

Digital Occupational Profile Version 1.0

Occupation

721914 Railway Track Plant Operator



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Acknowledgements

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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/

Labour Market/ Occupational information

- Rail Track Worker: Career and training pathways (railskillshub.gov.au)
- Australian Skills Classification Jobs and Skills Australia)
- 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/

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
- <u>TLI32121 Certificate III in Rail Structures</u>
- TLI32721 Certificate III in Track
 Protection

Links or information that may be relevant to the occupation

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



could impact the occupation

Key functions of the occupation

- Operates plant to lav. align and carry out maintenance/construction work on railway tracks and track infrastructure
- Maintains equipment

Digital Equipment used in the role

- Communications systems
- Remote controlled plant and equipment
- Autonomous plant and equipment
- Augmented reality (AR) and Virtual Reality (VR)

this could be the ASC, CVIG or and SME etc.

• Operate/pilot the equipment safely before they enter and during operation in the Network Unmanned aircraft (Drones) Participate in and/or lead safety critical Automated warning devices and technology communication in accordance with protocol Handheld devices Reporting identified exceedance in Environmental monitoring devices accordance with workplace protocols Survey equipment • 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 List digital equipment used, sources of information for



Digital Focus Area 1: Information and Data Literacy

1.1 Search, browse, and filter information

| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|---|--------------|---|----------|---|-------------|---|
| | | \boxtimes | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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

| 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 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 | |
|------------|---|--------------|---|----------|---|-------------|---|
| | | \boxtimes | | | | | |
| 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. | |



Foundation Intermediate Advanced Specialised 1 2 3 4 5 6 7 8

2.1 Digital communication

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

| Category of Usage | Digital Capability Skills |
|-------------------|---|
| Transferrable | Use digital communication devices in the workplace in accordance with protocol |
| Transferrable | Applications for workplace activities of different digital technology equipment and systems are interpreted |
| Transferrable | Appropriate uses of digital sign-on/communications confirmation processes |
| 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. | |



Foundation Intermediate Advanced Specialised 1 2 3 4 5 6 7 8

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

| 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. | |



Foundation Intermediate Advanced Specialised 1 2 3 4 5 6 7 8

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

| 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. | |



Foundation Intermediate Advanced Specialised 1 2 3 4 5 6 7 8

2.4 Digital collaboration

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

| 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. | |



Foundation Intermediate Advanced Specialised □ □ □ □ □ □ □ □ □ 1 2 3 4 5 6 7 8

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

| 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 | Clear and unambiguous vocal communication is used |
| Choose an item. | |
| Choose an item. | |



| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|-------------|--------------|---|----------|---|-------------|---|
| | \boxtimes | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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

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



Digital Focus Area 3: Digital Content Creation

Foundation Intermediate Advanced Specialised 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. | |



Digital Focus Area 3: Digital Content Creation

| Foundation | | Intermediate | | Advanced | | Specialise | |
|------------|-------------|--------------|---|----------|---|------------|---|
| | \boxtimes | | | | | | |
| 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. | |



Digital Focus Area 3: Digital Content Creation

| Foundation | | Intermediate | | Advanced | | Specialised | |
|-------------|---|--------------|---|----------|---|-------------|---|
| \boxtimes | | | | | | | |
| 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. | |





Digital Focus Area 3: Digital Content Creation

3.4 Create instructions for computers

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

| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|---|--------------|---|----------|---|-------------|---|
| | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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



4.1 Protect devices

| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|---|--------------|---|----------|---|-------------|---|
| | | \boxtimes | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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. | |



Foundation Intermediate Advanced Specialised 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. | |



4.3 Protection and Safety

| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|-------------|--------------|---|----------|---|-------------|---|
| | \boxtimes | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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. | |



4.4 Protect the environment

| Foundation | | Intermediate | | Advanced | | Specialised | |
|------------|---|--------------|---|----------|---|-------------|---|
| | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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. | |





| Foundation | | Intermediate | | Advanced | | Specialise | |
|------------|-------------|--------------|---|----------|---|------------|---|
| | \boxtimes | | | | | | |
| 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. | |





Foundation Intermediate Advanced Specialised 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. | | | |





Foundation Intermediate Advanced Specialised 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. | |



Foundation Intermediate Advanced Specialised 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. | |





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Occupation

721914 Railway Track Plant Operator

