

BSB 7.0

BSBTEC403

**APPLY
DIGITAL
SOLUTIONS
TO WORK
PROCESSES**

BSBTEC403

Apply digital solutions to work processes

Release 1

Learner Guide

Aspire Version 1.1



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Before you begin

This Learner Guide is based on the unit of competency *BSBTEC403 Apply digital solutions to work processes*, Release 1. Your trainer or training organisation must give you information about this unit of competency as part of your training program. You can access the unit of competency and assessment requirements at: www.training.gov.au.

How to work through this Learner Guide

This Learner Guide contains a number of features that will assist you in your learning. Your trainer will advise which parts of the Learner Guide you need to read, and which Practice Tasks and Learning Checkpoints you need to complete. The features of this Learner Guide are detailed in the following table.

Feature of the Learner Guide	How you can use each feature
Learning content	Read each topic in this Learner Guide. If you come across content that is confusing, make a note and discuss it with your trainer. Your trainer is in the best position to offer assistance. It is very important that you take on some of the responsibility for the learning you will undertake.
Examples	These highlight key learning points and provide realistic examples of workplace situations.
Practice Tasks	Practice Tasks give you the opportunity to put your skills and knowledge into action. Your trainer will tell you which practice tasks to complete.
Summaries	Key learning points are provided at the end of each topic.
Learning Checkpoints	There is a Learning Checkpoint at the end of each topic. Your trainer will tell you which Learning Checkpoints to complete. These checkpoints give you an opportunity to check your progress and apply the skills and knowledge you have learnt.

Foundation skills

As you complete learning using this guide, you will be developing the foundation skills relevant for this unit. Foundation skills are the language, literacy and numeracy (LLN) skills and the employability skills required for participation in modern workplaces and contemporary life.

The following table provides definitions for each foundation skill.

Foundation skill area	Foundation skill description
Reading	<ul style="list-style-type: none"> Sources, analyses and interprets information in the context of organisational strategy and compliance requirements
Writing	<ul style="list-style-type: none"> Develops texts dealing with complex concepts using specialised and detailed language to convey explicit information, requirements and recommendations in accordance with legal and organisational requirements
Oral communication	<ul style="list-style-type: none"> Presents information using language and features appropriate to the audience
Teamwork	<ul style="list-style-type: none"> Uses a collaborative instructional approach to encourage, support and develop understanding and skills in others

What do you already know?

Use the following table to identify what you may already know. This may assist you to work out what to focus on in your learning.

Topic	Key outcome	Rate your confidence in each section
Topic 1: Use digital workplace information	1A Identify available workplace digital applications	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1B Locate, use and review digital information	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1C Create, store and retrieve information in digital format	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1D Continuously review trends and innovations in digital technology	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
Topic 2: Integrate digital solutions into work processes	2A Identify, select, review and implement digital solutions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2B Identify and adopt digital media protocols and conventions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2C Train and support team members in the application of digital solutions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
Topic 3: Comply with intellectual property rights	3A Identify relevant IP legislation, regulations and organisational policies	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3B Review digital processes and applications and confirm compliance with IP requirements	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3C Document, register and report relevant matters related to IP	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident



Topic 1 | Use digital workplace information

- 1A Identify available workplace digital applications
- 1B Locate, use and review digital information
- 1C Create, store and retrieve information in digital format
- 1D Continuously review trends and innovations in digital technology

1A Identify available workplace digital applications

A digital application is any software designed to carry out a specific task.

Providing employees with access to digital applications in the workplace can increase productivity, enhance customer relations and support collaboration among employees and stakeholders.

There are a range of digital applications available for workplace communications, technologies and networks. A typical business is likely to use a range of digital applications, including Microsoft Office and others tailored for specific functions, such as managing finances or customer relationships.

Digital applications for communication

Numerous digital applications allow organisations to communicate with employees, customers, suppliers and business partners.

Digital applications help people communicate across borders and time zones, just as they would in person.

Types of digital application	Description	Examples of applications
Instant messaging applications	Instant messaging applications provide a similar function to SMS on a mobile phone – users can send and receive messages instantly.	<ul style="list-style-type: none"> Slack Yammer
Social media applications	Social media applications can be downloaded onto a phone or tablet or accessed through an internet browser. Each application provides a slightly different service such as messaging, photo- and video-sharing.	<ul style="list-style-type: none"> Instagram Snapchat
Video communication applications	When people are working remotely or from multiple locations, video calling and conferencing applications provide an opportunity to communicate via video in real time.	<ul style="list-style-type: none"> Skype Zoom Teams
Content sharing applications	When staff need to share files, documents, information or data, they can use content sharing applications. Some content sharing applications also provide options for document collaboration.	<ul style="list-style-type: none"> Dropbox SharePoint

Types of digital application	Description	Examples of applications
Collaboration applications	Collaboration applications help people complete work together. These applications help teams communicate and track information such as responsibilities, priorities and the progress of individual tasks.	<ul style="list-style-type: none"> • Trello • OpenProject
Issue tracking applications	Issue tracking applications help businesses respond to issues raised by customers or employees. With these applications, businesses have a central location where they can assign, record and track the progress of issues until they are resolved	<ul style="list-style-type: none"> • JIRA • Redmine
Web-based email applications	Web-based email applications allow users to access and use their email account via a web browser	<ul style="list-style-type: none"> • Gmail • Outlook.com

Sources: <https://powell-software.com/en/digital-communication-in-the-workplace/> <https://www.business.gov.au/people/managing-and-developing-staff/digital-tools-and-software-for-team-collaboration>

Digital technologies

Digital technologies are tools and devices that produce, store and process data.

Digital technologies include:

- laptop computers
- smartphones
- digital televisions
- social media
- digital cameras
- websites and
- portable electronic payment systems.

Digital technologies allow businesses to operate beyond a fixed physical location, which can enhance their capacity, customer base and profits. For example, a cafe could access more customers by having multiple mobile coffee carts that use portable or online payment technologies.

Investing in new technologies can be expensive for businesses, so many businesses allow their employees to use their own mobile devices in the workplace. This is known as 'Bring your own technology' (BYOT) and 'Bring your own device' (BYOD).

Security is a critical issue for businesses using digital technology, especially when it comes to BYOT. Organisations can improve BYOT security through mobile authentication services, mobile application management and unified services. IT teams must also keep up with users BYOT demands, as each mobile platform has different program interfaces.

Networks

Digital networks are social networks made possible through digital technology.

The goal of digital networks is to develop and support productive workplace relationships, within and beyond traditional work teams, and to promote knowledge sharing across an organisation.

Enterprise social networking (ESN) is a private social network used by organisations to connect people who have similar business interests or undertake similar activities. The network could be used by employers, employees, teams, business partners and customers.

Although social media platforms, such as Facebook, Twitter and LinkedIn are useful for businesses to promote their brand, products and services, ESN platforms are especially useful because they allow for real-time collaboration.

There are several ESN applications that organisations can use to share ideas and information, including Slack, Yammer, SharePoint and Asana. Each of these platforms will require their own set of guidelines for how to use effectively within your organisation

Identifying digital applications, technology and networks

Digital applications, technologies and networks typically belong to one of eight categories:

- messaging
- productivity
- collaboration
- communication
- business applications
- crowd sourcing
- connectivity and
- mobility.

The make-up of a company's suite of digital applications, technologies and networks will depend upon its needs, job functions and industry. The best toolbox is one that provides employees with the resources and functions they need to do their job in an efficient and effective way.

Example

Identify available workplace digital applications

Jerome has just started a job as an office manager at Garden Gurus, an online garden supply store. He has been asked to review the company's use of digital technology to identify potential improvements and efficiencies.

The employees at Garden Gurus Island use a range of digital technologies in the course of their everyday work, including smartphones, social media and laptop computers.

The company uses social media applications as a marketing tool and an issue tracking application to monitor customer queries and complaints. Employees use a content sharing application to share documents and data.

Practice Task 1

Question 1

Draw a line to match each digital application to its definition

- | | |
|------------------------------------|--|
| » Social media applications | » When staff need to share files, documents, information or data, they can use content sharing applications. Some applications also provide options for document collaboration. |
| » Video communication applications | » Can be downloaded onto a phone or tablet or accessed through an internet browser. Each application provides a slightly different service, such as messaging and media sharing. |
| » Content sharing applications | » These applications help teams communicate and track information, such as responsibilities, priorities and the progress of individual tasks. |
| » Collaboration applications | » When people are working remotely or from multiple locations, these applications provide them with the opportunity to see each other as they communicate. |

Question 2

Which of the following are examples of an enterprise social network? Tick all that apply.

- Slack
- Facebook
- SharePoint
- Microsoft Teams
- LinkedIn

1B Locate, use and review digital information

Digital information is data that is stored on computers and other digital media.

One way of understanding digital information is to compare it to analog information. Analog information is stored on analog technology. A camera that uses film is an example of analog technology. Images from these cameras are stored on film that reacts to light. A digital camera, on the other hand, measures the brightness and colour within individual pixels, each of which is then stored as a number.

Digital information provides benefits for businesses, as well as posing challenges. One challenge relates to the reliability and validity of digital information – especially information from external sources, such as public websites. Whenever you locate and use digital information to support workplace operations, evaluate the validity and reliability of the source.

Locating digital information

Here are some examples of where digital information is located and the types of information that might be accessible in those locations.

Where digital information is located	Types of information that can be accessed from these locations
Intranet and cloud storage services	<ul style="list-style-type: none"> Written documents (e.g. policies, manuals, reports) Spreadsheets Presentation slides Meeting notes
Business information systems	<ul style="list-style-type: none"> Human resources data Financial data Workflow data Customer data
Public websites	<ul style="list-style-type: none"> Articles Reports Images
Digital communication systems	<ul style="list-style-type: none"> Emails Messages (SMS, MMS, voicemail, voice notes) Photos

Here are some examples of how you might use different types of digital information.

Types of digital information	How digital information could be used
Text	<ul style="list-style-type: none"> Record or review a company policy Provide a status update on a project Inform employees about an organisational change
Numbers	<ul style="list-style-type: none"> Monitor employees' work activities and performance Monitor customer behaviours, needs and preferences Track expenditure
Photos	<ul style="list-style-type: none"> Promote a product on social media Provide visual instructions (e.g., in an instruction manual for staff) Record brainstorming content on a whiteboard
Videos	<ul style="list-style-type: none"> Promote a service on social media Explain and demonstrate a concept Watch a presentation by a thought leader (e.g. a TED talk)
Audio files	<ul style="list-style-type: none"> Record important discussions during team meetings Record and store information and feedback gathered from customers, clients and employees (e.g., during a focus group) Listen to a podcast featuring a thought leader in your sector

Example

Locate, use and review digital information

Jess is a team leader at *Tread Lightly*, a business that designs, produces and sells high-quality and environmentally sustainable footwear. She has been asked to do a basic strengths, weaknesses, opportunities and threats (SWOT) analysis of the business to identify ways of increasing sales, and to present her findings to the management team.

Jess locates digital information about *Tread Lightly's* business practices and financial situation from the company's intranet. She also asks the sales team to email her the latest sales and stock reports. She then downloads some relevant articles and reports from numerous public websites that will help her with her task.

Jess writes her report in a Word document. She creates Excel spreadsheets to summarise relevant numerical information and uses presentation software to communicate her findings to the management team.

Review digital information sources for validity and reliability

The validity of information relates to whether it is logical and correct. The reliability of information relates to whether the information is trustworthy.

You must be especially mindful of false or misleading information from external sources, such as public websites. For example, although blogs and wikis are a great way to source information, the content is not always accurate.

The consequences of not reviewing information to determine its validity and reliability include reputational damage, financial loss and disruption to work processes.

Here are some criteria you can use to review the validity and reliability of digital information.

Authority	<ul style="list-style-type: none"> Is the author of the content clearly identified? Is the author an expert in their field? Are they qualified to write about the subject? Do they have relevant experience and/or qualifications? Is the author affiliated with a reputable organisation or institution (e.g. a well-known company or university)?
Accuracy	<ul style="list-style-type: none"> Is the information supported by evidence or research? Has the content been peer-reviewed? Has the author included a list of references? Are the references reliable?
Objectivity	<ul style="list-style-type: none"> Does the author make it clear when they are expressing their own personal beliefs? Is the content published by a reputable organisation or institution? Is the motive for publishing the information free from a specific 'agenda' (e.g. a political motive)?
Currency	<ul style="list-style-type: none"> Can you identify when the information was published? Is the information up to date and supported by current evidence? Do the links to other resources work? Does the website include information about when revisions were made?
Coverage	<ul style="list-style-type: none"> Is the information covered in appropriate depth? Are relevant topics addressed? Are relevant arguments and opposing ideas addressed?

The more questions in this list that you can answer 'yes' to, the greater the validity and reliability of the information. However, not every source needs to meet all these criteria. There may be a valid reason why a reputable organisation publishes website content without an author; and older content may be acceptable, depending upon your goal. Exercise your own judgement to determine whether a source is valid and reliable.

Practice Task 2

Question 1

List three locations digital information can be located.

Question 2

Which of the following examples demonstrate how different types of digital information can be used in the workplace? Tick all that apply.

- Text information to record a company policy
- Videos to promote a service on social media
- Audio files to record and store customer feedback
- Photos to provide visual instructions
- Animated gifs to visually express emotions

Question 3

Draw a line to match each criteria for checking validity and reliability to the correct examples.

- | | |
|---------------|---|
| » Authority | » Is there a list of references for the content? Are the references from reliable sources? |
| » Accuracy | » Is there a specific 'agenda', such as a political motive, for publishing the information? |
| » Objectivity | » Is the information current, and supported by up to date evidence? |
| » Currency | » Is the author considered an expert in their field, with relevant qualifications and experience? |

1C Create, store and retrieve information in digital format

Digital information includes any data that is created, stored and retrieved using digital platforms and tools. It includes content that is digitally broadcast, streamed or contained in computer files.

Many employees regularly create, store and retrieve digital information via a range of digital technologies, such as smartphones, computers, email and social media. Various organisational protocols and procedures, as well as numerous laws, ensure that businesses and employees use digital technology in an ethical, responsible and safe way.

Creating digital information

When an employee writes and saves a document using word processing software, they are creating digital information. When someone creates and saves a spreadsheet, they are creating digital information. When you take photos using a digital device, you are creating digital information.

The digital information you create must be useful and relevant. For example, if you are creating a video for social media to promote a new product for the parents of young children, you will need to research the needs and preferences of that group and create content that appeals to them.

Storing digital information

In the past, businesses used paper files to store information. The disadvantage of this method is that it requires physical storage space – such as a filing room or a storage unit – which can be costly. Paper files also degrade over time, which can lead to the loss of important information.

Effective and efficient data storage methods allow businesses to easily retrieve, use and protect their data. The technology a business uses to store digital information must be reliable and safe. There must be strategies to protect digital information and minimise the risk of lost or corrupted data.

Here are some of the tools and systems businesses use to store digital information.

Online data storage	<ul style="list-style-type: none"> ▪ Online data storage involves storing data with a third-party service that is accessible via the internet. Cloud storage, such as SharePoint or Dropbox, is a form of online data storage. ▪ Online storage services are a cost-effective storage solution for businesses because they do not require expensive hardware installation. ▪ Most storage services safeguard clients' files and privacy using encryption tools. However, any information stored on an external, online server is vulnerable to security breaches. If the information your business wants to store is highly sensitive, online data storage may not be the best option.
Physical data storage	<ul style="list-style-type: none"> ▪ Physical data storage includes computer programs and external hard drives. ▪ Computer servers are computers that are designed to process requests and deliver data files to other computers through a local area network (LAN) or a wide area network, such as the internet.
Removable media	<ul style="list-style-type: none"> ▪ Removable media are a form of physical data storage. They include USB flash drives, memory cards and external hard drives. This type of device is highly portable and easy to insert into and eject from a computer or mobile device. ▪ The storage capacity of removable media varies depending on the device. ▪ Antivirus computer software can scan removable media devices to ensure they are safe to use.

Sources: <https://www.cyber.gov.au/node/1147> <https://www.entrepreneur.com/article/172226> <http://www.nextprocess.com/document-management/6-reasons-store-data-electronically/> <https://www.entrepreneur.com/article/172226> <https://www.infotech.co.uk/blog/it-infrastructure-what-does-a-server-actually-do>

Retrieving digital information

Some storage tools will require you to log on or sign in before you can access information. For example, when using cloud storage devices, you will need to sign in before you can retrieve files. Individual files may be password protected, or only accessible to employees with specific authorisation.

One of the advantages of digital storage is that it makes data more accessible. The method for searching for information will depend upon the storage tool. 'Search bars' (often highlighted via the use of a magnifying glass symbol) are a common method used to find specific files and folders. The user simply types the term they are searching for (e.g. 'quarterly report', 'customer feedback', etc.) into the search bar and presses 'Enter.'

Legislation and regulations

Relevant laws include those relating to intellectual property (IP), privacy and data protection laws. Intellectual property is an especially important component of IT law.

Here are some examples of other relevant legislation:

- Equal opportunity and anti-discrimination legislation
- Competition and consumer protection
- Harassment and bullying legislation
- Privacy laws, confidentiality and security requirements
- Defamation laws
- Workplace relations laws and regulations
- Intellectual property laws and regulations
- Health and safety laws and regulations
- Trade promotion and competition regulations

Regular and thorough review of legislation and industry regulations helps an organisation meet its compliance requirements.

Organisational protocols, policies and procedures

Organisational protocols, policies and procedures relating to digital technology are often underpinned by legislation and regulations.

There are many different policies and procedures used by organisations, and some are specific to the use of digital media. These are listed below:

- Information and Communication Technology Systems Policy and Procedure
- Fair Use (or Acceptable Use) Policy
- Remote Access Policy
- Privacy Policy
- Digital Media Policy
- Social Media Policy
- Digital Communications Guidelines

The following table lists areas covered by legislation and organisational protocols, policies and procedures relating to the creation, storage and retrieval of digital information.

Intellectual property (IP)	<ul style="list-style-type: none"> Intellectual property (IP) law covers the creative and intellectual efforts of individuals and organisations. When managed effectively, IP assets, such as newly created digital content, can create competitive advantage and bring value to an organisation. Businesses should be aware of their rights, and the pros and cons of formal IP protection before disclosing their ideas to people who are not employed by the company.
Usage	<ul style="list-style-type: none"> IT data and systems are at risk of hacking, malware, viruses, spam and online scams that may corrupt business hardware or allow criminals to steal private data. Your organisation must have procedures around using data and systems, backing up data and data protection. Such procedures define how employees and contractors behave. Companies may have guidelines for employees around opening attachments. Attachments can contain viruses which pose a threat to data security. A business may require employees to keep their passwords secret and to change their password on a regular basis. This prevents unauthorized users from accessing the company's server.
Privacy	<ul style="list-style-type: none"> All business owners have a legal obligation to secure data and protect the privacy of their customers' personal information. To safeguard customers and staff, businesses need to identify and implement policies, procedures and protocols that comply with the laws on privacy, spam and electronic transfer. A privacy policy should outline how your organisation collects and stores data, how the information can and cannot be used, and restrictions on sharing data with a third party.
Electronic transaction	<ul style="list-style-type: none"> Legally, there is no difference between electronic financial transactions and cash transactions, and your online security must comply with national and state laws. For more information, see the <i>Electronic Transactions Act 1999</i> (Cth) or the relevant legislation in your state or territory.
IT risk management	<ul style="list-style-type: none"> Your organisation needs to identify risks to your IT data and systems, and put measures in place such as firewalls, passwords and antivirus software to protect you and your customers. A risk management plan can help you to identify and manage risks to IT data and systems.

Adapted from: Business Queensland <https://www.business.qld.gov.au/running-business/ip/managing-ip/ip-audit>, © The State of Queensland 2017

You must understand and comply with your company's protocols, policies and procedures when creating, storing and retrieving digital information.

Depending on the circumstances, non-compliance with requirements may constitute a breach of the law. This may include a breach of contract (such as an employment contract), misconduct or discrimination. Failure to comply with organisational policies and procedures as an employee may result in disciplinary action and, in more serious cases, termination of employment.

If you become aware of inappropriate or unlawful online content that relates to your organisation, or content that may have been published in breach of organisational policies and procedures, report the situation immediately to the relevant person in your organisation.

Example

Create, store and retrieve information in a digital format

Marcus is a marketing manager at BestLife, a company that provides services and sells products that promote relaxation and mindfulness.

Marcus creates, stores and retrieves digital information regularly throughout his working day. He writes emails to colleagues, saves documents, posts images on BestLife's social media accounts, writes website content and accesses files stored on BestLife's server.

As he goes about these tasks, Marcus makes sure that he follows the company's procedures and protocols regarding the use of digital technology and digital information.

For example, when working with external contractors, Marcus ensures there is a written agreement relating to who owns the IP of any materials produced as part of that contract. To protect customers' privacy, Marcus also follows company policy when re-posting content about from customers' personal social media accounts, such as photos and product reviews.

Practice Task 3

Question 1

Which of the following legislative and organisational requirements must be upheld when creating and storing digital information? Tick all that apply.

- Intellectual property (IP) laws and regulations
- Employment policies
- Privacy policies
- Health and safety laws and regulations
- Electronic transaction laws

Question 2

Which of the following statements are correct? Select yes or no for each one.

- a) When an employee writes and sends an email, they are creating digital information. >> Yes >> No
- b) Online data storage involves storing data in your email application. >> Yes >> No
- c) When an employee takes and uploads a photo to the company's social media account, they are creating digital information. >> Yes >> No
- d) Digital information can be stored in physical data storage systems like USB and memory cards. >> Yes >> No

Question 3

List two actions you may need to take to retrieve digital information.

1D Continuously review trends and innovations in digital technology

Reviewing information about digital trends and innovations helps businesses to remain competitive and identify solutions for improving their efficiency and effectiveness.

The key to reviewing trends and innovations in a continuous and efficient way is to identify those relevant to your company's overall business strategy. For example, if your goal is to facilitate mobility and flexibility in your workplace operations, look at technologies that offer solutions in those areas. The trends and innovations you adopt must also be compliant with relevant legislation and organisational policies and procedures.

Monitoring trends and innovations

When monitoring information about trends and innovations, pick sources that are relevant to your organisational strategy.

A digital disruption occurs when new digital technologies and business models affect the value proposition of existing goods and services. The term 'disruption' refers to the emergence of new digital products, services and businesses that disrupt the current market and cause businesses to re-evaluate their options.

You can learn to embrace and plan for digital disruption by continually reviewing and monitoring trends and innovations in digital technology that are relevant and suitable for use in your workplace. The key to successful monitoring is to use a holistic and contextual approach – there is no point concentrating on a new trend that has little or no relevance to your overall business strategy.

Here are some ways you can monitor trends and innovations in digital technology.

Monitor your competitors	<ul style="list-style-type: none"> Closely monitor the activity of your main competitors or the market leaders in your industry. This is a useful way of identifying what the latest key digital trends and technologies are and whether or not they work.
Speak to your team	<ul style="list-style-type: none"> Speak to your team members for their knowledge and expertise on digital trends and technologies. Optimise the collective experience of your colleagues and use their strengths to stay ahead of your competition in the digital marketplace.

Use social media	<ul style="list-style-type: none"> Use your social media accounts to keep up with digital technologies and trends by joining groups, following experts and businesses or networking with industry professionals. For example, joining a LinkedIn group allows you to have conversations about digital workplace updates and ask questions about anything you are unsure of to both peers and experts.
Follow online media	<ul style="list-style-type: none"> Blogs, podcasts, online forums, zines and news sites offer useful articles, reviews and expert commentary on emerging digital trends and technologies. Consider subscribing to online media that is relevant to your business and industry. Find sources of information that are regularly updated to address your specific needs.
Undertake training	<ul style="list-style-type: none"> Professional training, either online or in-house, and watching online tutorials are useful ways of learning how to apply new digital technologies to your work processes. You can also access conferences, like TED talks, or webinars where the presenter/s demonstrates or discusses a new technology with the audience.

Analysing trends and innovations

The process of analysis and interpretation involves determining the significance and implications of the information. For example, you might ask:

- Would a recent innovation help your team or your company become more efficient?
- Would a recent innovation make your colleagues' jobs easier?
- Does an upcoming trend suggest that your company needs to update its technology?
- Does an upcoming trend indicate a change in how customers will seek out or purchase products in the future?
- Does an upcoming trend indicate opportunities for engaging with customers or expanding your customer base?

A key issue when analysing information is ensuring the technology aligns with relevant legislation, organisational procedures and protocols and organisational strategy. For example, you might ask:

- Does the technology allow your company to sufficiently protect the privacy of employees and customers?
- How much will it cost to integrate the technology into work processes?
- Will the technology solve a problem that the business is currently facing?

Tips for analysis and interpretation

Here are some practical tips that you can use before, during and after you read a document, blog or article to help you analyse and interpret information.

Before reading	<ul style="list-style-type: none"> Assess the validity and reliability of the information: What are the author's credentials? How current is the information? What is the source of the document (e.g. a reputable company, a well-known institution, etc.)? Skim the document (e.g. headings and subheadings, table of contents) – get a feel for how the document is structured. Identify the sections of the document that are relevant to your task – read these sections especially closely.
During reading	<ul style="list-style-type: none"> Make notes as you read and highlight critical information – note-taking will help you remember and absorb the information. Pay attention to tables and charts – these will help you understand what you are reading and verify the validity and reliability of the information.
After reading	<ul style="list-style-type: none"> Reflect again upon the validity of the information – is the information accurate? Does the author have an 'agenda'? Write a brief list of the key points within the documents that are most relevant to your workplace.

Example

Continuously review trends and innovations in digital technology

Keiran is an Operations Manager at a for-profit social research company. One of his responsibilities is to keep on top of digital trends and innovations that may improve the efficiency of the various teams within the organisation.

One area that Keiran has been asked to focus upon is data collection. Employees working on the 'frontline' regularly report that the software program that is used to collect data is too slow and way too complicated.

Keiran stays on top of digital trends and innovations in numerous ways. For example, he has identified a few trustworthy and reliable sources of information online. He also regularly reminds his colleagues to tell him if they learn about potentially useful emerging technologies. Keiran also reviews the websites of the company's main competitors to see what technologies they are using and keeps track of what key experts in the field are saying about upcoming innovations.

One of Keiran's colleagues recently told him about a new software program that may be superior to the one they are currently using for data collection. Keiran sources some information about the software program from a few trusted sources. Even though he trusts the sources, Keiran double-checks the publications he has sourced by reviewing the qualifications and expertise of the authors.

As he reads the documents, Keiran makes notes about the pros and cons of the software program, especially those that relate to data collection. When he has finished reading, Keiran uses the notes he has made to make a brief list of key points that he will use as the basis for further discussion with his team about the potential of this software program.

Practice Task 4

Question 1

Which of the following sources would you consult for information on the latest trends in digital technology solutions? Tick all that apply.

- Organisational reports
- Online news sites specialising in technology
- Business publications
- Reports from well-known, reputable companies
- Blogs or podcasts hosted by experts in the field of technology and innovation

Question 2

Which of the following statements about ways to monitor trends and innovation in digital technology are correct? Tick all that apply.

- Monitor how competitors or market leaders are using digital technology.
- Have meeting to discuss digital trends and technologies.
- Use social media to network with digital technology experts and businesses.
- Follow media that relates to emerging digital technology trends and solutions.
- Undertake training to learn how to apply new digital technologies in your workplace.

Question 3

List three questions you should consider when determining if digital technology trends and innovations would be suitable in your workplace.

Summary

- Digital applications can increase a company's productivity, enhance their relationships with customers and support greater collaboration among employees.
- Digital technology are tools and devices that produce, store and process data.
- Every workplace will have its own digital workplace toolbox.
- Digital information can be stored online, in a physical location or on removable media.
- When used within a work context, digital information – especially when it comes from external sources such as publicly accessible websites – needs to be checked to ensure it is valid and reliable.
- Various laws and regulations are used to oversee the creation, storage and retrieval of digital information.
- To remain current, organisations need to keep up-to-date with the latest trends and innovations in digital technology.

Learning Checkpoint 1

Use digital workplace information

Part A

- Which of the following are examples of creating, storing or retrieving information in digital format? Tick all that apply.
 - Creating a spreadsheet using Microsoft Excel
 - Taking a document from a folder in the filing cabinet
 - Entering login details to access a document on Google Drive or OneDrive
 - Saving a document to a removable hard drive
 - Taking a photo on a tablet or smart phone
- Draw a line to match each legislative and organisational requirement to its correct definition.

» Intellectual property (IP) laws	» Organisations must have procedures in place that define how employees and contractors access and use IT data and systems.
» Digital security policies and procedures	» IT data and systems risks must be identified, documented and controlled. This may include setting up firewalls, passwords and installing antivirus software.
» Privacy laws	» This protects the creative and intellectual efforts of individuals and organisations.
» Risk management policies and procedures	» Organisations have a legal obligation to ensure that all personal information data (of both internal and external customers) is secured and protected.

3. Which of the following questions should employees ask to check the validity and reliability of information retrieved online? Tick all that apply.

- Does the content include diagrams and visual representations?
- Is the information supported by evidence or research?
- Is the content published by a reputable organisation or institution?
- Does the information have a publication date?
- Is the author of the content clearly identified?

4. List three sources of information individuals can access to learn about the latest trends and innovations in workplace digital technology.

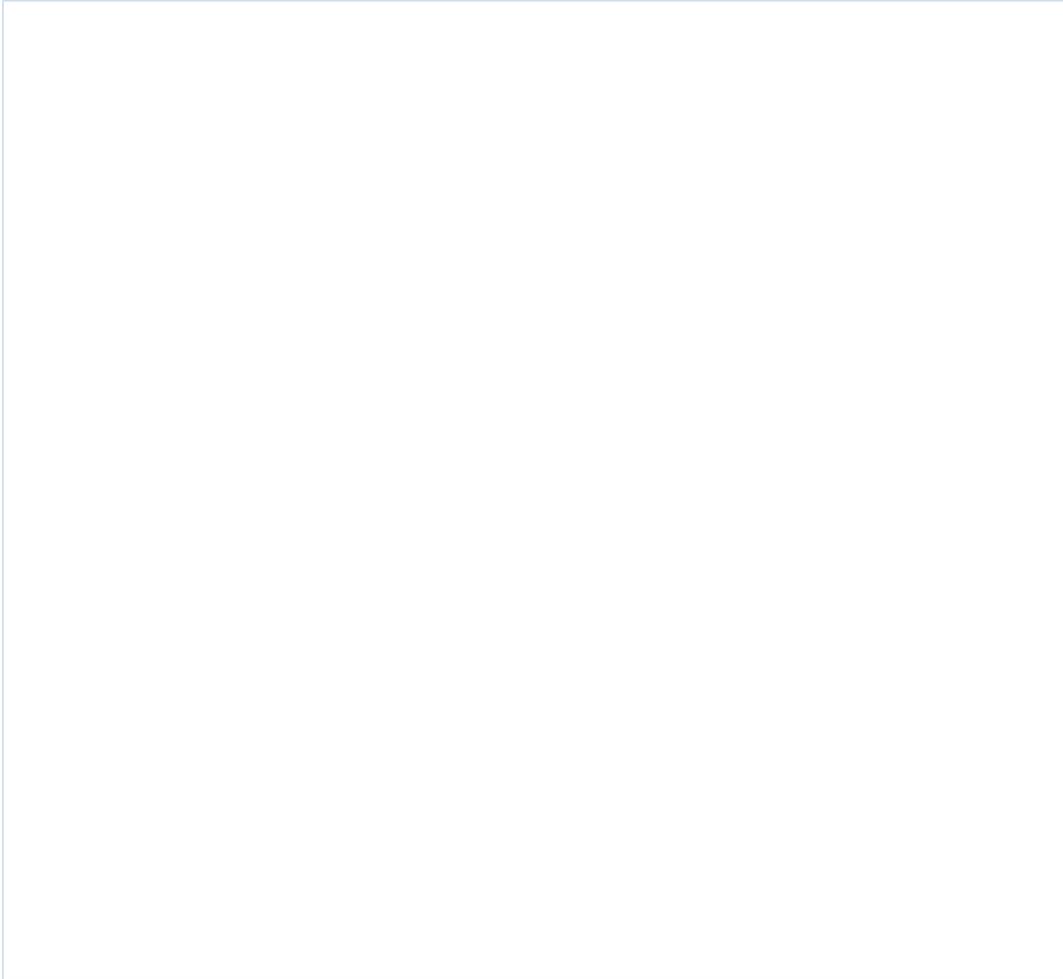
Part B

Read the case study, then answer the questions that follow.

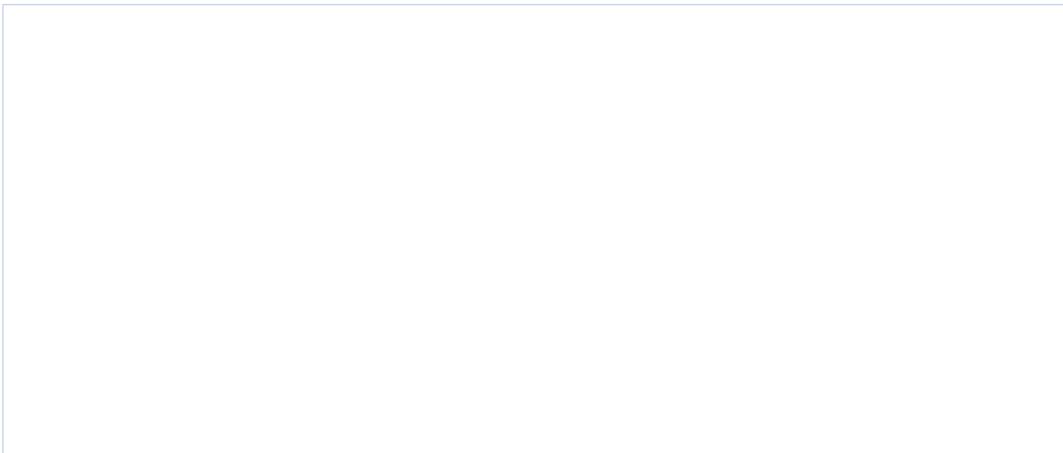
Case Study

After careful deliberation, Technotron Accounting decided to downsize its office space in order to cut costs and allow employees the option to work from home. The company would still retain two offices, which would be used for hosting important team or client meetings for when senior management and team members wanted to come into the office. To ensure a smooth transition to working from home for all employees, the company would need to invest in a range of digital applications, technologies and networks for communication.

1. Identify and briefly outline three workplace digital applications, technologies and networks that Technotron Accounting could use for communication between staff.



2. When staff are working remotely, where could digital information be stored so that employees can easily access required information?





Topic 2 | Integrate digital solutions into work processes

- 2A Identify, select, review and implement digital solutions
- 2B Identify and adopt digital media protocols and conventions
- 2C Train and support team members in the application of digital solutions

2A Identify, select, review and implement digital solutions

To ensure effective digital solutions in the workplace, businesses need to choose technology that aligns with their organisation's goals.

Many organisations believe that they are already using digital technology effectively because they have a website or Facebook page. However, there are many more ways to use digital technology to improve business outcomes.

When integrating digital solutions in the workplace it is necessary to firstly identify the areas of the business that could benefit and then select and review solutions that are fit for purpose and aligned with organisational policies and procedures.

Identify areas that could integrate digital solutions

Businesses are usually separated into different departments that have a specific focus and function. Departments are structured according to business requirements and vary depending on the type of business and industry.

Digital solutions can be implemented across an entire organisation, or applied to only one area. When identifying the areas within a business that could integrate digital solutions, consider your business goals. These could include:

- increasing revenue
- increasing profit
- more efficient use of assets
- improving staff skills.

Consider what changes would make it easier for your business to meet these goals; these could be changes to processes, customer service or how staff communicate. When you have identified these changes, prioritise them (e.g. determine which are the most important).

For example, perhaps you work in a real estate agency. One of the business goals is to improve the efficiency of administrative tasks, especially when it comes to customer enquiries. One of the changes that would make it easier for your business to meet this goal is if there was a more efficient system for managing customer enquiries, so staff had more time to attend to other work. The digital solution in this case might be an automated customer enquiry system that logs enquiries and minimises the risk that customer enquiries will 'slip through the cracks'.

Here are some other examples of digital solutions for specific areas of the workplace.

<p>Human resources (HR)</p>	<p>The HR department is responsible for recruiting, selecting and inducting people with the required skills, qualifications and experience for different work roles across the organisation. Other work processes carried out in HR include:</p> <ul style="list-style-type: none"> ▪ training employees ▪ performance management ▪ employee remuneration and benefits administration (payroll) ▪ employee relations. <p>Digital solutions could be applied to HR work processes by:</p> <ul style="list-style-type: none"> ▪ using a digital recruitment campaign to target and attract potential employees from a wider talent pool ▪ conducting virtual performance reviews with employees using video or web conferencing ▪ automating payroll processes using software or cloud computing options.
<p>Finance</p>	<p>The finance department is responsible for accounting, auditing, planning and organising a company's finances, and producing financial statements. Work processes carried out by the finance department include accounts payable and receivable, financial reporting and fixed-assets accounting.</p> <p>Digital solutions could be applied to financial work processes by:</p> <ul style="list-style-type: none"> ▪ automating finance and accounting systems to streamline all repeatable processes and produce accurate reports ▪ using big data analytics to improve financial management and risk management ▪ using real-time analytics to keep track of performance in an environment that deals with different currencies, commodities and political risks.
<p>Marketing and promotions</p>	<p>Marketing, advertising and promotional activities allow businesses to communicate with customers about their products and services. The marketing department is responsible for promoting and growing the business to generate sales. Marketing work processes include creating marketing strategies, planning promotional campaigns and monitoring competitors' activities.</p> <p>Digital solutions could be applied to marketing work processes by:</p> <ul style="list-style-type: none"> ▪ developing a company website, mobile site or app that promotes the business ▪ using digital marketing tools and techniques to reach a wider audience ▪ using social media to improve online presence and customer interaction ▪ managing and measuring social media marketing with tools such as Hootsuite, Buffer, TweetDeck and SocialOomph.

IT	<p>IT systems are essential to operating a digital workplace. The IT department is responsible for ensuring the smooth operation of all digital work processes and activities. IT work processes include implementing software, providing direct operating assistance in software use and data management across the whole organisation.</p> <p>Digital solutions could be applied to IT work processes by:</p> <ul style="list-style-type: none"> ▪ linking separate IT systems and software so that they become self-acting and self-regulating ▪ creating a paperless workplace by storing and managing all company data electronically or online ▪ using a virtual help desk that allows IT support workers to provide virtual assistance and support to users experiencing technical issues.
Administration and management	<p>The administration and management team handles the day-to-day business, planning, and decision-making of an organisation. This department links with other departments to ensure consistent workplace operations and constant flow of information. Administrative and management work processes include project management, financial review and clerical processes, such as reception.</p> <p>Digital solutions could be applied to administrative or management work processes by:</p> <ul style="list-style-type: none"> ▪ implementing workflow management software to automate time tracking, issue tracking, project management and task management ▪ using data analytics to produce key performance indicator (KPI) reports that measure the performance of different business areas and departments ▪ using intelligent personal assistants to assist employees to complete certain tasks.
Customer service	<p>The customer service department provides support to and interacts with customers. Some organisations have customer service support centres focused on creating and maintaining customer relationships. Customer service work processes include handling inquiries, processing orders and managing customer complaints.</p> <p>Digital solutions could be applied to customer service support by:</p> <ul style="list-style-type: none"> ▪ implementing a 24/7 virtual customer service desk with trained operators on hand to provide customers with prompt and personal responses ▪ providing online customer self-service so that customers can manage their own accounts and transactions ▪ managing multiple departments, including technical support, business inquiries and billing, from a single ticketing system.

<p>Sales</p>	<p>The sales department plays an important role in generating revenue. This department is responsible for selling products and services to consumers to make a profit. Sales department work processes include sourcing new leads and prospects, negotiating with potential customers and giving sales presentations.</p> <p>Digital solutions could be applied to sales work processes by:</p> <ul style="list-style-type: none"> ▪ using customer relationship management (CRM) software to manage and analyse customer interactions and data ▪ implementing e-commerce solutions so that customers can purchase products and services online ▪ live streaming product launches online and in real time using different social media platforms and applications.
<p>Distribution</p>	<p>The distribution department receives and delivers customer orders. This department is responsible for ensuring that orders are delivered to the right place at the right time. Distribution work processes include ensuring goods are suitable for particular distribution channels, selecting and using correct packaging materials, and minimising waste.</p> <p>Digital solutions could be applied to distribution work processes by:</p> <ul style="list-style-type: none"> ▪ using distribution platforms to manage licences and securely distribute resources to eligible users ▪ using logistics management software to automate ordering, invoicing and shipping processes ▪ using computerised warehouse management systems and radio frequency technologies to manage stock.
<p>Operations</p>	<p>The operations department designs, controls and monitors the production of goods and services. This department designs practices to manufacture products or deliver services more efficiently. Operational work processes include acquiring raw materials, managing supplier relationships and developing strategies to save operational costs.</p> <p>Digital solutions could be applied to operational work processes by:</p> <ul style="list-style-type: none"> ▪ using supplier relationship management (SRM) software to manage and analyse supplier interactions and data ▪ using data analytics to identify operational issues and improve work processes ▪ automating inventory reordering processes so the production department has access to the materials it needs at all times.

Research and development	<p>Research and development identifies new competitive opportunities. The research and development department is responsible for product innovations, staying up to date with the latest technologies and trends, and finding ways to stay ahead of the competition.</p> <p>Digital solutions could be applied to research and development work processes by:</p> <ul style="list-style-type: none"> ▪ using sophisticated analytical tools to organise, coordinate and analyse market trends and consumer behaviours ▪ using data analytics to determine the economic viability of research and development projects ▪ using digital technologies to support virtual collaboration.
Legal	<p>An organisation's internal legal department oversees and identifies legal issues in all other departments. Not all organisations need an internal legal department, and many outsource legal work to external practitioners. Internal legal work processes include handling customer complaints, monitoring organisational compliance with laws and regulations, and filing legal documents.</p> <p>Digital solutions could be applied to legal work processes by:</p> <ul style="list-style-type: none"> ▪ using compliance management software to monitor and meet regulatory requirements and deadlines ▪ using AI, robots and expert systems to automate legal advice ▪ using electronic filing solutions to sign and lodge legal documents.
Production	<p>The production department is responsible for manufacturing products. The production department ensures that raw materials are effectively and efficiently made into finished, quality products. Production work processes include manufacturing products, managing product quality control and maintaining optimum inventory levels.</p> <p>Digital solutions could be applied to production work processes by:</p> <ul style="list-style-type: none"> ▪ using automated digital manufacturing tools to model, simulate and analyse all machinery and equipment ▪ using computerised numerically controlled machines to enable mass production and flexibility ▪ using inventory management software or a cloud inventory system to manage stock.

Select and review digital solutions

Digital solutions include a broad range of platforms and tools that organisations can use to automate work processes, operate more efficiently and facilitate communication.

Most business leaders recognise and appreciate the importance of digital solutions to their organisation, but they do not always know what is possible, what to address first or how to go about implementing change.

Here are some examples of digital solutions that could be implemented in the workplace.

Artificial intelligence (AI)	<ul style="list-style-type: none"> ▪ AI is an area of computer science that aims to create intelligent machines that work and react like humans. Computers with AI may be designed for speech recognition, learning, planning and problem-solving. ▪ AI and robotics are already supplementing jobs, such as accountants, lawyers, doctors and financial advisers, and are likely to replace a number of manual jobs and work processes in the future. ▪ You can use AI in your workplace to manage routine activities and use human resources to perform the unpredictable work tasks that require creativity, problem-solving and flexibility.
Automation	<ul style="list-style-type: none"> ▪ Automation refers to using equipment to carry out work processes normally performed by a person. ▪ Automation is becoming increasingly widespread as industries continue to adopt technology and try to find ways to save money, time and effort. ▪ It's a good idea to phase automation into your workplace gradually rather than all at once, allowing your employees and end users to adapt to, learn and succeed with the technology.
Mobility	<ul style="list-style-type: none"> ▪ Mobility allows employees to perform work tasks and activities whenever and wherever they want. Research has shown that employee mobility leads to better work processes, increased productivity and more satisfied employees. ▪ Employee mobility cuts time spent commuting to and from the office and allows employees to maintain a flexible work schedule. Mobile devices and platforms like the cloud allow increased mobility and encourage creative innovation without sitting behind a desk. This freedom results in more efficient employees and can increase a company's bottom line. ▪ You can embrace mobility solutions by using custom apps, mobile solutions, cloud services and mobile devices to keep productivity levels high, even when employees are offsite.
Machine learning	<ul style="list-style-type: none"> ▪ Machine learning is a type of AI that provides computers with the ability to learn, or find hidden insights or innovative solutions to a problem, without these being explicitly programmed. It is a method of data analysis that uses statistics to solve problems, using data from the knowledge discovery process. ▪ Machine learning makes it possible for organisations to automatically analyse large amounts of 'big data' (complex data) to deliver faster, more accurate results. This produces high-value predictions that can guide businesses to make better decisions and take smarter actions in real time, without human intervention. ▪ You can even use machine learning to analyse employee behaviour and productivity, allowing you to recognise efficient employees, maintain a positive work culture and retain talented workers.

The Internet of Things	<ul style="list-style-type: none"> • The Internet of Things (IOT) describes the interconnection of computing devices embedded in everyday objects, which enables them to send and receive data over the internet. It involves connecting any device to the internet and/or to each other, including smart phones, household appliances and wearable technologies. • In the workplace, it can be used to improve social interaction and productivity between colleagues by allowing people to connect and collaborate with each other anytime and anywhere. • In the workplace, it can help you save energy by automating lights and thermostats, increasing security by using smart surveillance systems and reducing commuting times for employees by using built-in navigation technology.
Wearable technology	<ul style="list-style-type: none"> • Wearable technology is one of the biggest trends in today's digital marketplace. It includes gadgets that are equipped with smart sensors that use the internet to connect people wirelessly to their smartphones or other devices. Wearables help people achieve goals, such as staying fit and being more organised. • Wearables may be worn virtually anywhere, most commonly on the wrist, but can be found elsewhere on the body, such as around the neck. They can also be mounted on headgear, worn as clothing or jewellery and even implanted under the skin.
Conversational interfaces and intelligent personal assistants (IPAs)	<ul style="list-style-type: none"> • A conversational interface is a voice recognition and natural language interface for a computer or mobile device. It mimics chatting with a real person and allows users to interact with it by talking directly to it. • An IPA is voice-operated software that can perform tasks or services for an individual. IPAs, such as Apple's Siri and Microsoft's Cortana, provide simpler ways to look up information, cue music to play and create shopping lists after receiving verbal instructions. Some workplaces are now using IPAs and 'chatbots' to simulate conversation with human employees over the internet. • You could use conversational interfaces and IPAs to understand text and provide better responses to user queries. You can also develop and use IPAs that are unique to your business and become a key part of your brand or customer experience.
Microservices and application program interfaces (APIs)	<ul style="list-style-type: none"> • Microservices are independently created and maintained components that communicate with each other through contractually agreed-upon interfaces (APIs). Microservices and APIs allow app developers to present a smooth, clean user interface to users. • APIs encourage individual programs and services to communicate; this helps developers create new, interconnected tools and services that continuously move software in new directions. • With the growing number of consumers and businesses incorporating mobile apps into their daily routines, plan how to make your services accessible via APIs. API tools could allow you to create new business opportunities, improve your existing products, systems and workplace operations, and allow your business to expand into new markets.

Converged infrastructure	<ul style="list-style-type: none"> Converged infrastructure is an approach to data management that minimises compatibility issues between servers, storage systems and network devices. Organisations use converged infrastructure to centralise the management of IT resources, consolidate systems and reduce operating costs. It achieves this by implementing computers, storage and networking resources that can be shared by multiple applications and collectively managed using policy-driven processes. Converged infrastructure can help to lower business operating costs by using an automated data management centre to reduce labour, and saving money on cabling, cooling, power and floor space.
Data analytics	<ul style="list-style-type: none"> Data analytics refers to extracting insights from data. The data can be qualitative (non-numerical) or quantitative (numerical). Data analytics is used to improve productivity and add value to the business. Data is extracted and categorised to analyse behavioural data and patterns. Techniques vary depending on organisational needs and requirements. Even without advanced software, organisations and employees can use data analysis strategies and techniques in the workplace to optimise workspaces, carry out HR functions and make other operational decisions. You can use big data analytics tools to collect and analyse a wide variety of data types and use identified patterns to enhance business processes. For example, data from various sources can be analysed to devise a model for selecting shipping subcontractors to limit the risks of late delivery or damaged goods.

Fit for purpose

When selecting digital solutions, ensure they are ‘fit for purpose’. This means a suitable solution will meet your business needs and goals. The solution must be used according to the policies and procedures your organisation has in place.

Here are some criteria you could use to select and review ‘fit for purpose’ digital workplace solutions.

Accessibility	The digital solution should be accessible by all users, easy to obtain and able to be adapted to meet individual needs.
Content	The digital solution should include content that is relevant, appropriate, easily understood by users and provided in different languages to meet individual needs.
Organisational standards	The digital solution should be compatible with organisational policies and procedures, such as for digital media, ICTs, privacy protocols and digital communication.
Engagement	The digital solution should engage users and encourage repeat use.

Functionality	The digital solution should perform the functions it was designed for and be easy for the user to navigate.
Visual appeal	The digital solution should include aesthetics, graphics, videos, layout and other components that make it visually appealing to users.
Subjective quality	The digital solution should be worth recommending to others and have a high overall user satisfaction rating.
Cost	The digital solution should be cost-effective relative to business needs.

Implement digital solutions into workplace operations

Proactive innovation is one of the best ways you can stay competitive in an evolving marketplace. However, the implementation of digital solutions can be challenging. Even the most suitable and up-to-date technology will not lead to improved outcomes if the implementation of the technology is not done properly. In fact, many digital solutions in the workplace are not successful.

Some of the factors that can get in the way of effective implementation include:

- lacklustre support from senior managers
- employee resistance to new technology
- a lack of collaboration between teams.

Source: <https://www.mckinsey.com/business-functions/organization/our-insights/unlocking-success-in-digital-transformations#>

Here are some factors that have been shown to make implementation of digital solutions run smoothly.

Senior management support	New digital innovations must be managed at a senior level to be successfully integrated into workplace operations. Senior managers must become a champion of the idea, the development process and the success or failure that may follow. They should empower, inspire and convince employees to become participants in digital workplace innovations.
Strategic alignment	For any digital innovation to succeed, it is important that it is aligned with your business strategy and goals. This is more likely to occur naturally when senior management takes the lead with an innovation initiative. Strategic alignment is critical to achieving peak performance.
Holistic thinking	Think about a holistic digital workplace rather than simply implementing technologies that address a specific need. Digital innovations should not be limited to product development; they can include improvements to work processes, organisational structure, business modelling and marketing.

Understanding culture	A culture of innovation creates an environment where employees are encouraged to accept change, take risks and test new ideas. Innovation cannot exist without experimentation. If you want your organisation to make the most of new digital innovations, your success depends on your ability to determine what works best for your business. Testing is crucial to minimise failures and uncover any hidden potential an idea may have.
Delivering value	To stay ahead of the competition, businesses must leverage the right technology to support current and future work processes. Your focus should be on delivering value for the business rather than simply implementing new technologies. New digital innovations should drive efficiencies, capture new revenue streams and capitalise on new market opportunities for your business.
Make it easy	Introduce better ways for employees to do their work with widespread operational impact. Some technologies require more skills and knowledge than others. When making choices about which digital innovations to integrate into your workplace, investigate access to support should you require it.

Example

Identify, select, review and implement digital solutions

Melanie is the chief information officer (CIO) at Credit Lender, a large financial services company. Because the company has not been performing well over the last two years, extreme measures have been put in place to save costs and keep the company afloat.

Melanie is responsible for implementing digital solutions that improve Credit Lender's online presence, automate work processes and exceed industry standards in compliance. She wants to develop an interactive financial calculator to drive traffic to the company's website and generate quality leads.

Melanie outsources the development work to a digital service provider (DSP) that specialises in financial technology. The DSP develops a customised self-service financial calculator that enables users to calculate borrowing power, loan repayments and savings. The calculator will be placed on Credit Lender's website and will be designed for use on a range of devices. The calculator is integrated into the DSP's unique configuration console. This means that the DSP can quickly make any changes to the calculator at Melanie's request through an application program interface (API).

After six months, Melanie reviews the success of the calculator and discovers that traffic flow to Credit Lender's website has increased by 15 per cent.

Practice Task 5

Question 1

Draw a line to match each workplace area to the most appropriate digital solution that could be integrated in each area.

- | | |
|--------------------|--|
| » Customer service | » Conducting virtual performance reviews with employees using video or web conferencing |
| » Human resources | » Using inventory management software or a cloud inventory system to manage stock |
| » Sales | » Implementing a 24/7 virtual customer service desk with trained operators on hand to provide customers with prompt and personal responses |
| » Production | » Live streaming product launches in real time using different social media platforms and applications |

Question 2

Which of the following criteria will help determine whether a digital solution is fit for purpose? Tick all that apply.

- Cost – the digital solution should be more expensive than the previous solution
- Accessibility – users should be able to access the digital solution easily
- Organisational standards – the digital solution should meet organisational policies and procedures
- Functionality – users should find the digital solution easy to navigate and performing as intended
- Quality – users should be able to produce work of higher quality using the digital solution

Question 3

List three key factors you need to consider when implementing new digital innovations into the workplace.



2B Identify and adopt digital media protocols and conventions

Business policies and procedures should clearly explain the protocols and conventions relating to digital technology.

Policies and procedures relating to digital media could relate to any number of tasks, such as file-naming, responding to customer emails and managing email attachments. These policies and procedures should be readily available to employees and be explained in training and induction programs so employees uphold organisational standards and expectations.

Identify digital media protocols and conventions

Policies and procedures relating to the use of digital media are typically available via a company's intranet – or they may be available in hard-copy format.

Here are some examples of organisational protocols and conventions you may need to be aware of when you are integrating digital solutions into workplace operations.

Protocol or procedures	Example of protocol or procedure
Use of IT systems	Company policies may restrict what content employees can access when using digital technologies during their working day.
Social media usage	A business may require employees to refrain from expressing certain opinions or beliefs through their personal social media accounts.
File naming	An organisation may have a policy around file naming. File naming protocols help companies keep track of and retrieve information.
Communication	A company might stipulate which technologies can be used for which purpose. For example, it may be against your company's policy to fire someone via email or text message.

Sources: <https://store.legal.thomsonreuters.com/law-products/news-views/corporate-counsel/managing-employee-relations-in-the-digital-environment> <https://smallbusiness.chron.com/can-email-abused-business-environment-38981.html>

Adopt digital media protocols and conventions

Protocols and conventions could take the form of a policy or guidelines. Policies are typically more detailed and are underpinned by legislation, whereas guidelines are more instructive.

Here are some examples of 'best practice' protocols and conventions for digital marketing and communication and social media. These are examples only; the protocols and conventions for each organisation will be different depending upon their needs and circumstances.

Digital marketing and communication

- Understand audience needs and design your digital communications with the end user in mind.
- Establish a sustainable and multi-disciplinary team that can develop and maintain digital channels in real time, led by a suitably skilled and senior communications manager with decision-making responsibility.
- Set up systems to ensure digital information and communication channels remain up to date and relevant.
- Understand intellectual property laws and privacy considerations related to the content you are publishing.
- Set up systems that allow your team to produce and deploy content in an agile, timely and consistent manner with appropriate approvals or delegations in place.
- Establish performance benchmarks and regularly evaluate them using analytics and metrics from various platforms.
- Develop content that is clear, intuitive and accessible so that users understand and use it successfully.
- Make sure that all digital channels are well-resourced and updated regularly, and remove channels that are underperforming or not being maintained.
- Take audience feedback seriously and use it to improve the performance of your digital tools and channels.
- Aim to integrate your digital tools and channels with your other marketing and communication activities.

Social media

- Social media is built on the idea of being part of a community and contributing to a conversation. Best practice use of social media includes:
- Be responsive and helpful: Reply quickly to questions or feedback and help to solve problems.
- Be polite and respectful: Respect different views, and don't post inflammatory or sensitive content, take personal conversations offline or into a private space.
- Be meaningful and relevant: Provide the right message at the right time, tailor content to the audience, and don't spam or try to push information out.
- Be consistent: Social media content should support and integrate with your other communication strategies.
- Be honest and accountable: Always acknowledge who you represent and who you speak for; check what you post; own up to and correct mistakes quickly; and apologise when things go wrong.
- Be conversational and friendly: Use a tone and language that is familiar to your audience to give your voice and brand a personality.
- Be engaging and interactive: Use humour when appropriate, be interesting and make sure the conversation is two-way; acknowledge those who follow you by following back; post often at regular intervals.

Adapted from: Government of South Australia (2015), Digital Communications Guidelines: www.govcommunications.sa.gov.au/system/files/Digital%20Communications%20Guidelines%20~_0.pdf

Example

Identify and adopt digital media protocols and conventions

Xin works as an HR specialist in a newly formed small business. In preparation for a new social media campaign, Xin has been asked to identify the company's current social media protocols and conventions and, if necessary, update them to reflect current best practice in the industry.

Xin reviews her company's social media policy and notes that it does not include guidelines around personal use of social media. As employees will likely be using their own smartphones and laptops to post work-based social media content as part of the campaign, Xin recommends that the company create a new policy around employees' personal use of social media.

Practice Task 6

Question 1

Which of the following social media protocols should organisations adopt? Tick all that apply.

- Reply quickly to questions or comments and help solve users' problems.
- Post content frequently, as quantity of posts is more important than quality.
- Post respectful content at all times.
- Tailor content to the audience and purpose of communication.
- Use a tone and language that resonates with your audience and separates your brand and personality from others.

Question 2

List two areas a digital media policy or guideline should address.

2C Train and support team members in the application of digital solutions

Regular training needs analyses will help your organisation identify and address digital skills gaps among employees.

To successfully apply digital solutions in the workplace, train and support your team members. This training and support should focus on ensuring your team members have the skills, knowledge and confidence to use digital technologies in accordance with relevant protocols, conventions and policies.

Training and support should be provided as soon as new digital solutions are introduced. Digital skills training and supports can also be incorporated into the induction process to ensure new employees understand the tools and technologies used.

Identify procedures and protocols

Here are some examples of business procedures and protocols relevant to training, mentoring and supporting employees.

Protocols regarding the duties and responsibilities of staff in regard to training, according to their job role

Procedures relating to training needs analysis – when and how this analysis is undertaken

Procedures around communicating with staff about training opportunities – how staff will be informed about opportunities

Protocols around budgeting for professional development opportunities

Procedures around how to initiate and maintain mentoring and coaching relationships within the workplace

Strategies for training and supporting team members

When training and supporting team members, present information using language and concepts that are appropriate to your audience. For example, if you are speaking with:

- someone from a non-technical background about a specific software program, it would be inappropriate to use highly technical terms without explanations.
- a new employee about how to use specific technology, it is best not to use jargon – they may not be familiar with certain terms.

Here are some examples of strategies that can be used to train and support team members to apply digital solutions.

Plan-do-check-act	<ul style="list-style-type: none"> ▪ The PDCA cycle is a four-stage approach for continually improving processes, products and services, or for resolving workplace issues. ▪ The four phases are: <ul style="list-style-type: none"> – Plan: Identify and analyse the problem or opportunity, develop theories about what the issues could be and decide which one to test. – Do: Test the potential solution and measure the results. – Check: Study the result, measure the effectiveness, and decide whether the theory is supported or not. – Act: If the solution was successful, implement it. ▪ You could use PDCA to systematically test digital solutions in your workplace, analyse the results and implement the solutions that are shown to work. ▪ You can invite your team members to explore a range of digital solutions to problems, and pilot them in a controlled way before selecting one for implementation.
Demonstration method	<ul style="list-style-type: none"> ▪ The demonstration method follows the 'learning by doing' maxim. The idea behind this method is that skills are developed by imitation. ▪ Demonstrations and simulation-based learning can be conducted face to face or via virtual communication (e.g. video conferencing). It provides opportunities for participants to practise and master digital skills before implementing the solution in the workplace. ▪ The demonstration method involves the following three steps: <ul style="list-style-type: none"> – Introduction: The trainer states the objectives of the training demonstration. For example, to learn how to apply a digital solution to a specific work process. – Development: Participants try to initiate the demonstrated activity. If participants are still unsure, the trainer provides further demonstrations or illustrations. – Integration: The trainer integrates all the activities, and these activities are rehearsed, revised and evaluated. ▪ The person providing the demonstration must have the adequate skills and demonstrate actions in a safe and appropriate manner.
Coaching	<ul style="list-style-type: none"> ▪ The goal of workplace coaching aims is to equip people with the tools and skills they need to be effective in their work role. When coaching someone in the workplace, use your knowledge and experience to help your colleague create and develop their own practices. ▪ Coaching typically focuses upon a specific task, such as how to use a specific piece of equipment. ▪ Coaching is especially useful for workers who are new to their role, or for employees who need to learn how to perform new tasks.

Digital champion model	<ul style="list-style-type: none"> ▪ The digital champion model is a form of peer-to-peer learning where one or more people in the workplace commits to helping colleagues build their confidence with digital technologies. ▪ A digital champion might answer colleagues' questions about a specific type of technology, run a workshop on how to use a specific application or show a colleague how to access and use a specific software. ▪ Digital champions within the workplace do not have to be IT experts, they just need to be enthusiastic about sharing their digital skills and motivated to help others.
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Using a collaborative instructional approach

This approach encourages interdependence among learners, active participation, communication and dialogue. In this way, a collaborative instructional approach is different to traditional methods of teaching, such as the 'sage on the stage' model where an expert imparts information to a passive audience.

A collaborative instructional approach involves the use of multiple approaches to learning. For example, you might use a demonstration method for some employees and coaching for others. This makes collaborative instructional approaches especially useful for training people who have different levels of knowledge and skills – such as a team that comprises people with varying levels of digital skills.

Sources: <https://www.becauselearning.com/2018/02/05/collaborative-instructional-style-learning/>
https://link.springer.com/referenceworkentry/10.1007%2F978-1-4419-1428-6_818

Here are some of the principles that inform collaborative instruction as well as examples of how these principles might inform the way you communicate with your colleagues during training.

Principles that inform collaborative instruction	Examples of these principles
Learning takes place in a collegial environment	<ul style="list-style-type: none"> ▪ Speak with your colleagues using a friendly and warm tone. ▪ Offer to help colleagues if it looks like they are struggling – but don't step in to help them without asking first.
Participants are supported to learn independently	<ul style="list-style-type: none"> ▪ Encourage colleagues to follow up on issues that are of specific interest to them. ▪ Trust that your colleagues will ask you for your help if they need it.

Principles that inform collaborative instruction	Examples of these principles
Participants are supported to learn cooperatively	<ul style="list-style-type: none"> Bring together team members who can complement each other's skills so they can learn from each other. Encourage colleagues to share their knowledge with each other.
Participants' voices are heard	<ul style="list-style-type: none"> Use active listening skills – pay attention to your colleagues when they speak and show them that you are listening to them. Reflect on what your colleagues say and ask relevant questions.
Participants will have a say in what and how they learn and are taught	<ul style="list-style-type: none"> Ask your colleagues how they like to learn and try to cater for their different learning styles (e.g. one-on-one support, group learning, etc.).

Source: Gjergo, E., & Samarxhiu, S. (2014). Basic Principles of "Collaborative Learning". European Scientific Journal, 17.

Example

Train and support team members in the application of digital solutions

Alexandro works as an IT specialist in a small business. The business has just introduced a new digital solution that helps employees track customer enquiries and requests. Alexandro has been asked to support his colleagues to use the new technology.

Alexandro begins by reviewing the company's policies and procedures relating to training and support. He notes that the company encourages a collaborative instructional approach to training and support. Taking this into account, Alexandro sends a brief email to his colleagues to let him know if they need help with the new technology, trusting that they will approach him if they are struggling.

When Danielle asks Alexandro for help using the new technology, Alexandro responds in a friendly and warm way. He sits beside Danielle at her desk and asks her what she is having problems with. He makes sure that he listens carefully to Danielle as she speaks.

Alexandro uses the demonstration method to help Danielle with her task. He shows her how to do the task and then watches as she performs it. When she struggles to finish the task, Alexandro shows her again. Once Danielle performs the task successfully, she thanks Alexandro for his help.

Practice Task 7

Question 1

Which of the following methods can be used to train and support staff in the application of digital solutions? Tick all that apply.

- Role-playing
- Plan-do-check-act
- Demonstration method
- Coaching
- Digital champion model

Question 2

List four actions managers can take that demonstrate the use of a collaborative instructional approach.

Question 3

Which of the following protocols or procedures may apply when training or providing support to team members? Tick all that apply.

- Procedures for the duration of training
- Protocols for distributing training materials
- Procedures for training needs analysis
- Protocols regarding the responsibilities of staff when training
- Protocols for budgeting for professional development

Summary

- Digital solutions can be implemented across an organisation or in specific work areas.
- When selecting digital solutions, choose solutions that are ‘fit for purpose.’
- A range of factors can help to ensure the effective implementation of digital solutions in the workplace, including senior management support and holistic thinking.
- Businesses need policies and procedures relating to digital technology. If those policies and procedures do not exist, create them.
- A range of strategies can be used to train and support employees to apply digital solutions including the demonstration method and coaching.
- A collaborative instructional approach uses multiple approaches to learning, depending on the needs and preferences of the learner.
- A key aspect of a collaborative instructional approach is the learner’s voice is heard and they have a say in what they learn and how they are taught.

Learning Checkpoint 2

Integrate digital solutions into work processes

Part A

1. Which of the following strategies make implementation of digital solutions into workplace operations easier? Tick all that apply.
 - Having senior managers champion the idea and empower, inspire and convince employees to adopt digital workplace innovations
 - Aligning digital solutions with organisational strategies and goals
 - Introducing digital innovations that meet the needs of a single department first, then finding solutions that meet the needs of remaining departments
 - Creating an environment and culture of innovation where employees are encouraged to accept change, take risks and test new ideas
 - Choosing digital solutions that other organisations are using as this proves the technology has merit
2. Describe three protocols or conventions that organisations should adopt when implementing digital media solutions.

3. Draw a line to match each training and support strategy to its definition.

- | | |
|--|---|
| » Demonstration method | » This is a form of peer-to-peer learning where workers agree to help their colleagues build confidence with digital technology and develop digital skills. |
| » Coaching | » This involves using multiple approaches to learning in order to encourage participation, communication and dialogue. |
| » Digital champion model | » This is 'learning by doing' where skills are developed by imitation. |
| » Collaborative instructional approach | » This aims to pass on the knowledge and experience of an 'expert' to a less experienced colleague. |

4. Select true or false for each of the following.

- | | | |
|---|--------|---------|
| a) Procedures relating to training needs analysis outline why the analysis is taking place. | » True | » False |
| b) Organisations will have protocols on budgeting for professional development. | » True | » False |

Part B

Read the case study, then answer the questions that follow.

Case Study

Preet works in the Human Resources department of a legal firm. After the COVID-19 pandemic, her organisation set out to create a more digital workplace where staff could communicate and collaborate easily regardless of their physical location. As part of her daily work, Preet is responsible for recruiting, interviewing and inducting new employees. The idea of having this process digitised sounds exciting, and Preet thinks it will be a much more efficient way of doing things.

1. List three digital solutions that could be integrated into Preet's work area.

2. Which of the following digital solutions would support Preet's workplace operations? Tick all that apply.

- Mobility
- Automation
- The Internet of Things (IOT)
- Wearable technology
- Data analytics

3. Preet selects a form of social media, LinkedIn, as her digital solution to providing assistance with employee recruitment. List four reasons why this solution is fit for purpose.



Topic 3 | Comply with intellectual property rights

- 3A Identify relevant IP legislation, regulations and organisational policies
- 3B Review digital processes and applications and confirm compliance with IP requirements
- 3C Document, register and report relevant matters related to IP

3A Identify relevant IP legislation, regulations and organisational policies

IP laws are designed to foster innovation. They provide businesses with a competitive advantage when developing original ideas and products.

Intellectual property (IP) is intangible property that is the result of human intelligence and creation. It includes inventions, copyright, trademarks and brands, designs and the application of an idea. To protect your idea under IP laws, it must be something new or original.

Until recently, IP was a specialised field thought only to apply to inventors, corporate researchers and development managers. But in today's digital economy, where ideas and innovation drive economic growth and business success, IP has moved to the forefront as a key success factor in a wide range of professions and industries.

When applying digital solutions to work processes, know your IP obligations, as the unauthorised distribution of digital information and materials among employees could create a potential liability and place your business at legal, financial and reputational risk.

You may need to apply for IP rights over specific inventions or creations. This will help you build a business and establish a market presence. Some things, such as a written description of a new process, are automatically protected by copyright law when they are created.

In some cases, a business may need to keep their invention or design as a 'trade secret' (confidential) until they have registered it for IP rights. It is important that you identify the legislation, regulations, and organisational policies and procedures relevant to IP in your workplace.

Different types of IP rights

IP rights provide the owners with the time and opportunity to commercialise their creations. This protection serves as an incentive to innovate.

IP rights exist in many forms, and each type provides different competitive advantages.

IP Australia is the Australian government agency responsible for administering IP legislation. It undertakes reviews of IP laws that often result in changes to IP legislation. Its aim is to encourage innovation by maintaining a system that strikes a balance between public and private interest.

Australian IP laws and regulations underpin different types of IP rights. It is critical that you understand your legal obligations and organisational requirements when creating your own IP using digital solutions, as well as using IP that is owned by others.

Copyright

Copyright is where the owner's original expression of ideas is protected, but not the ideas themselves. Copyright is handled by the Australian Government Department of Communications and the Arts.

The moment an idea or creative concept is documented on paper or electronically, it is automatically protected by copyright in Australia. It also protects originally created typographical arrangements (the style, composition and layout of a published page), databases, media broadcasts, computer programs and compositions of other people's work, such as academic journals and music compilations.

Although a copyright notice with the owner's name and date is not necessary in Australia, it can help to prove your ownership of copyright. Depending on the material, copyright for literary, dramatic, musical and artistic works generally lasts 70 years after the author's death (or 70 years after the date of first publication).

The legal basis for copyright in Australia is contained in the following acts:

- *Copyright Act 1968* (Cth)
- *Copyright Regulations 1969* (Cth).

Examples of works protected by copyright include books, films, music, sound recordings, newspapers, magazines and artwork.

Trademark

A trademark is a way of identifying a unique product or service. A good trademark distinguishes your business from other traders. Sometimes referred to as a brand, it can help customers recognise your product or service. A trademark is not just a logo. It can also be a letter, number, word, phrase, sound, smell, shape, picture, movement, aspect of packaging, or combination of these.

There is no legal requirement to register a trademark in order to use it. However, if someone else has already registered the same trademark as yours, they can take legal action against you if you infringe their IP rights.

Trademark registration with IP Australia lasts for 10 years from the filing date. You must actively use your trademark in the course of trade. If you do not, it can be removed on the grounds of non-use.

The legal basis for trademarks in Australia can be found in the:

- *Trade Marks Act 1995* (Cth)
- *Trade Marks Regulations 1995* (Cth).

Large companies that have trademarks include Qantas, Lonely Planet and Vegemite.

Patent

A patent is a legally enforceable right that protects the invention of a device, substance, method or process. For your application to be successful, your invention must be new, useful, and inventive or innovative. A patent gives you exclusive commercial rights to your invention.

The type of patent you hold determines the duration of your protection. For example, computer-based inventions can last up to eight years, a standard patent lasts up to 20 years and pharmaceutical patents can last up to 25 years.

Australian patent applications must be filed with IP Australia, which assesses applications to make sure they meet legislative requirements. The legal basis for patents in Australia can be found in:

- *Patents Act 1990* (Cth)
- *Patents Regulations 1991* (Cth).

Examples of patents include for polymer bank notes and the anti-cervical cancer drug Gardasil.

Design

Design refers to the features of shape, configuration, pattern or ornamentation of something. It must be new and distinctive and give a product a unique appearance.

Design registration aims to protect designs that have an industrial or commercial use. A registered design gives the owner exclusive rights to commercially use, license or sell it.

Registering and certifying a design is often a lengthy, complex and costly process, especially if you are planning on commercialising your design.

The legal basis for designs in Australia can be found in:

- *Designs Act 2003* (Cth)
- *Designs Regulations 2004* (Cth).

Examples of registered designs include the Apple iPhone user interface and fashion items, including shoes and jewellery.

Geographical indications

A geographical indication (GI) identifies a product as originating in a specific territory, region or locality where a particular quality, reputation or other characteristic can be attributed to its geographic origin.

Australia has two systems to register a GI:

- Certification trademarks can be used to register GIs for all goods.
- GIs for wine can be registered under standalone legislation or wine GIs.

GIs can be a powerful marketing and branding tool, with their value increasing as consumer recognition grows.

The legal basis for geographical indications can be found in the:

- *Competition and Consumer Act 2010* (Cth)
- *Competition and Consumer Regulations 2010* (Cth).

Examples of GIs include Scotch whisky, Stilton cheese and Margaret River wines.

Trade secrets

A trade secret (or confidential information) refers to knowledge of an idea or process that is known only to people inside an organisation. It is up to the organisation to protect that knowledge, such as by ensuring employees or distributors sign confidentiality agreements.

Examples of trade secrets include the recipe for Coca-Cola, and the combination of the 12 secret herbs and spices used by KFC.

Other types of IP

Other types of IP include circuit layouts and plant breeder's rights.

Circuit layouts are the layout designs or plans (topographies) of integrated circuits used in computer-generated equipment, also referred to as computer chip or semi-conductor chip designs. These rights are handled by the Australian Government Department of Communications and the Arts.

Plant breeder's rights are exclusive commercial rights for a registered variety of plant. These rights protect plant breeders and give them a commercial monopoly for 20–25 years. This encourages innovation, and means that new plant varieties are freely available to anybody when the protection period lapses.

The legal basis for plant breeder's rights in Australia can be found in:

- *Plant Breeder's Rights Act 1994* (Cth)
- *Plant Breeder's Rights Regulations 1994* (Cth).

Examples include cotton plants with insect resistance, grapevines and the pink iceberg rose.

Adapted from: IP Australia ([https:// www.ipaustralia.gov.au/](https://www.ipaustralia.gov.au/)) © Commonwealth of Australia 2017

Copyright laws

Copyright protection is provided under the *Copyright Act 1968* (Cth).

The *Copyright Act 1968* (Cth) gives copyright owners exclusive rights to copy the work, perform it in public, broadcast, publish or make an adaptation of it.

Each country has its own copyright laws. In Australia, copyright laws became the responsibility of the Australian Government Department of Communications and the Arts in 2015.

While there is no such thing as international copyright, there are international treaties that govern it. The oldest and most important of these is the Berne Convention, which was first signed in 1886 in Berne, Switzerland. The Berne Convention sets minimum standards for copyrighted works.

Here are some examples.

Literary works

This includes blogs, books, cartoons, emails, letters, magazines, memos, newspapers, newsletters, trade journals, training materials and other written materials in print or digital format.

Computer software

This includes software on flash drives, discs, computer hard drives (or other formats).

Pictures, graphics and sculptures

This includes three-dimensional artworks and other creations, as well as two-dimensional graphical images, maps and photographs in print or digital format.

Sound recording

This includes sound digitally recorded, on compact discs, phonographic records, podcasts or other media.

Audiovisual works

This includes films, multimedia presentations, demonstrations and slideshows in analogue or digital format.

Dramatic works and accompanying music

This includes plays and screenplays, regardless of the medium in which they are performed or displayed.

Creative Commons licensing

Creative Commons (CC) is a worldwide project that aims to make copyright material more accessible and negotiable in the digital environment.

The creation of digital information has posed new challenges to copyright and IP laws, prompting an 'open content movement' where digital content creators voluntarily give up some, or all, of their legal rights to reproduce their work.

CC licences relate only to copyright material, not to other forms of intellectual property. Users are free to use copyright material available on or through a website that is covered by a CC licence in line with the licence terms. There are different types of Creative Commons licences, each with a distinctive symbol that lets you know exactly what right you have to reproduce, communicate, cut, paste or remix that content.

IP policies and procedures

IP ownership can be agreed on through appropriate contractual arrangements with employees, suppliers, contractors, distributors and manufacturers.

Your organisation may have IP policies, procedures and protocols in place to establish a structure for the identification, ownership, reporting, management and commercialisation of IP in your workplace. IP policies and procedures reflect the relevant laws and regulations by guiding decision-making about protecting your inventions and innovations. This includes using digital solutions to protect IP assets.

The following table gives examples of where you can access various policies and procedures that relate to IP.

Type of IP	Examples of policies and procedures
Intellectual property	University of Southern Queensland IP Policy and Procedure: aspirelr.link/policyusqdocument
Copyright	James Cook University Copyright Policy and Procedure: aspirelr.link/jcucopyrightpolicy
Digital information	NSW Government Digital Information Security Policy: aspirelr.link/nswsecuritypolicy
Privacy, confidentiality	Australian Government Department of Education and Training Privacy Policy: aspirelr.link/educationprivacypolicy

Example

Identify relevant intellectual property legislation, regulations and organisational policies

Darryn works as a marketing specialist at a company that sells pet care products online. Darryn's role involves writing content for the company's website, including a blog series that talks about how pet owners can address common issues.

To make the content appealing, Darryn uses photos of pets and their owners. He often uploads these photos from a photo sharing application. To ensure Darryn is not breaching copyright laws or their company policy, he only uses photos that have a Creative Commons license.

Practice Task 8

Question 1

Draw a line to match each legal and organisational requirement to its definition.

- | | |
|---------------------------------|--|
| » IP policies and procedures | » This is a legally enforceable right that protects the invention of a device, substance, method or process. To be protected, the invention must be new, useful, and inventive or innovative. |
| » Copyright Act and Regulations | » This protects the new and distinctive features of shape, configuration, pattern or ornamentation which give a product a unique appearance. The owner has the exclusive rights to commercially use, license or sell it. |
| » Patents Act and Regulations | » These documents establish a structure for the identification, ownership, reporting, management and commercialisation of IP in the workplace. They aim to guide decision-making about protecting inventions and innovations |
| » Designs Act and Regulations | » Gives owners of the work exclusive rights to copy, perform, broadcast, publish or make an adaptation of it. Works include books, cartoons, artwork, motion pictures, etc. |

Question 2

List two ways organisations can comply with intellectual property requirements.

3B Review digital processes and applications and confirm compliance with IP requirements

Reviewing your digital processes helps to protect your IP and identify risks to avoid inadvertently infringing the IP of others.

You should carry out an IP audit (also known as IP due diligence) to review the IP owned, used or acquired by your business. This helps to identify what IP exists within your organisation, who owns it, the value of that IP, its legal status and what to do with it.

Here are some examples of IP risks to organisations in relation to digital technology, all of which can lead to financial loss and reputational damage.

Risk	Description of risk
IP theft	<ul style="list-style-type: none"> Digital technology makes IP theft much easier than it used to be. For example, it is much easier to reproduce a digital document than a hard-copy book. Digital information that is shared on the internet can be sourced and distributed by anyone who has an internet connection. The ability of people to remain anonymous on the internet can make it difficult for relevant authorities to enforce IP laws. For more information about dealing with online infringement of IP see: aspirelr.link/ip-australia-infringement
IP misuse	<ul style="list-style-type: none"> Examples of IP misuse include patent trolling and cybersquatting. Cybersquatters register domain names that are similar or identical to a well-known trademark or person and then try to sell that domain to the owner of the trademark or the person. Cybersquatters can also use domain names to damage a company's reputation. Patent trolls purchase patents that belong to other people or businesses and then threaten that person or business with legal action if they don't pay a licensing fee.
IP infringement	<ul style="list-style-type: none"> If an employee reproduces or distributes a digital asset that belongs to someone else (e.g. a photo, a song, an article, etc.), the employer can be held accountable for IP infringement, leading to costly legal battles and reputational damage. A business can also unintentionally infringe IP in overseas market if they don't undertake relevant research on IP in the countries where they are selling products.

Sources: <https://jmuirandassociates.com/digital-intellectual-property-rights/> <https://www.artslaw.com.au/article/caveat-cybersquatting/> <https://www.fglaw.com.au/patent-trolls-recent-federal-court-australia-ruling/>

Manage IP risks in relation to digital technology

Proper risk management reduces the likelihood of an adverse event occurring, as well as the impact it could have on your business.

Here are some ways your business can manage IP risks in relation to digital technology:

- Establish IP security protocols in your workplace.
- Build internal systems to assess, report and mitigate IP risks.
- Use a document tracking system to protect your business from IP theft so that you know where corporate documents are at all times.
- Ensure inventory systems are managed properly, and include procedures for accessing confidential information to enact tighter controls over the flow of information.
- Ensure employees read, understand and sign confidentiality statements addressing the need for strict confidentiality regarding the protection of IP and corporate information.
- Use internal reporting systems that allow employees and external sources to report counterfeit technologies or IP theft.
- Work with the IT department to limit employee access to certain information they cannot access it when they are away from work or when their employment terminates.
- Use data loss prevention software to help prevent the theft of IP and prohibit information from being viewed or sent if the employee isn't permitted to do so.

Avoid infringing on IP owned by others

The consequences of infringement can be expensive, so it is best to be proactive and take steps to avoid it:

Search online	When creating IP in your workplace, conduct an online search as early as possible to see whether any individuals or businesses already own the IP rights to the creation or invention. Searching may reveal potential for infringement on others' IP rights.
Identify your IP	When dealing with alleged infringement, it is important to know what IP your business owns. For example, someone may claim that you are infringing on their IP, when in fact you can prove your ownership. Note that IP also includes information that is critical to the business, such as customer lists and specialist knowledge.
Get permission for source material	Avoid using information or materials sourced from another website or publication without first obtaining permission. This is often referred to as 'clearance' in relation to IP rights. You should always inquire about the source of any information or materials provided to you and any clearance involved.

Keep records

Maintain documents that record your ownership of IP rights or your entitlement to use them. These records can help to prove that any infringement was unintentional, rather than deliberate, and may reduce any liability if you have infringed someone else's IP.

Example**Ownership issues and the impact for your brand**

Company A is a family-run company that has produced a particular award-winning product for 30 years and sold this product at \$20–\$50 per unit. They have built an excellent reputation based on this product. Company B enters the market, producing a very similar product and using a very similar brand name. It sells the product for only \$5. Nearly 20 million units of this cheaper product have sold.

Company A receives numerous customer complaints about the poor quality of the cheaper product, even though it is not their product. Company A starts to see how their product brand name is a tangible asset and they are concerned this cheaper, low-quality product is starting to negatively affect their reputation and sales. Company A takes legal action and Company B eventually agrees to change their brand name.

Review IP compliance

Many businesses engage employees or third-party contractors to develop new ideas and innovations. These ideas and innovations can become valuable IP assets. Businesses often assume they own the IP rights to those assets because they paid for the work. However, this is not always the case.

Under Australian IP laws, the author or inventor is usually the default owner of the IP for any new technology or design. Similarly, the inventor of new technology is usually the first person entitled to apply for a patent on the technology.

It may be unclear whether the individual who created the work was an employee or an independent contractor. For IP rights subject to registration, it is easy to establish the extent of protection granted by the IP right; for example, for patents exhaustively describing the exact scope of the invention. For IP rights that are not subject to registration, such as copyright, the property being protected must be objectively identified. For instance, in the case of a sound recording, this is often done by providing the court with a copy of the master recording.

Failing to secure ownership of IP could lead to the following problems:

- You may be unable to protect, exploit or commercialise that IP because someone else has rights to it.
- If a third-party investor's due diligence exposes your IP ownership problems, the inventor may choose not to proceed with the deal. They may also demand that any deal be conditional on you resolving the problem, or may discount the value of your IP assets.
- You may be unable to give warranties and indemnities (e.g. that you own the IP) to customers, licensees, or other third parties regarding the IP. This may jeopardise future commercial negotiations.
- You may not be able to stop an employee or third party from using or exploiting the IP.

Confirm IP compliance

Having a basic understanding of IP rights and requirements helps ensure that employees properly manage and control IP they create and avoid infringing on the IP rights of others.

Here are some ways that companies can monitor and confirm compliance to organisational and legal requirements relating to IP:

- Review IP policies and procedures regularly to ensure they are current and in line with organisational changes.
- Consult with staff to develop, implement and monitor IP policies and procedures to promote stronger awareness, understanding and ownership of the outcome.
- Define key terms used in IP policies and procedures so that employees understand them, and know what workplace behaviours are expected of them.
- Document and report on any IP infringements made by your employees (whether or not this was intentional), and identify what led to the infringements taking place.
- Explain IP policies and procedures to employees by carrying out information and/or training sessions during team meetings and induction sessions for new staff.
- Apply IP policies and procedures consistently throughout your organisation.
- Deal with policy breaches promptly and according to the procedures.

Example

Review digital processes and applications and confirm compliance with intellectual property requirements

Samuel works as a security analyst in the IT department of a large business where he is responsible for improving IT security.

Two years ago, the business lost a significant amount of critical information when a virus shut down its computer system.

Samuel starts working with a team of technical experts to develop a sophisticated tool that tests software security testing. The aim is to produce a tool that is easy to use, capable of producing reports and able to accurately measure the security of software used in the organisation.

There are hundreds of other similar tools on the market, and Samuel is concerned that the new tool he is developing might infringe on the IP owned by others. To avoid this, Samuel and his team develop a list of criteria and use it to compare their idea with similar tools on the market. Samuel then prepares a report for his manager that identifies any potential IP infringements the business may face.

Practice Task 9

Question 1

Which of the following actions can organisations take to comply with IP requirements?

Tick all that apply.

- Review IP policies and procedures when IP laws and regulations are proposed.
- Involve staff in the development, implementation and monitoring of IP policies and procedures to encourage greater understanding and compliance.
- Keep a register or record of IP infringements made by employees and identify what led to the infringements taking place.
- Hold information or training sessions for employees where IP policies and procedures are explained.
- Handle IP policy breaches promptly and consistently, in line with organisational procedures.

Question 2

List two intellectual property risks relating to digital technology that organisations may face.



3C Document, register and report relevant matters related to IP

Businesses must document, register and report on matters relating to their intellectual property so they can protect their ideas and prove the validity of their IP ownership rights.

IP Australia defines intellectual property (IP) as “the property of your mind or proprietary knowledge.” In other words, IP refers to your ownership – or your company’s ownership – over new ideas, such as inventions, trademarks, designs and brands. A company’s IP is what distinguishes it from its competitors.

Document issues relating to IP

When documenting issues relating to IP, you need to be able to communicate about complex concepts and use specialised and detailed language.

For example, you may need to write a contract or agreement outlining who owns the IP rights of materials created by an employee or contractor. To avoid potential IP disputes, IP Australia recommends that such contracts include:

- confidentiality clauses/agreements
- non-compete clauses in employee contracts.

IP Australia also recommends that these contracts include a written agreement which explicitly states who owns the IP of the materials that are created. Such an agreement should include:

- whether, and when, transfer of ownership will take place
- who has the right to exploit it
- who is to pay for it
- whether improvements or modifications are allowed.

The language you use when writing contracts needs to be clear and unambiguous to avoid misunderstanding and minimise the risk of legal disputes.

If specific terms about ownership and rights are not included in a contract, the IP belongs to the person who initially developed the material.

Register issues relating to IP

Some companies use an IP register or database to record all information relating to their IP rights, permissions and licences.

Some of the information that might be included in an IP register or database includes:

- a description of the IP asset
- how it works and how it is used
- its stage of development, e.g. proof-of-concept, prototype, trials, etc.
- the owner of the IP asset and any problems that exist with ownership
- the inventor, creator or author
- when and how the asset was created or acquired
- contracts and agreements in place with employees and contractors
- the asset's IP status (e.g. pending or granted payment)
- ongoing maintenance requirements (e.g. patent fees)
- how it can be further exploited (e.g. by licensing)
- the value of the IP asset and how it fits with the organisation's plans and goals.

IP registers should be periodically reviewed to ensure they are up to date.

Report issues relating to IP

IP matters you may need to report within the workplace include ownership issues, issues relating to IP renewal and potential IP risks

You should report issues relating to IP to a relevant person within your organisation. Some of the ways you might do this include:

- communicating the issue to your IT manager or chief information officer
- having a face-to-face discussion with your direct line manager
- submitting a written document with recommendations about IP to a relevant manager
- holding a team meeting to discuss the issues
- giving a presentation to the board or senior management
- facilitating workplace training on IP issues.

When verbally reporting issues relating to IP – such as in a face-to-face discussion – remember to use language and concepts appropriate to your audience. Avoid highly technical terms, don't use jargon or slang, and speak in a clear, calm and courteous way.

When reporting issues in writing, make sure you follow relevant organisational requirements. For example, you may need to use a specific template or follow a style guide.

Example

Document, register and report relevant matters related to intellectual property

Two business owners, Tim and Matt, work for two years on a mobile app that allows people to track and analyse their fitness. At the end of the two years, Tim and Matt have an argument and decide to part ways. They verbally agree that the app is a failure and that neither of them will pursue it any further. However, Tim takes out a patent on their research.

Six months later, Tim speaks about the app at a tech conference in Sydney. He doesn't know that Matt is also at the conference. At the end of his presentation, Matt confronts Tim and asks him why he is taking all the credit for an idea they developed together. Tim tells Matt that he changed his mind after they agreed not to pursue the idea, and that he didn't think Matt would be interested any more. Tim has numerous investors lined up to help pay for the further development of the app.

After a lengthy court battle, Tim is recognized as the owner of the IP because of the detailed documentation of his patent.

Practice Task 10

Question 1

Provide three examples of information that should be documented in an IP contract or agreement.

Question 2

Which of the following information could be included in an IP register? Tick all that apply.

- The name of the inventor, creator or author
- A description of the IP asset
- How the IP asset works and is to be used
- Its current stage of development
- Why the asset was created

Question 3

List three ways to report matters relating to intellectual property.

Summary

- IP rights provide owners with the time and opportunity to commercialise their creations. This serves as an incentive for innovation.
- Most organisations have IP policies, procedures and protocols in place that cover issues relating to IP.
- Businesses should regularly carry out IP audits. A company's ability to enforce their IP right is critical to deter infringements and breaches, and maintain commercial value.
- Ensure that you do not infringe on the IP owned by others. The consequences of infringement can be expensive, so it is best to be proactive and take steps to avoid it.
- Employees should have a basic understanding of IP rights and requirements. This helps to ensure that they properly manage and control any IP they create and that they do not infringe on the IP rights of others.
- Employees must document, register and report on matters that relate to IP so they can protect their company's IP from theft or infringement. This means their company can prove the validity of your IP rights if legal action is brought against them.
- Your organisation should have a risk management strategy in place to identify, analyse and respond to risk factors related to IP rights.

Learning Checkpoint 3

Comply with intellectual property rights

Part A

1. Which of the following statements are correct? Select yes or no for each one.
- | | | |
|---|-------|------|
| a) Employee contracts should include a written agreement which explicitly states who owns the IP of the materials that are created during time of employment. | » Yes | » No |
| b) If specific terms relating to the ownership and rights over the IP material are not included in a contract, the IP belongs to the person who initially developed the material (i.e. the employee). | » Yes | » No |
| c) IP registers may only be reviewed when the organisation's IP policies and procedures are updated or amended. | » Yes | » No |
| d) Matters relating to IP that may need to be reported include ownership issues, issues relating to IP renewal and potential IP risks. | » Yes | » No |
| e) Matters relating to IP should be reported verbally, using technical terms in order to accurately express concerns. | » Yes | » No |

Part B

Read the case study, then answer the questions that follow.

Case Study

Safina has a very successful food blog due to the countless hours she has spent creating, trialling and refining recipes. What started off as a passion project is now quite a lucrative endeavour as Safina commands a large following on her website, YouTube channel and Instagram account. One day, Safina was sent a link by one of her followers. The link took her to another person's blog where they had posted the exact same recipe for broccolini salad with vegan mayo. Safina isn't sure what to do, but knows she needs to take action.

1. Which of the following intellectual property laws have been flouted by the other blog?
Tick the correct response.

- Design laws and regulations
- Patent laws and regulations
- Plant Breeder's Rights laws and regulations
- Copyright laws and regulations
- Trademark laws and regulations

2. Safina wants to make sure her own work never flouts IP laws. Identify two protocols or procedures Safina can implement to ensure she meets IP requirements.

3. What intellectual property risk relating to digital technology has Safina been exposed to?