Australian Agricultural Workforce

digital capability framework

Training and curricula handbook for education and training providers

September 2019

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How can the *training & curricula* handbook be used?

The handbook is a guide that provides a digital and enabling capability and maturity framework to the training organisations and education providers about the expectations of employers and potential learners. In addition, the handbook highlights the role of digital and enabling capabilities in the agricultural and agribusiness industry.

The digital capability framework provides a common language that can be used by training organisations and education providers and the agricultural industry to communicate with each other regarding digital and enabling skills development.

Training providers might use the headline terms and learning objectives per maturity level to identify courses aimed at addressing specific agricultural digital skills.

Each of the digital and enabling capabilities have been further explained by providing a range of learning outcomes. Training organisations and education providers can use these to help design course curricula at the appropriate level.

The needs of the agriculture industry are many and varied, and it is expected that providers will be able to better service different market segments, and pitch their curricula accordingly.

Where training organisations and education providers identify a gap and do not have the expertise to deliver, the handbook may help to identify where industry partnerships could be formed.

Conversely employers and potential learners might use the terms to search for courses to help address a particular skills gap.

In parallel, the agricultural industry will develop a self-assessment tool that will enable the future and existing workforce to assess their digital and enabling capabilities based on current skills and knowledge. Moving forward, the self-assessment tool will enable the workforce to identify the digital skills gaps that are required to be addressed by the course curricula. These will be designed by training organisations and education providers.

Definition of a

Digital Capability Framework

The digital capability framework defines the skills required in the future to uptake digital technologies influencing the Australian agriculture workforce. This framework includes digital capabilities and enabling capabilities.

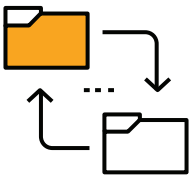
DIGITAL CAPABILITIES

Digital capabilities are defined as the wide ranging skills an individual, organisation or industry require to ensure they have the capacity to actively participate in a current and future environment that is heavily reliant on digital resources and technologies. In Australia's agriculture industry, this means that stakeholders possess the digital capacity or capability to live, learn and work in a digital environment.

Digital literacy

Technology operation

Data management



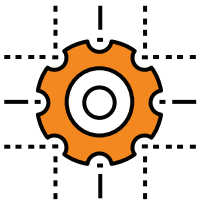
Data monitoring, analysis & interpretation

Digital communication

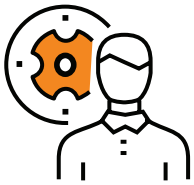
Incident management

ENABLING CAPABILITIES

Enabling capabilities are also known as soft skills and are those capabilities that individuals possess including personal attributes and traits, communication skills and behaviours.
They enable individuals to grasp basic digital skills and knowledge and promote innovative behaviour in using new and advanced technologies now and in the future.

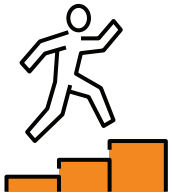


Process improvement



Personal learning & mastery

Collaboration



Business transformation

Critical thinking

Capability level descriptors

Level 1

FOUNDATION

- Demonstrates foundational knowledge, skills and experience in the area of capability to meet current requirements.
- Displays ability to operate and perform basic approaches and techniques effectively.

Level 2

DEVELOPING

- Demonstrates growth and development in critical skills, knowledge and experience in the area of current and emerging capabilities to meet requirements.
- Displays increased adeptness and proficiency in the area of capability, and applies new skills to improve performance and achieve effective outcomes.

Level 3

PROFICIENT

- Demonstrates complete adeptness, advanced skills and proficiency in the area of current and emerging capabilities needed to meet and exceed requirements.
- Applies proven experience in the area of digital capability to lead others and achieve key outcomes, acting as a role model to demonstrate the capability in the effective performance of work and the application of key behaviours.

Level 4

MASTERY

- Demonstrates mastery and extensive experience in the area of digital capability to set vision, drive culture, and deliver capability and services that enable the organisation to execute the key pillars of the strategic agenda.
- Applies a breadth and depth of experience in the area of capability to champion major strategic and transformational programs, drive innovation, collaboration and create new value for the organisation and drive change in the broader industry sector.

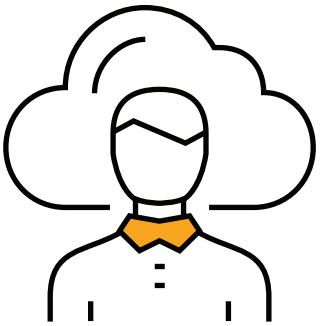
Digital Capabilities

MATURITY FRAMEWORK

Digital Capabilities

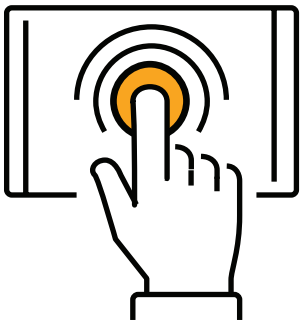
Digital capabilities are defined as the wide ranging skills an individual, organisation or industry require to ensure they have the capacity to actively participate in a current and future environment that is heavily reliant on digital resources and technologies.

In Australia's agriculture industry, this means that stakeholders possess the digital capacity or capability to live, learn and work in a digital environment.



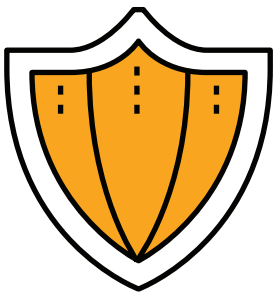
DIGITAL LITERACY

The ability to acquire and maintain a awareness and knowledge of current and emerging technologies impacting on the agricultural industry.



TECHNOLOGY OPERATION

Proficiency in operating all relevant technologies and other digital devices applicable to business activities and processes. Anticipates the occurrence of digital problems including errors, issues and road blocks and proactively implements preventative actions.

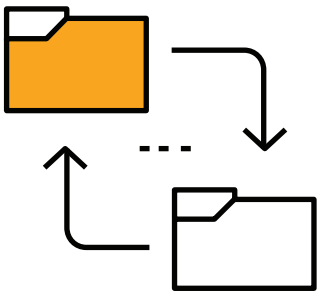


DATA MANAGEMENT

Understands the importance of data governance by ensuring it is collected, managed, recorded, stored, shared and disposed of safely and securely and in accordance with the principles driving use of confidential, personal and non-personal data.

DATA MONITORING, ANALYSIS & INTERPRETATION

Critically monitors and analyses collected data and data sources along with other digital outputs from leveraged technologies. Selects and interprets data to identify trends, problems and other points of interest quickly and accurately to make informed decisions to improve the business, make the required adjustments, drive opportunities and mitigate risks.

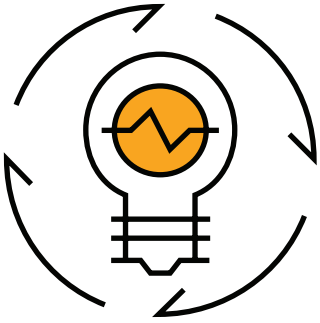


DIGITAL COMMUNICATION

Effectively communicates and reports in digital spaces including within the organisation, with digital service providers, regulatory entities, digital communities and other identified stakeholders.

INCIDENT MANAGEMENT

Implements actions to minimise the impact of incidents that cannot be prevented. Manage the incidents that have occurred despite of the preventative actions.



Learning Outcomes:

DIGITAL LITERACY

LEARNING OUTCOMES

01. Identify new and emerging types of technologies being used in agricultural workplaces, and the benefits of adopting each.

02. Select and assess an appropriate digital solution or service provider for a particular task or set of tasks and explain why it is the best option.

03. Identify obsolete technologies or processes that may interfere with the introduction of new or existing digital systems.

04. Test and report on the implementation of a new technology.

KEY CAPABILITIES

Summary

The ability to acquire and maintain awareness and knowledge of current and emerging technologies impacting on the agricultural industry.

Level 1 FOUNDATION

- Builds knowledge and awareness of how current and new technology are being utilised and applied across the agricultural industry; and
- Can select and use commonly applied technology devices, applications and software to meet key requirements and undertake specific job functions within entry level roles.

Level 2 DEVELOPING

- Is aware of how and why technologies are being used to change traditional industry and work practices across the agricultural industry;
- Understands how emerging or new technology devices, applications and software may be applied and used to improve productivity and outcomes; and
- Understands and applies foundational concepts in computing, coding and information management.

Level 3 PROFICIENT

- Uses the correct technology to carry out tasks effectively, productively and with attention to detail;
- Can assess technology options most suitable to an operation;
- Can quickly and confidently familiarise and use new technological devices, applications, software and devices;
- Can staying up to date with ICT as it evolves;
- Understand what the right mix of current versus emerging technologies should be to best meet current and future needs; and
- Knows when technology becomes redundant and should be retired to avoid interference with updated systems.

Level 4 MASTERY

Mastery in digital literacy refers to an individual who:

- Demonstrates high levels of digital knowledge and awareness concerning the use of Information and Communications Technology (ICT) based devices, software and services;
- Has the ability to work across a range of tools, platforms and applications to solve complex problems;
- Has the ability to identify the right technology (fit-for-purpose) from among the ecosystem of existing AgTech solutions;
- Can identify suitable service providers to address their requirements, and analyse pros and cons of competing technologies to meet strategic outcomes;
- Looks for innovative ways to apply existing and new technology and contribute to roadmaps for technological development;
- Can implement integrated digital solutions to meet needs and create increased value; and
- Seeks out examples of leading practices around the application of digital technology across the agricultural industry and can apply these.

Learning Outcomes:

TECHNOLOGY OPERATION

LEARNING OUTCOMES

01. Acquire and demonstrate an increasing level of proficiency in a particular technology.

02. Operate multiple technologies to complete a task.

03. Identify, and seek solutions for resolving, a range of common technological error messages.

04. Collect information from multiple sources for the on-going upkeep of technologies.

05. Collect data required for informed selection of a new workplace technology.

06. Identify when existing technologies do not meet workplace needs and collaborate with others in developing solutions.

KEY CAPABILITIES

Summary

Proficiency in operating all relevant technologies and other digital devices applicable to business activities and processes. Anticipates the occurrence of digital problems including errors, issues and road blocks and proactively implements preventative actions.

Level 1

FOUNDATION

- Utilises basic digital tools, platforms and applications to complete core activity and processes;
- Demonstrates capacity to collect and evaluate basic data and information and to share insights and findings using digital methods; and
- Invests time and participates in learning programs targeting the development and growth of foundation capability for operating existing and emerging digital technology.

Level 2

DEVELOPING

- Builds increased proficiency and is growing capability for operating emerging digital tools, platforms and applications;
- Passes technology operation skills on to staff to ensure successful implementation, training staff in on-farm digital practices as well as adhering to OH&S regulations;
- Identifies when a digital technology problem occurs and describes its characteristics and potential impacts and/or consequences; and
- Utilises technology to develop digital solutions to address common issues and meet key requirements.

Level 3

PROFICIENT

- Demonstrates effective use of a broad range of existing and emerging digital tools, platforms and applications either individually or simultaneously, to address key issues and needs;
- Maintains proficiency and up-to-date knowledge concerning the correct use of digital technologies and their various functionalities and add-ons;
- Leads application of selection and decision processes to procure technologies, platforms and services needed to operate and to collect, combine, analyse, monitor relevant data, and report relevant insights for the business; and
- Engages and negotiates effectively with sellers and providers of digital technologies and service entities.

Level 4

MASTERY

- Demonstrates the highest proficiency level and deep expertise regarding the effective and productive use of ICT devices, digital tools, and software to develop tailored solutions and address complex issues and needs;
- Develops business cases for required new services or investments according to the identified business needs not met with the tools in place. This includes performing cost analysis and identifying the risks involved in implementing these digital applications;
- Develops and applies new ICT solutions and advanced digital practices anticipating and preparing for future user needs and undertakes innovation projects to support and achieve strategic goals.

Learning Outcomes:

DATA MANAGEMENT

LEARNING OUTCOMES

01. Identify the data needs of a particular business, or business activity.

02. Compare data storage technologies including security and accessibility.

03. Identify relevant legislation and regulation regarding collection, ownership, ethical use and sharing of data.

04. Develop and implement a data security plan for a business.

KEY CAPABILITIES

Summary

Understands the importance of data governance by ensuring it is collected, managed, recorded, stored, shared and disposed of safely and securely and in accordance with the principles driving use of confidential, personal and non-personal data.

Level 1 FOUNDATION

- Maintains a basic and relevant understanding of individual and business legal requirements pertaining to privacy and compliance of data;
- Understands individual and business responsibility when sharing data, being able to identify the difference between personal and non-personal data;
- Understands the details of the ownership of the data and how it may be shared; and
- Is Aware that any data that is personal data must in many cases be used in accordance with the Privacy Act and the Australian Privacy Principles. Also aware that in other cases there are legal and regulatory restrictions on what data can be shared and collected in what contexts.

Level 2 DEVELOPING

- Understands and ensures any controlled data is subject to the appropriate and legal level of security, privacy and compliance;
- Understands and manages the various risks that are relevant to data capturing and storage and the impacts these risks carry for the business and its compliance responsibilities; and
- Maintains and stores high quality data, ensuring that it is securely accessible, relevant and timely.

Level 3 PROFICIENT

- Develops organisational policies, standards, and guidelines for data management, aligned with ethical principles;
- Uses an effective and accurate methodology to collect and store relevant data while ensuring its quality and integrity are maintained; and
- Plans, establishes and manages processes for regular and consistent access to, and independent validation of external information from multiple sources.

Level 4 MASTERY

- Derives and executes an overall strategy of master data management, within an established information architecture, that supports the development and secure operation of information and digital services;
- Develops and implements master data management processes, including classification, security, quality, ethical principles, retrieval and retention processes;
- Identifies issues which might prevent the organisation from making maximum use of its information assets and implements solutions.

Learning Outcomes:

DATA MONITORING, ANALYSIS & INTERPRETATION

LEARNING OUTCOMES

01. Select and use a range of digital technologies to collect, download and analyse data.

02. Extract and collate data from multiple sources, including archived information, for further analysis and interpretation.

03. Identify and describe limitations of individual data sets.

04. Present data, and data trends and insights, to enable business decision-making.

KEY CAPABILITIES

Summary

Critically monitors and analyses collected data and data sources along with other digital outputs from leveraged technologies. Selects and interprets data to identify trends, problems and other points of interest quickly and accurately to make informed decisions to improve the business, make the required adjustments, drive opportunities and mitigate risks.

Level 1 FOUNDATION

- Gathers and consolidates relevant data from digital sources across the Agricultural sector;
- Understands how to produce data outputs relevant for business insights and objectives; and
- Is able to review and run basic analysis on common data sets.

Level 2 DEVELOPING

- Maintains current awareness of data and information supplied by industry sources across the Agricultural sector, and identifies emerging trends and potential key issues;
- Is able to combine and manipulate data sourced from different digital tools, platforms or applications to extract more meaning and prepare it for further analysis and interpretation;
- Understands how to extract archived data for reuse and comparison with other captured data or other data sources.

Level 3 PROFICIENT

- Understands, and is adept at, accessing digital sources of data, analysis and information required to effectively review, analyse and address key issues and opportunities;
- Reviews and critically evaluates digital data and information sourced across the agricultural industry and interprets and establishes relativity and importance to the organisation;
- Identifies, selects, and analyses relevant data to determine its best and most valuable use for the business; and
- Understands the limitations of data and their consequential effect on interpretation and decision making.

Level 4 MASTERY

- Applies advanced ICT skills to interpret complex digital information and data relevant to the agricultural industry, and to review, analyse, synthesise and re-present digital information in different contexts and settings;
- Demonstrates high capacity to utilise a broad range of digital solutions to monitor, assess and analyse complex data and information, and draw key insights, trends and key points of relevance for use in the development of strategies and operational plans; and
- Establishes and monitors digital dashboards and advanced reporting and visualisation tools for monitoring and assessing real time data to evaluate performance and inform strategy and decision making.

Learning Outcomes:

DIGITAL COMMUNICATION

LEARNING OUTCOMES

01. Identify and compare a range of digital communication tools regarding their applications and limitations.

02. Use a range of digital technologies to collaborate with stakeholders and service providers both individually and as groups.

03. Recognise barriers to effective digital communication and solutions to overcome them.

04. Use digital communication software and devices to source, prepare, share and present information and reports.

05. Monitor industry technological developments using a variety of digital platforms, including social media and forums.

KEY CAPABILITIES

Summary

Effectively communicates and reports in digital spaces including within the organisation, with digital service providers, regulatory entities, digital communities and other identified stakeholders.

Level 1 FOUNDATION

- Uses basic digital tools and spaces to communicate effectively with peers and other stakeholders;
- Promotes a open style of communication as suited to a digital organisation and sector;
- Promotes respectful communication in digital media; and
- Respects others in public communications and maintains privacy in private communications.

Level 2 DEVELOPING

- Builds increased proficiency and is growing capability applying emerging digital communication platforms and tools;
- Understands how to produce a range of data outputs relevant for business insights and objectives;
- Understands how to extract archived data for reuse and comparison with other captured data or other data sources; and Promotes engagement and participation across the organisation and among multiple organisations, clients and stakeholders, using digital tools to engage, consult and make effective decisions.

Level 3 PROFICIENT

- Ensures the digital culture of the organisation supports access, inclusion, and equality of opportunity;
- Communicates effectively in digital media and spaces such as text-based forums, online video, audio and social media and designs digital communications for different purposes and audiences;
- Identifies, selects, and analyses relevant collected data to determine its best and most valuable use;
- Understands the limitations of data and their consequential effect on interpretation and decision making.

Level 4 MASTERY

- Utilises digital networks and media to build partnerships and build public/business/community engagement to promote the vision and identity of the organisation;
- Invests in infrastructure for digital communication, developing internal and external networks for knowledge exchange and practice sharing;
- Combines and manipulates data sourced from different digital tools, platforms or applications to extract more meaning and value for analysis and interpretation;
- Articulates key insights from the relevant data to drive informed decisions for the business.

Learning Outcomes:

INCIDENT MANAGEMENT

LEARNING OUTCOMES

01. Identify a range of cyber risks for a particular business and mitigation strategies for each.

02. Establish roles and responsibilities for personnel for each area of risk in a business.

03. Develop and test an incident reporting policy and procedure.

04. Use a range of digital monitoring systems and devices to measure system or equipment performance.

05. Develop a disaster recovery plan for a potential incident.

KEY CAPABILITIES

Summary

Implements actions to minimise the impact of incidents that cannot be prevented. Manages the incidents that have occurred in spite of the preventative actions.

Level 1 FOUNDATION

- Follows agreed procedures, identifies, registers and categorises incidents;
- Gathers information to enable incident resolution and promptly allocates incidents and escalates as appropriate;
- Maintains records and advises relevant persons of actions taken; and
- Documents and closes resolved incidents according to agreed procedures.

Level 2 DEVELOPING

- Records problems that occur and are resolved to ensure similar events can be avoided in future situations;
- Prioritises and diagnoses incidents according to agreed procedures;
- Investigates causes of incidents and seeks resolution, escalating unresolved incidents;
- Facilitates recovery, following resolution of incidents; and
- Ensures that resolved incidents are properly documented and closed.

Level 3 PROFICIENT

- Ensures that appropriate action is taken to anticipate, investigate and resolve problems in systems and services;
- Manages the end-to-end lifecycle of incidents, from identification to treatment, to resolution;
- Monitors and analyses metrics and reports on performance of incident management process, identifying key trends and required actions and improvements; and
- Analyses causes of incidents, and informs service owners in order to minimise probability of recurrence, and contribute to service improvement.

Level 4 MASTERY

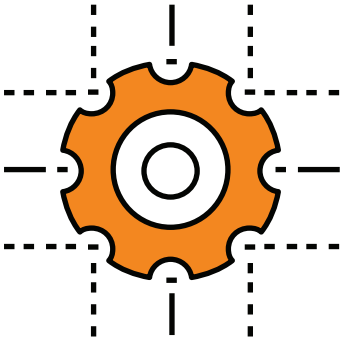
- Develops and implements disaster recovery strategies that safeguard and protect the organisation's critical data and information assets;
- Runs incident management analysis on complex problems, identifying key trends and issues surrounding major incidents and repeat issues, using data analytics to identify causal factors and develop preventative strategies; and
- Engages and collaborates with relevant technology sellers and service providers across the Agricultural sector to resolve errors and issues.

Enabling Capabilities

MATURITY FRAMEWORK

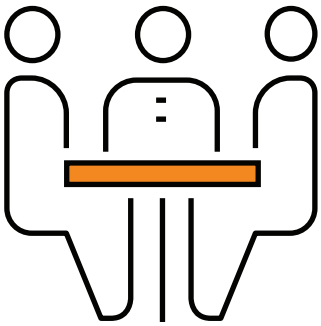
Enabling Capabilities

Enabling capabilities are also known as soft skills and are those capabilities that individuals possess including personal attributes and traits, communication skills and behaviours. They enable individuals to grasp basic digital skills and knowledge and promote innovative behaviour in using new and advanced technologies now and in the future.



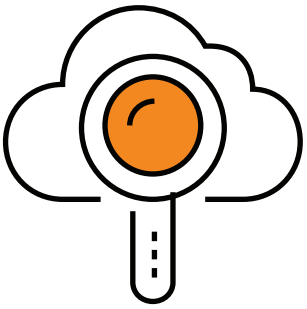
PROCESS IMPROVEMENT

Continuously identifies and implements improvements and innovation to enable increased business performance, and process efficiency.



COLLABORATION

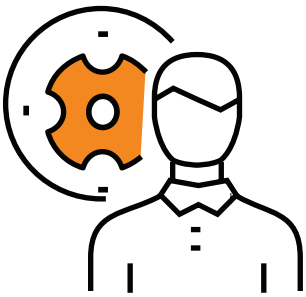
Ability to work effectively in a team or with a group of stakeholders to build and maintain strategic and professional relationships while driving business outcomes, achieving a common purpose and managing conflict.



CRITICAL THINKING

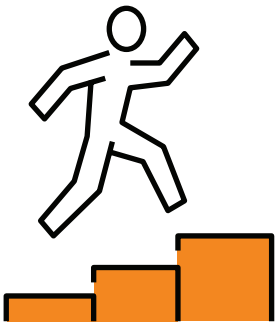
Creating new knowledge and/or using existing knowledge in new and creative ways in order to generate new concepts, methodologies and understandings.

PERSONAL LEARNING & MASTERY



Takes accountability for the acquisition of knowledge or skills through study, experience, or being taught while displaying a concentrated effort to gain comprehensive knowledge or skill in that particular subject or activity.

BUSINESS TRANSFORMATION



Senses new opportunities and responds to shifts in the environment by making fundamental changes to how a process, business or industry operates.

Responds flexibly to changing circumstances in order to minimise impact to activities, program or schedule of work.

Learning Outcomes:

PROCESS IMPROVEMENT

LEARNING OUTCOMES

01. Analyse existing processes and scan for opportunities for improvement.

02. Identify benefits and risks of a range of process improvement activities.

03. Develop a process improvement implementation and communications plan.

04. Monitor a process improvement to establish effectiveness.

KEY CAPABILITIES

Summary

Continuously identifies and implements improvements and innovation to enable increased business performance, and process efficiency.

Level 1 FOUNDATION

- Continuously looks for ways to improve execution of existing processes;
- Remains flexible, adaptable and open to new processes and ways of working; and
- Adopts new processes and ways of working to improve own performance and better meet collective requirements.

Level 2 DEVELOPING

- Identifies the need for processes to be improved and understands the ramifications of an implemented process improvement;
- Seeks out opportunities to be an early adopter of new processes and promotes wider adoption amongst networks and colleagues; and
- Collaborates with colleagues and contributes to the review and identification of potential process improvements.

Level 3 PROFICIENT

- Applies sound judgement to effectively review, critique and learn from past experience working with existing processes, identifying key issues and potential process improvements, and the business case for change;
- Able to critically think and collaborate with necessary stakeholders in designing, building and implementing any identified process improvements;
- Understands importance of reviewing and monitoring implemented improvements to verify and compare intended outcomes against actual outcomes; and
- Maintains a mindset in which process improvement is not only inevitable, but beneficial for productivity and increased return on investment.

Level 4 MASTERY

- Proactively identifies and analyses data, processes and other sources of information to determine opportunities for improvement and optimisation allowing new standards of quality, accuracy and efficiency to be reached;
- Seeks out industry leading practices and creates ways to adopt proven process improvement opportunities employed across the Agricultural sector; and
- Promotes a continuous learning environment and improvement culture where innovation and testing new concepts and ideas around processes is promoted and supported in a safe-to-fail environment.

Learning Outcomes:

COLLABORATION

LEARNING OUTCOMES

01. Understand and apply basic principles of communications, team work and collaboration.

02. Identify stakeholder groups to collaborate on a particular issue, and identify techniques to effectively involve each group in the process.

03. Use a range of digital communications platforms and devices to collaborate to solve a specific problem.

KEY CAPABILITIES

Summary

Ability to work effectively in a team or with a group of stakeholders to build and maintain strategic and professional relationships while driving business outcomes, achieving a common purpose and managing conflict.

Level 1

FOUNDATION

- Understands the importance of own contributions as part of the broader team objectives and goals;
- Communicates clearly and listens effectively and respectfully to others views;
- Able to maintain personal and team accountability for decisions made and actions carried out; and
- Respects individual differences and the diverse capabilities, background and experiences of others.

Level 2

DEVELOPING

- Preparedness to work in diverse environments and alongside others with different personalities, abilities, working styles and backgrounds in a collaborative team environment;
- Willingness to be open regarding the ideas and opinions of others to enhance knowledge sharing and respect and leverage diverse mindsets and thinking;
- Understands the supply chain and key stakeholders involved
- Understands the various roles and responsibilities assigned to different stakeholders in the collaboration process, and identifies ways to build productive working relationships; and
- Looks for ways to provide support to others to help them achieve their objectives and goals, and the team to achieve its overall objective.

Level 3

PROFICIENT

- Provides leadership to the team regardless of role, creating and promoting a team connection in order to deliver promised results both in real-time and also in environments where interaction is time-shifted;
- Develops and maintains a network of key stakeholder relationships across the agricultural industry, with industry bodies and with relevant technology organisations;
- Understands and leverages colleagues, and stakeholders' capabilities and strengths, and aligns them to achieve a common purpose and objective; and
- Exercises effective, open and constructive communication with all team members to ensure information flow is unhindered and ideas and tasks can be carried out successfully.

Level 4

MASTERY

- Creates a culture that fosters collaboration at all levels, and role models key behaviours that promote trust, diversity and inclusion;
- Leverages strategic relationships with industry bodies and across the broader technology sector to collaborate around emerging issues, opportunities and pursue potential strategic alliances and partnerships in the future;
- Collaborates with stakeholders across the whole supply chain;
- Collaborates effectively using shared digital tools and media, and participates in digital teams and working groups using shared digital productivity tools; and
- Facilitates, participates in, and builds digital networks across the organisation and the broader Agricultural sector using digital media and services to create positive connections and build valuable relationships.

Learning Outcomes:

CRITICAL THINKING

LEARNING OUTCOMES

01. Apply digital and other research methodologies to collect data and evidence to solve a problem.

02. Understand and use a range of strategic business analysis techniques.

03. Apply a range of data collection and analysis techniques to build and compare purchasing options.

KEY CAPABILITIES

Summary

Creating new knowledge and/or using existing knowledge in new and creative ways in order to generate new concepts, methodologies and understandings.

Level 1 FOUNDATION

- Researches and analyses information and makes recommendations based on data, evidence and facts;
- Explores a range of possibilities and creative alternatives to contribute to systems, process and business improvements; and
- Looks for trends in data and generates new insights and ideas for acting on information.

Level 2 DEVELOPING

- Applies objective, critical analysis to draw accurate conclusions that recognise and manage contextual issues;
- Uses knowledge of digital research methods and of different data analysis tools and techniques to generate concepts and ideas;
- Works through issues, weighs up alternatives and identifies the most effective solutions, taking account of the wider business context when considering options to resolve issues; and
- Explores a range of possibilities and creative alternatives to contribute to systems, process and business improvements.

Level 3 PROFICIENT

- Utilises a wide range of tools and resources, including digital methods, when conducting research activity ensuring findings and conclusions made are of high quality and accurate;
- Applies critical observation skills when interpreting data including identifying patterns and other points of interest or concern; and
- Ability to critically analyse, summarise and interpret data and provide a variety of researched findings and solutions if necessary.

Level 4 MASTERY

- Engages in high-level critical analysis of a wide range of complex data and information and develops effective responses to emerging and existing problems and issues;
- Uses robust digital evidence and data analytics to explore issues and solve complex problems, and shares findings using digital methods; and
- Applies strategic thinking to develop, test and evaluate scenarios and build a series of feasible options and innovative solutions that are sustainable and impactful.

Learning Outcomes:

PERSONAL LEARNING & MASTERY

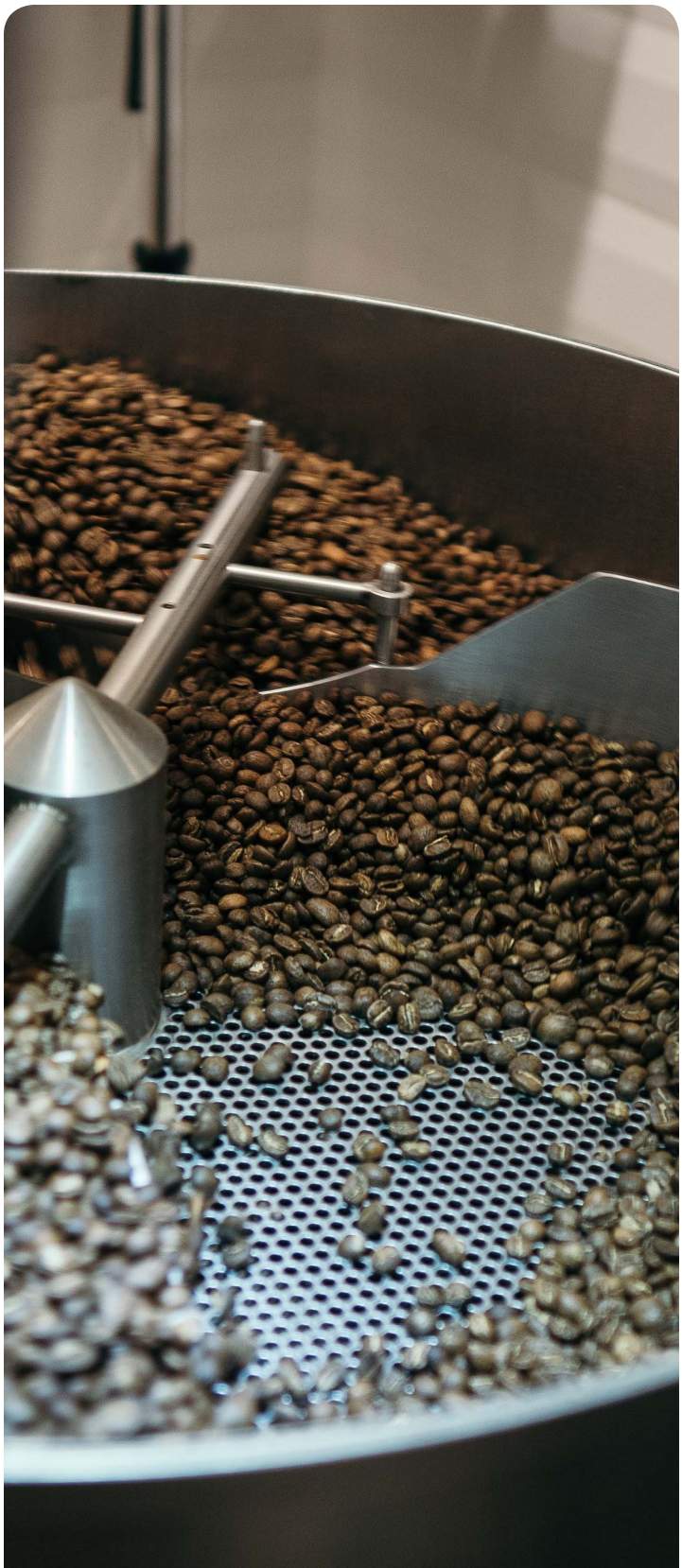
LEARNING OUTCOMES

01. Identify personal strengths and weaknesses regarding digital skills for self and others.

02. Establish learning goals to develop new or expanded digital skills for self and others.

03. Use digital technology to develop a new digital skill and reflect on learning journey.

04. Develop and implement a learning plan to teach another person a digital skill.



KEY CAPABILITIES

Summary

Takes accountability for the acquisition of knowledge or skills through study, experience or being taught, while displaying a concentrated effort to gain comprehensive knowledge or skill in that particular subject or activity.

Level 1

FOUNDATION

- Understands own skills and capabilities including gaps and areas for development;
- Demonstrates preparedness to dedicate time and resources in practicing a skill to obtain practical proficiency;
- Seeks feedback on current capability, performance and areas to improve, grow and develop; and
- Adapts existing skills and capabilities for application in new contexts and environments.

Level 2

DEVELOPING

- Identifies and accesses opportunities to accelerate growth and development in key skills and capabilities;
- Looks for new ways to leverage and utilise existing strengths to help the team improve overall performance;
- Displays curiosity in the learning and skill mastery development process; and
- Demonstrates ability to identify and use required resources and tools to assist in the learning and skill mastery process.

Level 3

PROFICIENT

- Maintains a broad knowledge, skill and experience base that is proficient and competent in the ongoing delivery of work;
- Maintains capacity to plan, monitor progress, record, reflect and analyse self-learning with ability to recognise and accept feedback and achievement when it is received;
- Displays awareness and understanding of the many challenges (including own needs) involved with learning in a digital environment; and
- Shows ability to learn, understand and apply a broad range of relevant theories and methodologies and apply them to business practices.

Level 4

MASTERY

- Acquires and maintains a level of knowledge and skill mastery through a combination of digital learning, collaboration exchange platforms, the acquisition of critical experience, and engaging with industry networks;
- Reinforces a learning culture, by looking for and creating new opportunities for others to acquire critical digital skills and capabilities; and
- Provides leadership in sharing skill mastery and coaching others seeking to learn and develop their own abilities in that particular skill area.

Learning Outcomes:

BUSINESS TRANSFORMATION

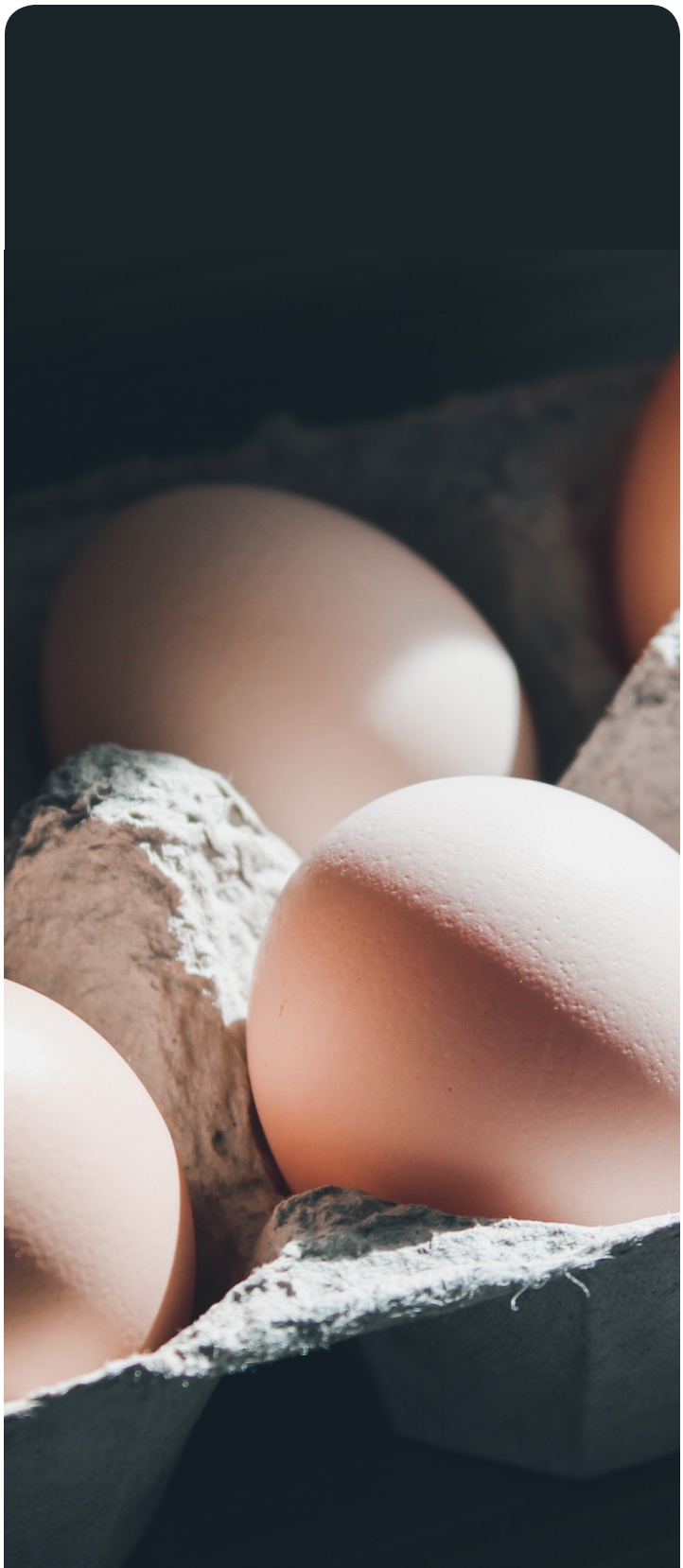
LEARNING OUTCOMES

01. Understand and apply a range of change management approaches.

02. Develop and implement a business transformation plan for a specific digital change.

03. Identify and manage the roles and expectations of people involved in change processes.

04. Use digital technologies to monitor change processes and outcomes.



KEY CAPABILITIES

Summary

Senses new opportunities and responds to shifts in the environment by making fundamental changes to how a process, business or industry operates. Responds flexibly to changing circumstances in order to minimise impact to activities, program or schedule of work.

Level 1

FOUNDATION

- Supports change initiatives, remaining flexible, displaying positive behaviours, and collaborating effectively;
- Identifies the nature and impacts of change on current processes and practice and adapts own behaviour and contribution to align with new processes and practices; and
- Provides constructive feedback as part of the change process to help improve broader implementation and benefit realisation.

Level 2

DEVELOPING

- Identifies and pre-empts processes and current behaviours that are mapped for change to self-prepare;
- Accommodates changing priorities and responds flexibly to uncertainty and ambiguity;
- Identifies change milestones and understands the importance of celebrating and/or reflecting on these achievements; and
- Shows ability to create and maintain strong connections with other stakeholders impacted by the change including using appropriate methods and timing of communication.

Level 3

PROFICIENT

- Leads end-to-end change management processes mitigating and managing key risks to ensure change benefits are realised;
- Ensures the effective transition of people as part of the change process using effective planning, communication and stakeholder management to align and guide people through the change journey;
- Understands the drivers for change and applies the necessary behaviours and attitudes in anticipating change and transformation; and
- Demonstrates agility to pivot direction, ideas and culture and find alternate solutions and adapt quickly.

Level 4

MASTERY

- Develops and implements transformational change strategies that shape the long term direction of the business and influence industry trends and practices across the Agricultural sector;
- Ensures transformation encompasses strategic decisions based on the desired growth and operation of the business and/or industry; and
- Maintains deep understanding of the business and/or industry environment, anticipating and acting on key opportunities, risks, challenges and other developments and their potential impact on the necessity for change to occur.

Useful resources

Useful resources

Training Packages

Training packages and accredited courses, often referred to as training products, are key features of Australia's VET system. They are used as the framework for most RTO-delivered VET programs and are developed and reviewed in line with national standards.

Training packages describe the competencies required by different occupations and industries and show how these may be packaged into nationally-recognised qualifications in accordance with the Australian Qualifications Framework.

TRAINING RESOURCES INCLUDE:

training.gov.au is the national register of VET training packages, and is the official repository of nationally-recognised training information for qualifications, units of competency, accredited courses, skill sets. Examples of industry training packages include (but are not limited to):

Agriculture Horticulture and Conservation and Land Management Training Package

Forest and Wood Products Training Package

Australian Meat Processing Training Package

Seafood Industry Training Package

VETNet contains companion volume implementation guides to assist trainers, RTOs and enterprises in delivering nationally-endorsed training packages:

Agriculture Horticulture and Conservation and Land Management Training Package

Forest and Wood Products Training Package

Australian Meat Processing Training Package

Seafood Industry Training Package

MySkills is an Australian Government initiative to enable consumers to search for, and compare, VET courses and training providers.

www.myskills.gov.au

Contextualising teaching and learning: is a practical guide for VET trainers who work with training packages and are seeking to implement learner-centred, flexible and innovative approaches to teaching and learning. It caters for practitioners working with a diverse range of learners and contains user-friendly methods for contextualising learning, whether in an educational institution, farm, factory floor or online.

www.voced.edu.au

The Australian Government's **Core Skills for Work Developmental Framework** describes skills, knowledge and understandings that underpin successful participation in work, which are foundational to the enabling capabilities in this report.

www.acpet.edu.au

INDUSTRY RESOURCES:

The Australian Government's **Be Connected** platform provides online learning resources and a network of community partners who support users in covering basic digital skills, equipment use, online security, connectivity and networks.

www.beconnected.esafety.gov.au

ForestWorks is an industry-owned not-for-profit organisation offering free skills development services for the forest, wood and timber products industries.

www.forestworks.com.au

Internet Society's Tutorials are free online courses for managing security and privacy.

www.internetsociety.org

The South West Grid's Digital Literacy & Citizenship provides free materials to help primary and secondary students to think critically, behave safely and participate responsibly in the digital world.

www.digital-literacy.org.uk

Coursera's AI For Everyone is a partnership with universities and organisations to provide beginner, intermediate and advanced online courses.

www.coursera.org

CSIRO's work on Digital Agriculture includes innovative processes for process improvement.

www.csiro.au

The SproutX Accelerator is an agtech-focused program for early stage startups.

www.sproutx.com.au

Think. Digital is enhancing education with immersive technologies.

https://think.digital/

Business Foundations' Digital Skills for Small Business - Online Training offers a $25 digital skills course for businesses. Topics include digital literacy, websites, online booking systems and cyber meetings, business in the cloud, bookkeeping, marketing and promotion, and using G-suite.

www.businessfoundations.com.au

FutureLearn's Grow Your Digital Skills with Accenture offers seven courses through a social learning platform: Grow Your Career, Social Media, Web Analytics, Digital Marketing, User Experience, Retail and Mobile.

www.futurelearn.com

Education & training providers

involved in the development of digital and enabling capabilities in agriculture and agri-business

Education & training providers

VET, universities, & informal training providers

Australian agriculture digital capabilities can be delivered through both formal and informal training, with an increasing trend across the board towards delivery of shorter, focused education and skills development events.

Vocational Education and Training (VET), delivered through registered training organisations AQF levels 2 to 6:

- Deliver Vocational Education and Training Qualifications, skill sets and individual units of competency which are formally recognised through statements of attainment and issued certifications
- May also deliver stand-alone courses and fee-for service modules
- Focus is on practical work skills used in the workplace with the aim to assist the creation of a competent workforce
- Registered training organisations - TAFE (public), private and enterprise – with Qualifications, Skills Sets or units of Competency on scope can be found by searching at:
  - training.gov.au and,
  - MySkills.gov.au

Universities (Uni) AQF levels 6 to 10:

- Deliver formal degree qualifications and informal short courses recognised through academic records and issued certifications
- Delivery can encompass face-to-face, online through distance learning, and various forms of blended learning
- Focus is on knowledge and methodologies that provide foundations for long-term adaptable work design and practices
- Detailed information about courses is best found through direct contact with the institution.

Associations, industry groups, agribusiness and non-registered trainers (Informal), AQF not applicable

- Deliver informal training, through short programs or individualised training, often linked to membership requirements, supplier sales or local industry needs
- Focus may be on updating knowledge, up-skilling, problem solving, adopting new technology or using specific equipment
- Promotion of these learning events can often be limited to those people already on organisational and allied mailing lists

Member-based Associations or industry groups

Member-based associations focus on particular segments of the agriculture industry and represent participants in that sector

As they are peer organisations, they are a valuable source of relevant training, information and networking

Sources include:

- Research and Development Corporations
- Peer recommendations
- Websites and helplines offered by broader bodies, such as the National Farmers Federation
- Local councils and community organisations
- Most Universities and RTOs have connections to relevant industry associations

Suppliers

Suppliers will usually have systems in place to provide training related to products they sell, including:

- Introductory information that help with purchasing decisions
- Post-purchase training and help-guides

These options are often made available online or through virtual training, and enquiries should be made at the time of considering purchasing decisions

Supplier-based training tends to be very product specific and will not usually result in acquisition of broader skills

Other informal training

Individuals, small companies and small and medium training enterprises often design training programs to address local needs

Virtual and online training is also widely available, however there may be very limited quality control

Identifying informal opportunities can be difficult, and word of mouth (often through member-based associations) is a major source of recommendation

Sources include:

- Local Councils and community bodies
- Adult learning providers
- Local media and advertising materials
- Direct marketing
- LinkedIn, YouTube and other professional and trade sites
- Specialised online and virtual learning sites