

Australian Workplace Practitioners' Network Conference 2015

Bob Paton, CEO
Cameron Baker, Deputy CEO
Manufacturing Skills Australia

Manufacturing a skilled Australia

Manufacturing Skills Australia

- Welcome to the Australian Workplace Practitioners Network Conference

Manufacturing Skills Australia

- About MSA
- Workforce Development
- Training Package continuous improvement and getting involved
- Environmental Scan 2015
- Foundation skills in manufacturing

01. About MSA

Manufacturing Skills Australia

- national body responsible for ensuring that manufacturing enterprises have the workforce skills they need to be globally competitive
- one of 12 national Industry Skills Councils established and funded by the Australian Government and supported by industry
- ACNC registered public company – not for profit, owned by 14 industry organisations (7 employer, 7 unions) with an 11 person Board of Directors
- operate in the vocational education and training (VET) sector as well as whole of tertiary sector

Roles for Manufacturing Skills Australia

- develop and maintain national, industry endorsed Training Packages - to establish skill standards and provide a framework for skills development
- support the implementation of training - through advice and resources, workforce development support and assisting with Government funded programs
- provide leadership to support economic and environmental sustainability
- provide government with industry intelligence - to inform the development of policies and programs aimed at workforce development.

Manufacturing Skills Australia

Manufacturing Industry Skills Council

Company Owners / Members

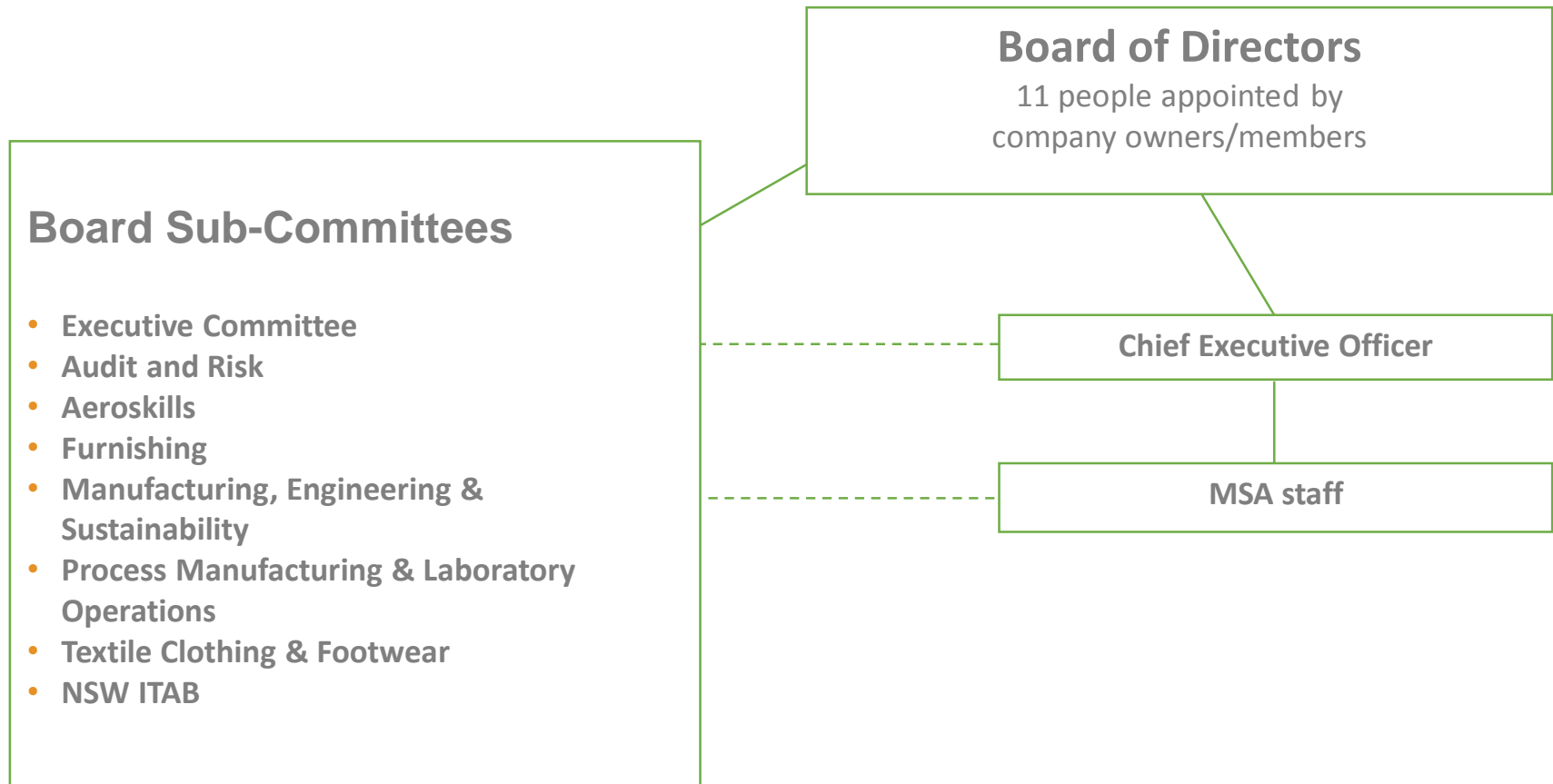
Australian Industry Group
Australian Chamber of Commerce and Industry
Australian Manufacturing Workers' Union
Australian Workers' Union
Australian Petroleum Production and Exploration Association
Communication Electrical and Plumbing Union
Construction Forestry Mining and Energy Union
Footwear Manufacturers' Association of Australia
Furnishing Industry Association of Australia
United Voice
National Union of Workers
Plastics and Chemicals Industries Association
Textile and Fashion Industries of Australia
Textile Clothing and Footwear Union of Australia

ASIC registered public company

Owned by 14 industry organisations
(7 employer, 7 unions)

Manufacturing Skills Australia

Governance structure



Manufacturing Skills Australia

Representation of Owners / Members on the Board of 11 Directors

One director nominated by:	Annual Rotation
Australian Industry Group	no
Australian Chamber of Commerce and Industry	no
Australian Industry Group – aerospace representative	no
Australian Industry Group /State Chamber of Commerce – metal and engineering representative	no
Australian Manufacturing Workers’ Union	no
Australian Workers’ Union or Communication Electrical and Plumbing Union	yes
Furnishing Industry Association of Australia	no
National Union of Workers or Liquor Hospitality and Miscellaneous Union	yes
Plastics and Chemicals Industries Association	no
Textile and Fashion Industries of Australia or Footwear Manufacturers’ Association of Australia	yes
Textile Clothing and Footwear Union of Australia or Construction Forestry Mining and Energy Union	no
Australian Petroleum Production and Exploration Association (not directly represented on the board)	

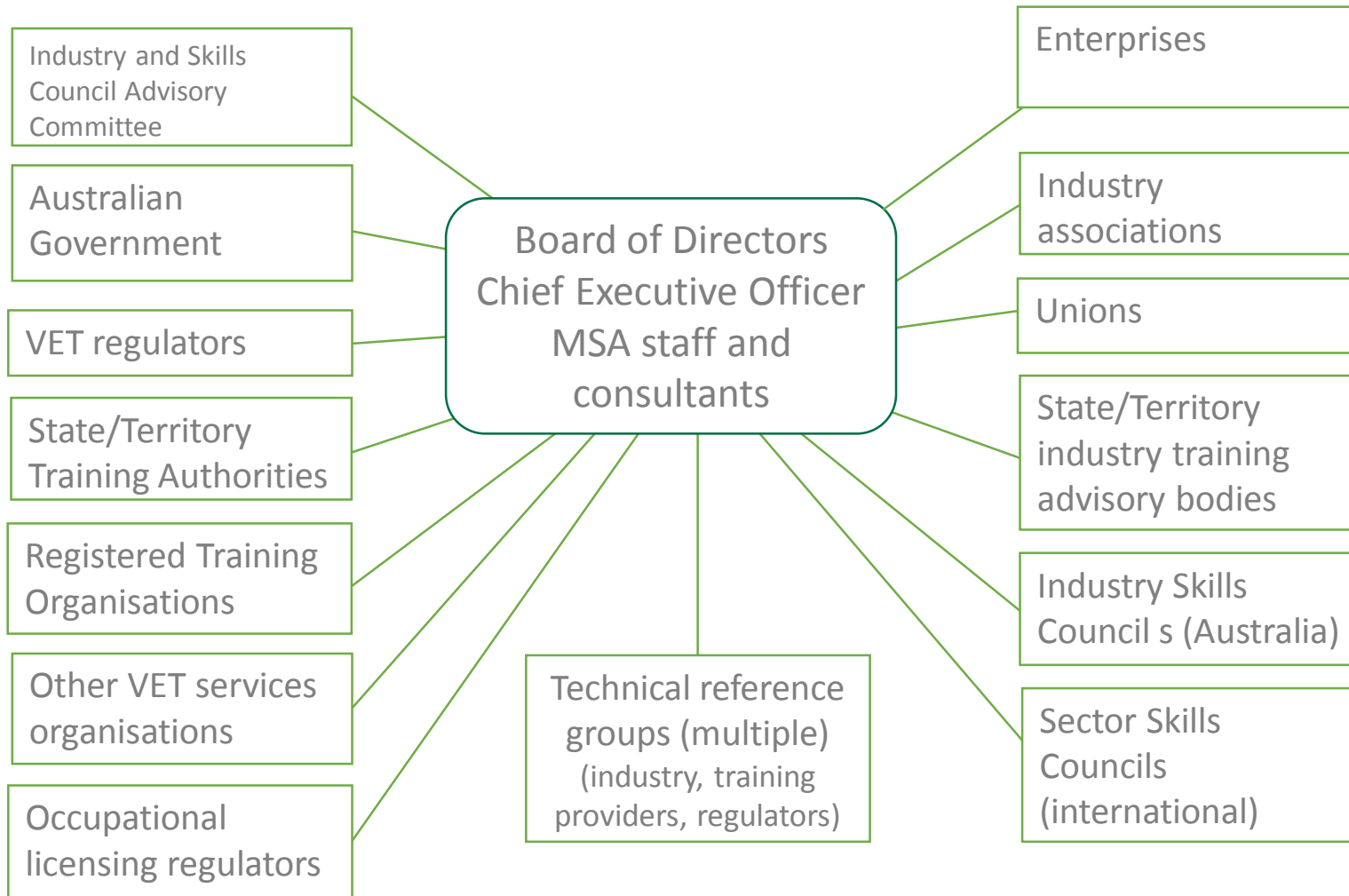
Coverage of Manufacturing Skills Australia

MSA coverage spans across manufacturing from:

- Petrochemicals to clothing
- Watchmaking to shipbuilding
- Shoes to mining equipment
- Mattresses to jewellery
- Laboratories to concrete pipes
- Welding to windows
- Fitters to violin makers
- Cement to textiles
- Plastics to steel
- Cabinet makers to aircraft engineers

*** Does not cover: food / pharmaceuticals or forest products / paper**

MSA stakeholder engagement map



02. Workforce Development

Addressing Skills Needs in Industry

Workforce Development

- Business planning
- Workforce organisation
- Workforce capability and needs analysis
- Current skills held
- Identifying skills gaps
- Filling skills gaps
 - Up-skilling existing workers
 - Recruit existing-skilled workers
 - Buy in (contractors)

03. Training Packages

MSA Training Packages

- Aeroskills Training Package
- Chemical, Hydrocarbons and Refining
- Furnishing Training Package
- Laboratory Operations
- Manufacturing Training Package
- Manufactured Mineral Products Training Package
- Metal and Engineering Training Package
- Plastics, Rubber and Cablemaking Training Package
- Sustainability Training Package
- Textiles, Clothing and Footwear Training Package

04. MSA Environmental Scan 2015

MSA Environmental Scan 2015

- Key messages

- changing the conversation around manufacturing to a more positive message
- skills –
 - management skills especially for small business
 - marketing and integrating into global supply chains
 - critical thinking, design thinking, innovation
 - digital skills at all levels
- government education and funding policies
- government procurement policies
- attracting the younger generation to manufacturing
 - foundation skills
 - STEM skills
 - apprenticeships



MSA Environmental Scan 2015 – current influences

- innovation
- advanced manufacturing
 - additive manufacturing
 - disruptive technologies
- increased productivity
- leadership and management capability
- stronger outcomes from research and development (R&D)
- modern, flexible and highly skilled workforce

MSA Environmental Scan 2015 – workforce development needs

- Flexible training for a flexible workforce
- Supporting an industry in transition
- Strategic training for niche and thin markets
- Co-ordinated, national approach
- VET in Schools
- Good advice, without strings attached

MSA Environmental Scan 2015 – future directions

- The future of manufacturing in Australia will be in high quality, high value add, niche and sustainable products and services that meet the needs of global markets.
- increasingly service-driven
- require workers with a new set of skills –
 - collaboration
 - data mining/analytics
 - computer proficiency (digital literacy)
 - advanced materials knowledge
 - design skills
 - marketing and sales
 - logistics
 - industrial networking

05. Foundation skills in manufacturing

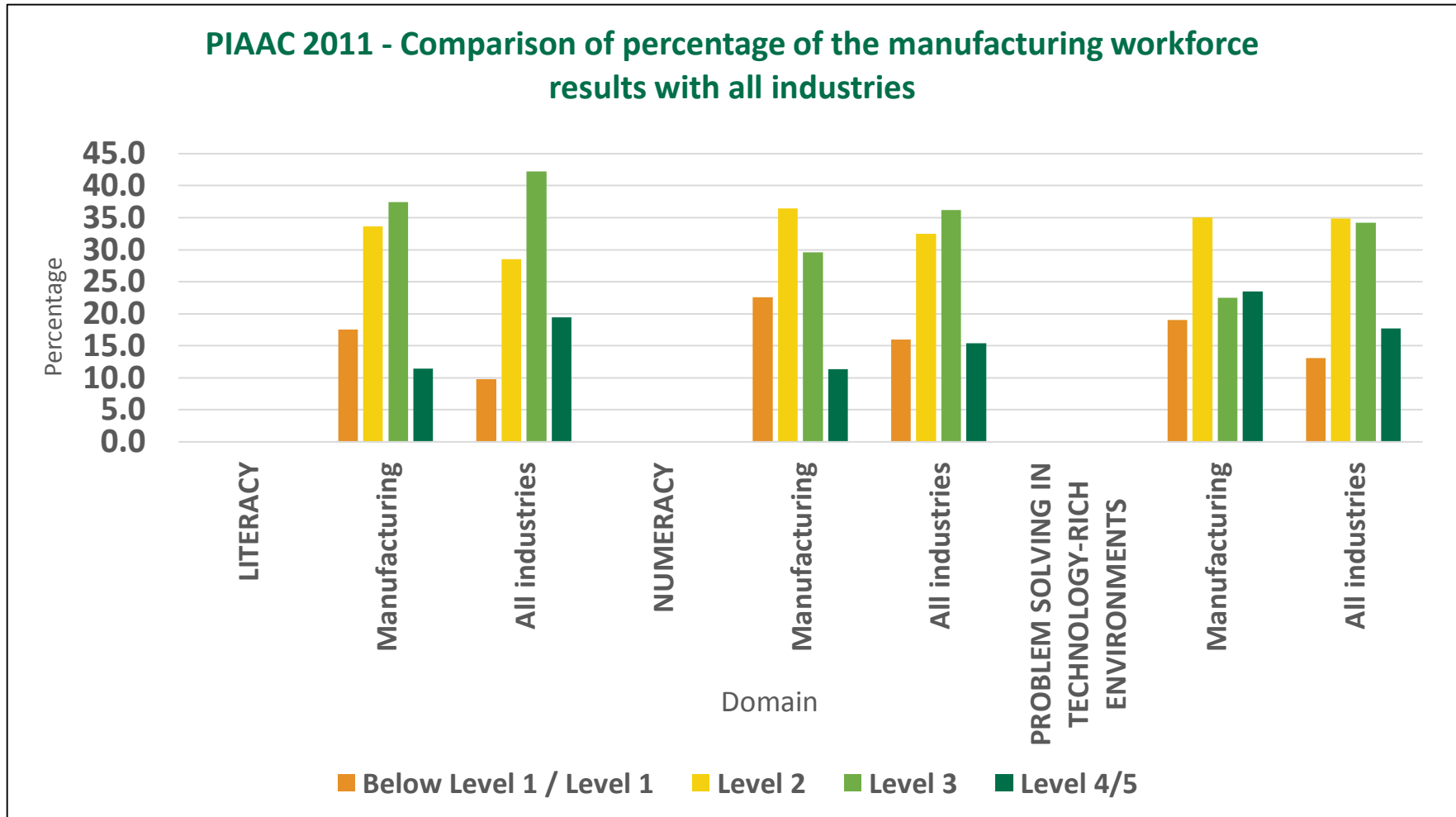
Foundation skills in manufacturing

- In 2008, 87% of available jobs required post-school qualifications, 50% of workforce lacked these.
- Productivity Commission (2014)
 - An increase in literacy and numeracy by one skill level = an increase likelihood of employment by 2.4% for men and 4.3% for women
 - An increase in literacy and numeracy by one skill level = 10% increase in wages for both men and women

Foundation skills in manufacturing

- PIAAC 2011-12
 - Almost 44% of working age Australians had literacy levels below Level 3
 - More than 53% of working age Australians had numeracy level below Level 3
 - Only 28% of working age Australians scored at level 2 or 3 for problem solving in a technology-rich environment

Foundation skills in manufacturing



Foundation skills in manufacturing

- Factors that impact on foundation skills
 - educational attainment
 - employment
 - non-English speaking background
 - age
 - gender

Foundation skills in manufacturing

- Impact of poor foundation skills in the workplace
 - poor completion of workplace documents
 - time wasting through reworks
 - ineffective work teams
 - materials wastage
 - ineffective training outcomes

When faced with foundation skills issues, only 8% of employers indicated that they had the resources to lift the foundation skills levels of their workers.

Foundation skills in manufacturing

- Impact on workers
 - inability to:
 - read Standard Operating Procedures
 - perform manual calculations
 - select correct parts/products
 - mistakes in ordering
 - using inappropriate email language with external customers
 - using inappropriate language in written material for websites and publications
 - using inappropriate communication methods for team based approaches to problem solving
 - difficulty translating technical documentation into commercial language consistent with business needs

Foundation skills in manufacturing

- Impact on the enterprise
 - poor completion rates of workplace documents
 - time wasting through work needing to be repeated
 - materials wastage due to incorrect calculations or misinterpreted instructions
 - recruitment difficulties
 - injuries and time lost
 - poor workplace relationships due to poor communication skills
 - reluctance to undertake training
 - resistance to workplace change
 - inability to benefit from workforce development opportunities
 - inability to participate in quality circles or team-type approaches used in lean manufacturing

Foundation skills in manufacturing

- MSA's annual survey of enterprises identified the four major skill needs as
 - higher level technical skills
 - innovation/design skills
 - multi-skilled, broad-based capabilities
 - IT/digital skills

In particular, enterprises need access to problem solving and 'boundary-crossing' skills to give workers an ability to apply their skills and knowledge to a range of contexts and applications.

06. MSA projects and resources

Foundation skills resources and research

mskills.org.au/workforce-planning-and-development/info/foundation-skills

Reading Writing
Learning Digital Literacy
Oral Communication
Numeracy Employability
Foundation
Skills



Our Foundation Skills involvement

Foundation Skills Strategic Framework

- aims to champion the importance of LLN issues to the manufacturing industry
- influencing and advising enterprises, the VET sector and government policy of the significant need to develop and enhance the core Foundation Skill levels of the manufacturing workforce

Building the Foundation Skills Workforce project

- MSA's latest project which focusses on increasing the capacity of VET workforce through the completion of TAE80113 - Graduate Diploma of Adult Language, Literacy and Numeracy Practice

National Foundation Skills Strategy project

- funded by the Commonwealth government and coordinated by TAFE SA
- MSA is a supporter of the project and has successfully nominated a Foundation Skills Champion for manufacturing
- also nominating a Workplace Foundation Skills Champion to promote and identify strategies that manufacturing workplaces can successfully use to improve the foundations skills of employees

National Foundation Skills Strategy project – Champions Community of Practice project

- MSA is supporting the project to develop and deliver a face to face professional development workshop to the Hydrocarbons Assessors Network (HAN)
- the aim of the project is to:
 - strengthen their understanding of Foundation Skills and the Australian Core Skills Framework (ACSF) in assessment
 - assist them to understand how to use resources such as LLN tools and the ACSF mapping of the PMA units in guiding assessment
 - interactive, hands on workshop with a problem solving approach designed to explore and respond to the participants' needs.

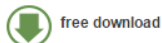
Online products

home > online products > fs

Foundation Skills

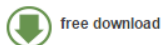
ACSF Mapping Project

The Australian Core Skills Framework (ACSF) provides a consistent national approach to the identification of the core skill requirements; and a common reference point for discussing and describing performance in the five core skill areas.



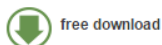
Making the Connections: Integrating foundation skills into vocational training

The purpose of Making the connections: integrating foundation skills into vocational training is to build the capability of vocational practitioners to effectively address the foundation skills embedded in vocational training.



Putting the Jigsaw Together- Numeracy Resources for VET Trainers, Version 3

These MSA resources are designed as a series of tool kits to support VET trainers with practical strategies to assist apprentices to develop their numeracy skills. Each tool kit includes: literacy and numeracy indicator tools, a comprehensive trainers' guide and a series of tools that target numeracy skill areas.



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Free Foundation Skills resources available for download:

mskills.org.au/online-products/fs

Making the Connections

- free resource developed by MSA to support the implementation of the Foundation Skills Training Package
- Recently updated to ensure that it is aligned with current Foundation Skills strategic directions
- developed specifically for vocational trainers and made up of 12 discrete sessions
- flexibly designed, with each session capable of being delivered individually (in a sequential order) or in groups e.g. two day workshop or sessions over lunch
- consists of three products - facilitator's guide, participant's notes and activities/resources
- aligned to and provides much of the required skills and knowledge for the three UoC in TAESS00009 Address Language, Literacy and Numeracy Skills in Vocational Practice
- easily contextualised to other industries, with a range of organisations

Putting the Jigsaw Together- numeracy resources for VET Trainers

- MSA resources designed as a series of tool kits to support VET trainers
- provides practical strategies to assist apprentices to develop their numeracy skills
- each tool kit includes:
 - literacy and numeracy indicator tools
 - a comprehensive trainers' guide
 - a series of tools that target numeracy skill areas
- available for free download in both Word and PDF versions from our website
- easily contextualised to other industries

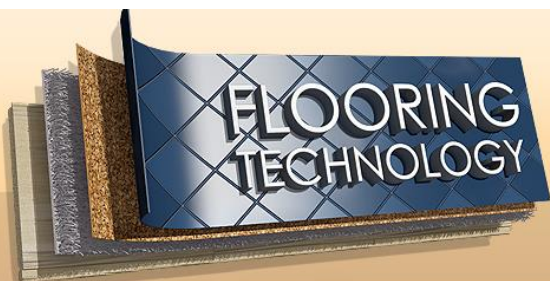
ACSF Mapping Project

- designed to assist trainers and assessors by specifying the required ACSF levels for training outcomes
- the units of competency mapped have been chosen from our 'high use' qualifications and skill sets
- a total of 17 qualifications and four Skill Sets were mapped from eight Training Packages

ACSF Mapping for MSA Industry Skills Council		Learning	Reading	Writing	Oral Communication	Numeracy
MEM30305 Certificate III in Engineering - Fabrication Trade						
Unit code	Unit title					
MEM12023A	Perform engineering measurements CORE	3	3	2	2	3
MEM12024A	Perform computations CORE	3	3-4	-	2	4
MEM13014A	Apply principles of occupational health and safety in the work environment CORE	2	2-3	2-3	2	-
MEM14004A	Plan to undertake a routine task CORE	3	2-3	2-3	3	1
MEM14005A	Plan a complete activity CORE	3	3	2-3	3	4
MEM15002A	Apply quality systems CORE	2	3	2	2	4
MEM15024A	Apply quality procedures CORE	2-3	3	2	2	1-2
MEM16006A	Organise and communicate information CORE	3	3	2	3	1-2
MEM16007A	Work with others in a manufacturing, engineering or related environment CORE	3	3	-	3	3
MEM16008A	Interact with computing technology CORE	3	3	3	2-3	3
MEM17003A	Assist in the provision of on the job training CORE	3	3	3	3	-
MSAENV272B	Participate in environmentally sustainable work practices CORE	3	1-2	2	2	2
MEM03003B	Perform sheet and plate assembly	3	3	-	2	3
MEM04001B	Operate melting furnaces	3	3-4	2	2	3
MEM04002B	Perform gravity die casting	3	3-4	2	-	3-4
MEM04004B	Prepare and mix sand for metal moulding	3	3	2	2	4
MEM04005B	Produce moulds and cores by hand (jobbing)	3	3-4	2	2	3-4
MEM04006B	Operate sand moulding and core making machines	3	3	2	2	3
MEM04007B	Pour molten metal	3-4	3-4	-	3	3-4
MEM04008B	Fettle and trim metal castings/forgings	3	3-4	2	2	3-4
MEM04010B	Develop and manufacture wood patterns	3	3-4	1	-	4
MEM04011B	Produce polymer patterns	3	3-4	-	-	4
MEM04012B	Assemble plated patterns	3	3-4	-	2-3	3-4

Sector specific resources

- **Flooring Technology project** - a learning resource designed for trainees undertaking the Certificate III in Flooring Technology (LMF31208)
- **Kitchen and Bathroom Cabinetmaking project** - a learning resource designed for apprentices undertaking the Certificate III in Cabinetmaking (Kitchens and Bathrooms) LMF32109
- most of the funding for these projects was provided by the Department of Industry, through the Workplace English Language and Literacy (WELL) Program
- the aim of the projects was to enable learning resources to be produced that not only contain all the technical information required, but also provide literacy and numeracy support for people who may struggle with conventional written material
- the websites contain interactive exercises, graphics and photos, and a voice-over narration of the main text



Management:
MSA
Manufacturing Skills Australia

Development:
Workspace
TRAINING

Funding:
WELL
Workplace English Language and
Literacy Program (WELL)

About this resource



Safety at work



Making Measurements



Working sustainably



Planning and costing



Inspecting & testing subfloors



Concrete grinding



Subfloor coatings and toppings



Preparing floor coverings



Commercial vinyl



Lay flat vinyl



Resilient tiles



Linoleum



ESD floors



Communication and Teams



Work Documents



Hand and Power Tools

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For further information visit:

flooringtech.com.au

KITCHEN & BATHROOM CABINET MAKING

Home

Management:
MISA
Manufacturing Skills Australia

Development:
Workspace
Training

Funding:
WELL
Workplace English Language and
Literacy Program (WELL)



Working sustainably



Working safely



Making measurements



Preparing for installation



Processes in K&B projects



Installation requirements



Checking fit of cabinets



Adjusting cabinets on-site



Fabricating cabinets



Installing cabinets on-site



Installing furnishing products



Communication and teams



Work documents



Hand and power tools

About this resource

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For further information visit:

kbcabinetmaking.com.au

MSA Rilda Mossop Innovation Study Award

- we're offering one Fellowship valued at \$12,500
- the Award aims to extend the capability and performance of Australian manufacturing through education and training with resulting workforce development
- applications are invited from VET teachers, trainers and assessors, enterprise owners and employees of all ages and backgrounds
- the successful applicant will spend three to four weeks involved in a study program and/or visits to industry and/or educational training institutions outside of Australia
- the MSA Rilda Mossop Innovation Study Award is open to people involved in any sector covered by MSA –
- Applications close at 4:00pm on Monday, April 20, 2015
- visit the website for details and to apply mskills.org.au

Industry Skills Councils



MSA is a proud member of the Industry Skills Forum.

The Industry Skills Council Forum ('ISC Forum') plays a key role in bringing together the 11 Industry Skills Councils (ISCs) to progress cross industry priorities and support the effective operation of Australia's National Training System.

The ISC Forum recognises that ISCs are autonomous, not for profit, independent registered public companies, governed by their respective boards, and which choose to come together for the common good. The ISC Forum's initiatives will support the ISCs' formal roles and responsibilities and supplement each Council's individual activities and charter.

www.isc.org.au



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