

BSBMGT407

Apply digital solutions to work processes

Release 1

Learner guide

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Aspire Version 1.1

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Before you begin

This learner guide is based on the unit of competency *BSBMGT407 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.

Icon	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 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.
	Video clips	Where QR codes appear, you can use a smartphone or other device to access video clips relating to the content. For information about how to download a QR reader app or accessing video on your device, please visit our website: www.aspirelr.com.au/help
	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 outlines specific foundation skills noted for your learning in this learner guide.

Foundation skill area	Foundation skill description
Reading	<ul style="list-style-type: none"> Sources, analyses and interprets textual information, including technical data, 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
Navigate the world of work	<ul style="list-style-type: none"> Monitors adherence to organisational policies and legal requirements
Interact with others	<ul style="list-style-type: none"> Uses a collaborative instructional approach to encourage, support and develop understanding and skills in others
Get the work done	<ul style="list-style-type: none"> Uses and investigates new digital technologies and applications to support organisational plans Supports the implementation and review of digital technologies

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 and use digital information	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1B Review digital information, trends and technologies	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident

Topic	Key outcome	Rate your confidence in each section
Topic 2: Lead work processes in a digital environment	2A Select, use and review digital solutions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2B Train employees to apply digital solutions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
Topic 3: Recognise and apply intellectual property requirements	3A Identify intellectual property obligations	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3B Review digital processes for compliance	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3C Document and report intellectual property issues	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident



Topic 1

Use digital workplace information

The digital workplace is a user-friendly work environment that facilitates innovative, creative and flexible working practices.

It includes all the technologies staff use to do their jobs. This can range from core business applications to email, instant messaging, social media tools, intranets and portals. Advances in technology are driving changes in the digital workplace. Intelligent work processes and work management practices have been made possible by digital technology, which are reinventing much of the way that businesses are run.

A digital workplace is important because it lowers the dependence on a physical work location and allows flexibility in the way people work, how teams are formed, and how peers can come together to share ideas and solve workplace problems.

Digital information includes any data that is created, stored and retrieved using digital platforms, tools and environments. It includes content that is digitally broadcast, streamed or contained in computer files. Workplace supervisors, managers and team leaders need to identify, use and review digital information, trends and new technologies to improve employee engagement and drive performance change.

In this topic you will learn how to:

- 1A Identify and use digital information
- 1B Review digital information, trends and technologies

Watch the unit introduction video here.



1A

Identify and use digital information

Digital information is any content that exists in the form of digital data.

Computers and mobile devices can only work with digital information. Digital information comes in many forms from text, audio and video files to graphics, animations and images. Everything processed on an electronic device must first be turned into a digital file.

In the workplace, digital information should be structured in a way that helps people to do their jobs, coordinating work processes, practices and projects in ways that deliver meaningful outcomes.

For example, many organisations use and collect digital information to monitor employees' work activities, track real-world customer behaviours, and engage with internal and external stakeholders through social media targeting.

You must identify and follow your organisation's strategies, protocols and procedures for digital information sharing, content development and information management, and adhere to organisational guidelines for using digital information.



Identify available digital workplace applications

A digital application is any software that can be used by a computer, mobile device or tablet to allow you to create, store and retrieve digital information relevant to your work operations.

Providing employees with access to digital workplace applications, regardless of location and time, can increase productivity and supports collaboration with other employees, partners and customers.

A typical business is likely to use well-known digital applications, such as the Microsoft Office Suite, which allows employees to create documents, spreadsheets, presentations and databases. However, it may also use more customised digital applications for its financial functions, such as SAP, a customer relationship management database such as Salesforce and other specialised applications that meet the needs of the business.

Choosing the right applications for your business and its workflow will ensure employees can access the information they need, and also generate and collate the information required to for the business to function. There are a range of digital applications available for workplace communications, technologies and networks.

Communications

To ensure the right information reaches the right audience, employees need digital tools and applications that support two-way communication and the personalisation of content.

Digital communications allow organisations to connect with employees, customers, suppliers and business partners across borders, languages, time zones and generations. Teams connect authentically as they would in person, using a range of easy-to-use applications and tools.

Here are some examples of digital workplace applications used for communications.

Live video streaming

Live video streaming is useful for internal workplace communications because of how easy it is to quickly get a message out to a distributed workforce. Many organisations use live video to conduct staff meetings, sales meetings and presentations to the whole organisation.

Intranet

The intranet is a central portal where everyone in the organisation can access information, communications, documents and contracts in one place. Social intranet software lowers IT maintenance costs by allowing employees to use their own devices to access workplace information through a centralised platform.

Instant messaging

Private, group messaging and chat room applications such as Yammer, Lync and Basecamp allow employees and work teams to collaborate and communicate in real time across different geographical locations and time zones. This is important when managers need updates on the progress of projects or when they need to quickly communicate with team members.

Discussion forums

Online discussion forums allow all members of an organisation to participate in open discussions on a topic. This helps to disseminate information, gather support and allow employees to ask questions, discuss projects and resolve workplace issues in a moderated environment.

Issue tracking

Ticketing, issue tracking and case management software are internal communication tools that enable customers or employees to submit a case or ticket, get it assigned to the right staff member, and have it resolved on time. Issue tracking software helps to centralise customer support queries, track open issues, monitor team productivity, prioritise the most important queries, and collect meaningful customer feedback that helps to improve products and services.

Internal blogs

An internal blog allows employees to share ideas and experiences quickly and informally. It promotes open discussion and collaboration, and keeps staff up to date on important information.

Podcasts

A podcast is a digital audio file available on the internet. It can be streamed or downloaded to a computer or mobile device. Many organisations use podcasting to reach the internal workforce. Internal podcasts could include topics such as messages from the CEO, new work processes, project updates and announcements and employee assistance programs.

Technologies

Mobile technologies play an important role in improving employee communication and increasing staff productivity.

Mobile technologies include laptops, mobile phones, tablets, cloud storage and portable electronic payment systems. They have allowed businesses to expand outside of the traditional office space, extend their customer reach and have a more flexible workforce. For example, a cafe could access more customers by having mobile coffee carts or vans to meet customers' needs in busy parks without the high costs associated with renting commercial premises. Orders can be taken on tablets using suitable digital apps, and payments can be processed using portable or online payment technologies. Technologies such as this allow a business to respond to customer needs for their product in an efficient and cost-effective way.



It can be expensive for a business to invest in new technologies and many businesses allow their employees to use their own mobile devices in the workplace. Bring your own technology (BYOT) (also called bring your own apps (BYOA) and bring your own device (BYOD)) refers to the concept in which organisations allow their employees to use their own mobile devices to do their jobs, and interact with customers and colleagues.

Security is an issue in just about everything digital. Organisations can improve BYOT security through mobile authentication services, mobile application management and unified services. IT teams must also keep up with a user's BYOT demands, as each mobile platform has different program interfaces, and may require different skill sets from the IT team.

Watch this video to learn about the importance of having mobile technology in today's workplace.



Networks

The digital workplace allows employees to collaborate, communicate and connect easily with others.

The goal is to develop productive workplace relationships, within and beyond natural work teams, and to promote knowledge sharing across the organisation. Social collaboration has become essential for connecting organisations. Enterprise social networking (ESN) is an organisation's use of social media, both inside and outside the organisation, to connect individuals who share similar business interests or activities.

ESN increases business value by enabling employers, employees, teams, business partners and customers to plug into conversations through status updates, commenting or by following up on activity streams. While social media platforms such as Facebook, Twitter and LinkedIn are useful for businesses to promote their brand, products and services, ESN platforms can be used for real-time collaboration where users can post or follow up on progress, chats and group contributions to projects.



There are numerous ESN applications that organisations can use to share ideas and information. Each of these platforms has its own set of guidelines, which you can find on their website.

Examples of ESN applications:

- Yammer
- Speechbubble
- Sharepoint
- Tibbr
- Jive
- SocialCast
- Convo
- Kaltura
- Chatter
- Zyncro
- Socialtext
- Connections (IBM)
- Asana
- Slack

Digital toolbox

Each organisation has its own digital toolbox comprised of the digital applications required for communications, technologies and networks in the workplace.

The tools needed to support a digital workplace depend on the industry, business needs and job functions. The key is to adopt the right tools for employees to do their jobs effectively.

In most organisations, the digital toolbox can be broadly defined in eight categories to support the ways in which employees communicate, collaborate, connect and deliver services. These include messaging, productivity, collaboration, communication, business applications, crowd sourcing, connectivity and mobility.

Locate and use digital information in the workplace

Digital information is any data stored on digital media or computers. It must be accessible by all employees when they need it.

Organisations must provide employees with the tools and applications they need to share the knowledge they possess. This leads to more efficient and effective decision-making and easier collaboration. Employees need to identify what digital technology is available in their workplace, what it is used for, how to use it and where to access it.

Here are some examples of different types, sources and uses of digital information for workplace operations.

Digital information types



- Correspondence or records of employee discussions
- Organisational documents, plans, policies, procedures and protocols in electronic format
- Videos and audio files
- Marketing and/or promotional materials
- Staff learning and development materials and content
- Information and records relating to customers, clients and employees
- Feedback gathered from customers, clients, and employees about products, services or work practices

Digital information uses



- Making decisions about workplace operations
- Attracting, recruiting, developing and retaining employees
- Conducting strategic and operational planning activities
- Monitoring employees' work activities and performance
- Monitoring customer behaviours, needs and preferences
- Engaging with different or new target audiences
- Conducting human or financial resource planning

Digital information sources



- Office applications, such as word-processing documents, spreadsheets and presentations
- Online platforms, such as the intranet, portals, public websites and records of transactions
- Business information systems, such as databases, geospatial data systems, human resources systems, financial systems, workflow systems, customer management systems, electronic documents and record management systems
- Digital communication systems, such as email, instant messaging, voicemail, short messaging services (SMS), multimedia messaging services (MMS), video conferencing and teleconferencing
- Cloud service panels, data centre panels, information and communication technology (ICT) hardware panels, mobile panels and telecommunication panels

Benefits of using digital technology



- Sharing information instantly
- Recording and searching for information
- Working sustainably by minimising paper and printing costs, and physical storage space
- Securely storing and retrieving information quickly



Practice task 1

Click icon to complete interactive version

Check your understanding of identifying and using digital information.

Question 1

Think of a business you are familiar with or one that you have visited in the last week. Answer the following questions:

- a) What types of digital information might it use?
- b) Where would the business source the digital information from?

Question 2

Match the beginning of each sentence about digital technologies to the correct ending.

- | | |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| * Examples of mobile technologies include | * live video streaming, instant messaging, discussion forums, issue-tracking, internal blogs and podcasts. |
| * Examples of digital technology used for communication include | * useful for businesses to promote their brand, products and services. |
| * Facebook, Twitter and LinkedIn are | * laptops, mobile phones, tablets, cloud storage and portable electronic payment systems. |

Create information in a digital format

Information management requires an integrated approach to locating, capturing, evaluating, retrieving and sharing an organisation's information assets.

These assets may include databases, documents, policies, procedures and employee expertise. When digital information includes high-risk or valuable archive records, you must ensure the storage used keeps the information authentic, reliable, discoverable, accessible, useable, protected and preserved for as long as they are needed.

Digital content creation is an important part of the digital strategy in a workplace. Every piece of content you create must be carefully designed to achieve your goals – whether it be to attract customers to your business or to improve employee job satisfaction.

Whenever you share or upload photos, videos, online posts or audio files on the internet, you are creating digital content.

You will need to select software and files that are supported and can be shared and read by different programs. This will depend on how the information will be used. Use short descriptive file names and a consistent approach to file naming, including dates and version control numbers. Refer to your organisation's policies and procedures for the preferred file naming and data storage protocols.

Here are several steps you can take to create digital content.

Determine your purpose

Determine your purpose at the beginning of the content creation process to improve the likelihood that your content will achieve the desired results. For example, you might need to create content for an intranet blog post explaining a new work process to employees, or for a social media advertising campaign to attract a target consumer group.

Create useful, quality content

Every piece of content you create must be useful and relevant to your target audience. The more useful the content is, the easier it will be for audiences to contextualise it to their situation and share it with others. For example, if you are creating video content to promote a product to consumers, you will need to research and understand the unique characteristics of your target audience, and use film and editing techniques to attract that group.

Use images and multimedia

Supplement your written content with photos, images, infographics and/or videos. Research has shown that digital content paired with captivating images receives more views than digital content without images or videos.

Use search engine optimisation (SEO)

SEO is the process of enhancing the amount of traffic from search results on search engines such as Google, Yahoo and Bing. Consider implementing a formal SEO strategy that leverages search engine tools and helps you identify the most searched, valuable terms for your location, business or industry. SEO is about making sure your digital content contains these terms to attract users to your website.

Track and analyse content

Consider using an analytics program to evaluate the online behaviours of the individuals who are viewing specific pieces of your digital content. This will help you to understand your customers and identify how you could improve your digital content to achieve your objectives.

Store and retrieve information in a digital format

Storage technology must be durable and reliable for long-term use, and to minimise the risk of data loss or corruption.

Choose your digital information storage devices carefully as computer hardware and storage media can become obsolete over time. This means that down the track you may need to use format conversion software to access the information. For example, information that was once stored on microfilm (also called microfiche) must now be scanned and converted to digital format. Floppy disks were an almost universal data storage device used in the 1970s and 1980s, but have since been replaced by CDs, DVDs and USBs.

Strategies to protect and retrieve stored information may involve creating multiple independent copies of digital material and storing them at different locations and in different systems or devices (both online and offline). Data integrity should also be checked regularly to detect and resolve problems, and minimise the risk of lost or corrupted data.

Here are some ways to store and retrieve digital information.

Online storage



Digital information can be stored and retrieved online, whether locally on an agency server, or by hosted storage on the internet. Online storage allows quick access to information, and includes cloud storage such as Dropbox, OneDrive, Google Drive and Amazon web servers.

Online storage services are usually the most affordable solution as there is no expensive hardware installation. However, costs for the service vary according to how much storage space is required.

Digital information and files are easily accessible as long as you have an internet connection. They are also backed up in an offsite location so you won't lose your files, even if your device is stolen.

Most storage services try to safeguard clients' files and privacy using encryption tools while the transfers take place. However, any information stored on an external, online server is more vulnerable to security breaches. If the digital information you want to store is highly sensitive, you might want to reconsider storing it online.

Physical storage



Digital information can be stored and shared via a computer server, which is designed to process requests and deliver data files to other (client) computers over a local network or over the internet.

Digital information can be stored offline and retrieved quickly through a near-line storage system and brought online for access.

This type of storage system is useful for data that is complete and is not required on an ongoing basis, but may still need to be accessed frequently.

Physical storage includes storing digital information on hard drives, as well as CDs, DVDs and USBs.

Removable media



Digital information can be stored and retrieved on removable media, such as USBs, memory cards, external hard drives, CDs and DVDs.

Removable media:

- has high transfer speeds
- is easy to insert and eject from your computer or mobile device
- is durable and highly portable
- has a long period of data retention.

Storage capacity varies depending on the device, but some hard drives can store over a terabyte of data.

Using simple storage media has the potential to cause problems for a user or an organisation as malware (malicious software) can be spread through USB devices. To avoid computer viruses or loss of data, install antivirus or firewall software on your computer that can scan any device that connects to your computer via a port (such as a USB port).

Example

Identifying and using digital information

Jess is a new team leader at ComicCom, a business that sells costumes. 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 knows she must locate and evaluate relevant information, collate and organise it, then communicate her recommendations.

Jess accesses digital information kept by the organisation about the current business practices and financial situation. She starts her analysis by using the company's intranet to read the company's organisational chart, and policies and procedures to determine who she needs to consult with. She also asks the sales team to email her the latest sales and stock reports, and asks her supervisor for passwords so she can access financial and marketing information kept in databases and on secured drives on the server. Jess also reviews the marketing budget spreadsheets, customer management systems, current marketing and promotional materials, customer records, and the company's current online presence. She downloads articles and reports that she can refer to later on and saves them onto her desktop for easy access.

Jess also uses the internet to research how the company's competitors are marketing their products and what platforms they use in their marketing. Her findings show that the organisation's competitors have a much greater online presence.

Jess provides her report as Word documents using the organisation's report template. She creates Excel spreadsheets to summarise numerical information and also uses presentation software to give her presentation to the management team. Some members of the management team are located in another state, so Jess organises a web-conferencing session for her presentation.

Jess uses her laptop to store all the files and to run her presentation. She also keeps a copy of the files on a USB device in case she loses the data from her laptop. She stores her information in these digital formats so she can protect the integrity of the data and retrieve it quickly and easily, especially when presenting her information to the management team.

Jess's recommendations to the management team include using online surveys to gather feedback from customers about the business's current performance and what they want in terms of customer service and product delivery. She also presents her findings on using social media platforms to reach new markets.



Workplace rules regarding digital technology and information

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

You must understand and comply with workplace rules when applying digital solutions to work processes. For example, IT laws encompass aspects of contract, intellectual property, privacy and data protection laws. Intellectual property is an important component of IT law, and includes copyright, rules on fair use and special rules on copyright protection for digital media.

Regular and thorough review of legislation and industry regulations helps to ensure an organisation meets its compliance requirements.

Here are some examples of legislation, regulations, and organisational policies and procedures that relate to working with digital technology and information.

Legislation and regulations

Legislation that relates to working with digital technology and information includes:

- equal opportunity and anti-discrimination legislation
- competition and consumer protection
- copyright laws
- 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.

For more information on relevant legislation, visit <http://aspirelr.link/austlii>.

Policies and procedures

Policies and procedures that relate to working with digital technology and information include:

- Digital media usage: For example, see the University of New South Wales Digital Media Policy at: <http://aspirelr.link/digitalmediapolicy>.
 - Digital communications: For example, see the Government of South Australia Digital Communications Guidelines at: <http://aspirelr.link/digitalcommunicationsguidelines>.
 - Social media usage: For example, see the Australian Government Department of Human Services Social Media Policy for departmental staff at: <http://aspirelr.link/socialmediapolicy>.
 - Use of IT systems: For example, see the Moreton Bay Regional Council Use of Information and Communication Technology Systems Policy at: <http://aspirelr.link/moretonbaypolicy>
 - Privacy, confidentiality and disclosure: For example, see the Australian Government Department of Education and Training Privacy Policy at: <http://aspirelr.link/educationprivacypolicy>.
-

Workplace rules about digital content creation and storage

Online security is vital to protect your organisation's digital information (also known as virtual assets) and IT systems.

IT data and systems are at risk of hacking, malware, viruses, spam and online scams that may corrupt your hardware or allow criminals to steal private data. Proper data and online security can protect your business from internal and external threats.

All business owners have a legal obligation to secure data and protect the privacy of their customers' personal information. To safeguard customers and staff, you need to identify and implement policies, procedures and protocols that comply with the laws on privacy, spam and electronic transfer.

Depending on the circumstances, non-compliance with organisational 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, you should report the situation immediately to the relevant person in your organisation.

Here is some information on the types of things that should be covered by your organisation's policies, procedures and protocols related to storing and retrieving digital information.

Digital content creation

Intellectual property

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, have the potential to create competitive advantage and bring value to an organisation. Managing your IP assets allows you to protect the ownership rights in your original idea or invention. You should be fully aware of your rights, and the pros and cons of formal IP protection before disclosing your ideas or sharing sensitive information with others.

Intellectual property laws and requirements are covered in more detail in Topic 3.

Procedures for using IT systems

Your organisation must have defined procedures about using IT data and systems, backing up data and data protection. Such procedures define how employees and contractors behave. For example, IT procedures could instruct staff to always delete spam without opening attachments, which can contain viruses.

Digital content storage

Privacy policy

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. Unsolicited commercial emails are illegal, so develop a policy to ensure you have permission to send messages to contacts.

Electronic transaction laws

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 *Electronic Transactions Act 1999* (Cth) or the relevant legislation in your state or territory.

IT risk management

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

Example

Developing a digital application

Anthony is the IT manager at a large commercial bank. In the wake of a financial downturn, the bank immediately set to work reinforcing customer relationships. The bank is on a mission to regain customer confidence by using the best technology to foster deep, longstanding relationships with its customers, and help them manage their money more effectively. In response to this, Anthony and his team develop a suite of mobile banking and lifestyle applications that consumers can access on their smartphones and tablets.

Consumers are to use the 'bank2gether' platform, which includes a mobile authorisation app that gives them better control over transactions. The bank's CEO, Rebecca, asks Anthony to work with the marketing team to develop an online social media campaign to launch the new app. Anthony must help to create marketing content that is useful, relevant and attractive to the bank's target audience. Rebecca also asks Anthony to create and devise an IP strategy for the new app and any other digital applications or technologies developed by the bank in the future.



You can watch the example video here.





Practice task 2

Click icon to complete interactive version

Check your understanding of creating, storing and retrieving information in a digital format.

Question 1

Which of the following statements about the importance of online security are correct? Tick all that apply.

- Online security is vital to protect an organisation's virtual assets.
- Hacking, malware, viruses, spam and online scams can corrupt your hardware and allow criminals to steal private data.
- You have a legal obligation to secure data, and protect the privacy of personal and corporate information.
- Policies and procedures help to ensure information is kept secure and protected.
- You should only deal with IT data and systems risks as they arise.

Question 2

Which of the following are examples of workplace rules that relate to working with digital technology and information? Tick all that apply.

- Legislation such as copyright, intellectual property and privacy laws
- Intellectual property and work health and safety regulations
- Trade promotion and competition regulations
- Policies and procedures that relate to enrolment and orientation
- Policies and procedures that relate to digital media and social media usage, privacy, confidentiality and disclosure

Question 3

Which of the following are examples of methods used to create, store and retrieve information in a digital format? Tick all that apply.

- Sideline storage
- Online storage
- Offline storage
- Removable media such as USB drives
- Removable media such as cloud storage

1B

Review digital information, trends and technologies

Technology is continually changing the way we do business.

To remain current and relevant, it is important to keep up to date with the latest trends and technologies in the digital workplace, and know exactly how they will affect your business. Continually reviewing digital innovations helps you to select digital solutions that improve your work processes and help you to remain competitive in the digital marketplace.

You should also review digital information sources for validity and reliability to ensure that the information you use to make decisions about your business is accurate, appropriate and fit for purpose.



Review digital sources for validity and reliability

Whenever you locate and use digital information to support workplace operations, you must evaluate information sources for reliability, accuracy and appropriateness.

You must be especially mindful of information that may be false, misleading or private. For example, while social media can provide instant news faster than traditional news sources, there is an ever-increasing need to verify and determine the accuracy of this information. While blogs and wikis may have a great wealth of information, the content may be influenced by personal feelings or opinions. Information posted on the internet is not regulated for quality or accuracy, so all information used in or by your organisation must be checked very carefully.

Consequences of using unreliable information include damage to the organisation's reputation, financial loss and disruption to work processes due to misinformation. Unsecured websites can be hacked by external parties, personal and financial information can be stolen, or data can be lost or corrupted.

Once you decide which digital tools, platforms and environments to use, you should develop a comprehensive plan for content development to ensure you are consistent when sharing information across various digital channels.

Here are some criteria you can use to review and evaluate digital information and sources.

Authority

- Is the author identified and recognised as an expert in their field?
- Is there enough information provided to establish the author's credibility?
- Is the author qualified to write about the subject? What are the author's credentials?
- Is the author affiliated to an academic institution or credible organisation?

Accuracy

- Is the information factual, valid and reliable, and has it been peer-reviewed?
- Has the author included a bibliography or reference list?
- Are reliable sources cited by the author? Can they be verified elsewhere?
- Is the information supported by evidence or empirical research?

Objectivity

- Does the author present objective arguments or make it clear when personal beliefs, values or attitudes are expressed?
- Is it a personal website, expressing personal thoughts and opinions?
- Does the website form part of an organisation, political party or religious group with a specific agenda? If yes, what are the motives for publishing the information?
- Is there any advertising on the website that is clearly different from the main content?

Currency

- Can you identify when the information was published?
- Is the information up to date and supported by current evidence?
- Are all links on the website current and working?
- Does the website include dates of when revisions were made to the information?

Coverage

- Is the language appropriate and useful?
- Is the information covered in appropriate depth or only at a superficial level?
- Are the relevant topics successfully addressed, with clearly presented arguments?
- Is the information supported by substantiated evidence?

Review and evaluate digital technology and service options

Keeping up with digital trends and technologies, and incorporating them into your daily business operations is essential if you want to remain competitive in the digital marketplace.

Most customers expect to communicate with your business online, both through your website and on social media. They expect engaging digital content and interactive online experiences, as well as accessible mobile tools and applications.

Here are the key elements you need to consider when evaluating whether digital technology and service options are fit for purpose.

Online presence



Your online presence refers to how and where other people and organisations see your business online. Online presence includes:

- your business website
- social media profiles
- corporate advertising profiles
- links, information, reviews and articles about your business on other websites.

To maximise your online presence, you must carefully choose the right platforms and practices that suit your core business strategy. What works for other businesses may not work for yours. Your organisation should have specific key performance indicators in place that evaluate the extent to which you are generating meaningful value for your business through your online presence.

Digital marketing



Digital marketing refers to the use of online tools and resources to promote your business online. Digital marketing tools include:

- your business website
- mobile apps
- social media platforms
- online banner and/or mobile banner ads
- blogs, newsletters and email marketing.

You can review and evaluate your digital marketing efforts by examining your specific marketing goals and targeting customer profiles. Assess whether the digital channels and key messages you have used successfully meet your customers' expectations.

Evaluate your overall return on investment (ROI) by identifying:

- the amount you have invested into your digital marketing campaigns (both financial investments and time expenditures)
- the financial benefit of any conversions you are tracking.

Selling online



Many businesses use online selling to allow customers to buy their products whenever they want. Selling products and services online helps to reduce internal processing times and more effectively allocate staff elsewhere in the business.

While some businesses may sell products or services directly from their websites, other businesses may use a variety of online marketplaces, such as Amazon and eBay, to reach a larger customer base.

To evaluate the digital technologies and services you use to sell online, here are some things you should consider:

- where and how your target customers prefer to shop for the types of products you are selling; for example, using Etsy.com to sell handmade or vintage goods
- the costs associated with setting up your own e-commerce store versus online marketplace fees
- the labour hours required to manage online stores, and to process, fill and deliver customer orders
- how an online marketplace may help you to expand your market reach.

Customer interaction



Customer interaction refers to the different ways customers can access your business; for example, using a mobile device, tablet, computer and/or social media platforms. Customers should find the information, products or services they are looking for with minimal effort.

To evaluate and improve the way your business interacts with its customers, you could use a customer relationship management (CRM) system to:

- capture and collate information about your customers or clients
- track contacts, call backs and conversions
- measure the performance of your traditional and digital marketing strategies
- link your customer information with your accounting software and processes.

Online security



Online security is essential for any business with an online presence. The digital data and information stored on your computers, devices, and IT servers and systems are considered virtual assets and must be protected from theft and corruption.

You can evaluate your organisation's online security by examining and assessing the following:

- workplace policies and procedures related to accessing and storing company data, using digital technologies and dealing with customer information
- the effectiveness of digital storage solutions, such as cloud-based backup systems
- the security of company software and payment systems.

Supplier interaction



Supplier interaction refers to the different ways your organisation establishes and maintains supplier relationships. Many suppliers can be sourced online, especially if they have used digital solutions to provide their own products, services and quotes online.

To evaluate and improve the way your business interacts with its suppliers, use a supplier relationship management (SRM) system to:

- facilitate and coordinate SRM activities across business functions and units
- conduct an enterprise-wide analysis of what activities you should engage in with particular suppliers that can add value to your business
- assess key suppliers' assets and capabilities with respect to your overall business strategy
- create more collaborative relationships with key suppliers to deliver greater levels of innovation
- monitor and improve SRM processes, including negotiating contracts, purchasing, and managing logistics and delivery.

Mobile-based solutions



Mobile-based solutions are websites or applications that provide business services to users. Customers can interact and conduct business with companies from their smartphones or tablets.

Mobile-based solutions include:

- mobile commerce – allows customers to transact with organisations via their mobile phones or tablets
- mobile websites – responsive websites that scale down to the screen size of a mobile phone or tablet
- mobile apps – purpose-built mobile apps that help users complete specific tasks, such as personal banking or editing photos.

To evaluate and improve your business's mobile-based solutions, you could do the following:

- Test all aspects of the mobile user experience, including functional, performance and contextual elements.
- Conduct on-demand mobile application monitoring and analytics to improve user experience.
- Examine end-to-end mobile security with real-world mobile app testing across device networks and servers.

Efficiencies through technology



It is essential that you use the right digital technologies and service options for the right purpose. This includes both hardware (computers, mobile devices and servers) and software (CRM and SRM systems).

Efficiencies through technology refers to your organisation's ability to process, store and retrieve data more efficiently or automate business activities.

To evaluate your efficiencies through technology, consider how your business operates and determine which technologies and service options can save you time and increase your revenue.

For example, you could decrease your administrative overheads and increase employee engagement by moving finance and human resources services online, automating things like time sheets, pay roll and annual leave.

Cloud computing



Cloud computing is a way of storing, managing and accessing digital data online, instead of on a computer's hard drive or server. Cloud computing allows businesses to increase their digital storage capacity without investing in new infrastructure, software or staff training.

You can either use an external cloud provider or invest in a private cloud for internal business use.

You can evaluate your cloud computing technology and service options by examining:

- performance levels – analyse response times and the way your cloud services respond differently to varying stress levels
- cost – identify the costs involved with using cloud services and how costs vary depending on the type or amount of cloud storage your business requires
- reliability – identify whether your cloud service is available at all times, no matter where, when or how you want to work
- security – analyse and assess the adequacy of measures designed to prevent data breaches and prevent hacking.

Monitor trends and innovations in digital technology

Changes in consumer needs force businesses to come up with new and innovative ways of fulfilling these needs, keeping existing customers satisfied and providing opportunities for engagement with new customers.

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

— Closely monitor the activity of your main competitors or the market leaders in your industry. This is a useful way of identifying what the key digital trends and technologies are and whether or not they work.

Speak to your team

— 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

— 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

— 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

— Professional training, either online or in-house, and watching web-based tutorials are useful ways of learning how to apply new digital technologies to your work processes. You could also access webcasts from various conferences or events where the presenter demonstrates or discusses a new technology with the audience.

Attend meetings and conferences

If you want to find out more about a particular digital technology, consider attending a face-to-face user group meeting or technical conference. These meetings are technology-specific and provide you with opportunities to meet people who are doing similar tasks to you, learn about what they are doing and be the first to hear about new innovations.

Example

Review digital information, trends and new technologies

Sally is the digital marketing manager for an online bookstore. Sally and her team recently ran a digital marketing campaign on three of the company's social networking websites. The campaign offered followers the opportunity to purchase selected bestsellers for \$10 each within a three-hour sale period. The goal of the campaign was to make a gross profit of \$2,000. Sally now wants to evaluate the success of the campaign to identify whether she needs to scale back or realign her digital marketing efforts on similar campaigns in the future.

Sally spent \$300 on tools to develop the campaign materials and \$500 in labour hours. She determined that, during the campaign, inbound visitors from the company's social networking websites accounted for 137 sales at \$10 each. This earned a gross profit of \$1,370 in total.

Sally sees that visitors from Facebook accounted for 80 per cent of those sales. The company's Facebook followers are primarily aged 25–40 and prefer to read their books on digital reading devices.

Sally decides to refocus her digital marketing efforts by concentrating on the Facebook traffic stream, as this has proven to be the most valuable to the company's bottom line.





Practice task 3

Click icon to complete interactive version

Check your understanding of reviewing digital information, trends and technologies.

Question 1

Which of the following statements about ways you can continually monitor trends and innovation in digital technology for use in your workplace are correct? Tick all that apply.

- Monitor how competitors or market leaders are using digital technology.
- Speak to team members to identify their expertise on digital trends and technologies.
- Use social media to network with digital technology experts and businesses.
- Follow web media that relates to emerging digital technology trends and solutions.
- Physically attend podcasts and live video streaming events to gather information about digital technologies.
- Undertake training to learn how to apply new digital technologies in your workplace.

Question 2

Which of the following describe the key elements you need to consider when evaluating whether digital technology and service options are fit for purpose? Tick all that apply.

- Customer interaction
- Conformity
- Online security
- Efficiencies through technology
- Cloud computing
- Online presence



Summary

- A digital workplace is important because it lowers the dependence on a physical work location and allows flexibility in the way people work, how teams are formed, and how peers come together to share ideas and solve workplace problems.
- Providing employees with seamless access to digital workplace applications, regardless of time and location, increases productivity and supports collaboration with colleagues, partners and customers.
- Digital services deliver digital content across multiple platforms and devices, such as mobile and internet. Information is presented in a way that is easy to use and understand.
- Digital workplace information should be structured in a way that helps people to do their jobs and to coordinate work processes, practices and projects in ways that deliver meaningful outcomes.
- Organisations should ensure that any policies and procedures introduced are necessary and relevant, and that managers have the capacity and capability to work within the policy framework.
- Every piece of content you create should be carefully designed to achieve your goals, such as driving customers to your business or improving employee job satisfaction.
- Information management requires an integrated approach to locating, capturing, evaluating, retrieving and sharing an organisation's information assets.
- IT data and systems are at risk of hacking, malware, viruses, spam and online scams that may corrupt your hardware or allow criminals to steal private data. Proper data and online security can protect your organisation from internal and external threats.
- Whenever you locate and use digital information to support workplace operations, you must evaluate information sources for reliability, accuracy and appropriateness.
- Keeping up with digital trends and technologies, and incorporating them into your daily business operations is essential if you want to remain competitive in the digital marketplace.



Learning checkpoint 1

Click icon to download this in Word format

This learning checkpoint allows you to review your skills and knowledge in using digital workplace information.

1. Give **two** examples of digital applications that are particularly valuable when used for communication in a typical workplace.

2. Give **two** examples of how digital information is used as an integral part of modern workplace operations.

3. Give **two** examples of how information can be created, stored and retrieved in a modern workplace.

4. Give **two** examples of legislation that relates to working with digital technology and information.

5. Why is it important to comply with legislation, regulations and organisational policies relating to digital information and technology?

6. Give **two** examples of protocols and procedures relating to the storage and retrieval of digital information.

7. Why is it important to source, analyse and interpret information with regard to the organisational strategy and compliance?

8. Why is it important to review digital information sources for validity and reliability?

9. How could you continuously review trends and innovations relating to digital technology suitable for workplace innovation?

10. Give **two** examples of the key elements to consider when evaluating whether digital technology and information options are fit for purpose.



Topic 2

Lead work processes in a digital environment

All businesses need to consider the digital environment to stay relevant and competitive.

To successfully lead work processes in a digital environment, you need to not only embrace the latest trends and technologies, but also promote cultural changes related to work processes and management.

To create a cohesive digital workplace that meets specific business needs, you need to choose the right technologies and services. You can do this by developing a digital workplace strategy that aligns digital solutions with your organisation's goals.

You also need to deliver digital initiatives with the employee experience in mind. Team members should be trained to apply digital solutions, solve digital workplace issues, and use the appropriate tools to communicate and collaborate effectively.

In this topic you will learn how to:

- 2A Select, use and review digital solutions
- 2B Train team members to apply digital solutions

2A

Select, use and review digital solutions

People, processes and workplace culture need to be aligned to achieve long-term digital success.

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

Continually monitoring and looking for ways to improve workplace operations can save time and money. To address challenges in the workplace and add value to the business, you need to select, use and review digital solutions that are tailored to your business needs and suitable for the workforce. You also need to identify and adopt digital media protocols and conventions so that digital work processes can be carried out safely and correctly.

Watch the video to learn about using and reviewing digital solutions.



Develop a digital workplace strategy

To prepare for digital workplace success, you need to investigate and use digital technologies and applications that support organisational goals.

Organisations need a comprehensive digital workplace strategy that:

- provides employees with access to data, technology, services and devices anywhere and at any time
- improves engagement, creates real-time collaboration opportunities and offers flexible work practices.

Your organisation's digital workplace strategy should include its business goals, a digital action plan, and outcomes that describe how your activities integrate with your overall business plan. Your strategy should adapt and change with the market and with emerging technologies in the same way as your business plan does. Regularly review and update your plan to keep up with your organisation's performance and achievement of goals.

Revisit your digital workplace strategy and action plan frequently, and challenge colleagues to keep thinking of ways to innovate.

Here are some steps you could follow to create a digital workplace strategy for your organisation.

Outline organisational goals



Identify the reasons for improving digital innovation in your workplace. Ensure digital workplace goals align with the overall goals of the business. For example, you may want to:

- increase your market share or customer base
- find ways to save your business time and money
- be recognised as an innovative business or industry leader
- attract and recruit quality staff
- improve communication with customers, suppliers and staff.

Develop a digital action plan



Carry out a digital audit to help you identify whether your business is digitally advanced. Your business may not need to be digitally advanced in all areas, but you should aim to match or surpass your competitors.

List the activities you need to complete to achieve your digital workplace goals, including the solutions needed to achieve them.

For example, if you currently share information on your website, but do not provide an online selling service, consider doing the following:

- Consult with a web developer about adding an e-commerce solution to your website.
- Research similar businesses in your industry that are selling effectively online.
- Develop a sales and logistics strategy for your new sales channel.
- Develop a marketing strategy for the launch, as well as ongoing promotion of this channel.
- Launch your new sales channel.

Include digital activities in the business plan



Your digital strategy should include digital actions that align with every part of your business and operational plans.

Here are some examples of the ways you can fit digital initiatives into your everyday workplace operations:

- Finance – shift to cloud-based accounting and reporting.
- Staff – implement a 'bring your own device' (BYOD) policy to ensure data is secure and not mishandled offsite by staff using their personal devices on unsecure networks.
- Marketing – create and implement a social media strategy.
- Operations – use cloud-based document management and file management systems.
- Customers – build your own mobile apps so that customers can easily connect with your business or access information on products and services in real time.

Select and use digital services for the workplace

Select, integrate and use digital services that are relevant, cost-effective and suitable for your workplace.

Digital services are services that are delivered via the internet or an electronic network, involve information technology (IT) and only require minimal human intervention. Examples include software, websites and e-markets.

Innovative businesses use digital services to deliver more efficient, valuable and satisfying customer experiences. If you don't have the skills or resources to carry out all the actions included in your digital strategy, you may need to find an appropriate digital service provider (DSP). DSPs are companies such as Amazon and iTunes that help you distribute your information, products and services online.

DSPs include:

- website and app developers
- search engine optimisation (SEO) specialists
- software and cloud computing providers
- online security experts
- social media managers
- virtual assistants
- digital marketing advisers.



Even if you do have the skills, it is often helpful to outsource digital services so you can spend more time and energy focusing on core business operations. Ensure you follow your organisation's policies and procedures, and seek permission from the appropriate person before acquiring outsourced digital services. For example, you may need to consult with employees from your IT or marketing department to identify the digital services needed to solve workplace issues or improve existing processes.

Working with a DSP, especially for the first time, should not be an impulse decision. Before beginning your search, think critically about the role a DSP would play in meeting your business goals. Whether you are redesigning your brand or planning for accelerated growth, you should be fully informed before you start searching for appropriate services or agencies.

When selecting digital services and providers, consider the amount of time you have to research the available options, the financial resources you are willing to invest, and the skills needed by employees to use selected digital services in the workplace.

Steps to take when selecting digital services for your workplace:

1. Read your digital workplace strategy and organisational plans to define your digital service needs and expectations.
2. List your digital service requirements and decide on which activities can be done in-house and which ones need to be outsourced.
3. Prepare to negotiate and develop a long-term partnership with DSPs, as you will need to cooperate and develop a relationship of trust for digital workplace success.
4. Ensure that the DSP you select shares your ideas and values, aligns with your workplace processes, and has the ability to execute the digital service strategies and plans you define together.

Integrate digital services in workplace operations

You need to understand how to progressively manage digital service integration over time and in the right order.

Integration refers to the process of combining several sub-systems or components into a single system that is capable of sharing data more efficiently. Integration enables the digital data contained in each sub-system to become part of a larger, more comprehensive system.

Before integration can occur, organisations may need to build a customised platform that combines new or existing hardware, software and other communications. Many businesses choose to outsource the management of some or all phases of the development of the new system to external DSPs.

Custom integration of digital services depends on the organisation's needs, and on the limitations of the systems and services you want to integrate. For example, you might want to integrate your customer relationship management (CRM) system with other services used to help streamline marketing and sales processes, or to update and organise customer information more efficiently. You could use a web developer to integrate your business website with marketing automation software that brings customer information directly into your CRM system. This would allow any action a customer takes on your website to be logged and a new record to be automatically created in the system.



Practice task 4

Click icon to complete interactive version

Check your understanding of selecting and integrating digital services.

Which of the following are examples of steps can you take when selecting and integrating digital services for the workplace? Select all that apply.

- Enlist the services of a digital service provider before you have identified your business goals.
- List your digital service requirements and decide what activities can be done in-house or be outsourced.
- Ensure your digital service provider shares your ideas and values, and aligns with your workplace processes.
- Always choose the cheapest digital service provider which can provide the quickest results.
- Read your digital workplace strategy and organisational plans to define your digital service requirements and expectations.

Select digital solutions

Digital solutions include the broad range of platforms, tools and environments organisations can use to automate work processes, operate more efficiently, and allow employees to connect in real time.

This may result from applying internet, electronic network or IT tools to address defined business issues and improve performance. Most business leaders recognise and appreciate the importance of digital solutions to their organisation, but they don't always know what is possible, what to address first, or how to go about implementing change.

Digital solutions can be tailored to address the challenges faced by your business, improve decision making and create a unified workplace culture. You should select solutions that meet your digital workplace goals and requirements.

Follow your organisation's policies and procedures, and seek permission from the appropriate person before developing or implementing digital solutions for your workplace. You may also need to follow organisational requirements for reporting on digital solution outcomes.

New digital solutions are developed and introduced to the market every day.

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

Artificial intelligence (AI)



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



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 technology.

Mobility



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



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 quickly and automatically analyse large amounts of 'big data' (complex data) and 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



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 any time and anywhere.

In the workplace, it can help you save energy by automating lights and thermostats; increase security by using smart surveillance systems; and reduce commuting times for employees by using built-in navigation technology.

Wearable technology



Wearable technology is one of the biggest trends in today's digital marketplace. It includes gadgets that are laden with smart sensors using the internet to connect people wirelessly to their smartphones or other devices. Wearables use these sensors to connect the user as a person, and help them to achieve goals such as staying fit, losing weight and being more organised.

Wearables may be worn virtually anywhere, including on the wrist, on the body, around the neck, mounted on headgear, worn as clothing or jewellery, and even implanted under the skin.

Conversational interfaces and intelligent personal assistants (IPAs)



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)



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, allowing developers to 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, you should 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 you may never have previously considered.

Converged infrastructure



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.

Cloud computing



Cloud computing is a way of storing, managing and accessing digital data online, instead of on a hard drive or server. It allows businesses and individuals to increase their digital storage capacity, and access their data and programs from any device. The cloud includes applications, databases, emails and file servers.

Cloud computing applications allow you to securely save files online using hosted file share, and back up your files using hosted and data replication apps. Cloud computing is usually enabled through a monthly or annual service fee, but eliminates the cost of purchasing expensive software licensing and storage systems.

Data analytics



Data analytics refers to qualitative and quantitative techniques and processes used to improve productivity and add value to the business. Data is extracted and categorised to identify and 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 recruitment and other 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.

Video: Digital solutions in the workplace

To support your learning, you might like to watch this TEDx talk in which economist David Autor discusses the future of work.



You may also like to watch this TED talk in which Kenneth Cukier looks at what's next for machine learning and human knowledge.



Review digital solutions

You need to review your selected digital solutions to ensure they have actually solved the issue or problem.

You should carefully review each of the digital solutions you consider implementing into your business to ensure they are suitable for your workplace, and meet your business needs and goals.

A challenge for business leaders is to bring together the right tools and solutions to help you to address unique workplace issues.

Here are some criteria you could use to review your 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.

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 and fit for purpose.

Using digital solutions to meet business objectives

Digital solutions can be used in many different businesses to address issues and improve processes.

Read the following workplace examples to see how digital solutions can be used to address business objectives.

Improved shopping directory

Objective

Improve customer experience in navigating a large shopping mall.

Digital solution

Interactive information booths are placed throughout the mall to enable customers to search for and locate shops using touch-screen technology. This interactive directory provides a complete system with a variety of search categories, visual information about each business and information on current sales, promotions and events happening in the mall.

Improved business performance includes:

- higher consumer traffic to individual shops and businesses
- allowing businesses to market their products and promotions in real time
- improving customer satisfaction and shopping experience.

Improved office management

Objective

Reduce time spent on administrative tasks in a real estate office, such as buyer and tenant enquires.

Digital solution

Use the latest real estate software tools and digital marketing strategies to integrate and streamline administrative tasks. Automated customer enquiry responses are implemented to provide real-time information, and after-hours enquiries are logged and managed to decrease the chance of customer enquiries and leads 'slipping through the cracks'.

Improved business performance includes:

- increasing customer loyalty due to fast and efficient management of issues
- increasing brand awareness
- saving of up to four hours of administration per day
- increasing monthly website traffic by over 20 per cent
- segmenting, responding to and databasing over 15,000 enquiries.

Improved customer relations**Objective**

Deliver an innovative, personalised private banking experience via different online channels.

Digital solution

Develop a flexible system that allows customers to access their accounts and complete transactions when they want and via any channel of choice.

Improved business performance includes:

- improving customer satisfaction with banking services
- streamlining administration processes
- increasing service options, such as international payments, card management, advanced search options and account alerts.

Improved record processing**Objective**

Replace paper-driven information capture and filing systems with a digital system.

Digital solution

Use scanning software and barcode recognition systems to scan and process documents and mail automatically, eliminating the need for a separate preparation process that is subject to human error.

Improved business performance includes:

- increasing accuracy of input documents
- reducing the amount of physical space needed to store files and paperwork
- saving time and money when processing and monitoring records and payments
- providing staff with electronic access to all records quickly and efficiently.



Practice task 5

Click icon to complete interactive version

Check your understanding of selecting and implementing digital solutions.

Question 1

Match the beginning of each sentence about digital solutions to the correct ending.

- | | |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| * Organisations may need to build a customised platform for | * combining different sub-systems, so that digital data contained in each becomes part of a larger, more comprehensive system capable of sharing data more efficiently. |
| * Digital integration refers to the process of | * combine new or existing hardware, software and other communications. |
| * Web developers integrate | * the business's needs and the limitations of the systems and services they want to integrate. |
| * Custom integration of digital services depends on | * the business website with marketing automation software that brings customer information directly into the CRM system. |

Question 2

Match each digital solution with the correct definition.

- | | |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| * Wearable technology | * Intelligent machines that work and react like humans, and are capable of speech recognition, learning, planning and problem-solving. |
| * Data analytics | * Uses sensors to monitor a person and connect them wirelessly to their smartphones or other devices. |
| * Automation | * Refers to qualitative and quantitative techniques and processes used to recognise behavioural patterns, improve productivity and add business value. |
| * Artificial intelligence | * Machines that can carry out work processes and activities usually performed by people. |

Question 3

Match each criteria item for reviewing digital solutions with its definition.

- | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| * Subjective quality | * The digital solution should be easy to obtain and adapt to meet individual needs. |
| * Accessibility | * The digital solution should include information that is relevant, appropriate, and easily understood by users, and provided in different languages to meet individual needs. |
| * Functionality | * The digital solution should captivate users and encourage repeat use. |
| * Engagement | * The digital solution should perform the tasks it was designed for and be easy for the user to navigate. |
| * Content | * The digital solution should be worth recommending to others and have a high overall user satisfaction rating. |

Apply digital solutions to work processes

Digital solutions are applied in the workplace to provide employees with the tools and technologies they need to execute business processes and functions according to organisational requirements.

Most businesses are 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 may be implemented across an entire organisation, or applied to only one business function or work process. Today, digital solutions are commonly used by organisations to automate the functional areas of a business, replace human labour where possible, and provide a more flexible and satisfying workplace for employees.

Once you have selected and reviewed digital solutions that are suitable for your workplace, you should follow organisational policies and procedures, and your digital workplace strategy to apply them to work processes.

Here are some ways you could apply digital solutions to work processes.

Human resources (HR)



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:

- training employees
- performance management
- employee remuneration and benefits administration (payroll)
- employee relations.

Digital solutions could be applied to HR work processes by:

- 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.

Finance



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.

Digital solutions could be applied to financial work processes by:

- 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.

Marketing and promotions



Marketing, advertising and promotional activities are the best ways for businesses to communicate with target customers about their products and services. The marketing department is responsible for promoting the business to generate sales and help the business grow. Marketing work processes include creating marketing strategies, planning promotional campaigns and monitoring competitors' activities.

Digital solutions could be applied to marketing work processes by:

- 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 support



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.

Digital solutions could be applied to IT work processes by:

- 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 assistant and support to users experiencing technical issues.

Administration and management



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.

Digital solutions could be applied to administrative or management work processes by:

- 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 support



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.

Digital solutions could be applied to customer service support by:

- 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.

Sales



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.

Digital solutions could be applied to sales work processes by:

- 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.

Production



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.

Digital solutions could be applied to production work processes by:

- 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.

Distribution



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.

Digital solutions could be applied to distribution work processes by:

- 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.

Operations



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.

Digital solutions could be applied to operational work processes by:

- 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



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.

Digital solutions could be applied to research and development work processes by:

- 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



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.

Digital solutions could be applied to legal work processes by:

- 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.

Video: What will future jobs look like?

To support your learning, you may like to watch this TED talk in which economist Andrew McAfee discusses what future jobs might look like, and how to educate future generations to find and keep them.



Integrate digital innovations into workplace operations

Businesses need to embrace the latest digital trends and the opportunities they provide for innovation.

Digital innovation refers to applying new technologies to existing work processes. Proactive innovation is one of the best ways you can stay competitive in an evolving marketplace. New digital tools and technologies must be assessed, tested, analysed and implemented effectively to ensure they add real value to your business.

It can be overwhelming to make multiple technology choices, so you should prioritise your needs and integrate digital innovations at a pace that is manageable for your business.

The types of digital innovations you decide to integrate into workplace operations will depend on the needs and goals of your business. Make sure you follow organisational policies and procedures, as well as your digital workplace strategy, when implementing new technologies.

Here are some tips on integrating new digital innovations into your workplace operations.

Ensure senior management

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.

Create 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.

Think holistically

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, and can include improvements to work processes, organisational structure, business modelling and marketing.

Understand 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.

Deliver business 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.

Research innovations

Conduct thorough research and choose new digital innovations and technologies carefully. Always keep in mind what you are hoping to achieve from new digital innovations and how this aligns with your business goals. For example, if your goal is to facilitate mobility and flexibility in your workplace operations, look at technologies that offer solutions in those areas.

Keep customer benefits in mind

Integrating new digital innovations should not only provide efficiencies for your business, but should also benefit the customer. For example, customers may benefit from greater efficiencies through a reduction in price, faster delivery and/or improved services.

Meet customer expectations

Aim to improve workplace operations to provide better quality products and services to your customers. When making choices about new digital innovations and technologies, identify the types of tools and technologies your customers are familiar with, and consider whether these are relevant to your choice.

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.

Consider future costs

Estimate the minimum, average and highest category pricing of any digital innovation to get an idea of the resources you will need when you fully integrate it into workplace operations. Some things to consider include the number of people using the technology, annual pricing and invoicing methods, and how easy it is to access and retrieve digital data if you decide to change technologies.

Example**Select, use and review digital solutions**

Melanie is the chief information officer (CIO) at Credit Lender, a large financial services company. As 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 the 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.

Watch the example video here.





Practice task 6

Click icon to complete interactive version

Check your understanding of integrating digital solutions into workplace operations.

Which of the following are examples of ways different organisational departments could apply digital solutions to work processes? Select all that apply.

- Use customer relationship management (CRM) software to implement staff rosters.
- Target and attract potential employees from a wider talent pool.
- Use social media to improve online presence and customer interaction.
- Automate payroll processes using software or cloud computing options.
- Use big data analytics to improve financial management and risk management.

2B

Train employees to apply digital solutions

Digital skills are highly valued in the modern workplace and can be vital for the future success of a business.

Digital skills are any skills related to being digitally literate. Cornell University defines digital literacy as ‘the ability to find, evaluate, utilise, share and create content using information technologies and the internet’.

To successfully implement your digital workplace, you need to train, encourage and support employees to apply digital solutions to work processes, and provide them with the tools they need to be more agile, responsive and positioned for growth. Ensure that employees feel confident using the tools and technologies needed to do their jobs, collaborate with others and follow work processes.



You must continue to address the digital divide between those who have been able to embrace the digital workplace and those who have not. Effective digital skills training is essential to ensure employees are up to date and prepared for future technological changes.

Digital skills training should be conducted as soon as you implement a new digital solution into workplace operations. You could also incorporate digital skills training into an employee induction program to ensure new employees understand existing tools and technologies used by your business. You should conduct regular training needs analyses (TNAs) to identify and address digital skills gaps within your workforce.

Assess digital training needs

Before implementing a training program in your workplace, you must identify the digital training needs of employees and translate those needs into training objectives.

This provides you with direction and a purpose for learning and development activities.

A TNA can be used to assess employee capabilities against required competencies, and helps to ensure that training resources are used effectively. It is counterproductive to offer training to employees who do not need it or to offer the wrong kind of support.

A TNA can be used to determine training objectives by establishing:

- what training is needed and why
- who it is needed by
- how training will be provided
- when and where it will be delivered
- how much the training will cost.

Conduct a training needs analysis

Conduct a training needs analysis to measure the digital skills and literacy levels currently held by employees.

Learning and development activities should be specifically designed to target any identified gaps.

Here is a process you could follow to perform a TNA in your workplace.

Step 1

Determine desired outcomes

- Clarify training goals and desired outcomes. Training goals should align with organisational and digital workplace objectives.

Step 2

Identify critical competencies

- Collect information and consult with employees to determine which competencies (in terms of behaviour, knowledge, skills, abilities and personal characteristics) are critical to achieving desired outcomes.

Step 3

Identify trainable competencies

- Assess the critical competencies and determine if they are abilities a team member should possess prior to employment or abilities that can be learnt on the job.

Step 4

Evaluate competencies and identify performance gaps

- Evaluate existing competencies of employees using performance appraisals, self-assessments, one-on-one interviews, surveys, questionnaires, focus groups and/or psychometric testing.
- Identify where there are gaps between existing and desired competencies.

Step 5

Prioritise training needs

- Determine the number of team members who require training on the competencies identified.
- Consider the importance of the competencies to achieving organisational and digital workplace objectives.
- Use identified competency needs to determine training priorities.

Step 6

Select training methods

- Select appropriate training methods, and learning and development activities according to the needs of your organisation.
- Consider adult learning principles and best practice for training in particular competencies.

Step 7

Determine the costs

- Consider the costs associated with the training methods to the extent that the methods selected will address performance gaps and meet digital workplace objectives.
- Costs may include:
 - program development
 - training and assessment resources
 - training evaluation and reporting
 - travel expenses
 - lost productivity from time spent in training.

Step 8

Evaluate training

- Measure how well the learning and development activities met training and digital workplace objectives.
- Observe employees to identify whether they have retained and applied the information and competencies received.
- Assess whether training improved employees' digital skills and literacy levels, and met other organisational objectives.

Develop a training program

Once digital training needs and goals have been determined, you should develop a training program.

This involves selecting methods and activities that achieve training and digital workplace objectives.

When planning a training program, consider the following:

- Who is the target audience, what is their level of competence and what type of training best suits their needs?
- What are the costs of training and how will these be met?
- When and where will the training take place?
- What training resources are already available?
- Who will develop any other training materials needed?
- How will the training be structured to meet the needs of a diverse workforce?
- How will training be delivered and who will deliver it?
- What are the learning outcomes and performance criteria that must be met?
- What is the length and duration of the training program?
- When must outcomes be achieved?
- How will learning be assessed?
- What methods will be used to evaluate the effectiveness of the training program?

Select training methods

There are several ways you can train team members to apply digital solutions.

Appropriate methods depend on your organisation's needs and available resources, as well as the different learning styles of team members.

Here are some ways you could train employees to apply digital solutions in the workplace.

Plan do check act (PDCA)



The PDCA cycle is a four-stage approach for continually improving processes, products and services, or for resolving workplace issues. You could use PDCA to systematically test digital solutions in your workplace, analyse the results, and implement the solutions that are shown to work.

The four phases are:

- 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 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



Using the demonstration method to train team members follows the 'learning by doing' maxim. Skills can be developed by imitation. Demonstrations and simulation-based learning can be conducted face to face, or via video or other system. It provides opportunities for participants to practise and master the digital skills required before implementing the solution in the workplace.

The demonstration method involves the following three steps:

- 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.

It is important that the person providing the demonstration is skilled in the topic and demonstrates actions in a safe and appropriate manner.

Digital learning technologies



You could use digital or online learning technologies to teach team members how to use other digital solutions in the workplace. Immersive training, such as augmented or virtual reality, gamification or interactive storytelling, can be used to create online experiences that engage participants in interactive, decision-based scenarios from their computer or mobile device.

Digital learning technologies help learners to:

- learn more efficiently
- learn at their own pace
- actively engage in learning
- learn anywhere and at any time
- receive instant feedback or guidance.

You should follow your organisation's digital training strategy or procedures to ensure training is appropriate and meets organisational requirements.

Policies and procedures



You can support employees to use digital solutions in the workplace by developing policies and procedures that address compliance issues and guide the behaviours of people using the digital solutions.

Once you have developed policies and procedures, ensure they are regularly used and referred to. Consider how to communicate the policies and procedures to employees, and ensure they are being followed correctly. You can do this by:

- asking team members to help develop policies and procedures
- developing a training program to show team members how to apply policies and procedures
- incorporating an explanation about policies and procedures into your induction program
- including links to policies and procedures on the company intranet
- promoting policies and procedures at team meetings, or through communication channels used in your workplace.

Policies and procedures related to digital technologies, solutions and skills should be inclusive and easily understood by all employees.

Mentoring program



Many organisations use mentoring to address complex HR challenges, such as increasing employee retention and satisfaction, and improving workforce productivity. You could develop a mentoring program for your workplace to promote the development of digital skills and literacy.

While digital solutions provide great opportunities for information sharing and innovation in the workplace, they pose challenges for employees who may feel overwhelmed adapting to technological language, information and tools.

Mentorship is a relationship in which a senior or more experienced employee (the mentor) shares knowledge, advice and resources with a less experienced employee (the mentee). The mentor also motivates the mentee, provides emotional support and models appropriate workplace behaviours.

You can use mentoring to navigate employees through organisational change, and help them to adapt to new digital processes and technologies.

Identify and adopt digital media protocols and conventions

Employees must be made aware of why and how they need to apply digital solutions to particular tasks or processes.

This information should be outlined in the organisation's policies and procedures. Policies and procedures should clearly explain what the organisation aims to achieve and how employees are expected to complete their tasks. For example, file-naming protocols, how to respond to customer emails and what they should do if an email attachment is larger than 10MB.

Policies and procedures must be readily available to employees in print or digital format, and be explained in training and induction programs. Employees must comply with the organisation's protocols and conventions to consistently uphold the organisations set standards and meet expectations. Employees must also be aware that failure to comply with policies and procedures could lead to disciplinary action, including dismissal.

Refer to Topic 1 for examples of policies and procedures related to using digital technology in the workplace.

You can view an example of an IT policy, procedure and protocols document here: <http://aspirelr.link/ITexample>.

Before you set up digital applications or use digital technology in your workplace, consider how a best practice approach might apply to the digital information and solutions you intend to use.

Here are some best practice examples when using digital tools and applications.

Digital tools best practice



Digital communications improve the ability of organisations to inform, engage and connect with team members, consumers, stakeholders and other businesses. When using digital marketing and communication tools:

- 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 it 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 best practice



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, be interesting and make sure the conversation is two-way; acknowledge those who follow you by following back; and 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

Train team members to apply digital solutions

To support your learning, you might like to listen to this podcast about social collaborative learning in the workplace.

The podcast can be found at:
<http://aspirelr.link/sociallearningpodcast>





Practice task 7

Click icon to complete interactive version

Check your understanding of training employees to apply digital solutions.

Which of the following are examples of training, encouraging and supporting employees to apply digital solutions? Select all that apply.

- Digital skills training should be conducted as soon as you implement a new digital solution into the workplace.
- Incorporate digital skills training into the employee induction program to ensure new workers are up to date on existing tools and technologies used in your business.
- Conduct regular training needs analyses (TNAs) to identify and address digital skills gaps in your workforce.
- Provide training and support only to those employees who specifically request it.
- Identify the digital training needs of your team members and develop a training program.



Summary

- Businesses need to develop a comprehensive digital workplace strategy that provides employees with access to data, technology, services and devices anywhere and at any time.
- An effective digital workplace strategy will improve engagement, create real-time collaboration opportunities and offer flexible work practices.
- Innovative businesses use digital services to deliver more efficient, valuable and satisfying customer experiences.
- Custom integration of digital services depends on the organisation's needs, and the limitations of the systems and services you want to integrate.
- Digital solutions can be tailored to address the challenges faced by your business, improve decision-making and create a unified workplace culture. You should select solutions that meet digital workplace goals and requirements.
- Digital solutions are commonly used by organisations to automate the functional areas of a business, replace human labour where possible, and provide a more flexible and satisfying workplace.
- Proactive innovation is one of the best ways to stay competitive in an evolving marketplace.
- To successfully implement your digital workplace, employees should be trained to apply digital solutions to work processes, and provided with the tools they need to be more agile, responsive and positioned for growth.



Learning checkpoint 2

Click icon to download this in Word format

This learning checkpoint allows you to review your skills and knowledge in relation to leading work processes in a digital environment.

1. Briefly explain how you would select, integrate and use digital services and solutions in your workplace.

2. Briefly explain how you would review and select digital solutions that are fit for purpose.

3. What are key factors you need to consider when integrating new digital innovations into the workplace?

4. Why is it important to identify and adopt digital media protocols and conventions?

5. Why is it important to train, encourage and support employees in the application of digital solutions?



Topic 3

Recognise and apply intellectual property requirements

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 that only applied to inventors, and corporate research 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, you must identify your IP obligations, review your digital processes for compliance, and document and report IP issues as they arise. 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.

In this topic you will learn how to:

- 3A Identify intellectual property obligations
- 3B Review digital processes for compliance
- 3C Document and report intellectual property issues

3A

Identify intellectual property obligations

IP laws are designed to foster innovation. They enable businesses that develop original IP to gain a competitive advantage.

You may need to apply for IP rights over specific inventions or creations. This can help you to 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.

You can watch a video about the importance of IP, published by IP Australia, here:



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, as well as using IP that is owned by others.

Here is some information on different types of intellectual property.

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, databases, media broadcasts, computer programs and compositions of other people's work, such as academic journals and CD 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 are contained in:

- *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:

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

Common brands 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 polymer bank notes and the anti-cervical cancer drug Gardasil.

Design



A design refers to the features of shape, configuration, pattern or ornamentation. 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:

- *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 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/>) © Commonwealth of Australia 2017

Copyright laws

Copyright protection is provided under the Copyright Act 1968 (Cth) and 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 material in print or digital format.

Computer software

This includes software on discs, downloaded onto computer hard drives, or in 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 recorded on compact discs, phonographic records, podcasts or other media.

Audiovisual works

This includes motion pictures, 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' in which 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.

To find more information on Creative Commons, visit:
<http://aspirelr.link/creativecommons>.



IP policies and procedures

The creator of IP is not necessarily the owner.

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

For a real-world example of how IP can be used to protect a company's brand and products, watch this video.





Practice task 8

Click icon to complete interactive version

Check your understanding of IP rights and legislation.

Question 1

Which of the following statements about IP rights are correct? Tick all that apply.

- The legal basis for IP in Australia is outlined in the *Copyright Act 1968* (Cth) and *Copyright Regulations 1969* (Cth).
- A design right is a type of IP to protect designs and is registered under the *Copyright Act 1968* (Cth).
- Patents, trademarks and copyright are all types of IP.
- Trade secrets are not protected by legislation as the organisation is responsible for protecting that knowledge.
- Products such as polymer bank notes and medicines are covered by the *Design Act 2003* (Cth) and *Design Regulations 2004* (Cth).

Question 2

Which of the following statements about legislation, regulations and organisational procedures relating to IP are correct? Tick all that apply.

- Organisations should 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.
- Each country has its own copyright laws, but the Berne Convention sets minimum standards for copyright works.
- There are international copyright laws that you must comply with.
- In Australia copyright protection is provided under the *Copyright Act 1968* (Cth).
- Creative Commons is a worldwide project to make copyright material more accessible in the digital world.

3B

Review digital processes for compliance

You need to review digital processes and applications for compliance with IP requirements.

Reviewing your digital processes helps to protect your IP and identify risks to avoid inadvertently infringing on 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.

For example, 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 with 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.

For more information about balancing the cost and benefits of protecting your IP, watch this video.



Outline IP risks related to digital technology

Digital technology and the internet have made it possible to instantly share and easily duplicate the work of others.

According to the Australian Federal Police, IP crimes occur when someone uses a particular brand, logo, design or piece of music or creative work with no right to do so. IP crime is a significant problem worldwide.

Here are some examples of IP risks to an organisation in relation to digital technology.

IP ownership issues

These issues occur when it is unclear who created the digital technology, or whether the individual who created it was an employee or a third-party contractor engaged by your business at the time.

IP assignment issues

If you don't have a well-drafted IP clause in the relevant contract outlining your ownership of IP in a digital technology, you could face a costly legal battle to enforce your rights.

IP infringements

IP rights are infringed when a digital technology protected by IP laws is used, copied or exploited without having the proper permission from the person who owns those rights.

IP theft

This occurs when digital technology protected by IP laws is pirated or counterfeited, and may cause significant financial loss to the creator and legal owner of the IP.

IP misuse and abuse

Your business could be potentially liable if employees use digital technology protected by IP laws for anything other than the use it was intended for.

Manage IP risks in relation to digital technology

Your organisation should have a risk management strategy in place to identify, analyse and respond to risk factors related to IP rights.

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

Ways to 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 to ensure they cannot access it when they are away from work, or when their employment has been terminated.
- 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

Make sure 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.

Here are some steps you can take to avoid infringing on IP owned by others.

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.

Identify and resolve IP ownership issues

IP ownership is an important issue to consider when developing new digital processes and applications for use in your workplace.

Many businesses engage employees or third-party contractors to work on new digital technologies or designs. These technologies or designs can become valuable IP assets of the business. 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 in 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, 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 example, in the case of a sound recording, this is often done by providing the court with a copy of the master tape.

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.

Monitor compliance

You need to monitor adherence to organisational and legal requirements relating to IP, and identify areas where employees may need further training or support.

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 make sure they do not infringe on the IP rights of others.

Ways to monitor compliance include:

- 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 for compliance

Samuel works as a security analyst in the IT department of a large business. Part of his role is to improve the business's IT security.

Two years ago, the business lost a lot of digital information when a virus shut down its computer system before protection software could get rid of it.

Samuel starts working with a team of technical experts to develop a sophisticated tool for software security testing that is customised to the needs of the business. The aim is to produce a tool that is easy to use, capable of producing instant 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.

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.



Watch the example video here.



Practice task 9

Click icon to complete interactive version

Check your understanding of reviewing digital processes for compliance.

Question 1

Which of the following statements about protecting IP and monitoring adherence to organisational policies and legal requirements are correct? Tick all that apply.

- Review digital processes and applications to protect IP from competitors.
- Carry out an IP audit to review the IP you own, use or have acquired.
- For IP rights that are not subject to registration, such as copyright, the property being protected must be objectively identified.
- Once you have paid for the work, you own the IP rights to the assets.

Question 2

Which of the following statements about monitoring compliance with organisational policies and legal requirements related to IP are correct? Tick all that apply.

- Review IP policies and procedures regularly to ensure they are in line with changes in the organisation.
- IP policies and procedures only need to be explained to management as staff don't need to understand what IP relates to.
- Apply IP policies and procedures consistently throughout the organisation, and deal with policy breaches promptly according to procedures.
- Document and report on any IP infringements made by employees, and identify what led to the infringement.
- Consult with staff to implement and monitor IP policies and procedures to promote stronger awareness, understanding and ownership of the outcome.

Question 3

Which of the following are examples of common IP issues and ways to manage IP risks in the workplace? Tick all that apply.

- It is illegal to limit employee access to certain information so they cannot access it when they are away from work or when their employment has been terminated.
- Use internal reporting systems that allow employees and external sources to report counterfeit technologies and IP theft.
- IP rights are infringed when a digital technology protected by IP laws is used, copied or exploited without having the proper permission from the person who owns those rights.

3C

Document and report intellectual property issues

IP is often the main driver of revenue for any organisation.

Intellectual property may be the single most important asset a company owns. Any vulnerabilities in the security of IP assets are subject to exploitation by others looking to gain a competitive advantage. Given the amount of digital data available, achieving total protection can be difficult.

It is important that you document, register and report on matters that relate to IP so you can protect your IP from theft or infringement, and prove the validity of your IP ownership rights if an action has been brought against you.

Document, register and report IP issues

You need to secure all rights necessary to enable your business to carry out its activities in a lawful manner, including rights to using any pre-existing IP owned by an external party.

You may need to provide written or verbal reports on matters relating to IP issues or breaches in your workplace. You may need to explain information, requirements and recommendations in accordance with legal and organisational requirements. Written and verbal reports must be clear, concise and professionally presented, and should contain the results of research and investigations.

When presenting a verbal report about IP issues, use language and features appropriate to the audience. Many large US-based online retailers and marketplaces provide information, tools and weblinks that IP owners can use to report online infringements.

For an example of these reporting tools, go to <http://aspirelr.link/amazoninfringement>.

Here is some information on how you can document, register and report IP issues in your workplace.

Document IP issues



Ensure you have contracts and agreements in place that clearly document IP issues to meet the needs and expectations of your business. All key contracts for the creation of new IP should contain well-drafted clauses that clearly state who owns the IP and what rights each party has to it.

If the person creating the work doesn't own the IP, the clause should state that the inventor or author agrees to assign the IP to the intended owner.

Employment and third-party contracts need to deal with IP ownership issues clearly and unambiguously to avoid any misunderstandings and minimise the risk of legal disputes.

If specific terms about IP ownership and rights are not included in a contract, the original creator will generally remain the owner of the IP.

Register IP issues



Some organisations use an IP register or database to record all information relating to IP rights, permissions and licences owned by the business. An IP register should be periodically reviewed to ensure it is up to date.

Develop an IP register/database that includes the following information:

- nature or 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.

Report IP issues



IP matters should be reported to the appropriate person in your workplace to resolve ownership issues, make decisions about IP renewals and mitigate potential risks.

You can report on IP issues by:

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

Example

Document and report IP issues

Two business owners, Tim and Matt, work for two years together on a mobile app that people can use to track and analyse sports activities. 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 his research 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 a number of potential investors lined up to pay for the development of the app.

After a lengthy court battle, Tim emerges as the victorious owner of the IP, due to the detailed documentation of his patent.

Watch the example video here.



Practice task 10

Click icon to complete interactive version

Check your understanding of documenting and reporting intellectual property issues.

Question 1

Which of the following statements about reporting IP issues are correct? Tick all that apply.

- Written reports must be clear, concise and professionally presented.
- Written reports should not contain the results of research or investigations.
- When creating digital technology IP for use in your workplace, you may need to provide verbal reports and presentations to communicate your ideas.
- When presenting a verbal report about IP issues, use language and features appropriate to the audience.

Question 2

Which of the following statements about documenting, registering and reporting matters related to IP are correct? Tick all that apply.

- Ensure you have contracts and agreements in place about IP issues that clearly state who owns the IP and what rights each party has.
- Use an IP register or database to record all information relating to IP rights, permissions and licences owned by the business.
- IP matters should be reported to the appropriate person in your workplace to resolve ownership issues, make decisions about IP renewals and mitigate potential risks.
- An IP register related to digital processes updates itself automatically.



Summary

- 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 range of professions and industries.
- IP rights provide owners with the time and opportunity to commercialise their creations. This serves as an incentive to innovate.
- Your organisation should have IP policies, procedures and protocols in place that establish a structure for the ownership, reporting, identification, management and commercialisation of IP in your workplace.
- You should carry out an IP audit to review the IP owned, used or acquired by your business. Your ability to enforce your IP right is critical to retain its value in legal terms, deter potential infringements and breaches, and attract 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.
- It is important that you document, register and report on matters that relate to IP so that you can protect your IP from theft or infringement, and prove the validity of your IP rights if legal action is brought against you.
- You need to secure all rights necessary to enable your business to carry out its activities in a lawful manner, including rights to use any pre-existing IP owned by an external party.
- 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

Click icon to download this in Word format

This learning checkpoint allows you to review your skills and knowledge in relation to recognising and applying intellectual property requirements.

1. How can you ensure you comply with legislation, regulations and the organisation's policy relating to intellectual property?

2. How can you ensure digital processes and applications comply with intellectual property requirements?

3. How can you monitor adherence to organisational policies and legal requirements?

4. Give **two** examples of how you can document, register and report matters related to intellectual property?

5. Give **two** examples of intellectual property risks to the organisation in relation to digital technology and **two** examples of how risks might be minimised.