and they are disseminated to industry.
5. Training and assessment materials customized for the meat industry are developed (or existing materials from other RTOs or other skills councils modified) to support the delivery of the high priority units of competency.
6. Training delivery is customised to the meat processing industry for high priority areas such as ammonia refrigeration, PLCs, hydraulics and pneumatics and training in the areas is made available in a similar way to the planned delivery of training in ammonia refrigeration.

Appendices

Appendix one

Guide to competencies & training options for maintenance engineers in meat processing plants

Introduction

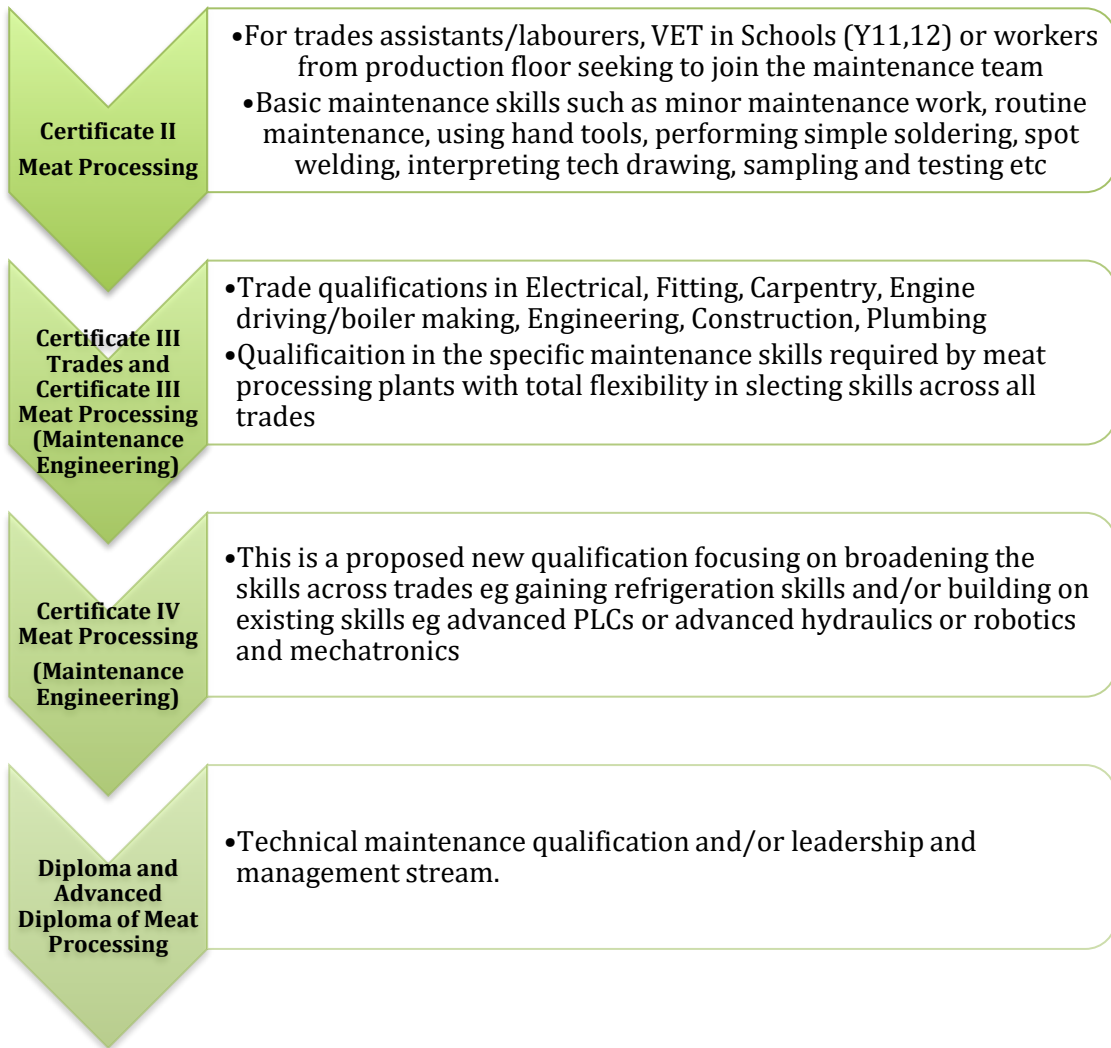
It is critical for meat processing plants to be able to meet the maintenance requirements of their plants. It is therefore critical for maintenance engineers to receive the continuing training they need to be able to meet the maintenance needs of their plants.

This guide provides you with a selection of units of competency that may suit your needs in specific maintenance areas. You are not locked into choosing from the units listed in these options. You may select any units, provided you are meeting the requirements for that particular qualification. You may select units from other options at the same qualification level in this guide or you may select units that aren't included in this guide that meet your skills needs so long as they meet the requirements for the qualification.

This guide sets out a training pathway for maintenance engineers covering entry level to senior management. Some of the options included in this pathway are currently available and can be undertaken by maintenance staff. Other options are proposed options for training that have been determined as a result of input from maintenance engineers in meat processing plants. These proposed options are not yet in place. They are currently

passing through a consultative and administrative process before they are approved in this form. It is indicated in this guide where the options are only proposed options.

An overview of the training pathway follows:



Certificate II in Meat Processing (Abattoirs)

Who is this qualification for?

This is an entry level qualification for personnel working in meat processing plants or preparing to work in meat processing plants. This qualification may be gained by:

- Labourers or trades assistants already working in maintenance
- Workers from production areas seeking to join the maintenance team
- School students undertaking a vocational education and training program as part of their requirements for years 11 and 12.

Can this qualification be used currently to gain maintenance competencies?

The qualification currently does not include many of the units needed by maintenance personnel. It is planned to incorporate other maintenance units of competency into this qualification so that maintenance engineers can access and gain the competencies they need in their plants.

However it is currently possible for maintenance staff to gain this qualification by combining units already available in the qualification with those selected from Certificate II from another training package as the packaging rules for the qualification allow up to four units to be selected from Certificate II level qualifications in other training packages.

What do you need to do to gain the qualification?

To gain the qualification you must:

- Complete all six core units of competency
- Complete a minimum of three elective units of competency, to a minimum value of twenty points.

Units with a value of up to fifteen points can be selected from a Certificate III in Meat Processing qualification.

A maximum of four units can be selected from other Certificate II level qualifications in this Training Package, or from another Training Package or accredited course. Units selected must be relevant to the identified job role and must not duplicate units already contained within the qualification. Units selected will be worth 2 points.

What units can I do to gain the qualification?

Two different options follow for gaining a Certificate II in Meat Processing (Abattoirs) with majors in maintenance engineering. These options provide you with a range of units of competency that you can select from to meet the needs of your plant. You need to select the number of units from each area to comply with the requirements for the qualification as set out above.

You should note that you are not confined to selecting from the units that are listed. You may select alternative units to those included in the following options. The following units have been selected because they are examples of competencies required in that respective area by maintenance personnel in meat processing plants. You may select any units so long as you comply with the requirements for the qualification.

Certificate II in Meat Processing (Abattoirs)

Maintenance engineering major

Core competencies You must complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies & procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
Elective units All of the following units are elective units. You must select a minimum of three elective units of competency, to a minimum value of twenty points.			
Elective units currently available in this qualification The following elective units are currently available in this qualification. You may select units to a minimum value of 20 points from these units or you may select the units you need from here and make up the points to 20 by also selecting units from Certificate III in Meat Processing such as those units that follow or elective units from other training packages.			
MTMP2042C	Operate new technology or process (2)	MTMPS201C	Clean work area during operations (4)
MTMP206C	Use selected hand tools (2)	MTMPSR202B	Apply environmentally sustainable work practices (2)
MTMPS206C	Operate forklift in a specific workplace (6)	HLTFA301C	Apply first aid (2)
Elective units from Certificate III in Meat Processing that are currently available in this qualification You may select units with a value of up to fifteen points from the Certificate III in Meat Processing.			
BSBFLM312C	Contribute to team effectiveness (3)	MTMP3118A	Conduct start up procedures and pre-operational checks on slaughter floor NLIS equipment (2)
MSL904001A	Perform standard calibrations (2)	MTMP3085C	Monitor boiler operations (4)
MSL922001A	Read and present data (2)		
Elective units from other training packages You may select a maximum of four units from the following maintenance electives from other training packages. Each unit will be given a value of two points. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			

Elective units in computing and measurement			
BSBITU101A	Operate a personal computer	MEM12024A	Perform computations
BSBITU202A	Create and use spread sheets	MEM16008A	Interact with computing technology
UEENEED101A	Use computer applications relevant to a workplace	MEM12023A	Perform engineering measurements
Elective units in drawing, drafting and design			
VU20910	Produce basic engineering sketches and drawings	RIICCM203A	Read and interpret plans and specifications
MEM09002B	Interpret technical drawing	MSAPMSUP210A	Process and record information
Elective units in maintenance and diagnostics			
MSAPMSUP240A	Undertake minor maintenance	MEM07001B	Perform operational maintenance of machines/equipment
MEM07029B	Perform routine sharpening/maintenance of production tools and cutters	AUMATK3003	Monitor & maintain equipment, tools & machinery
MSAPMSUP100A	Apply workplace procedures	MSAPMSUP101A	Clean workplace or equipment
MSAPMSUP303A	Identify equipment faults	MEM18011C	Shut down and isolate machines/equipment
UEENEEC002B	Source and purchase material/parts for installation or service jobs		
Elective units in machine and process operation			
MEM16007A	Work with others in manufacturing, engineering or related environment	MSASS00005	License to operate a standard boiler
MEM07024B	Operate and monitor machine/process	MEM18002B	Use power tools/hand held operations
MEM03001B	Perform manual production assembly	MEM18001C	Use hand tools
MEM18003C	Use tools for precision work	MEM07028B	Operate computer controlled machines/processes
MEM07016C	Set and edit computer controlled machines/processes		
Elective units in fabrication			
MEM05026C	Apply welding principles	AURVTW2005	Carry out spot welding procedures
VU20528	Perform basic oxy-acetylene welding and cutting	VU20911	Handle engineering materials
MEM05001B	Perform manual soldering/desoldering -	CPCCA3013A	Install lining, panelling and moulding

	electrical/electronic components		
PCCC02013A	Carry out concreting to simple forms	CPCPCM2048A	Cut and join sheet metal
Elective units in materials handling			
PMBHAN103C	Shift materials safely by hand	TLILIC2001A	License to operate a forklift truck
MEM11010B	Operate mobile load shifting equipment	RIIMPO318B	Conduct civil construction skid steer loader operations
TLILIC2014B	License to Drive Light Rigid Vehicle	TLILIC2016B	License to Drive Heavy Rigid Vehicle
TLILIC2015B	License to Drive Medium Rigid Vehicle	TLILIC3018B	License to drive a multi combination vehicle
TLILIC3017B	License to Drive Heavy Combination Vehicle		
Elective units in work health and safety			
HLTCPR211A	Perform CPR	MSAPMPER205C	Enter confined space
RIIOHS204A	Work safely at heights	TLID307E	Handle dangerous goods/hazardous substances
Elective units in other areas conducted by maintenance			
FPICOT2238A	Cut materials with hand held chain saw	PSPPM402B	Manage simple projects
FPICOT2237A	Maintain chainsaws		
New elective required in automation			
	Operate an industrial robot safely in a production environment		

Certificate II in Meat Processing (Abattoirs)

Environment major

Core competencies You must complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
Elective units All of the following units are elective units. You must select a minimum of three elective units of competency, to a minimum value of twenty points.			
Elective units currently available in this qualification The following elective units are currently available in this qualification. You may select units to a minimum value of 20 points from these units or you may select the units you need from here and make up the points to 20 by also selecting units from Certificate III in Meat Processing such as those units that follow or elective units from other training packages.			
MTMPSR202B	Apply environmentally sustainable work practices (2)	MTMPS201C	Clean work area during operations (4)
NWP262A	Monitor and report wastewater treatment processes (2)	MTMP2042C	Operate new technology or process (2)
NWP263A	Operate and maintain wastewater treatment plant and equipment (8)	HLTFA301C	Apply first aid (2)
NWP208A	Perform basic wastewater tests (2)	MTMP206C	Use selected hand tools (2)
MTMPS206C	Operate forklift in a specific workplace (6)	MSL973001A	Perform basic tests
MSL954001A	Obtain representative samples in accordance with sampling plan		
Elective units from other training packages You may select a maximum of four units from the following environment electives from other training packages. Each unit will be given a value of two points. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
NWP220B	Collect and control drainage run-off	NWP234B	Locate, identify and protect utility services

NWP213B	Monitor and operate irrigation, stock and domestic delivery systems	NWP241B	Inspect and maintain basic dams and water storages
NWP221A	Operate basic flow control and regulating devices in water or wastewater treatment network systems	NWP245B	Maintain tanks and water storage assets
NWP231B	Maintain and repair drainage assets	FDFSUG222A	Operate a waste water treatment system

Certificate III Trades qualification

Who are trades qualifications for?

A variety of trades are employed in the meat processing industry. These trades include:

- Mechanical fitters
- Electricians
- Plumbers
- Boilermakers.

The main trades in the industry are mechanical fitters and electricians.

The industry may recruit personnel to undertake a trade such as mechanical fitter or electrician. These personnel may commence the trade whilst completing years 11 and 12 in school and then continue their apprenticeship whilst fully employed at a meat processing plant or they may complete the whole apprenticeship as an employee of a plant.

The industry also employs fully qualified and experienced trade personnel.

What do you need to do to gain the qualification?

If you wish to do a trade qualification in mechanical fitting or electrical trades or even plumbing or boiler making you should make contact with the human resources department in a meat processing plant. The plant may support your apprenticeship and employ you to work at the plant while you are undertaking your training. The plant will assist you with enrolment in the trade.

If you are a qualified tradesperson you may contact the human resources department in a meat processing plant to enquire whether there are any vacancies in the plant.

Certificate III Meat Processing (Maintenance Engineering)

Who is this qualification for?

This qualification may be undertaken by personnel with some experience in maintenance engineering who are seeking a career in maintenance engineering in the meat processing industry. The qualification will also provide a progression for personnel who have completed a Certificate II Meat Processing with maintenance major and are working as trades assistants.

Is this qualification currently available?

This qualification is not currently available. It is hoped that this qualification will be included in the MINTRAC review of the Meat Industry Training Package and become available in about a year.

What units can I do to gain the qualification?

The qualification is designed to provide total flexibility for personnel working in the meat processing industry to be able to select units of competency that meet the diverse needs of their work situation and their own interests.

Personnel can design their own program to meet the packaging rules for the qualification selecting any units of competency (at the correct levels) across the whole spectrum of trades.

Certificate IV in Meat Processing

Who is this qualification for?

Qualifications at Certificate IV support career progression for maintenance engineering personnel who generally already have a Certificate III qualification. Career progression may include:

- Gaining skills in different areas such as environment or refrigeration or robotics
- Gaining skills across trades such as an electrician gaining skills in mechanics
- Gaining more advanced skills in your trade area such as an electrician gaining advanced skills in PLCs or robotics or a mechanical fitter gaining advanced skills in pneumatics or hydraulics
- Gaining leadership and management skills to support career progression to supervisory and management roles.

What qualifications are available for maintenance personnel at Certificate IV?

Maintenance engineering personnel may undertake Certificate IV qualifications in their own trade areas such as electricians undertaking a Certificate IV in Industrial Electronics and Control or Instrumentation or mechanical fitters undertaking a Certificate IV in Engineering. They may seek qualifications in a new area such as environment and enroll in the Certificate IV in Environmental Monitoring and Technology.

Alternatively maintenance engineering personnel may undertake Certificate IV qualifications in meat processing in a maintenance engineering stream. This qualification is not yet available in the meat industry training package but it is proposed to make the competencies required in maintenance engineering in meat processing plants available in the Certificate IV meat processing qualification designed to specifically meet the technical maintenance engineering requirements of the industry. This will allow post-trade maintenance and engineering personnel in the industry to gain the competencies they need to broaden their skills across trades and/or gain more advanced skills in particular areas such as automation and in so doing gain a qualification at Certificate IV.

Another option for maintenance engineering personnel is to gain competencies in leadership and management and progress to supervisory and management positions. In this case they could undertake a Certificate IV in Meat processing (Leadership).

What do you need to do to gain a Certificate IV qualification?

The requirements for Certificate IV qualifications are generally specific for the qualifications in each training package. This means that if you are seeking Certificate IV qualifications in engineering or electrical trades or manufacturing you need to meet the specific requirements for that qualification. The training officer or registered training organisation in your plant can help you with this.

The requirements to gain the Certificate IV in Meat Processing in leadership or in the new proposed maintenance engineering stream are as follows:

- Complete eighteen units of competency in total. This includes completing all ten core units of competency and completing eight elective units of competency.
- A maximum of three units can be selected from other Certificate IV or Diploma qualifications in this Training Package, or from another Training Package or

accredited course. Units selected must be relevant to meat processing job roles and must not duplicate units already contained within the qualification.

What units can I do to gain the Certificate IV in Meat Processing qualifications?

Suggested options for units for Certificate IV in Meat Processing for each of the two streams of technical maintenance engineering or leadership follow. You should note that you are not confined to selecting from the units that are listed. You may select alternative units to those included in the following options. The following units have been selected because they are examples of competencies required in that respective area by maintenance personnel in meat processing plants. You may select any units so long as you comply with the requirements for the qualification as set out above.

Certificate IV Meat Processing (Maintenance Engineering)

General training options

Core competencies			
You must complete all ten of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 3 units can be selected from a Diploma or other training package.			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404 A	Monitor and maintain records in an online environment
Elective units from the Diploma in Meat Processing that are currently available in this qualification			
You may select a maximum of three units from the Diploma in Meat Processing.			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities

Elective units from other training packages

You may select a maximum of three from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).

Elective units in maintenance and diagnostics

MSS404081A	Undertake proactive maintenance analysis	PMBTECH406A	Diagnose production equipment problems
MSS404082A	Assist in implementing a proactive maintenance strategy	MSAPMSUP303A	Identify equipment faults
AHCMOM302A	Perform machinery maintenance	PMAOPS402A	Respond to abnormal process situations
MEM18004B	Maintain and overhaul mechanical equipment	UEENEEC003B	Provide quotations for installation or service jobs
PMBTECH301B	Use material and process knowledge to solve problems	MEM18010C	Perform equipment condition monitoring and recording
MEM18006C	Repair and fit engineering components	MEM18016B	Analyse plant and equipment condition monitoring results
MEM18028B	Maintain (engine) lubrication systems	MEM18017C	Modify mechanical systems and equipment
UEENEEG181A	Provide advice on effective and energy efficient lighting products	MSAENV272B	Participate in environmentally sustainable work practices
BSBINN501A	Establish systems that support innovation	MSS403002A	Ensure process improvements are sustained

Elective units in installation and commissioning

MEM10006B	Install machine/plant	MEM18011C	Shut down and isolate machines/equipment
PMAOPS411B	Manage plant shutdown and restart	PMASUP441C	Decommission plant

Elective units in electrotechnology

UEENEEH147A	Assess electronic apparatus compliance	MEM18054B	Fault find, test and calibrate instrumentation systems and equipment
MEM18062B	Install, maintain and calibrate instrumentation sensors, transmitters and final control elements	MEM18061B	Maintain/calibrate complex control systems
MEM18066B	Diagnose and repair microprocessor-based equipment	MEM18069B	Maintain, repair instrumentation process control analysers
UEENEEC005B	Estimate electrotechnology projects		

Elective units in PLCs			
MEM07015B	Set computer controlled machines/ processes	MEM30027A	Prepare basic programs for programmable logic controllers
MEM07016C	Set and edit computer controlled machines/ processes	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
MEM10004B	Enter and change programmable controller operational parameters	UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable controllers
MEM10005B	Commission programmable controller programs		
New electives required in automation			
	Diagnose faults, maintain and service an industrial robot safely in a production environment		Program an industrial robot in a production environment
Elective units in hydraulics and pneumatics			
MEM30011A	Set up basic pneumatic circuits	MEM30010A	Set up basic hydraulic circuits
MEM18018C	Maintain pneumatic system components	MEM18020B	Maintain hydraulic system components
MEM18019B	Maintain pneumatic systems	MEM18021B	Maintain hydraulic systems
MEM18022B	Maintain fluid power controls	MEM18053B	Modify fluid power control systems
MEM18023B	Modify fluid power system operation		
Elective units in welding			
MEM05043B	Perform welds to code standards using gas metal arc welding process	AURVTW2004	Carry out gas tungsten arc welding procedures
MEM05044B	Perform welds to code standards using gas tungsten arc welding process	UEPOPS433B	Operate and monitor a heat recovery steam generator unit

Certificate IV Meat Processing (Maintenance Engineering)

Refrigeration major

Core competencies			
You must complete all ten of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 3 units can be selected from a Diploma or other training package.			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
Elective units from the Diploma in Meat Processing that are currently available in this qualification			
You may select a maximum of three units from the Diploma in Meat Processing.			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
Elective units from other training packages			
You may select a maximum of three units from other training packages. (It is proposed to			

include these units in this qualification in the future enabling you to select any of them in your qualification).

UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	MEM10006B	Install machine/plant
UEENEEJ196A	Operate ammonia refrigeration plant	MSS404081A	Undertake proactive maintenance analysis
MEM18090B	Maintain and repair industrial refrigeration systems and components	MEM18095A	Maintain and repair cooling towers/evaporative condensers and associated equipment
MEM18096A	Maintain, repair/replace and adjust refrigerant flow controls and associated equipment	MEM18016B	Analyse plant and equipment condition monitoring results
UEENEEJ111A	Diagnose and rectify faults in air conditioning and refrigeration systems and components	MSS404082A	Assist in implementing a proactive maintenance strategy
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	PMAOPS402A	Respond to abnormal process situations
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	PMAOPS411B	Manage plant shutdown and restart
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	PMASUP441C	Decommission plant
UEENEEJ109A	Verify functionality & compliance of refrigeration & air conditioning installations	PMBTECH301 B	Use material and process knowledge to solve problems
UEENEEJ113A	Commission air conditioning and refrigeration systems	UEENEEC003 B	Provide quotations for installation or service jobs
UEENEEJ105A	Fix and secure electro-technology equipment	UEENEEC005 B	Estimate electrotechnology projects
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	UEENEEC002 B	Source and purchase material/parts for installation or service jobs
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	UEENEEJ170 A	Diagnose and rectify faults in air conditioning and refrigeration control systems
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	CPCCCM1015 A	Carry out measurements and calculations
UEENEEJ110A	Select refrigerant piping,	RIICCM203A	Read and interpret plans and

	accessories and associated controls		specifications
AHCMOM302A	Perform machinery maintenance	UEENEEE107 A	Use drawings, diagrams, schedules, standards, codes and specifications
MEM18004B	Maintain and overhaul mechanical equipment	MEM10006B	Install machine/plant
PMBTECH406A	Diagnose production equipment problems	MSS404081A	Undertake proactive maintenance analysis
MSAPMSUP303 A	Identify equipment faults	MSS404082A	Assist in implementing a proactive maintenance strategy
MEM18011C	Shut down and isolate machines/equipment	PMAOPS402A	Respond to abnormal process situations
BSBINN501A	Establish systems that support innovation	PSPPM402B	Manage simple projects
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	UEENEED001 B	Maintain documentation
UEENEED002B	Source and purchase material/parts for installation or service jobs	UEENEED101 A	Use computer applications relevant to a workplace
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	UEENEEI150 A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEJ120A	Resolve problems in industrial refrigeration systems	UEENEEJ179 A	Repair and service ammonia refrigeration systems
UEENEEJ168A	Maintain microbial control of refrigeration and air conditioning systems	UEENEEJ180 A	Install and commission ammonia refrigeration systems, components and associated equipment
MEM13007B	Maintain water treatment systems for cooling towers	MEM18013B	Perform gland packing
MEM18092B	Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls		

Certificate IV Meat Processing (Environmental monitoring & management)

Core competencies

You must complete all ten of the following core competencies.

MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance

Elective units

All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 3 units can be selected from a Diploma or other training package.

Elective units currently available in the Certificate IV in Meat Processing

MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
NWP263A	Operate and maintain wastewater treatment plant and equipment		

Elective units from the Diploma in Meat Processing that are currently available in this qualification

You may select a maximum of three units from the Diploma in Meat Processing.

MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities

Elective units from other training packages

You may select a maximum of three units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).

MSAENV272B	Participate in environmentally sustainable work practices	MSAENV472B	Implement and monitor environmentally sustainable work practices
MSS024002A	Implement environmental management plans and procedures	MSS024003A	Apply an understanding of environmental principles to a site
MSS024004A	Process and present environmental data	MSL952001A	Collect routine site samples
MSL974007A	Undertake environmental field-based monitoring	CPCPDR4012B	Design and size stormwater drainage systems
MSS024006A	Perform sampling and testing of water	CPCPDR4013B	Design and size domestic treatment plant disposal systems
MSS024009A	Assist with assessing and monitoring stormwater systems	MSL954001A	Obtain representative samples in accordance with sampling plan
MSL904001A	Perform standard calibrations	MSS025001A	Assist with assessing site environmental indicators
MSS015010A	Conduct a sustainability water use audit	MSS025002A	Assess the environmental risk or impact of a project activity or process
MSS015011A	Conduct a sustainability energy audit	MSS025006A	Collect and evaluate groundwater data
MSS015012A	Conduct an emissions audit	PUAWER009B	Participate as a member of a workplace emergency initial response team
MSS025008A	Monitor and evaluate noise	SFIEMS401B	Conduct an internal audit of an environmental management plan
MSS025009A	Perform sampling and testing of air	LGAPLEM602A	Assist in developing an environmental management system for an organisation
MSS025010A	Assist with odour source assessment	MSS027001A	Co-ordinate environmental management activities
MSS025011A	Assist with odour field assessment	LGAPLEM606B	Develop ecologically sustainable land management systems
MSS025008A	Monitor and evaluate noise	BSBINN501A	Establish systems that support innovation
LGAPLEM504 A	Develop strategies and approaches to minimise environmental pollution	LGALAND405A	Implement strategies and approaches to minimize environmental pollution
CPPPMT3002	Assess pest management	CPPPMT3005A	Modify environment to manage

A	options		pests
CPPPMT3007 A	Implement pest management plans	CPPPMT3018B	Maintain equipment and chemical storage areas
CPPPMT3043 A	Prepare and present pest management proposals	CPPPMT3019A	Organise and monitor pest management operations
CPPPMT3029 A	Plan and schedule pest management operations		

Certificate IV Meat Processing (Leadership)

Core competencies			
You must complete all ten of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 3 units can be selected from a Diploma or other training package.			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
MTMP407B	Supervise new recruits	BSBINM401A	Implement workplace information system
MTMPSR401C	Coordinate contracts	BSBINN301A	Promote innovation in a team environment
MTMPSR404C	Foster a learning culture in a meat enterprise	BSBLED401A	Develop teams and individuals
MTMPSR405C	Build productive and effective workplace relationships	BSBMGT402A	Implement operational plan
MTMPSR411A	Lead communication in the workplace	BSBMGT403A	Implement continuous improvement
TAEASS401B	Plan assessment activities and processes	BSBWOR402A	Promote team effectiveness
TAEASS402B	Assess competence	SIRXINV005A	Control inventory
Elective units from the Diploma in Meat Processing that are currently available in this qualification			
You may select a maximum of three units from the Diploma in Meat Processing.			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and

			refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
Elective units from other training packages You may select a maximum of three units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
BSBINN501A	Establish systems that support innovation	MSS40300 2A	Ensure process improvements are sustained

Diploma of Meat Processing

Who is this qualification for?

Qualifications at Diploma level support career progression for maintenance engineering personnel who generally already have a Certificate III or IV qualification. Career progression may include:

- Gaining more advanced skills in technical skills in maintenance engineering
- Gaining leadership and management skills to support career progression to supervisory and management roles.

What qualifications are available for maintenance personnel at Diploma level?

Maintenance engineers may currently gain a qualification in the Diploma of Meat Processing selecting a combination of advanced technical maintenance units of competency and leadership and management units.

It is proposed to add advanced technical units to the qualification to enable more choice in units and to enable a qualification in technical units.

Alternatively maintenance engineers may gain a qualification wholly in leadership units of competency.

What do you need to do to gain a Diploma of Meat Processing qualification?

The requirements for the Diploma of Meat Processing qualification are completion of ten units of competency in total comprised of all four core units of competency and six elective units of competency.

Two of the elective units can be selected from a relevant Diploma or Advanced Diploma from this Training Package or any other Training Package or accredited course. Selected units must be relevant to meat industry and must not duplicate units already contained within the qualification.

What units can I do to gain the Diploma of Meat Processing qualification?

Suggested options for units for the Diploma of Meat Processing for each of the two streams of technical maintenance engineering or leadership follow. You should note that there are additional units to those included in the following options. The following units have been selected because they are examples of competencies required by maintenance personnel in meat processing plants. Additionally you may mix technical and leadership units in your selection of units for the qualification to comply with the requirements for the qualification as set out above.

Diploma of Meat Processing

Maintenance engineering major

Core competencies

You must complete all four core competencies. It should be noted that all four core units have pre-requisite units.

MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR403A	Participate in OH&S risk control process
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance

Elective units

All of the following units are elective units. You must select six elective units in total. The six elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 2 units can be selected from a Diploma in another training package.

Elective units currently available in the Diploma of Meat Processing

MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
BSBFIM501A	Manage budgets and financial plans	MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems

Elective units from other training packages

You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).

CPCBC5010B	Manage construction work	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEC006B	Prepare tender submissions for electrotechnology projects	CPCPCM5010A	Design complex sanitary plumbing and drainage systems

UEENEEC007B	Manage contract variations	CPCPPS5015B	Inspect plumbing and drainage systems
UEENEEE110A	Develop and implement energy sector maintenance programs	PSPPM501B	Design complex projects
CPPBDN5017A	Produce 2-D drawings for building design projects using CAD software	PSPPM503B	Close complex projects
UEENEEJ181A	Design ammonia refrigerated systems	BSBINN501A	Establish systems that support innovation
UEENEEJ165A	Evaluate thermodynamic and fluid parameters of refrigeration systems	BSBINN502A	Build and sustain an innovative work environment
UEENEEJ192A	Analyse the psychometric performance of HVAC/R systems	UEENEEJ133A	Design industrial refrigeration systems and select components
UEENEEE190A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures

Diploma of Meat Processing

Leadership major

Core competencies

You must complete all four core competencies. It should be noted that all four core units have pre-requisite units.

MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR403A	Participate in OH&S risk control process
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance

Elective units

All of the following units are elective units. You must select six elective units in total. The six elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units eg only a maximum of 2 units can be selected from a Diploma in another training package.

Elective units currently available in the Diploma of Meat Processing

MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
BSBFIM501A	Manage budgets and financial plans		

Elective units from other training packages

You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).

BSBLED501A	Develop a workplace learning environment	BSBWOR502B	Ensure team effectiveness
BSBMGT406A	Plan and monitor continuous improvement	BSBDIV501A	Manage diversity in the workplace
BSBMGT502B	Manage people performance	BSBHRM405A	Support the recruitment, selection and induction of staff
BSBHRM512A	Develop and manage performance-management processes	BSBHRM513A	Manage workforce planning
BSBMGT515A	Manage operational plan	PSPPM501B	Design complex projects

BSBMGT516C	Facilitate continuous improvement	PSPPM503B	Close complex projects
BSBR501B	Manage risk	BSBINN501A	Establish systems that support innovation
BSBINN502A	Build and sustain an innovative work environment		

Advanced Diploma of Meat Processing

Who is this qualification for?

Qualifications at Advanced Diploma level support career progression for maintenance engineering personnel who generally already have a Diploma or Bachelors qualification. Career progression at this level generally focuses on gaining leadership and management skills to support career progression to senior management roles.

What do you need to do to gain an Advanced Diploma of Meat Processing?

The requirements for the Advanced Diploma of Meat Processing qualification are completion of a total of ten units of competency with a minimum of five units selected from Group A and a minimum of three units selected from Group B.

Two of the elective units can be selected from a relevant Advanced Diploma from this Training Package or any other Training Package or accredited course. Selected units must be relevant to meat industry and must not duplicate units already contained within the qualification.

You should note that there are additional units to those included in the following options. The following units have been selected because they are examples of competencies required by maintenance personnel in meat processing plants. Additionally you may mix technical and leadership units in your selection of units for the qualification to comply with the requirements for the qualification as set out above.

Advanced Diploma of Meat Processing

Group A units			
A minimum of five units must be selected from Group A units			
Group A units currently available in the Advanced Diploma of Meat Processing			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	BSBMGT605B	Provide leadership across the organisation
MTMPS5607C	Manage and improve meat industry plant operations	BSBMGT617A	Develop and implement a business plan
MTMPSR5604C	Manage new product/process development	SIRXMGT005A	Set strategic plans
MTMPS5608C	Manage environmental impacts of meat processing operations	MSL916005A	Manage complex projects
BSBFIM501A	Manage budgets and financial plans	MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems
		SIRXMGT006A	Initiate and implement change
Group B units currently available in the Advanced Diploma of Meat Processing			
A minimum of three units must be selected from Group B units			
MTMPSR601A	Benchmark to manage/improve enterprise performance	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
MTMPSR602A	Monitor and manage organisational legal responsibilities	BSBDIV501A	Manage diversity in the workplace
MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems	BSBFIM601A	Manage finances
Elective units from other training packages			
You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
UEENEEE190 A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEC006 B	Prepare tender submissions for electrotechnology	CPCPCM5010A	Design complex sanitary plumbing and drainage

	projects		systems
UEENEEC007 B	Manage contract variations	CPCPPS5015B	Inspect plumbing and drainage systems
UEENEEE110 A	Develop and implement energy sector maintenance programs	PSPPM501B	Design complex projects
CPPBDN5017 A	Produce 2-D drawings for building design projects using CAD software	PSPPM503B	Close complex projects
CPCCBC5010 B	Manage construction work	BSBINN501A	Establish systems that support innovation
BSBLED501A	Develop a workplace learning environment	BSBINN502A	Build and sustain an innovative work environment
BSBMGT406A	Plan and monitor continuous improvement	BSBWOR502B	Ensure team effectiveness
BSBMGT502B	Manage people performance	BSBHRM513A	Manage workforce planning
BSBHRM512A	Develop and manage performance-management processes	BSBHRM405A	Support the recruitment, selection and induction of staff
BSBMGT515A	Manage operational plan	BSBMGT516C	Facilitate continuous improvement
BSBR5K501B	Manage risk		

Appendix two

Workforce planning guide for maintenance engineering

Background

The continuing evolution of technologies and automation of plant has impacted strongly on the staffing needs of maintenance engineering departments in the meat processing industry. These continuing changes have led to the need for more complex and sophisticated skills of maintenance staff to maintain and service the new technologies. Plants already struggle to resource their maintenance areas due to the limited numbers of skilled and experienced tradespersons and engineers in the regional location of plants and the increasing competition from other local industries such as mining and agrifood. The continuing and growing demand for more complex and sophisticated skills makes it even more difficult for plants to source labour with the skills they need.

In spite of this only a few larger plants in the industry take a systematic approach to planning how to go about identifying and meeting workforce requirements. In order to have any chance of meeting critical skills gaps, attracting and retaining maintenance staff, plants need to take a strategic approach to managing their workforce.

This guide is one of three guides designed to assist plant personnel recruit, retain and develop maintenance engineering personnel to meet business needs now and into the future. The three guides are:

Resourcing maintenance engineering



Introduction to the workforce planning guide

The workforce planning guide works through the planning process to ensure plants have the right maintenance personnel, with the right skills, at the right time, to do the work required, and the work gets done to industry and plant standards.

It is critical for plants to undertake a rigorous planning process to ensure they have the staff with the skills they need to be able do the work required to help meet the business objectives and, if they don't have the staff, work out how to resource the gap areas whether that be by upskilling staff, outsourcing or recruiting. This guide works through the steps in the workforce planning process.

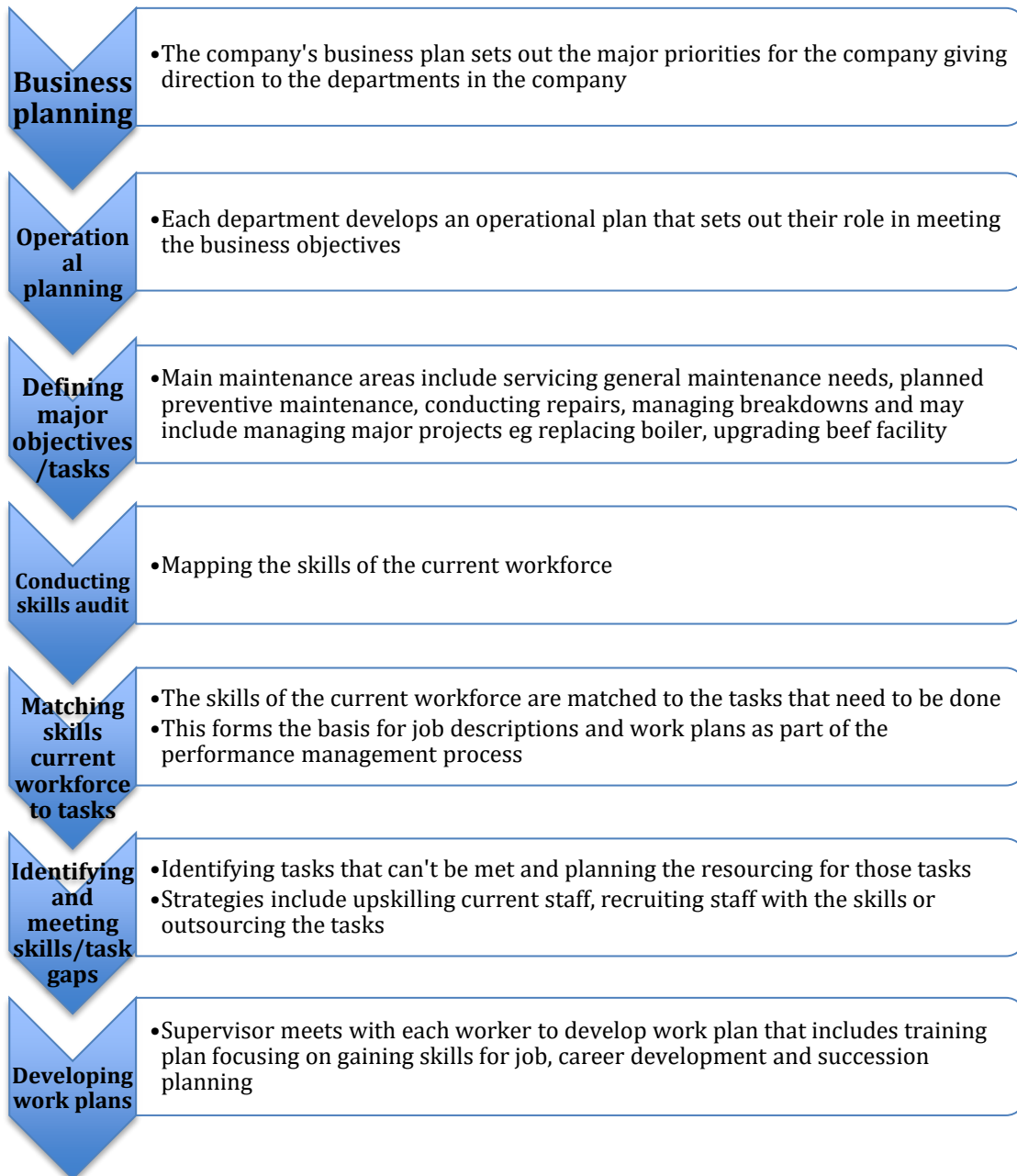
Link with the guide to competencies and training

This workforce planning guide should be read in conjunction with the 'Guide to competencies and training options for maintenance engineering.' The guide to

competencies and training options sets out the competencies and training options for maintenance engineering staff from entry level to senior management. The maintenance management team can use the competencies and training options guide as part of the planning process:

- To help determine the competency needs to perform tasks as part of the planning process
- As a resource in the performance management process to help plan how to meet the training needs of their staff:
 - To perform the tasks in their work plan
 - To support their career development, eg to gain more advanced technical skills
 - To support development for succession planning, eg to gain frontline management skills.

Steps in plant workforce planning process



Applying the planning process

Business planning



- The company's business plan sets out the major priorities for the company giving direction to the departments in the company

The business plan is a documented set of business goals, objectives and financial forecasts that your company aims to achieve over a certain period of time. It gives the business direction, defines objectives, maps out strategies to achieve the goals and helps identify and manage potential risks by learning about the different forces and factors that may affect the success of the business. It provides a roadmap for the business's future and helps give a sense of control over the business. Regularly reviewing the business plan provides the opportunity to review and revise directions, look at what's working and what can be improved and keep the plan up to date.

The business plan is generally developed by senior management and provides guidance for senior management to plan how they can manage their areas to make their contribution to achieving the business goals. The business plan also provides direction to the whole workforce about the company's priorities and more broadly to the customers and public who may be affected by the activities of the business.

Senior managers align the planning for their own department or area with the goals, objectives, schedules and financial forecasts set out in the business plan. Senior managers use the business plan to inform them about the development of the operational plan for their department.

For example, the major goals and targets in a company's business plan and their implications for the maintenance department may be as follows.

Sample business plan goals and targets and their major implications for the maintenance department

Goals in business plan	Targets	Maintenance department role cited in business plan to achieve goal
Increase productivity by investing in our people and encouraging innovation and the use of technology	<ul style="list-style-type: none"> • Increase productivity by 5% • Career development plans in place for all staff supported by training plans that are implemented • Succession plan in place 	<ul style="list-style-type: none"> • Replacement of a boiler • Installation of two new technologies in the beef boning room • Installation and operation of online maintenance management system
Increase profit by building export markets, increasing sales and reducing expenses	<ul style="list-style-type: none"> • Increase profit by 5% • Increase sales by 10% • Reduce expenses by 5% • Water usage reduced by 10% • Gas usage reduced by 20% 	<ul style="list-style-type: none"> • Reduction in water usage through water savings in ammonia refrigeration and other areas of the plant • Biogas retrieval related to covering two waste water

		lagoons with the gas produced supplying gas in steam raising facility
Continue to produce high quality products with food safety of the highest priority but also respecting animal welfare and protection of the environment	<ul style="list-style-type: none"> • No product recalls or customer or client complaints • New stockyards are built that provide shelter for stock • Water usage reduced by 10% • Gas usage reduced by 20% 	<ul style="list-style-type: none"> • Liaison and support as required for contractors building new stockyards
We respect and value our people and are committed to providing a healthy and safe working environment and supporting, training and developing our staff	<ul style="list-style-type: none"> • Career development plans in place for all staff supported by training plans that are implemented • Succession plan in place • Lost time injuries reduced by 50% 	<ul style="list-style-type: none"> • Career development plans in place for all staff supported by training plans that are implemented • Succession plan in place • Raise the profile of WHS to prevent LTIs

Operational planning



- Each department develops an operational plan that sets out their role in meeting the business objectives

The operational plan is the next step in the business planning process after the business plan has been developed. The goals identified in the business plan become the starting point for the operational plan. In reality, a business plan has limited value unless an operational plan follows. It is the operational plan that ensures that things get done.

The operational plan includes detailed information that directs people to perform the day-to-day tasks required in their area of the organisation. The operational plan includes the what, who, when and how much for specific areas of the organisation:

- **What** - the tasks and activities that must be undertaken
- **Skills** – the skills required to do the tasks
- **Who** - the persons who have responsibility of each of the tasks
- **When** - the timelines when tasks must be completed
- **Costs** - the cost of each task.

A sample template for the development of an operational plan follows.

Template for operational plan

Major tasks or objectives	Activities	Skills required	Time-frame	Who?	Costs

Defining major objectives

Defining major objectives

- The major objectives are identified in line with the business goals


Once the business plan has been developed the maintenance engineering manager needs to use the business plan to develop the operational plan for the maintenance engineering department. The implications for maintenance of the goals of the business plan become the major objectives or tasks in the maintenance engineering operational plan.

Example of major tasks or objectives in an operational plan aligned with a business plan

Major tasks or objectives	Activities	Skills required	Time-frame	Who?	Costs
Meet servicing and maintenance needs for all plant and equipment in plant					
Meet planned preventive maintenance for all plant and equipment					
Conduct repairs and manage breakdowns for plant and equipment					
Manage the replacement of a boiler					
Manage the installation of two new technologies in the beef boning room					
Review the ammonia refrigeration processes and implement measures to reduce water usage					
Conduct an audit of water usage in the plant and identify and implement measures to reduce water usage					
Work with the environment					

coordinator on the installation of the biogas technology					
Liaise with contractors building new stockyards					
Install and operate online maintenance management system					
Implement the performance management process with all staff including work plans, training and career development plans and succession planning					
Raise the profile of WHS to prevent LTIs	<ul style="list-style-type: none"> • Conduct weekly toolbox meetings • Train safety rep • Safety rep conducts regular inspections • Conduct task risk assessments 				

Conducting skills audit



Conducting skills audit

- Conduct a skills audit to identify the skills/competencies of the current staff

Once the major tasks, objectives and activities that the maintenance department needs to do have been identified then people need to be identified who have the skills to perform the tasks. A skills audit needs to be conducted to identify the skills or competencies each member of the maintenance engineering staff have currently. A skills audit would generally be conducted by the plant’s training officer or other member of the HR team. A skills audit involves meeting with each individual staff member and identifying, recording and/or storing:

- Copies of formal qualifications such as trade certificates
- Copies of certificates of attainment for any other training undertaken such as confined spaces entry, working at heights, forklift driving etc
- Copies of certificates of competency in any units of competency that have been completed in addition to the qualifications certificates already cited
- Information on any other skills that the staff member feels they have and how and when they acquired those skills.

A meeting should also be conducted with the supervisors of each of the personnel to verify that the personnel have current competencies in the areas identified and to identify additional skills areas that the supervisor feels they have.

Matching skills current workforce to tasks

Matching skills current workforce to tasks

- The skills of the current workforce are matched to the tasks that need to be done
- This forms the basis for job descriptions and work plans as part of the performance management process

The next step is to match the current workforce's skills to the tasks. Once this has been done you will have a list of tasks for each member of staff. You need to look at the list of tasks for each staff member and assess whether this is a realistic number of tasks for them to perform or whether there are insufficient or too many tasks for one position.

The list of tasks can be used as the basis for job descriptions and work plans as part of the performance management process. Once you have the list of tasks for each person and have thought through their career development potential, bearing in mind succession planning you will be in a position to be able to meet with each member of staff to develop their work plan including discussing:

- Their **work plan** which includes tasks, activities, timelines
- Their **training plan** which includes technical training progression in line with the skills needs and the worker's development preferences
- Their **career progression plan** which may include incorporating training in frontline management or gaining advanced technical skills
- **Succession planning** and any training and development plans associated with succession.

Identifying and meeting skills/task gaps

Identifying and meeting skills/task gaps

- Identify tasks that can't be met and planning the resourcing for those tasks
- Strategies include upskilling current staff, recruiting staff with the skills or outsourcing the tasks

Once the skills of the current workforce have been matched to tasks there may be gaps in your operational plan where you have tasks that you cannot resource either because no-one on your team has the skills you need or because you have insufficient staff with the skills you need. This is likely to be the case if the business plan includes projects in addition to the usual maintenance engineering workload. Where you have tasks that haven't been allocated to staff you have a number of options to resource the area. The options include:

- Upskilling your current staff to gain the skills they need
- Recruiting additional staff with the skills needed
- Outsourcing the tasks.

In making your decisions you need to consider:

- Career and succession planning for current staff members
- Whether your staff can access the training they need to gain the skills and whether you have staff with the availability to supervise them until they are competent in the area
- How likely it is that you will be able to recruit staff with the skills you need
- How critical the tasks are that need to be resourced, for example if there are regulatory requirements for tasks to be done or they are preventive maintenance tasks, then it may be more appropriate for them to be outsourced to ensure they are done and other more 'urgent' matters don't keep stopping staff from doing the tasks.

You should now be in a position to complete your operational plan with resourcing identified for every task in your operational plan. You should also be in a better position to be able to cost the tasks and have a more realistic budget.

Developing work plans



- Supervisor meets with each worker to develop work plan that includes training plan focusing on gaining skills for job, career development and succession planning

You now have the completed operational plan for the maintenance engineering department. You know what you are going to do, how you are going to do it, who will do it, by when and how much it costs. The next step is to let your staff know their roles in achieving the operational plan. Each staff member needs to know:

- Their job responsibilities
- How they go about meeting those responsibilities
- What training they need to do their jobs
- Who they report to
- What their priorities are
- How much time they should spend on different areas
- When they have important milestones such as completion of a project.

The maintenance manager needs to work out the reporting lines for staff in their team. All staff need to be clear about who they report to. This is especially important when maintenance staff are placed in production departments. In this case there needs to be a clear decision about whether they are reporting to the area's production manager or the maintenance manager.

The maintenance manager then meets with each member of their maintenance management team and jointly:

- Go through the operational plan
- Identify the staff that report to each manager
- Discuss the main roles and responsibilities of the manager

- Discuss the main roles and responsibilities of each member of their team
- Review each team member's job description
- Explains that the manager must now commence the performance management process with each member of their team by meeting with them:
 - To review their roles and responsibilities in their job description
 - To develop their work plan.

Each supervisor or manager then meets with each member of their team and completes their work plan. The work plan includes:

- Tasks/objectives
- Activities to complete each task or objective
- Targets that reflect achievement of the tasks/objectives
- Timelines for progress and achievement of the tasks/objectives
- Training needs to be able to do the tasks
- A career plan with a pathway to achieve the career progression including training
- A succession plan (as appropriate) with a pathway and training
- Discussion of how frequently they'll meet to discuss progress.

The outcome is that the supervisors and workers are absolutely clear about the role, priorities and timelines for each worker and they are also working towards career development. The entire workforce is now aware of the company directions and priorities and the whole workforce is aligned and all working together to make their contributions to achieving the business goals and achieving their own aspirations in the company.

Appendix three

Recruitment & retention guide for maintenance engineering in the meat industry

Introduction

With the supply of labour slowing in Australia, an ageing population and increasing competition for labour¹¹ it is critical for companies to not only attract the people you need, but to nurture, support and develop them. Securing and keeping maintenance staff to meet company needs is critical to the continuing sustainability of the meat industry.

This guide is directed to maintenance engineering managers, HR managers and other senior managers in meat processing plants. The guide provides a systematic and practical approach to attracting, recruiting, retaining and developing maintenance engineering staff to meet business needs now and into the future.

The guide is one of a series of three guides that provide a comprehensive approach to ensuring maintenance engineering has the right people, in the right place, when they are needed, to do the work to industry standards to make their contributions to meeting the business goals and fulfilling their own career aspirations.

The three guides are:

- Guide to maintenance engineering competencies and training options
- Workforce planning guide for maintenance engineering
- Recruitment and retention guide for maintenance engineering in the meat industry.

A snapshot of maintenance engineering in the meat processing industry

With the supply of labour slowing in Australia, an ageing population and increasing competition for labour¹² it is critical for companies to not only attract the people they need, but to nurture, support and develop them when they do. Securing and keeping maintenance staff to meet the company's needs is critical to the continuing sustainability of the meat industry.

As at 2012, employment growth in the meat processing industry at 3.4% is lower than for all industries at 9.5%. Employment of meat boners, slicers and slaughterman at 13,200 contracted by 9.9%. The declining numbers of production staff may in part be due to the increasing automation of production with a concomitant rise in the need for more highly skilled maintenance engineering staff to support the increasingly automated industry. The industry survey conducted in this project reflected that the majority of plants stated they were under-resourced and/or had skills shortages in their maintenance areas.

¹¹ The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

¹² The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

Maintenance personnel in the meat industry are traditionally trade qualified, with long experience in the industry, with many having worked in a single plant for much of their working life. All plants surveyed employ electricians and mechanical fitters. They may also employ other trades. A 'typical' maintenance engineering team in a large plant was described as:

- Larger proportion of mechanical fitters
- Half as many electricians as fitters
- Only a few sites with plumbers and boilermakers
- Trade or diploma qualified supervisors and planners
- Degree qualified plant engineers (who are difficult to attract to the industry).

All plants surveyed reported a lower turnover of staff in maintenance departments than in production areas. The reasons reported for the more stable workforce included:

- Older workforce with high attendance rates
- Recruitment of tradespersons who are generally seeking permanent employment as distinct from employing more transient groups such as those on temporary visas
- Personnel are settled in the town locally
- Job satisfaction associated with belonging to the maintenance team, the variety of work, the flexibility of their rosters, for example 4 days of 10 hour shifts with 3 days off/week
- Reasonable pay rates (although one comment was that "the salary is 'middle of the road' for tradespersons')
- Bonus schemes such as pay linked to gaining competencies or bonuses for keeping production downtime to minimum.

The age profile of the meat industry is slightly younger than average, with 32% of workers aged 45 years and over, compared with 38% for all industries. However, in line with the ageing of the workforce as a whole, the age profile of the meat industry workforce is becoming older particularly those in the meat processing sector. This is also true of maintenance engineering areas where there is a significant proportion of older tradespersons.

The challenges in maintenance engineering in the meat processing industry include:

- Changes in work associated with:
 - The continuing evolution of new technologies requiring more complex and cross trade skills
 - Changes in customer requirements such as value adding to products requiring new plant and equipment and associated skills
 - Increasing demands on maintenance staff associated with legal and regulatory compliance including QA, hygiene and sanitation, animal welfare, environment, work health and safety
 - More sophisticated approaches to maintenance management systems including preventive maintenance and management information systems
 - Upgrading of plant and equipment and different maintenance and servicing requirements for new plant
- Issues conducting maintenance work including:

- Difficulties accessing plant without disrupting production leading to need to work out of normal production hours
- Staff shortages and/or staff not skilled to do the work that needs to be done
- Contractors and/or equipment parts not available on short notice
- Under-resourcing resulting in focus on urgent work at the expense of planned preventive work
- Skills gaps with staff not having the skills they need to do the jobs and/or not being able to access the training they need to upgrade their skills
- A chronic shortage of tradespersons and university qualified staff in meat processing plants with all respondents to the survey reporting that they have current vacancies or are under-resourced.

Employment in Meat and Meat Product Manufacturing is expected to grow modestly, by 1600 (or 3%) by 2015-16. This is well below the all industries average of 11% growth, but is similar to the rate of growth experienced by the industry over the past 5 years (employment growth of 1800 or 3.4% in the 5 years to February 2012, compared with the all industries average growth of 9.5%). Employment opportunities in maintenance engineering exceed those in production.

**Get the people you need
Keep your people
Develop your people**

Getting the people you need

Maintenance staff attraction and recruitment checklist

We have publicised maintenance engineering work in our local schools, TAFE college and university

We have maintenance VET in schools programs in local schools

Our company is an employer of choice in our local community

We have developed a plan to adequately staff maintenance to help meet the company's business plan by:

- Identifying the skills of the current workforce
- Identifying current skills gaps in the workforce
- Identifying additional skills that are needed to deliver maintenance requirements in the business plan
- Identifying methods of meeting skills gaps
- Developing training plans for current staff to gain additional skills
- Developing job descriptions for recruitment of new staff
- Planning and clearly defining outsourcing requirements

We are working with HR to analyse our recruitment needs and identify recruitment strategies to meet our needs

- We are working with HR to plan the recruitment process
- We are working with HR to shortlist, interview and select staff

The challenges

The challenges recruiting maintenance engineering personnel include:

- Finding trades and university qualified people with the skills needed to work in maintenance engineering and/or people who wish to acquire those skills
- Attracting people to work in the meat industry
- Attracting people to the regional location of the plants
- Competing for employment with other local industries

The incentives

The incentives that help attract personnel to maintenance engineering in meat processing plants include:

- Financial security, stability and predictability
- Training and career development
- Some opportunities to progress in the organisation in technical and leadership roles
- Offering flexible working practices such as flexible scheduling of rosters eg 4 x 10 hour shifts with 3 days off/week and one rostered day off/month
- Living locally

The strategies

Building the plant and meat industry profile

In the first instance plants need to raise the industry profile and public perception of maintenance in the meat industry. One comment from industry was that 'We need to make the industry an attractive option for tradesmen, supervisors and engineers. Opportunities for training, development, advancement and remuneration all need to be considered.'

While working in meat processing plants may not be considered glamorous, maintenance in the industry provides the opportunity to undertake a trade and gain a broad range of experience in the trade area.

Promotional material setting out career options, career pathways and training pathways need to be developed and broadly distributed in local schools and TAFE Colleges. Partnerships can be established with local schools and with VET in Schools programs conducted with years 11 and 12 students in maintenance areas. Students spend time in the plant gaining maintenance skills whilst still at school and are partly through their trade before they begin work fulltime at the plant when they've finished school.

Employer of choice

The most effective recruitment strategy is that your company has a reputation locally as a good employer or employer of choice – people self-select to work in your company because it has a reputation as an employer of choice.

An employer of choice is a company that has a positive culture and:

- Values and respects its own employees
- Looks after the health, safety and welfare of its employees
- Listens to what staff say and encourages them to share their ideas and participate in decision-making
- Trains and promotes staff
- Appreciates staff efforts
- Supports, mentors and develops staff to work to their potential to make their contribution to the company and in so doing meet their own career aspirations.

Creating a positive culture not only attracts people to work in your company, but also encourages people to continue working with your company, building their pride and the pride of the community in your company.

'Initiatives that help to become an employer of choice include:

- Competitive remuneration and attractive salary packaging options
- Additional paid personal leave
- Personal feedback, genuinely given, specific and timely
- One off cash bonus – give employees discretion on how they spend it
- Employee health and wellbeing initiatives
- Leadership development programs and mentoring or coaching programs
- Supporting employee's further education, training and personal development opportunities
- Initiatives to publicly and formally recognise employee's performance and achievement
- Support for local and community events
- Fun, with celebrations marking all manner of organisational and personal achievements
- Work health and safety – a safe and harassment free environment for all staff
- Funded social events, themed days, team building days
- Tickets or vouchers which can be shared with family and friends
- Promotion of healthy lifestyle – fresh and health food available, lunch time sporting activities.' ¹³

You can also build local support for your company by:

- Building relationships and partnerships with local businesses and service providers and potential sources of employees
- Promoting your company locally including the broad range of employment opportunities, opportunities for training to gain qualifications and career progression
- Investing in the local community, buying locally and using local contractors.

Ultimately by building your company as an employer of choice through promoting job variety, career paths, job satisfaction and engagement you are improving the image of working in the meat processing industry.

¹³ *Good Practice in Workforce Development Tools & Tips for the Australian Meat Industry*



Workforce planning

It is critical to plan workforce needs and how they will be met. Conduct an annual workforce planning process in line with your business planning and budgeting process. Start by looking at the existing workforce and the current skills gap in the workforce. Identify any additional needs arising from your company's business plan for next year, eg implications of replacement of a boiler or installation of a robot on the production line. Determine how you will go about meeting skills gaps – by training up existing staff, by recruiting new staff or by out-sourcing specific needs. This will enable the development of a plan to meet workforce needs that will generally combine the options of training current staff, recruiting and outsourcing. You'll know the competencies you need to recruit. You need to consider the two options – recruiting people with the competencies you need and recruiting people with the goal of upskilling them to meet your needs. You should also be planning the career development and succession options for your workforce.

Recruiting the right people

Having conducted your workforce planning and clearly identified the skills you need in your maintenance workforce, your options include:

- Recruiting people with the skills you need
- Recruiting people with the potential to develop the skills you need
- Training your own workforce to acquire the skills
- Outsourcing specific tasks as a temporary or permanent option

Recruiting people with development potential

In a declining and highly competitive labour market consider recruiting people with the potential to gain the skills you need. Consider the most likely sources of people who may be interested in working in the meat industry in a regional location. These may be people who currently live or have grown up in your region or people who would consider living in a regional location for reasons such as not being able to afford to buy a home and live in a large city, or people who want to raise a family in a country location or smaller community.

Establish relationships and partnerships with all local sources of suitable people including the local schools, TAFE Colleges, universities and employment services providers including:

- Partnerships with schools establishing relationships with careers advisors, participating in career expos, student work experience, student holiday work, VET in schools programs, establishing scholarships, sponsoring students, making donations such as meat for raffles for fundraising events
- Partnerships with agricultural colleges, TAFE colleges and universities including cadetships, traineeships, holiday positions, holiday projects or projects in association with modules of training, scholarships and sponsorships
- Partnerships with employment service providers who may be able to access support to help educate and train potential applicants, eg applicants with poor written and verbal communication skills.

Consider opportunities with your current production or administration workforce who may be interested in joining maintenance and undertaking a traineeship or

apprenticeship in the area. Production workers are already familiar with working in the meat industry and working in your plant. They are also familiar with the maintenance roles and you have had the opportunity to recognise their potential.

Consider mature age traineeships and other non-traditional sources of labour including Indigenous people, students, and people from a non-English speaking background, women, people returning to the workforce. Emphasise working conditions and arrangements that may better suit these groups. There is likely to be people in your local community who are seeking training for a career. Target these people in particular with opportunities such as introductions to the industry, pre-apprenticeships or part-time work.

Recruiting people with the skills you need

Considering the regional location of plants and the strong competition locally for qualified and experienced tradespersons and university qualified engineers it is critical that you plan and execute your recruitment strategies with precision and that your company has gained recognition as an employer of choice in your location. In other words, qualified and experienced tradespersons self select to join your company.

Plan your recruitment strategies and processes by compiling:

- **The what** - a detailed profile of the skills needs into a job description together with the competencies and experience you are looking for
- **The who** – a detailed account of who you are targeting considering local, regional and specific city-based potential sources of experienced tradespersons who may meet your skills needs
- **The why** – a detailed description of why an experienced tradesperson might consider joining your company. As outlined above, this may include:
 - Financial security, stability and predictability
 - Training and career development
 - Opportunities to progress in the organisation in technical and leadership roles
 - Flexible rostering options
 - Variety of work
 - Live locally
- **The how** – a recruitment plan that sets out how you're going to go about targeting each of the potential sources of candidates you've identified. These options for recruiting experienced and qualified personnel may include:
 - Using recruitment agencies who specialise in the recruitment of tradespersons
 - Advertising online or in materials that your target group are likely to access eg The Land, SEEK
 - Specifically targeting local industries suffering a downturn, eg mining or vehicle manufacturing.

Keeping your people

The research shows

'Retaining skilled employees is a significant issue for a business because a high rate of employee turnover results in a loss of business and industry knowledge and skills which can be very expensive.

In today's tight labour market workers will not continue to work in poor conditions or be ill-treated. To retain employees you need to know what is important to them and keep them connected to their work. Connected or engaged employees will be more dedicated and committed to the business.'¹⁴

Research is consistent about the main reasons for staff leaving employment as reflected in the two following studies.

'Key reasons for leaving an employer are lack of future certainty, poor leadership and lack of communication, as well as uncompetitive wages and better career options elsewhere.'¹⁵ A study of turnover in FIFO mining operations in Australia attributed low turnover to 'a combination of four factors: equitable remuneration; commitment to training and skills development; good management; and developing and maintaining a positive organizational culture.'¹⁶

¹⁴ *Good Practice in Workforce Development* Tools & Tips for the Australian Meat Industry

¹⁵ The Centre for International Economics and The Ryder Self Group 'Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries.' MLA 2008

¹⁶ Beach R, Brereton D, and Cliff D (2003), Workforce turnover in FIFO mining operations in Australia: An exploratory study, Centre for Social Responsibility in Mining, University of Qld and Sustainable Minerals Institute

Maintenance staff retention checklist

- We have a positive workplace culture that values and respects our employees
- The salaries of our staff are reasonable and there are opportunities to earn regular increments in salary linked with set criteria including training
- There is some flexibility in the rostering of staff
- New staff participate in an induction program
- New staff participate in training to familiarise them with the meat industry, the plant and the specific requirements for working in the meat industry
- New staff meet with their supervisors and go through their job description and develop a work plan and a training plan for the first three months
- New staff meet regularly with their supervisors to discuss their progress and raise any issues
- Our staff feel comfortable about raising their concerns with their supervisors and confident that the supervisors will address their concerns
- Our staff have opportunities to raise issues at meetings such as toolbox or staff meetings
- Our supervisors have received leadership and management training
- Our supervisors support and mentor their staff and develop work plans with them and provide them with regular feedback on their performance
- Our supervisors develop training plans for their staff in association with their work plans
- Our supervisors encourage training and development
- There are opportunities for our staff to progress their careers and the staff have career development plans
- Our supervisors encourage their staff to get involved and make suggestions for improvement

The strategies

Understanding your workforce and responding to risks

In order to manage staff turnover you need to understand why people leave your company and make changes to manage turnover. Maintenance engineering staff generally have a lower turnover rate than production staff but this is no reason to be complacent. It is important to recognise employee dissatisfaction before people leave and respond to staff concerns before they leave. Staff need to have opportunities to raise concerns with their supervisors and feel confident that when they do raise them they will be treated seriously, considered and resolved.

Opportunities to raise issues may be provided at regular performance review meetings, toolbox and staff meetings. Additionally, staff surveys and questionnaires may be conducted to gain constructive feedback from staff and address issues that are affecting productivity. HR monitors staff resignations and conducts exit interviews to identify the reasons why staff leave. Workforce data can be analysed to identify trends such as turnover, average age of staff, skills development, participation in training etc and develop and implement strategies to manage the risks identified.

‘An industry truism is that age makes a difference – older new recruits stay longer.... The research also says the longer a person is with an organisation, the more likely they are to stay – that length of service is one of the best single predictors of turnover.’¹⁷

Qualified, experienced tradespersons and engineering graduates are extremely hard to come by and it takes considerable time to train them internally to gain the skills you need – you cannot afford to lose a single person from your workforce. You need to do everything in your power to support them to work to their capacity and make their contribution to your organisation.

First 3 months critical

‘The research says that employees leave soon after they start work if induction programs are poorly designed or non-existent and because of poor employment decisions. Not only does the employer make poor decisions but also the employees, particularly if their expectations are raised too high during the recruitment process. This includes having little or no understanding of what the work and industry really entails.’¹⁸

In order to have the best opportunity of meeting the needs of your new recruits and thereby keeping them beyond that critical, initial first three months probationary period your organisation needs to:

- Consider pre-employment programs as a strategy for providing realistic expectations of the job and of the industry
- Include a meat industry and meat plant familiarisation program as part of the recruitment and induction programs
- Include ongoing familiarisation with the business and its personnel, terms and conditions, HR and WHS policies and procedures, company code of conduct, methods of communication, performance management program, career development etc in induction program

¹⁷ MINTRAC, ‘Workforce retention and training’ Volume 1, Issue 1

¹⁸ MINTRAC, ‘Workforce retention and training’ Volume 1, Issue 1

- Introduce new recruits to key plant personnel and their roles
- Introduce supervisors and begin the performance management process with the new recruit working with their supervisor to go over their job description and develop a work plan for the first three months and organise regular times to meet to review progress
- Begin supervising the new recruit on the job, providing them with support and training until they are competent in the specific situations in their work area
- Meet with the new recruits regularly to review their progress and give them opportunities to provide feedback
- Ensure the supervisor conducts a performance appraisal immediately prior to the end of the probation period to give feedback and recognition on completion of the initial work plan and discuss the experience over the first three months. Ensure action is taken on feedback and commence planning for the remainder of the year.

Familiarisation with the meat industry

It is particularly important for maintenance engineering personnel to be provided with induction training to familiarise them with the meat industry, and your plant in particular because the majority of personnel joining the maintenance team will not have had prior experience in the meat processing industry. Just as for production staff, maintenance engineering personnel need to be competent in areas including the production line itself, how meat is produced safely and hygienically and their role in ensuring this, work health and safety and quality assurance measures that are particularly important in the meat industry and how they are applied in your plant.

Training in meat industry skills for maintenance personnel is available and may provide credits towards additional qualifications. The units of competency that help familiarise maintenance tradespersons and engineers with the industry vary according to the level of qualification that personnel are seeking to undertake. For personnel seeking to undertake meat industry qualifications in a maintenance engineering stream at Certificate II or III the meat industry specific units of competency include:

- MTMCOR201A Maintain personal equipment
- MTMCOR204A Follow safe work policies and procedures
- MTMCOR202A Apply hygiene and sanitation practices
- MTMCOR205A Communicate in the workplace
- MTMCOR203A Apply Quality Assurance practices
- MTMCOR206A Overview the meat industry

For personnel undertaking meat industry qualifications in a maintenance engineering stream at Certificate IV the meat industry specific units of competency include:

- MTMCOR402C Facilitate Quality Assurance process
- MTMCOR403A Participate in OH&S risk control process
- MTMCOR404A Facilitate hygiene and sanitation performance.

Satisfaction with supervisors

'One reason why people leave is because they are dissatisfied with the supervision they receive. Supervision includes familiarisation with the job, feedback on performance, team development, a positive working environment and recognition. It also includes supervisor treatment of employees, with bullying or failure to prevent bullying an

example of poor supervision. Supervisors who have the skills and knowledge make time to answer a new recruit's questions, provide feedback to individuals and develop their skills, resolve problems faced by new recruits and other work mates and work comfortably and confidently with younger people.¹⁹

'The reason most frequently given by employees for leaving their jobs is that they are disconnected or disengaged from their bosses or work.... Managers including those on the front line, project leaders or senior managers have more power than anyone else to improve employee satisfaction and commitment in the workplace. Managers can do this by providing recognition and feedback regularly, offering opportunities to learn and grow, ensuring fair compensation for employee contributions and value to the organisation, fostering a safe and happy work environment, and respecting and recognising employee's needs, desires and working style.²⁰

Just as staff need professional development to gain competencies in technical and professional areas such as PLCs or hydraulics, staff taking on supervisory roles need to gain competencies in leadership and management. The meat industry qualifications framework includes qualifications in leadership at Certificate IV Meat Processing (Leadership). There is also the opportunity to major in leadership at the Diploma and Advanced Diploma levels.

All staff need to be managed through your performance management process. As part of this process you may identify staff members with the potential to become supervisors. You can then work together to develop and implement a training plan to assist them to gain the competencies they need to lead and manage other staff, and to give them support as they take on supervisory responsibilities.

Good Practice in Workforce Development Tools & Tips for the Australian Meat Industry identifies a number of top retention tips that are all the responsibilities of supervisors. These include:

- Building employee engagement and satisfaction to improve staff retention. Employee engagement is about building employee commitment to the organisation and trust in leadership
- Ensuring clear communication and feedback between management and employees
- Resolving employee problems in a timely manner. Finding the cause and implementing solutions
- Encouraging training and development for current and future roles, and aligning into the business succession plan
- Broadening responsibilities rather than have narrowly-defined job functions
- Managing workplace diversity – knowing your staff needs and motivations
- Implementing work health and safety so that staff secure and safe in the workplace, free from ^{[[[}harassment and discrimination
- Encouraging independence and innovation, allowing employees to get involved and make suggestions on how to improve performance.

¹⁹ MINTRAC, 'Workforce retention and training' Volume 1, Issue 1

²⁰ *Good Practice in Workforce Development Tools & Tips for the Australian Meat Industry*

Remuneration

Industry consultation conducted in association with this project reflected that wages for tradespersons in the meat industry are 'reasonable but considered middle of the road for tradespersons.' Salaries in some other local industries such as mining are generally more competitive. This makes it difficult for the meat industry to compete for labour when other local industries are offering a more competitive salary. There needs to be factors in addition to a 'reasonable' salary for tradespersons to consider employment in the meat processing industry over working in other local industries that have more competitive salaries. These factors may include:

- More certainty and stability of continuing work (than other industries suffering a downturn currently eg mining and automotive industries)
- Opportunities for continuing development linked with regular salary increases
- Some career development opportunities in technical and leadership and management areas
- Offering choices in scheduling of shifts and working hours
- Some financial incentives and bonuses such as bonuses for keeping production line downtime low.

Recognition and rewards

Recognition and rewards for work well done and continuing development are top motivators for staff. It is important to have a formal reward program in place that includes financial and non financial benefits and is fair, timely and specific. The recognition and reward program needs to include:

- A workplace culture that values and respects employees, supports, mentors and develops them
- Regular, set salary increases linked with set criteria and learning and development (set in awards)
- A workplace culture of continuing learning and professional development
- Career development and career progression
- Annual salary aligned with increases in cost of living and market rates
- Incentives and bonuses
- Employee benefits
- Flexible rosters and working hours
- Initiatives that encourage work-life balance
- Salary increments linked with skills development and career progression, and performance management that incorporates a training plan and regular review to ensure training plan and skills development is achieved and career development and salary progression is attained
- Training pathway reflecting career path from entry level through to trade and post trade skills defining options for progression to more complex technical skills and/or gaining skills across trades and/or progression to leadership and management
- Building a positive industry culture.

Improving workplace flexibility

In a competitive and declining labour market it is important to keep your skilled, experienced workforce. You need to understand your workforce and identify and implement strategies to meet their needs if that means they can continue to work for you.

Flexible rosters were cited as incentives for maintenance staff in industry consultation associated with this project. This included rotating shift rosters and regular RDOs, eg 4 days x 10 hours/day and 3 days off/week and 1 RDO/fortnight or month.

If you have an ageing workforce you may consider options such as phased retirement and job sharing for workers transitioning to retirement. Similarly you may consider more flexible work arrangements such as job sharing, part-time work, more flexibility in scheduling of shifts for parents in your workforce.

Developing your people

One respondent of the industry consultation was 'Candidates are usually very interested in further training opportunities and we struggle to convince them that we have an effective training policy and systems in place that will meet their development needs.'

Plants need to take a systematic approach to training, development, advancement and remuneration that includes workforce planning, identifying skills needs, developing training plans with each member of the maintenance team and supporting them to achieve their training and career goals through performance management and in so doing gain salary increases.

The performance management process should begin when the person joins your company and the new recruit and their supervisor jointly develop a work plan for the probation period. In association with developing the work plan they can determine the training needs for that particular person. This will include:

- Induction training
- Meat industry specific training covering areas such as the production line, hygiene and sanitation, quality assurance and work health and safety
- Job specific training.

There may also be additional areas required by that person to perform their job such as confined space entry or safe working at heights.

Each year the supervisor and worker meet to develop the work plan for the ensuing year. They also consider the training needs for the worker to be able to meet the outcomes in their work plan, as well as planning a career path for the worker and determining the training needs to be able to fulfill the career aspirations, eg enrolling in a Certificate IV Meat Processing (Leadership) so that they gain competencies in leadership and management in preparation for taking on a supervisory role. They may also consider a pathway that includes planning for succession so that workers have the opportunity to learn skills from personnel whom they may be backing up when they are absent or taking on their role in other shifts.

Resources

- MINTRAC Induction manual
- MINTRAC Traineeship induction kit
- MINTRAC Overview the Meat Industry (in a variety of different languages)
- MINTRAC Careers poster
- MINTRAC Careers in the Australian Meat industry brochure
- MINTRAC Managing diversity in the Meat Industry
- MINTRAC Career development handbook
- MINTRAC Essential skills for supervisors kit
- MINTRAC Basic meat industry training skills set
- MINTRAC Delivering training in the meat industry
- MINTRAC Developing an enterprise training system in the Australian Meat industry
- MINTRAC Delivering training in a meat processing plant
- MINTRAC Vocational education and training in schools for the Meat Industry
- Good Practice in Workforce Development, Tools & Tips for the Australian Meat Industry, FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- How to become an employer of choice in an industry of choice: A practical guide to workforce development in the Australian Meat Industry, FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- Fact Sheet 1 – Community Relations: How to get more ‘bang for your buck’! FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- Fact Sheet 2 – Keeping employees through the first three months! FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- Fact Sheet 3 - Good workers are worth keeping! Ideas that can help. FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- Fact Sheet 4 - Career progression for employees – make it work for you too! FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008
- Fact Sheet 5 - Succession planning: What makes an effective Supervisor? FTH Skills Council South Australia and the SA Meat Industry Workforce Development Steering Group, August 2008.