

Digital Occupational Profile Version 1.0

Occupation

721914 Railway Track Plant Operator

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Australian Government
Department of Employment
and Workplace Relations

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Acknowledgements

The Department of Employment and Workplace Relations (the Department) acknowledges that the Framework is adapted from the European Commission's 'The Digital Competence Framework for Citizens with eight proficiency levels and examples of use' ([DigComp 2.1](#)).

Citation: Carretero Gomez, S., Vuorikari, R. and Punie, Y., DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use, EUR 28558 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-68006-9 (pdf), 978-92-79-68005-2 (print), 978-92-79-74173-9 (ePub), doi:10.2760/38842 (online), 10.2760/836968 (print), 10.2760/00963 (ePub), JRC106281.

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The digital occupational profile defines the knowledge, skills and proficiency levels that a professional must possess to adequately perform the tasks that require digital capability in their occupation.

The profile can serve to assess the potential of a professional and their suitability to the requirements of an occupation, to detect needs and manage training plans as well as to evaluate proficiency.

Digital capability training and upskilling may be represented in Nationally Recognised Training, Accredited Courses, Enterprise Training, Propriety Training (e.g. Microsoft); at any point in the training sequence.

The digital occupational profile model uses the Australian Digital Capability Framework as a reference for the description of digital capabilities, their level of proficiency, and task descriptors. Experts in the occupation are interviewed to establish the digital aspects of their professional tasks and to describe the specific content of the digital capabilities for the occupation, as reflected in this document.

The digital occupational profiles places digital capabilities into three categories of usage based on work tasks and work processes:

Essential digital capabilities

capabilities that are essential and specific to the occupation described in the profile

Transferrable digital capabilities

capabilities that are essential to the occupation described in the profile but may also be used across multiple occupations

Complementary digital capabilities

skills that are useful and improve job performance but are not strictly necessary

Some capabilities from the Australian Digital Capability Framework may be excluded from some profiles because they are not required in the work processes of a certain occupation.

In each profile, the appropriate level of proficiency for each capability is established, with the type of knowledge, skills and attitudes required for that particular occupation described. These particular descriptions for each capability are occupation-specific: some profiles will have the same capability but with different descriptions, as each capability may cover different activities.

Note: Please refer to the Australian Digital Capability Framework and Proficiency levels for reference.

Digital Occupational Profile

Occupation

Railway Track Plant Operator

e.g. Grape Grower

ANZSCO Code

721914

e.g. 121617 Wine Grape Grower, 121612 Fruit Grower

Future Skills/Upcoming/ New Technology

- Communications devices and technology
- Remote controlled plant and equipment
- Autonomous plant and equipment
- High speed rail infrastructure
- Augmented reality (AR) and Virtual Reality (VR) – training, infrastructure inspection
- Unmanned aircraft for inspection (Drones)
- Automated warning devices and technology.
- Use of integrated AI technology
- Transponders (GPS tracker)
- Implementation and usage Digital twins/3D modelling

List Future Skills/Upcoming/New Technology that is/ could impact the occupation

Labour Market/ Occupational information

- [Rail Track Worker: Career and training pathways \(railskillshub.gov.au \)](https://railskillshub.gov.au/)
- [Australian Skills Classification Jobs and Skills Australia](https://www.skills.gov.au/jobs-and-skills/)
- Australasian Railway Association: The Rail Industry Worker (RIW) program (<https://www.riw.net.au/>)
- <https://www.rissb.com.au/products/anrp-2031-responsibilities-of-track-workers/>
- <https://www.rissb.com.au/products/anrp-2027-responsibilities-of-rail-traffic-crew/>

Links or information that may be relevant to the occupation

Training Opportunities

- [TLISS00128 Rail Infrastructure Induction Skill Set](#)
- [TLI27121 Certificate II in Rail Infrastructure](#)
- [TLI37122 Certificate III in Rail Infrastructure](#)
- [TLI47121 Certificate IV in Rail Infrastructure](#)
- [TLI50621 Diploma of Rail Operations Management](#)
- [TLI32821 Certificate III in Rail Operations](#)
- [TLI23221 Certificate II in Shunting](#)
- [TLI33221 Certificate III in Terminal Train Driving](#)
- [TLI42622 Certificate IV in Train Driving](#)
- [TLI21921 Certificate II in Track Protection](#)
- [TLI32121 Certificate III in Rail Structures](#)
- [TLI32721 Certificate III in Track Protection](#)

Links or information in this section to relevant training. It may cover all or some of the skills in the DOP.



Key functions of the occupation

- Operates plant to lay, align and carry out maintenance/construction work on railway tracks and track infrastructure
- Maintains equipment
- Operate/pilot the equipment safely before they enter and during operation in the Network
- Participate in and/or lead safety critical communication in accordance with protocol
- Reporting identified exceedance in accordance with workplace protocols
- Cooperate with Competent Workers in the performance of their duties
- Report breaches in accordance with protocol
- Promptly report delays in accordance with protocol
- Be aware of and agree the current limit of authority
- Must check other rail traffic as effectively as the circumstances allow
- Confirm rail traffic complete

List key digital and non digital tasks for the occupation

Digital Equipment used in the role

- Communications systems
- Remote controlled plant and equipment
- Autonomous plant and equipment
- Augmented reality (AR) and Virtual Reality (VR)
- Unmanned aircraft (Drones)
- Automated warning devices and technology
- Handheld devices
- Environmental monitoring devices
- Survey equipment

List digital equipment used, sources of information for this could be the ASC, CVIG or and SME etc.





Digital Focus Area 1: Information and Data Literacy

1.1 Search, browse, and filter information

To understand the purpose, required content, and methods for the search. Search effectively for content, navigate between various resources, and apply, maintain and improve personal search strategies

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage	Digital Capability Skills
Transferrable	Use digital devices in the workplace
Transferrable	Access and search relevant/current network platforms for network specific documentation/data
Transferrable	Precautions against the loss or corruption of data are followed in accordance with workplace procedures
Transferrable	Filter and interpret relevant workplace information as applicable to the work context
Complementary	Accessing and prompting AI services
Choose an item.	
Choose an item.	

Digital Focus Area 1: Information and Data Literacy

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

1.2 Verify information and data

To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content

Category of Usage	Digital Capability Skills
Transferrable	Use digital devices in the workplace
Transferrable	Apply knowledge of automated workplace fundamentals
Transferrable	Precautions against the loss or corruption of data are followed in accordance with workplace procedures
Transferrable	Use data to verify worksite position and protection limits
Transferrable	Identify authoritative sources, use and importance of data
Transferrable	Follow cybersecurity protocols to confirm veracity of sources and minimise the risk of a data breach
Transferrable	Diagnose and identify irregularities in digital data
Transferrable	Identify, interpret and report plant and equipment fault codes in accordance with workplace protocols

Digital Focus Area 1: Information and Data Literacy

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

1.3 Manage data and information

To manage, organise, store and retrieve data, information and content in digital environments. To organise and process them in a secure and structured environment for accessibility, for as long as it is needed

Category of Usage	Digital Capability Skills
Transferrable	Use digital devices in the workplace
Transferrable	Gather and store/retrieve information/data/output on a digital system, as required, in accordance with regulatory requirements and workplace procedures
Transferrable	Precautions against the loss or corruption of data are followed in accordance with workplace procedures
Transferrable	Process and review workplace documentation
Transferrable	Identify, access and update appropriate data/digital management system
Choose an item.	
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

2.1 Digital communication

To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage

Digital Capability Skills

Transferrable

Use digital communication devices in the workplace in accordance with protocol

Transferrable

Interpret applications for workplace digital technology equipment and systems

Transferrable

Use appropriate digital sign-on/communications confirmation in accordance with workplace procedures

Transferrable

Understanding/application of safety critical communications protocols using the relevant device in accordance with the workplace safety management system

Choose an item.

Choose an item.

Choose an item.



Digital Focus Area 2: Communication and Collaboration

2.2 Digital sharing

To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage	Digital Capability Skills
Transferrable	Organise and communicate information, accessing and recording relevant information from a range of sources
Transferrable	Digitally communicate information using established workplace methods
Transferrable	Discreetly share information using established workplace methods and protocols/channels
Transferrable	Use correct templates or mechanisms
Transferrable	Observing approval/attribution processes for digital content sharing
Choose an item.	
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

2.3 Digital engagement

To participate in education, workplace and society through the use of public and private digital services. To seek opportunities for self-empowerment and contribution through participation using appropriate digital technologies

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage	Digital Capability Skills
Transferrable	Research workforce pathways through digital technologies
Transferrable	Participate in education, workplace and society through the use of digital services
Transferrable	Leverage technologies to achieve learning outcomes
Transferrable	Use technology efficiently and effectively to manage work priorities and commitments
Transferrable	Communicate with the public using appropriate digital communication methods
Transferrable	Use digital resources to report workplace issues and seek help and advice where appropriate
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

2.4 Digital collaboration

To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage	Digital Capability Skills
Transferrable	Applying different digital equipment and applications/systems for workplace activities
Transferrable	Interact with relevant digital technologies and their function and capabilities used in the workplace
Transferrable	Understanding and selecting an appropriate channel/application for workplace collaboration
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

2.5 Digital conduct

To be aware of appropriate behaviour while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage

Digital Capability Skills

Transferrable

Use digital communications systems appropriately according to workplace protocols

Transferrable

Use inclusive and respectful communication protocols

Transferrable

Understanding/application of safety critical communications protocols using the relevant device in accordance with the workplace safety management system

Transferrable

Discreetly interacting in a digital environment using established workplace methods and protocols/channels

Transferrable

Use clear and unambiguous vocal communication

Choose an item.

Choose an item.



Digital Focus Area 2: Communication and Collaboration

2.6 Digital identity

To create and manage one or multiple digital identities, to understand how digital identities are used and how to manage and protect them

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

Category of Usage	Digital Capability Skills
Transferrable	Understand applications of digital identities and how they are managed and protected
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 3:

Digital Content Creation

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

3.1 Develop digital content

To create and edit original digital content in different formats, to express oneself through digital means

Category of Usage	Digital Capability Skills
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 3:

Digital Content Creation

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

3.2 Integrate and modify digital content

To modify, refine, improve and integrate information and content into an existing body of knowledge to create new, original and relevant content and knowledge

Category of Usage	Digital Capability Skills
Transferrable	Understanding workplace obligation regarding continual improvement processes
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 3:

Digital Content Creation

Foundation		Intermediate		Advanced		Specialised	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

3.3 Digital copyright and licences

To understand how copyright, subscriptions and licences apply to data, information and digital content

Category of Usage	Digital Capability Skills
Transferrable	Adhere to workplace/legislative protocols regarding digital sharing
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 3:

Digital Content Creation

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

3.4 Create instructions for computers

To plan and encode computable logic to solve a given problem or perform a specific task

Category of Usage	Digital Capability Skills
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 4: Protection and Safety

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

4.1 Protect devices

To protect devices and digital content, and to understand risks and threats in physical environments and digital environments. To know about safety and security measures and to have due regard to reliability and privacy

Category of Usage	Digital Capability Skills
Transferrable	Protect devices and content from malicious access and adhere to organisational cyber security policies and procedures
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 4: Protection and Safety

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

4.2 Protect information and privacy

To protect organisational and personal data, confidentiality and privacy in digital environments. To understand how to use and share identifiable information while being able to protect oneself, others and organisations from damage. To understand confidentiality and privacy statements and how confidential and personal information is used in a digital environment

Category of Usage	Digital Capability Skills
Transferrable	Ensure, in digital environment, organisational and personal data is protected in accordance with workplace procedures
Transferrable	Protect devices and content from malicious access and adhere to organisational cyber security policies and procedures
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 4: Protection and Safety

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

4.3 Protection and Safety

To identify and avoid health-risks and threats to physical and psychological wellbeing while using digital technologies. To protect oneself and others from possible dangers in digital environments (e.g. cyber bullying). To be aware of digital technologies for well-being and social inclusion

Category of Usage	Digital Capability Skills
Transferrable	Apply digital duty of care, to protect self and others from risk of harm in digital environments in line with workplace procedures
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 4: Protection and Safety

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

4.4 Protect the environment

To identify and be aware of environmental impacts of digital technologies and their use. This includes knowledge of cloud and local energy consumption, disposal, energy consumption in systems development, whether obsolescence is designed in (circular economy). Using digital tools to learn about looking after the environment, and using them to drive reduced waste and circular economy. Creating material for or publicising positive environmental actions using digital means

Category of Usage	Digital Capability Skills
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 5: Technical proficiency and problem solving

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

5.1 Manage devices and resolve problems

To identify and resolve technical problems when operating digital devices and using digital environments (from troubleshooting to solving more complex problems)

Category of Usage	Digital Capability Skills
Transferrable	Recognise and manage and report faults with applications and devices
Transferrable	Troubleshoot issues with the hardware and software from external or remote systems
Transferrable	Undertake diagnostic processes under guidance for more complex technical issues to identify which component of a digital interface is faulty
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 5: Technical proficiency and problem solving

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

5.2 Operate digital devices and tools

Choosing, using and configuring digital systems for equipment, machinery, devices, online tools. To adjust and customise digital environments to task or customer requirements for access and use

Category of Usage	Digital Capability Skills
Transferrable	Understand data received through digital devices to plan and conduct work within the rail corridor
Transferrable	Configuring onboard systems to safely operate plant and equipment
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 5: Technical proficiency and problem solving

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

5.3 Innovate with digital tools

To use digital tools and technologies to create knowledge, and to innovate processes and products. To engage individually and collectively to understand and resolve conceptual problems and problem situations in digital environments

Category of Usage	Digital Capability Skills
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 5: Technical proficiency and problem solving

Foundation		Intermediate		Advanced		Specialised	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8

5.4 Learning and self-development

To identify personal digital capability gaps and use learning and development opportunities to close them. To support others to improve or upskill with their digital capability development

Category of Usage	Digital Capability Skills
Transferrable	Identify, access, and manage both internal and external eLearning applications, social learning platforms and websites to develop skills and knowledge
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	

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Occupation

721914 Railway Track Plant Operator