Mining and Automotive Skills Alliance

Vocational Degrees

January 2026

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Acknowledgement of Country

The information session will cover:

- **Welcome**
  - Adrian Lea – Executive Director Training and Workforce Innovation
  - Marilyn Connell – Manager Workforce Innovation
  - Annie Barry – Manager Training Products
  - Mike Barker – Workforce Innovation Lead
- **Introduction to the Vocational Degree**
  - What is it and why do we need it
- **Project timeline and key findings**
  - Phase 1 – Feasibility study and analysis
  - Phase 2 – Qualification scoping and initial implementation plan
- **What's next**
  - Phase 3 – Training Product Development
  - Request for Tender process
- **Q&A**

What is a JSC?

Meet the Jobs and Skills Councils

What does a Jobs and Skills Council do?

Four Core Functions

- Workforce Planning
- Training Product Development
- Implementation, Promotion and Monitoring
- Industry Stewardship

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The Missing Middle

Vocational Degree in the Mining and Automotive Sectors

2025 | A New VET Qualification

Vocational Degree - Endorsed by Skills and Education Ministers

- Added to AQF (level 7)
- Advanced skills training
- Specialised knowledge & technical skills

Leverages the strengths and expertise of the VET sector

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What is a Vocational Degree?

*"A **technical** qualification that provides learners with access to **work-based** learning opportunities at **AQF level 7**, including learning that may be linked with a **contract of training** where the work-based learning component aligns with **applicable standards** for the associated industry"*

- p.3, Addendum No.7 (Part A) to AQF Second Edition January 2013

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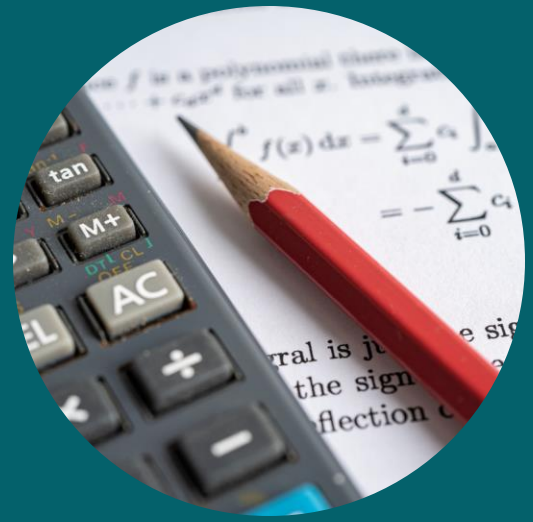
VOCATIONAL DEGREE

- AQF level 7
- Progression AQF 8
- Vocational Education delivery
- Technical occupation-specific focus
- Typical duration 1 – 3 years
- Competency-based
- Contract of employment
- Practical training for specialisations



HIGHER EDUCATION

- AQF level 7
- Progression AQF 8
- Higher education delivery
- Broad academic scope
- Typical duration 3 – 4 years
- Theoretical and conceptual
- Work placement
- Broad career opportunities

Vocational Degree | Timeline to completion

Phase 1

✓Completed
June 2025

Phase 2

✓Concluded
19 Jan 2026

Phase 3

- Commences
March 2026

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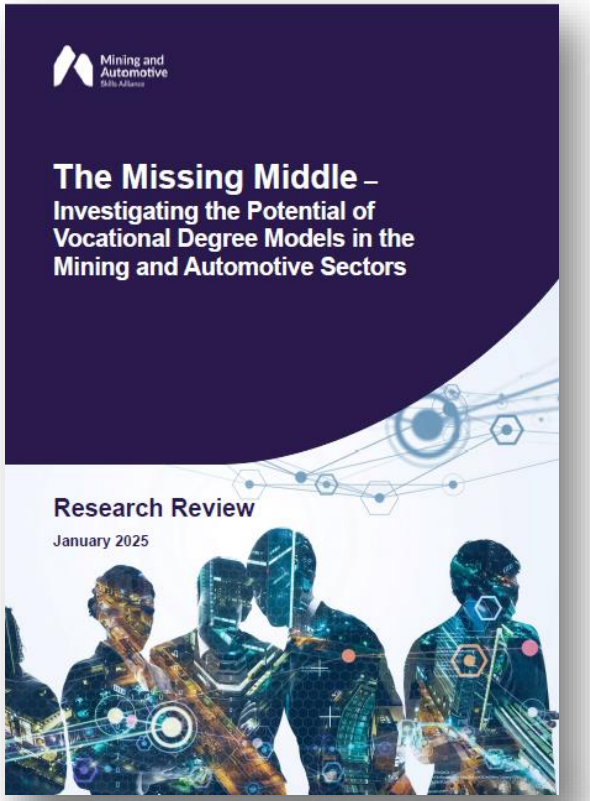
Investigating the Potential of Vocational Degrees

Phase 1 – “Was there a need and an appetite?”

- Desktop research and environmental scan
- Industry consultation
- Opportunity analysis
- Data based response
- Sample product and role identified
- Reported to DEWR and approval confirmed – June 2025



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Three Models Evaluated

- Higher Apprenticeships – UK
- Dual Studies Programs – Germany
- Professional Degrees – Canada

Job Roles Initially Identified

Automotive

- Master Technician
- Instrumentation Technician
- Diagnostic Specialists
- Automotive Diagnostic Engineers and Technical Advisors
- Service Manager and Workshop Managers
- EV and Hybrid Systems Technologists
- Advanced Manufacturing and Quality Technicians

Mining

- Mine Scheduler
- Planning Engineer/Scheduler
- Metallurgy Technician
- Field Technician Hydrologist
- Reliability Engineer/Technician
- Testing Engineer/Test Technician
- Field Geotechnician
- HSEC Advisor

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The Modern Engineering Team

IN ASSET INTENSIVE INDUSTRIES

Leadership

Superintendent – Reliability, Superintendent - Engineering Reliability Manager, Engineering Manager

Operational Support

Trades Assistant, Operator, Process Operator

Engineer

Mechanical, Electrical, Process Engineers, Senior Engineer, Project Engineer, Asset Engineer

Trades and Maintenance

Tradesperson – Electrical, Mechanical, Maintenance Technician, Leading Hand

Applied Professional - Engineer

Reliability Engineer, Testing Engineer, Systems Analyst, Maintenance Strategy Specialist

Technical and Applied Technical

Condition Monitoring Technician, Asset Health Technician, Planner, Scheduler

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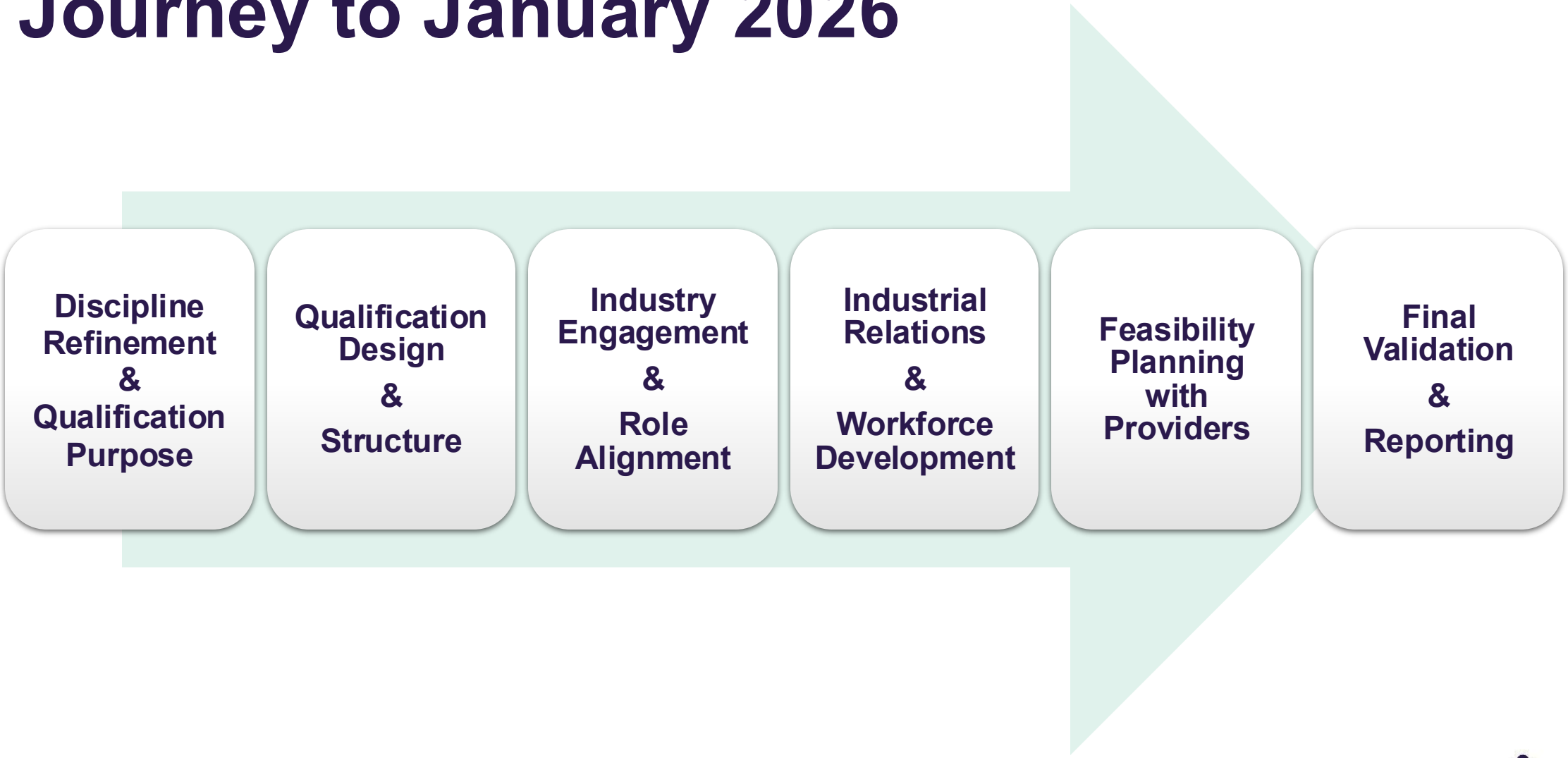
Journey to January 2026



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Shared Approach

Steering Committee

- Government
- Industry
- Unions
- Peak Bodies
- RTOs

Discipline Panel

- Engineers with lived experience
- Engineers with training experience
- Technical experts
- Academic experts

Responding to Recommendations

ANZSCO Recognition

Seeking formal recognition of Reliability and Testing Engineer occupation

Engineers Australia Recognition

Formal subdiscipline **or** emerging recognition

Refine Sample Product

Degree structure, content and outcomes

Delivery Partnerships

Joint commitment from training providers and industry

Phase 2 – the journey

Challenges

- Differentiating Vocational Degrees
- VET and HE – entry, exit & funding
- Policy settings
- Delivery capability

Benefits

- Addressing industry shortages
- Collaboration - VET, HE, and Industry
- Enabling equitable participation
- Workforce readiness - integrating practical and theoretical learning

Workplace Focus

- Function
- RE application

Teaching and Learning Focus

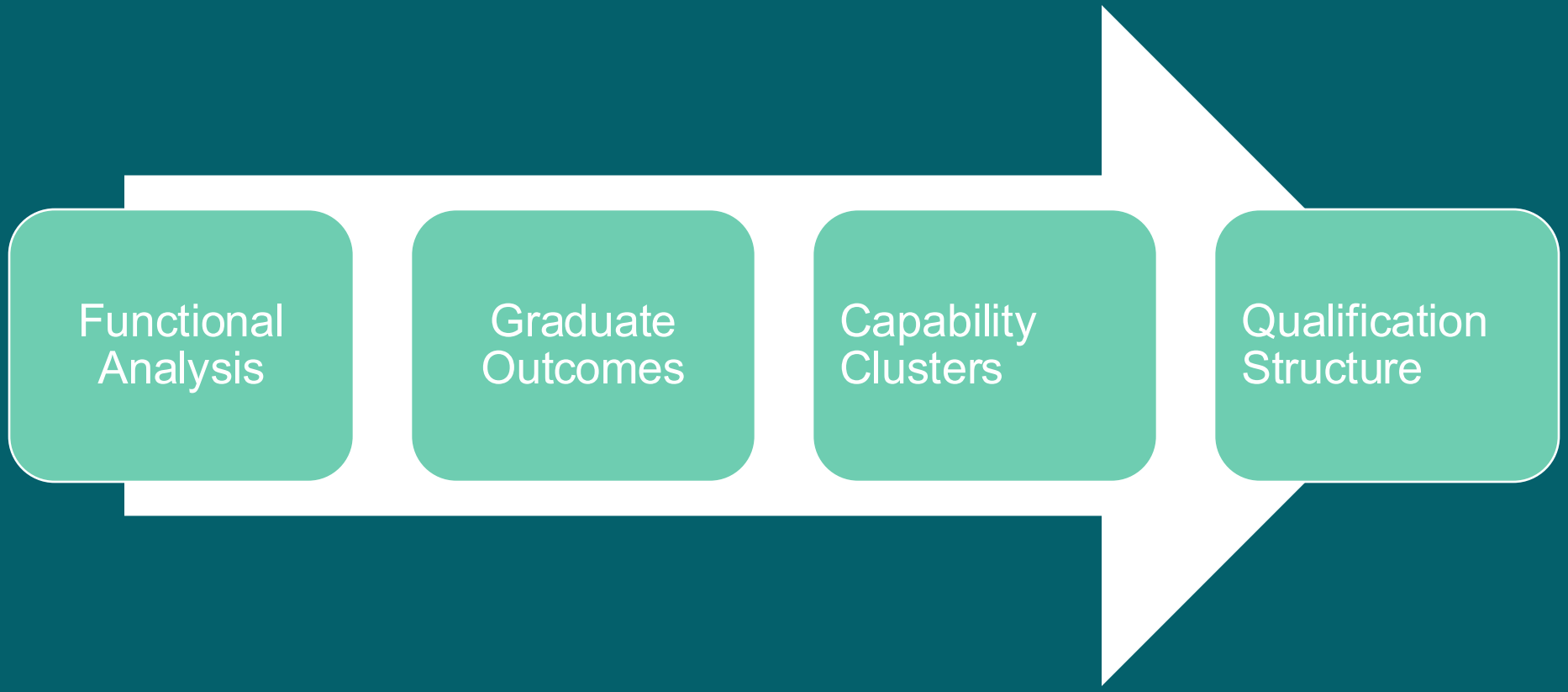
- Knowledge
- Skills
- Exposure to
- Experience with

Functional Analysis - V 7

11 Functions

1. Reliability Engineering
2. Asset strategy, lifecycle management and sustainability
3. Root Cause Analysis
4. Data collection & analysis
5. Technical research
6. Test planning and execution
7. Continuous improvement
8. Systems integration and digitalisation
9. Reporting & documentation
10. Standards and compliance
11. Cross-functional collaboration

Mapping



Engineers Australia

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Qualification

Vocational Degree in Reliability Engineering

The qualification is made up of:

- 20 Core units
- Completion of a minimum of 5 electives
- A maximum of 2 electives may be chosen from other endorsed AQF level 7 qualifications

Elective – 5 electives

Electives drawn from any theme (14 units)

- Energy systems and sustainability – 2 units
- Digital and data-driven reliability – 3 units
- Materials testing and innovation – 3 units
- Industry applications and collaboration – 3 units
- Commercial and strategic management in engineering operations – 3 units

Specialisation electives – (Testing and Validation) descriptor in the qualification title

All 5 electives must be completed

- Plan and conduct environmental and lifecycle testing
- Analyse and interpret test data for reliability decision making
- Design and execute risk-informed verification programs
- Prepare and present traceable test
- Apply digital simulation and automation tools for testing and validation

Qualification Structure

The Three-Year Structure

1

FOUNDATION YEAR

Learners build a broad base of theoretical knowledge and practical skills. Emphasis is placed on foundational science and engineering principles, alongside an introduction to reliability concepts.

2

DEVELOPMENT YEAR

Increase in specialised and technical competency clusters with complex, integrated problems – reflecting the multi-disciplinary nature of reliability engineering. Learners function more independently in both learning and work, applying initiative to troubleshooting.

3

PRACTICING YEAR

Integrating all skills in complex, open-ended situations allows for contextual specialisation. The competency clusters at this stage demonstrate advanced application and higher responsibility.

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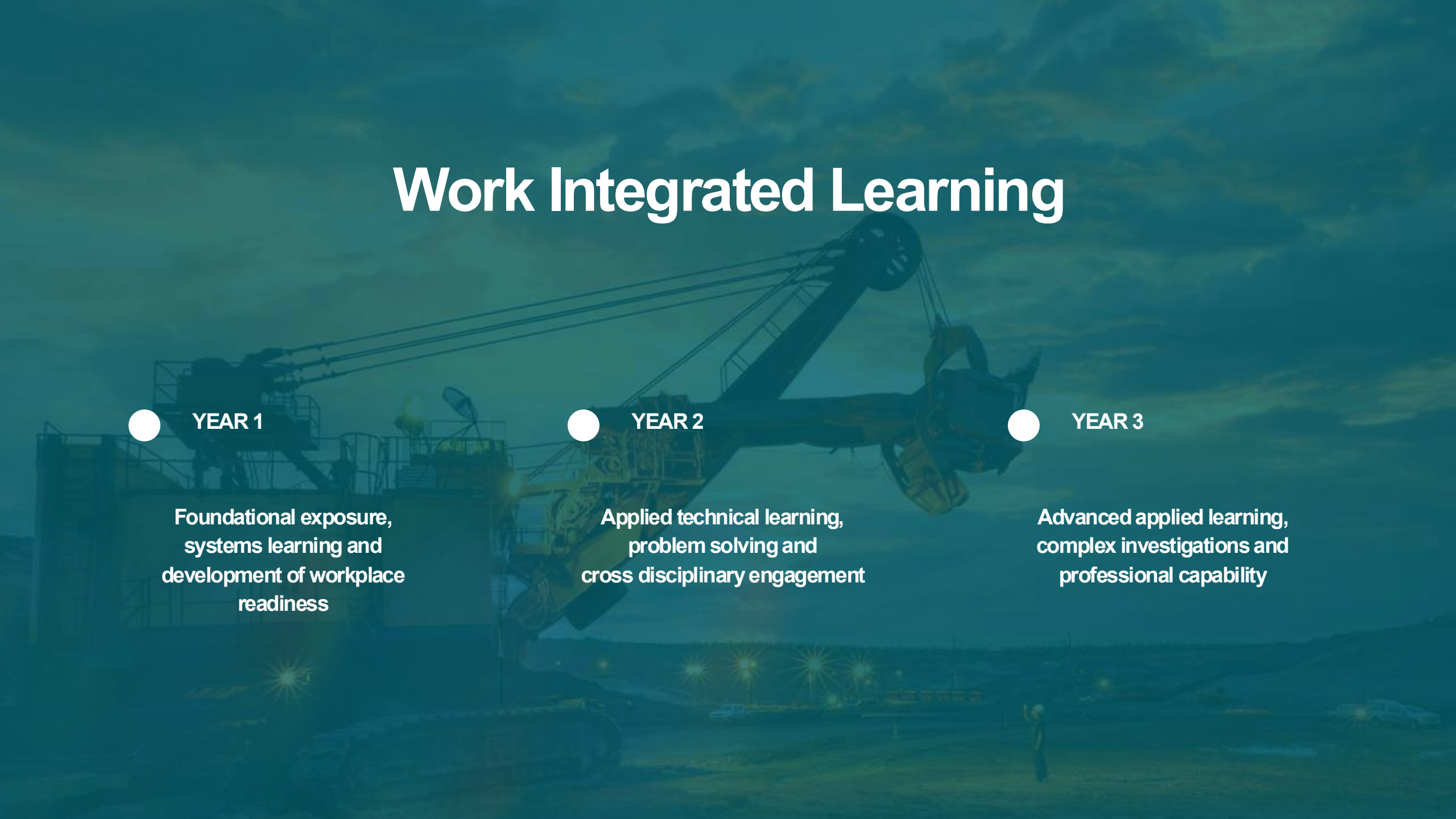
Work Integrated Learning



YEAR 1

Foundational exposure, systems learning and development of workplace readiness

YEAR 2

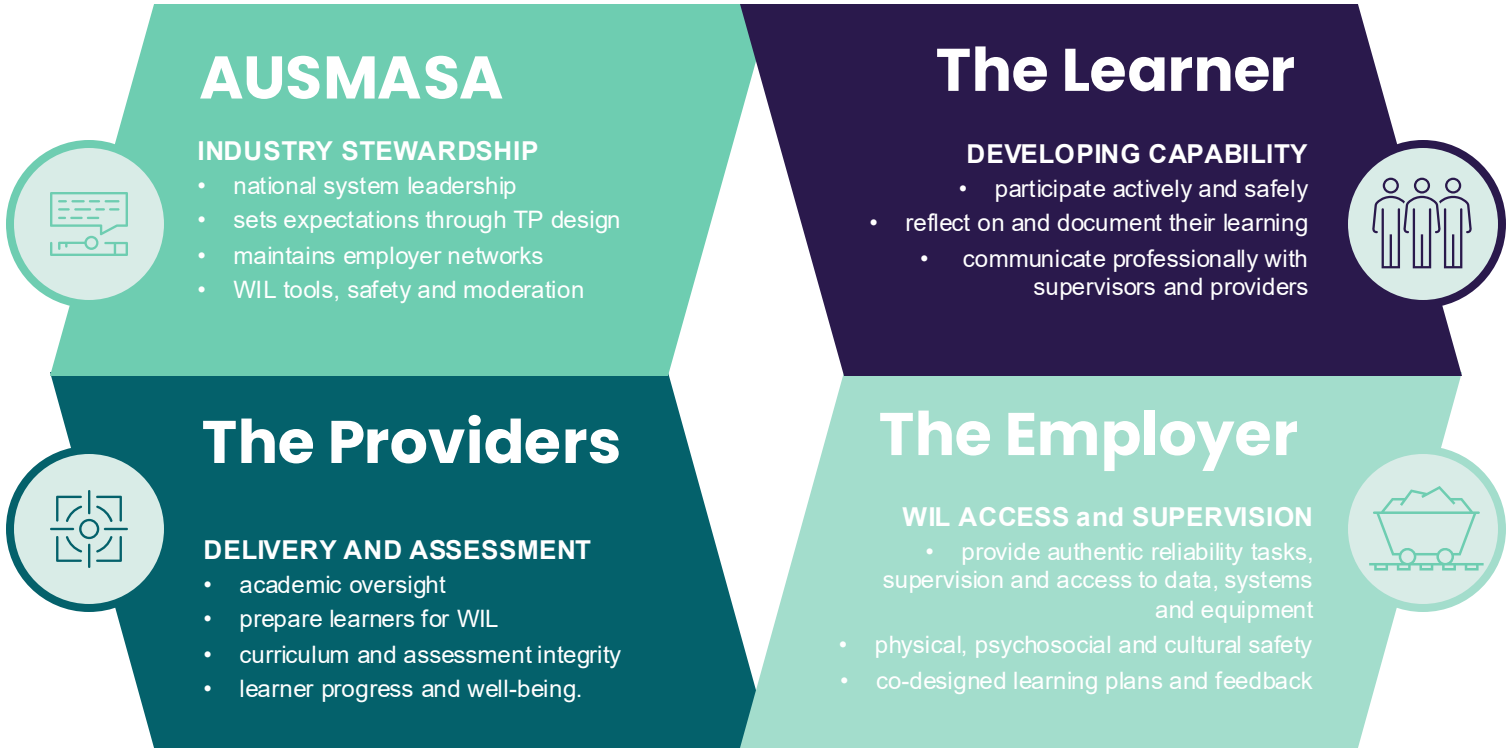
Applied technical learning, problem solving and cross disciplinary engagement

YEAR 3

Advanced applied learning, complex investigations and professional capability

The Shared Responsibility Model

Work Integrated Learning



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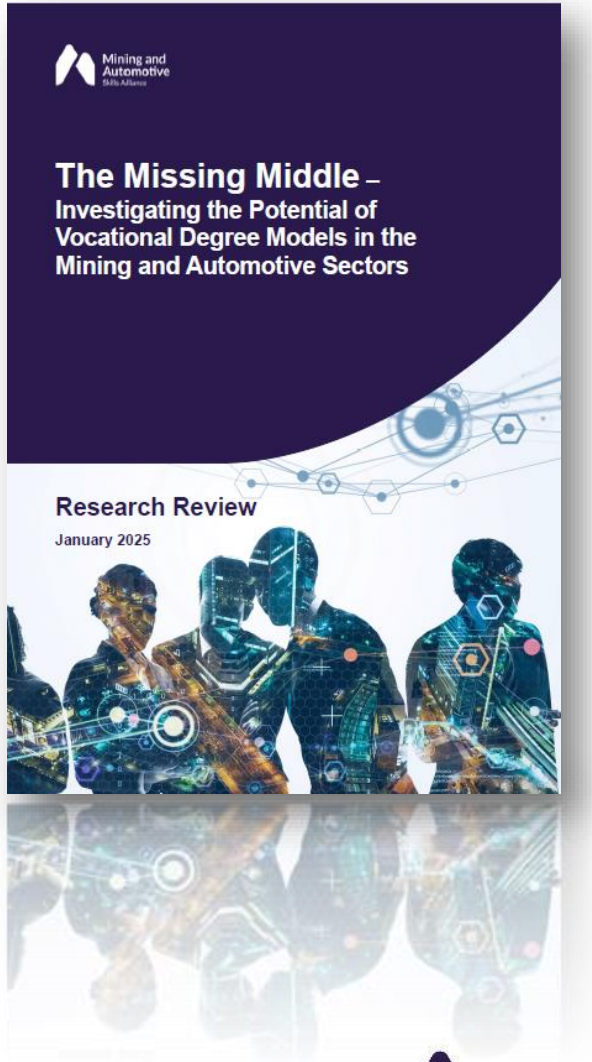
Phase 3 – Training Product Development

- **Qualification development**
  - Following the Training Package Operational Framework
  - Using qualification and unit of competency templates
  - Proposed accreditation pathway
- **Aligned**
  - Purpose-led qualification design
- **Flexible**
  - Enables updating for technology advancements
- **High level skill and knowledge**
  - Mining, applied systems and maintenance, technical analysis, data analysis and digital diagnostics, root cause analysis and investigation, work planning and reliability strategies
- **Co-design**
  - Established and committed partners identified in Phase 2



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Tender Process

“Calling all experienced educational consultants with technical writing skills”

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Thank you & Questions

adrian.lea@ausmasa.org.au
annie.barry@ausmasa.org.au
marilyn.connell@ausmasa.org.au