

Digital Occupational Profile Version 1.0

Occupation

712918 Train Controller

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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](https://ec.europa.eu/digital-skills/)).

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

Train Controller (Network Control Officer)

e.g. Grape Grower

ANZSCO Code

712918

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

Future Skills/Upcoming/ New Technology

- Communications devices and technology
- Autonomous rail vehicles
- High speed rail vehicle systems
- European Train Control System (ETCS)
- Communications Based Train Control (CBTC)

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

Labour Market/ Occupational information

- [Career and training pathways \(railskillshub.gov.au\)](http://railskillshub.gov.au)
- Australian Skills Classification Jobs and Skills Australia (<https://www.jobsandskills.gov.au/data/labour-market-insights/occupations/712918-train-controllers>)
- Australasian Railway Association: The Rail Industry Worker (RIW) program (<https://www.riw.net.au/business-rules/network-operators/>)
- Jobs and Skills Australia
- <https://www.rissb.com.au/products/code-of-practice-recruitment-and-training-of-network-control-officers/>
- https://railsafe.org.au/_data/assets/pdf_file/0004/54508/Network-Rules-and-Network-Procedures-Certification-Standard.pdf?updated=1712611707

Links or information that may be relevant to the occupation

Links or information in this section to

Training Opportunities

- [TLISS00224 Rail Operations Fundamentals Skill Set](https://training.gov.au/Training/Details/TLISS00224)
- [TLI32821 Certificate III in Rail Operations](https://training.gov.au/Training/Details/TLI32821)
- [TLI40921 Certificate IV in Rail Network Control](https://training.gov.au/Training/Details/TLI40921)<https://training.gov.au/Training/Details/TLI50621>
- [TLI50621 Diploma of Rail Operations Management](https://training.gov.au/Training/Details/TLI50621)

relevant training. It may cover all or some of the skills in the DOP.



Key functions of the occupation

- Oversees the safe movement of rail vehicles using a computerised train control signalling system
- Authorises and direct movements of rail vehicles
- Communicates with driver to ensure safe movements of rail vehicles
- Familiarises themselves with the weight, length and schedules of rail vehicles
- Records movement of rail vehicles including departures and scheduled stops
- Provides other train controllers with information on rail vehicles progress
- Authorises and controls any activity taking place on railway tracks, including maintenance work
- Contacts relevant personal to deal with faults or mechanical failures
- Reports any accidents or incidents to the land transport authority and any other relevant body such as emergency services.

Digital Equipment used in the role

- Communications devices and technology
- Autonomous rail vehicles
- High speed rail vehicle systems
- Traffic Management Systems
- Safeworking systems
- Asset Management systems
- Operational information systems
- Digital Train Graphs
- Time Tabling Systems
- Human Machine Interfaces (HMI)

List key digital and non digital tasks for the occupation

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

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

1.1 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

Category of Usage

Digital Capability Skills

Transferrable

Operate operational software, using search functions to locate information

Transferrable

Data is gathered, required data is prepared and forms completed, in accordance with workplace policies and procedures

Transferrable

Understanding how to operate and navigate different software applications

Choose an item.

Choose an item.

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 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

1.2 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
Essential	Use digital safeworking systems, entered information is checked and verified
Transferrable	Process workplace information, data is gathered, required records are verified
Transferrable	Using software applications to gather and input operational information
Choose an item.	
Choose an item.	
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 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	Operate digital devices, navigate and organise file or application environment
Essential	Process workplace information, data is gathered and entered into computerised system in accordance with regulatory requirements and workplace procedures
Transferrable	Understand of cybersecurity principles to protect operational technology from potential threats
Essential	Ability to analyse and edit data from DTC technology systems to monitor the operational performance of trains
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

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

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 systems, identify communications equipment and systems

Transferrable

Appropriate communications system and protocols are used in accordance with safety critical communication workplace procedures

Essential

Manage communications, including knowledge of specific codes, terminology, and protocols used in the railway industry as it relates to Digital Train Control technology

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Digital Focus Area 2: Communication and Collaboration

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

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	Work and communicate effectively with others, communications systems are used to communicate with effected stakeholders, as required, in accordance with workplace procedures
Transferrable	Digital communications system features and control functions are identified and used in accordance with workplace procedures
Essential	Ability to supervise and monitor the rail network's real-time status and take necessary actions based on the system's real-time information
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	



Digital Focus Area 2: Communication and Collaboration

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

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

Technology is used efficiently and effectively to manage work priorities and commitments

Transferrable

Leverage technologies to achieve learning outcomes

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Digital Focus Area 2: Communication and Collaboration

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

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

Use digital devices in the workplace to communicate with operational staff

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Digital Focus Area 2: Communication and Collaboration

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

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 communication systems, messages are transmitted clearly, unambiguously and precisely in accordance with protocols required of users as outlined in workplace procedures

Transferrable

Tailor communications style to the audience in line with protocols and workplace procedures

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Choose an item.

Digital Focus Area 2: Communication and Collaboration

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

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

Use digital communication systems and profiles in accordance with workplace procedures

Transferrable

Take appropriate action to protect digital identity from malicious actors

Transferrable

Identify and take action to protect confidential and operationally sensitive data in different media formats

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 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

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 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

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

3.4 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
Transferrable	Create simple programs to implement repeatable procedures
Transferrable	Pre-prepare system parameters for easy application at an appropriate time
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 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

4.3 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 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

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
Essential	Ability to manage train scheduling (arrivals, departures and managing disruptions), and understanding the principles of capacity planning and delay management using digital technology
Transferrable	Identify errors or mismatches in provided data then use digital systems to manage or rectify the error / mismatch
Essential	Ability to interpret system warnings, alerts, and faults and perform testing or troubleshooting on digital devices and technology systems
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.	

Digital Focus Area 5: Technical proficiency and problem solving

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

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
Essential	Use multiple digital systems and platforms concurrently to safely manage rail operations and access to the rail corridor by the Rail Safety Workers
Essential	Configuring onboard systems to safely manage train operations (autonomous)
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 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

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.

Digital Occupational Profile

Version 1.0

Occupation

712918 Train Controller