CHCINM001

Meet statutory and organisation information requirements

ASPIRE

Learning Resources

CHCINM001
Meet statutory and organisation information requirements

Release 1

Learner Guide

Aspire Version 1.1

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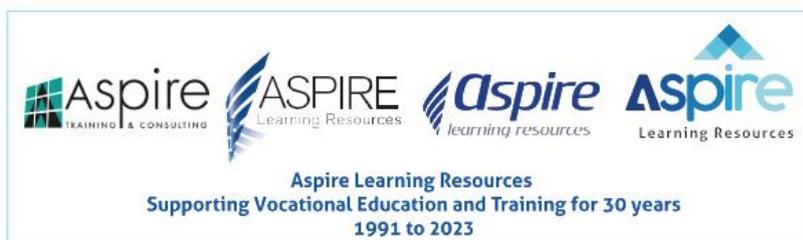
Aspire Learning Resources
Supporting Vocational Education and Training for 30 years
1991 to 2023

Contents

Aspire acknowledges the homelands of all Aboriginal and Torres Strait Islander peoples and pays our respect to Country

Before you begin

This Learner Guide is based on the unit of competency *CHCINM001 Meet statutory and organisation information requirements*, Release 1.

Your trainer or training organisation must give you information about this unit of competency as part of your training program.

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.

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.
Callouts	Callouts reiterate key learning points to help students revise for their assessments.
Weblinks	Weblinks provide learners with additional content to contextualise their learning and develop their understanding.
Videos	Videos provide a visual reference of key concepts to aid comprehension and guide learner exploration. Each video is accessed by a QR code in the Learner Guide (or a button in the eBook version) for ease of access.
Glossary/margin definitions	Key terms are defined where they first appear to help consolidate understanding. A glossary of terms is provided at the end of the Learner Guide to assist learner revision of key concepts.
Summaries	Key learning points are provided at the end of each topic.
Learning Checkpoints	There are Learning Checkpoints at the end of each topic. Your trainer will tell you which activities to complete. These activities give you an opportunity to check your progress and apply the skills and knowledge you have learnt.
Case studies	Case studies are interspersed throughout the learning content to provide a workplace setting that contextualises key concepts.

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.

These skills are listed below:

Foundation skill area	Foundation skill description
Reading	• Understanding how documents are presented and being able to navigate through documents • Understanding industry- and job-specific terminology • Interpreting key information in relevant documents • Understanding routine workplace checklists and documentation
Writing	• Planning, drafting and writing reports and documents • Communicating through written letters, email and online • Recording progress; reporting incidents
Oral communication	• Clarifying instructions • Providing information • Supporting others through encouragement, negotiation and conflict resolution • Using body language to model desired behaviour and responding to others' body language
Numeracy	• Calculating costs, weights, measurements of height and distance • Interpreting measurements
Learning	• Understanding your job role, organisational procedures and legal responsibilities • Managing your work and seeing how well you are going • Making goals for yourself at work • Seeking professional development opportunities for continuous improvement
Problem-solving	• Identifying problems • Working out how to fix a problem using problem-solving processes • Reviewing the outcome
Initiative and enterprise	• Recognising opportunities to develop and apply new ideas • Generating ideas by thinking of new ways to do something • Making suggestions to improve work
Teamwork	• Working well with other people by cooperating, collaborating, encouraging and building rapport

Foundation skill area	Foundation skill description
Planning and organising	• Planning your workload and commitments • Implementing tasks • Completing work on time • Knowing how to deal with hazards and risks
Self-management	• Understanding and applying decision-making processes • Reviewing your behaviour and the impact of your decisions
Technology	• Efficiently using digitally based technologies and systems correctly and safely • Accessing, organising and presenting information • Using equipment correctly and safely

Note: Not every unit of competency will contain all foundation skills.

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 Identify and address information requirements	1A Identify organisation and statutory information requirements	❑ Confident ❑ Basic understanding ❑ Not confident
	1B Identify gaps or inadequacies in the organisation's information systems	❑ Confident ❑ Basic understanding ❑ Not confident
	1C Analyse breakdowns in methods for recording, storing and accessing information and take corrective action	❑ Confident ❑ Basic understanding ❑ Not confident
	1D Collect, analyse and prepare data on information needs to inform decision-making	❑ Confident ❑ Basic understanding ❑ Not confident
Topic 2 Review options for information management	2A Identify and evaluate sources of information	❑ Confident ❑ Basic understanding ❑ Not confident
	2B Identify, evaluate and prepare options for the development of information systems	❑ Confident ❑ Basic understanding ❑ Not confident
	2C Identify, calculate and evaluate financial and technological resources	❑ Confident ❑ Basic understanding ❑ Not confident

Topic	Key outcome	Rate your confidence in each section
Topic 3 Establish and manage systems to record and store information	3A Develop, implement and document systems for recording, storing and accessing information	❑ Confident ❑ Basic understanding ❑ Not confident
	3B Implement strategies to address any gaps in meeting current information requirements	❑ Confident ❑ Basic understanding ❑ Not confident
Topic 4 Develop staff and resources	4A Analyse staff training needs and organise training	❑ Confident ❑ Basic understanding ❑ Not confident
	4B Develop educational resources and guidelines and recruit appropriate expertise	❑ Confident ❑ Basic understanding ❑ Not confident
Topic 5 Evaluate and maintain quality information systems	5A Evaluate adequacy of information systems for effectiveness and security	❑ Confident ❑ Basic understanding ❑ Not confident
	5B Monitor information, information systems and resources and make necessary improvements	❑ Confident ❑ Basic understanding ❑ Not confident

Topic 1: Identify and address information requirements

1A   Identify organisation and statutory information requirements

1B   Identify gaps or inadequacies in the organisation's information systems

1C   Analyse breakdowns in methods for recording, storing and accessing information and take corrective action

1D   Collect, analyse and prepare data on information needs to inform decision-making

1A Identify organisation and statutory information requirements

Organisations have a range of laws and policies they need to follow when it comes to information.

Laws and policies in regard to information help to protect clients' and employees' privacy and ensure that information is used in an ethical way. Organisations use information, such as details about workplace incidents and financial data, to report to governments and funding bodies, and to demonstrate that they are adhering to guidelines, laws and expectations.

Statutory information requirements

Statutory information requirements are laws that organisations must follow relating to recording, storing and accessing information.

Some statutory information requirements apply to all health and community services organisations, while others are only relevant in some settings and sectors.

Here are some examples of laws relating to the information requirements of health and community services organisations. Some laws will differ depending on the state or territory where an organisation is based.

Personal and sensitive information
Information that is protected by law and must be carefully protected from unauthorised access.

Privacy
A fundamental human right designed to protect people from intrusion and to selectively express themselves.

Privacy legislation	*The Privacy Act 1988* (Cth) outlines the legal requirements of agencies and organisations for handling personal information, including how it is collected, used, disclosed and stored
	A higher level of protection is given to **personal and sensitive information**, such as information about religious affiliation, sexual orientation and criminal record. According to the Privacy Act, health information is considered to be one of the most sensitive types of information.
	In addition to the Commonwealth law regarding **privacy**, most Australian states and territories have their own privacy legislation.
Freedom of information legislation	*The Freedom of Information Act 1982* (Cth) gives people the right to access documents that are held by Australian government agencies, including documents that contain personal information about themselves.
	Once people have been given access to their personal information held by a government agency, the Freedom of Information Act gives them the right to ask for a document to be amended if it is incomplete, incorrect or out of date.

Health records legislation	Victoria, NSW and the ACT have their own health records legislation that regulates how health information is handled.
	The principles in these laws are similar to those in the Privacy Act, but health professionals in these states and territories may be subject to additional requirements in some situations when it comes to patients' health records.
Work health and safety (WHS) legislation	WHS legislation promotes and maintains the health, safety and welfare of people in the workplace. The *Work Health and Safety Act 2011* (Cth) is regulated and enforced in the Commonwealth, states and territories.
	WHS legislation includes information requirements, such as the requirement to keep records of notifiable incidents for at least five years from the date of notification.
Fair work legislation	*The Fair Work Act 2009* (Cth) provides workers with certain rights and general workplace protections. The Act requires employers to record and keep personal information about employees, such as their emergency contact, taxation, banking and superannuation details.
	In some cases, personal information held by employers about employees is not covered by the Privacy Act.
Legislation relating to tax concessions and fundraising	Incorporated associations and charities registered with the Australian Charities and Not-for-profits Commission (ACNC) have record-keeping requirements. For example, charities must keep certain records, such as financial and operational records, for seven years. Charities that operate overseas are required to keep records relating to those overseas activities.
Disputes	Organisations may be required to record information about internal complaints and disputes. For example, when an employee lodges a formal complaint of sexual harassment, investigation officers will need to record certain information and retain the information for a reasonable period of time.
	Information that is collected and stored by an organisation about internal complaints and disputes can be used as evidence in subsequent legal proceedings.
Reporting requirements	Some organisations have mandatory reporting requirements, such as for serious incidents involving clients.

Sources: https://www.racgp.org.au; https://www.oaic.gov.au/; https://www.safeworkaustralia.gov.au/; https://www.fairwork.gov.au/; https://www.nfplaw.org.au/; https://www.acnc.gov.au/; https://humanrights.gov.au/

For more information about freedom of information, go to: aspirelr.link/oaic-foi

For a list of state- and territory-based WHS regulators, go to: aspirelr.link/swa-compensation

For more information about workplace privacy and the Fair Work Act, go to:
aspirelr.link/fairwork-workplace-privacy

Policy
A course of action proposed by an organisation as a basis for making decisions.

Procedure
An established or official way of doing something.

Organisations have their own **policies** and **procedures** about how information is recorded, stored and accessed.

Here are some examples of organisational policies and procedures related to recording, storing and accessing information:

Policy/procedure example	Description
Email retention and archiving policy	These policies are designed to ensure important emails are accessible for operational purposes and to meet legal document retention requirements.
Incident and injury reporting policy	These policies outline mechanisms for recording, retaining and accessing information about workplace accidents, incidents and dangerous events.
Management of unsatisfactory performance procedures	These procedures outline the steps that supervisors, managers and human resource (HR) representatives need to take to manage unsatisfactory performance of an employee, including information that needs to be retained, such as copies of written warnings.
Privacy policy	These policies outline the processes employees need to follow when collecting, using, disclosing, storing and destroying stakeholders' personal information.
Confidentiality policy	These policies outline the circumstances where an organisation is required to restrict information – such as where that information concerns the privacy of clients – and how those restrictions are identifiable to staff (e.g. identified clearly on a file).
Conduct of meetings policy	These policies outline how meeting minutes will be distributed to stakeholders and what those minutes should record.
Dispute resolution procedures	These procedures explain what managers need to do when an employee reports a dispute or grievance, and how to record the resolution of the dispute or grievance.
Employment references policy	These policies may require supervisors and managers to record information on a staff member's file that is collected during the process of verifying references (e.g. notes from telephone references) and to store information so it can only be accessed by authorised staff.

A template for an email retention and archiving policy is available at:
aspirelr.link/cd-email-retention

Organisations use policies and procedures to ensure that workers are meeting relevant legal requirements. An organisation's *Privacy Policy*, for example, should be aligned with the requirements of the *Privacy Act 1988* (Cth). In this way, when workers implement their organisation's *Privacy Policy*, they are fulfilling their organisation's legal responsibilities, as well as any legal responsibilities they themselves might have as an individual worker.

> The Australian Government Department of Health and Aged Care has produced a list of 10 record-keeping tips for health professionals, which is available at:
> aspirelr.link/health-record-keeping

Ethical considerations

In addition to their legal responsibilities, organisations also need to factor in ethical considerations when they deal with issues relating to recording, storing and accessing information.

These ethical standards and codes might be specific to a profession (such as the Australian Association of Social Workers Code of Ethics) or to a setting or sector (such as the Australian Community Workers Code of Ethics).

Here are some examples of ethical considerations relating to information requirements:

Ethical consideration	Description
The right to privacy	Privacy is a moral right. If personal or sensitive information about an individual becomes known to others, it could lead to social embarrassment or shame. It could also be harmful to a person's status in their community, their current or future employment prospects, or their safety (e.g. family and domestic violence situations).
Professionals' ethical duty of confidentiality	Professionals have an ethical duty to **confidentiality** of personal and sensitive information when it is provided to them by a client in the course of a professional relationship.
Benefit to the public good	The need to respect people's privacy needs to be weighed against the potential benefits of sharing an individual's personal and sensitive information. For example, if an individual threatens to harm themselves or others, this may justify a breach of that individual's confidentiality.

Confidentiality
The principle of keeping personal information private, unless the person consents to sharing the information with other parties.

Ethical consideration	Description
Control over use and disclosure of personal information	Individuals have the right to autonomy over their personal information and how that information is used. Access to personal information by third parties should be strictly controlled. **Informed consent** procedures give individuals the ability to make informed decisions about how their personal information is used and who can access it.

Sources: https://ccnmtl.columbia.edu/projects/cire/pac/foundation/; https://www.monash.edu/__data/assets/pdf_file/0005/857624/arc-report2.pdf

Informed consent
Permission granted by a person who has full understanding of the reasons and consequences of what they are agreeing to.

Example
Identify organisation and statutory information requirements

Zainab is a team leader at an organisation that provides support services to recently arrived refugees to Australia. The organisation plans to employ two new staff members who can work directly with clients. These employees need to have a deep understanding of trauma and how it affects a person's life.

During an interview, a candidate for the job reveals to Zainab that he comes from a refugee background and was persecuted in his home country. As a result, he has complex post-traumatic stress disorder. The candidate states that he has shared this information with Zainab because he believes his experiences will help him relate to the experiences of clients who are refugees. Zainab thanks him for sharing the information and reiterates that the organisation is indeed looking for candidates who have a deep understanding of trauma.

After the interview, Zainab completes her notes outlining the candidate's suitability for the role. As per organisational policy, she stores this information in an electronic file that is only accessible to a select few people in the organisation. Because job candidates, employees and clients sometimes share highly personal and sensitive information, the organisation has strict privacy and confidentiality policies.

Mechanisms for identifying information requirements

There are a range of mechanisms workers can use to identify organisation and statutory information requirements.

Workers need to use their professional judgment to determine which mechanisms for identifying organisation and statutory information requirements are appropriate in their workplace. Where workers are unclear about the most appropriate mechanisms for undertaking this task, they should consult their supervisor or manager.

Here are some examples of mechanisms for identifying information requirements:

Mechanism	Description
Consult with key internal personnel	• Key personnel in your organisation should be aware of your organisation's statutory information requirements. For example, senior HR personnel will know about information requirements relating to the Fair Work Act and WHS. • If your organisation has a legal team or a legal advisor, they will also be aware of your organisation's statutory requirements.
Review information from or consult with relevant external organisations	• Many government agencies provide information about legislation relevant to organisations' information requirements. For example, the Office of the Australian Information Commissioner (OAIC) provides information about privacy and freedom of information for organisations. • Some legal organisations provide free or low-cost guidance and advice to non-profit organisations about statutory requirements. For example, Justice Connect provides information about operating a non-profit organisation or social enterprise.
Review organisational policies	• Your organisation's policies will include information requirements, such as email retention and archiving. These policies are typically available online through an organisation's intranet site. • Documents outlining organisational policies also often reference or describe relevant laws. For example, an organisation's email retention and archiving policy will typically reference relevant privacy laws.

Practice Task 1

Question 1

List two mechanisms a worker could use to identify organisation and statutory information requirements.

Question 2

Which of the following can you use to identify organisation or statutory information requirements? Tick all that apply.

❑ Use your professional judgment.

❑ Observe how your colleagues undertake similar tasks.

❑ Review the organisation's vision and mission statement.

❑ Search for relevant information online.

❑ Consult your supervisor or manager for advice.

Question 3

Match the legislation on the left to its description on the right.

Privacy Act 1988 (Cth)	Requires organisations to keep records of notifiable incidents for at least five years from the date of notification
Freedom of Information Act 1982 (Cth)	Requires employers to record and keep personal information about employees, such as their emergency contact details
Fair Work Act 2009 (Cth)	Outlines the legal requirements of agencies and organisations for handling personal and sensitive information
Work health and safety legislation	Gives people the right to access documents that are held by Australian government agencies

Question 4

List two ethical considerations for an organisation when dealing with issues relating to managing personal and sensitive information.

1B Identify gaps or inadequacies in the organisation's information systems

An information system is the set of components an organisation uses to collect, store, process and distribute information.

Within health and community services organisations, information systems are used to generate, compile, analyse and communicate data.

Often when people think of information systems, they think of information technology (IT), especially computers; however, information systems also involve processes and people. For an information system to work well, an organisation's IT, processes and people all need to function effectively.

Information systems are used to support an organisation's management, operations and decision-making. In primary health care, for example, information systems that provide timely, reliable and complete data can be used to plan, manage and deliver coordinated and comprehensive care to patients.

The five key components of information systems are as follows.

Computer hardware	Hardware is the physical technology required for information systems, such as hard drives and peripheral devices (e.g. keyboard, router).
Computer software	Software is needed so that the hardware knows what to do. Primary system software is an operating system (e.g. Windows) and application software is designed for a specific task (e.g. spreadsheet, document).
Telecommunications	Telecommunications connect hardware to form a network. Connections are made through cables or fibre optics. Some connections are wireless (e.g. Wi-Fi).
Databases	Databases are where data resides. Data can be collected in and retrieved (via specific criteria) from a database.
Human resources and procedures	Human resources are arguably the most important element of any information system. Human resources are needed to run the system and implement the procedures required to operate the hardware, software, databases and networks. Human resources include the employees who maintain the IT and those who use technology to do their jobs.

Source: https://www.britannica.com/list/5-components-of-information-systems

Identify gaps or inadequacies in information systems

There can be gaps or inadequacies in an organisation's information systems.

These gaps and inadequacies typically belong to one of four categories.

Design	• The information system is complicated or discouraging for users.
	• Information recorded in the system is not easily understood by users.
	• Information is not provided quickly enough to be useful.
	• The design of the system is not compatible with the structure, culture and goals of the organisation.
	• Using the system slows down the process of providing care and support to clients.
Data	• Data is inaccurate or inconsistent.
	• Data is incomplete.
	• Data is organised in such a way that it cannot be used for the purpose it was created.
	• Information is incorrect or ambiguous.
Cost	• There are excessive implementation or operation costs.
	• Expenditure cannot be justified by the value of the information provided.
Operations	• There are problems with the technical features of the information system, such as:
	- a poor user interface
	- overall slowness of the system.
	• There are organisational factors that affect the efficiency of the system, such as:
	- downtime procedures that are unclear
	- hardware that is unavailable to people when they need it.

Here are some ways that a worker could identify gaps or inadequacies in their organisation's information systems:

Method	Description
Consult with system users	• The information system users (typically employees within your organisation) will be able to tell you about gaps or inadequacies. • Consider consulting with anyone who uses the system to record, store or access information. In most cases, every level of the organisation – from the most junior to the most senior staff – will be using the system for at least some tasks.
Consult with team leaders and managers	• Team leaders, managers and decision-makers are users of the information system and will be able to tell you about their experiences with it. They will also most likely be able to give you a 'birds-eye view' of the system. • For example, they might be able to tell you what their staff have told them about the system, such as what works and what does not. This may have given them an insight into common problems.
Consult with IT staff	• IT staff will have specialist insight into gaps or inadequacies in every component of an organisation's information system. • Some IT staff will be responsible for dealing with employee difficulties with or complaints about hardware and software. This experience will give them a unique insight into gaps and inadequacies in those systems. • They will most likely have insights into technical issues, such as troublesome technology, as well as issues relating to human resources, such as the need for staff training in a particular area.
Review policies and procedures	• An organisation's policies and procedures may provide information about gaps and inadequacies in the information system. • For example, in your consultations with IT staff you might learn about the importance of new file-naming conventions to ensure employees can access information easily and quickly. • If the organisation's policy regarding file-naming conventions has not been updated, this is a gap in the information system.
Review previously collected data	• Other people in your organisation may have already collected information or data about gaps and inadequacies in the information system or a component within it. • For example, perhaps staff routinely report problems with the organisation's information system to the IT department who file these issues in a spreadsheet. An analysis of this information could help you to identify gaps in the information system.

Once again, workers will need to use their professional judgment to determine which of these methods is appropriate in their workplace and seek guidance or advice from their supervisor if necessary.

Example

Identify gaps or inadequacies in the organisation's information systems

Maude is a senior disability worker at an organisation that provides a range of support services to adults with disabilities. She regularly hears her colleagues' frustrations about the organisation's information system – from those who use it to record client data to those who use that data to evaluate programs and services.

Maude is working with two other employees at the organisation to clarify the gaps and inadequacies in the information system. She begins by consulting with 10 frontline staff who work in the field and use the system to record information about clients. She then consults with six office-based staff who use client data to evaluate the programs and services delivered.

Based on these consultations, Maude learns that the system is not easy for frontline staff to navigate and is unnecessarily complicated. She also learns that the data frontline staff provide is sometimes incomplete and cannot be used for evaluation purposes.

Systems analysis models and theories

When analysing gaps, inadequacies and breakdowns in an information system, it is useful to understand systems analysis models and theories.

Systems analysis involves an investigation of a procedure to determine its goals and objectives and create a new or modified system. The purpose of systems analysis is to create and maintain systems that can perform organisational functions and allow employees to undertake tasks more easily and efficiently. Systems analysis involves the collection and interpretation of facts, the identification of problems and a breakdown of a system into its components.

Systems analysis models are used to understand and design systems.

Here are some examples of systems analysis models:

Systems analysis model	Description
Cognitive work analysis	The objective of cognitive work analysis is to inform the design of technology in the workplace. When using this model to understand information systems, the focus is on human–information interactions. The process of cognitive work analysis involves evaluating the existing system and then developing recommendations for design. The evaluation involves an analysis of how people use information in context. For example, a cognitive work analysis could be used to find out what problems staff are experiencing when searching for information in a database and providing recommendations to address those problems.
Event analysis of systemic teamwork (EAST)	Event analysis of systemic teamwork (EAST) is a framework that is used to explain complex systems and the activities and connections that take place within them. In this model, systems comprise three different types of networks: • Social • Task • Information
Work system life cycle (WSLC)	The work system life cycle (WSLC) model is used to explain how work systems change over time. The model involves four key stages: 1. Operation and maintenance – monitoring and evaluating the system, fixing small errors and keeping the system operational 2. Initiation – the commencement of a project aimed at reviewing the work system 3. Development – the design and development phase, which includes testing 4. Implementation – moving from the old to the new system, user training and change management

Sources: http://www.iadisportal.org/digital-library/work-system-life-cycle-model-revised; https://ergonomicsblog.uk/information-network-analysis/; https://journals.sagepub.com/doi/abs/10.1177/1541931218621065

Because information systems are complex, it is useful to have theories to help us understand how they work. Here are some examples of systems analysis theories:

Systems analysis theory	Description
General systems theory	• Defines a system as a 'complex of interacting elements', with each element having its own specific structure and function • Concerned with breaking a whole thing into its parts and learning how those parts work together within a system • Focuses on interactions – the behaviour of a single autonomous element is different when the element interacts with other elements • Changes in one of part of a system will create changes in other parts • Applicable to a wide range of fields including chemistry, physics, social science and medicine
Open systems theory	• Focuses on the relationships between an organisation and the environments the organisation is involved in • Proposes that organisations are strongly influenced by the environment they operate in, such as economic, political and social factors • Proposes that the environment provides key resources that support an organisation, leading to adaptation and survival
Work systems theory	• Technologies should be seen as components of work systems rather than separate systems • Humans are part of information systems, rather than just users of technology • Especially relevant to IT-reliant work systems • The components and interactions in a system should be aligned with the organisation's (or project's) goals • System performance should be evaluated based on the efficiency of internal processes and activities and external evaluations of the services provided (e.g. client feedback)

Source: https://pubsonline.informs.org/doi/pdf/10.1287/serv.2.1_2.126#:~:text=A%20systems%20theory%20is%20hence,entity%E2%80%99s%20organization%2C%20functioning%20and%20outcomes; https://www.bibliomed.org/mnsfulltext/157/157-1455952116.pdf?1651475366; http://www-personal.umich.edu/~bastedo/papers/bastedo.opensystems.pdf; https://is.theorizeit.org/wiki/Work_systems_theory

Practice Task 2

Question 1

List two written documents a worker could use to identify gaps or inadequacies in their organisation's information system.

Question 2

Match the systems analysis model on the left to its description on the right.

Work system life cycle (WSLC)	Within this model, systems comprise three different types of social, task and information networks
Cognitive work analysis	Involves four key stages, beginning with operation and maintenance
Event analysis of systemic teamwork (EAST)	In this model, the focus is on human–information interactions

Question 3

Which of the following theories propose that humans are part of information systems, rather than just users of technology? Tick the correct response.

❑ Chaos theory

❑ Open systems theory

❑ Work systems theory

❑ General systems theory

❑ Peak system theory

1C Analyse breakdowns in methods for recording, storing and accessing information and take corrective action

It is critically important for organisations to have the capacity to record, store and access information in an effective and efficient way.

No system is perfect, and there will be times when organisations will experience breakdowns in the methods they use to record, store and access information.

Because organisations have statutory requirements pertaining to recording, storing and accessing information, they need staff who are able to analyse breakdowns in information systems and take corrective action when problems occur.

Here are some examples of substantial breakdowns in methods of recording, storing and accessing information in an organisation.

> Breakdowns in methods for recording, storing and accessing information can happen for a range of reasons.

Breakdown type	Example
Recording information	• Staff are unaware of the need to record certain information. • Information is recorded in an incorrect or incomplete way. • Information is not sufficiently detailed. • Information is not routinely updated.
Storing information	• Records that are meant to be stored for a specific period of time are accidentally deleted. • Electronic records are compromised by malware. • Records are stored in the wrong location or in the wrong way (e.g. file-naming conventions are not followed). • Records are lost, stolen or damaged. • Records are not stored securely.
Accessing information	• Information cannot be located. • Information cannot be used because it is in the wrong format (electronic records) or indecipherable (written records). • Personal or sensitive information is accessed by an unauthorised person or people inside or outside the organisation.

Source: https://www.commerce.wa.gov.au/books/inc-guide-incorporated-associations-western-australia/record-keeping-systems

Analyse cause and effect

Prior to undertaking corrective action to fix breakdowns, it is necessary to understand their causes and effects.

One way of understanding causes and effects is to undertake a Cause and Effect Analysis, which involves four key steps. The final step is the development of a diagram – typically referred to as a 'fishbone'. The head of the fishbone is the problem, and the bones are the causes and sub-causes of the problem.

Step	Description
1. **Identify the problem**	Briefly describe the problem, the people involved and how the problem occurs. Be very specific about identifying the problem. If the problem is not identified correctly, the analysis will also be incorrect. An example of a problem might be: 'Demographic information about clients is often incomplete because frontline staff are not entering the data.'
2. **Identify the main problem causes**	Come up with as many reasons as possible to explain the main causes of the problem. Major causes of a problem could include: • Work environment • Training • Tasks
3. **Identify plausible sub-causes of the main causes**	Narrow down the main causes of the problem to identify sub-causes. This will help you during the problem-solving stage of the analysis. Sub-causes of a major cause such as the work environment could include: • Overloaded staff • Time pressures • Low priority of administrative tasks **Brainstorming** can assist in this process.
4. **Analyse the diagram**	Your 'fishbone' diagram should include the problem (the head of the fish), the major causes (the large bones of the fish) and the sub-causes (the smaller bones of the fish). You can use this diagram as the basis for a deeper exploration of the causes. For example, you could survey staff about their perspectives on the causes of the problem. Then, you can start to develop an action plan with clear priorities. The actions should address the sub-causes of the major causes.

Brainstorming
An unstructured method of generating ideas used by a group of people to solve a problem.

Source: https://creately.com/blog/diagrams/how-to-use-cause-and-effect-analysis/

Client information incomplete

Tasks
- Some staff are confused about who has responsibility for entering client information into the database
- Low priority of administrative tasks

Training

Work environment

- Staff are not completing relevant online training
- Staff are not provided with information about how the data is used and why it is important

- Overloaded staff
- Time pressures

Example
Analyse breakdowns in methods for recording, storing and accessing information and take corrective action

Zainab, a team leader at an organisation that provides support services to recently arrived refugees to Australia, has identified two problems with how frontline staff in the organisation are recording client data. First, the data is often incomplete – for example, information such as the client's family circumstances is missing from many client records. Second, some staff are using abbreviations and jargon that is difficult for other staff to interpret.

Before she starts developing corrective actions to address these problems, Zainab needs to understand what is causing them. She gathers a group of colleagues to undertake a Cause and Effect Analysis. The group includes two members of her team who work directly with clients, two staff in the evaluation team who use client data regularly to produce reports for senior managers, the evaluation manager and two IT staff.

Zainab uses brainstorming methods to help the group identify potential causes and sub-causes of the problem. In a subsequent meeting, she presents the group with a completed 'fishbone' diagram which they then use to explore the problems in greater depth. Zainab records the conversation and ideas from this meeting and uses the information to generate some initial ideas about corrective actions.

Take corrective action

Corrective action
An action that eliminates the cause of a problem or undesirable situation.

The **corrective action** taken to address breakdowns in methods of recording, storing and accessing information should align with the findings of the Cause and Effect Analysis.

For example, if your analysis found that the reason why many client records are incomplete is that staff do not understand what information they need to enter into the system, then the corrective action you take must focus on improving staff members' understanding of this specific process.

Once you understand the causes and effects of breakdowns, you can take action to correct them.

It may be useful to create an action plan that incorporates the breakdowns you identified, the causes and sub-causes of those problems, and corrective actions to address the problems. The action plan should include clear priorities that can be implemented quickly.

The corrective actions you take could involve training staff, improving communications, introducing new technology or a range of other approaches.

Here are some examples of corrective actions that could be undertaken in response to various types of breakdowns:

Breakdown	Cause	Example of corrective action
Client data is routinely incomplete	Staff are uncomfortable asking clients for information about sensitive issues.	Provide relevant staff with training about how to ask clients questions about sensitive issues.
Employees' personal information is accessible to unauthorised personnel	File passwords are not being updated regularly.	Set up an automated system to remind relevant managers about updating passwords for files that include employees' personal information.
Information cannot be located	Staff are not following file-naming conventions because they have received mixed messages about the correct conventions.	Create a slide presentation for the next whole-of-staff meeting outlining the correct file-naming conventions

Practice Task 3

Question 1

Number each step from 1 to 4 in the order you would follow to undertake a Cause and Effect Analysis.

	Analyse the diagram.
	Identify the problem.
	Identify plausible sub-causes of the main causes.
	Identify the main problem causes.

Question 2

List two types of corrective actions that can be taken to resolve problems with recording, storing and accessing information in an organisation.

1D Collect, analyse and prepare data on information needs to inform decision-making

Every organisation has different information needs.

An organisation's information needs could relate to equipment, resources or training. An organisation might need updated software, for example, or staff might need training to use software correctly.

To understand the information needs of an organisation, it is necessary to collect, analyse and prepare data from staff, managers and key stakeholders. This data can then be used to make decisions about information systems.

Collect data

The method you choose to collect data about information needs in your organisation will depend on what is reasonable and appropriate in your workplace.

For example, if your colleagues are too busy to participate in a focus group, the best approach might be observation and 1–2 interviews. On the other hand, if observation would make your colleagues uncomfortable, it may be better to use an online survey to collect data.

Here are some options for collecting data about information needs in your organisation:

Interviews	Interviews typically involve two people: one person asks questions and the other answers them.
Focus groups	Focus groups involve a group of people. Typically, a focus group is led by one person (the facilitator) who asks the group questions or encourages them to discuss a specific topic.
Surveys	Surveys are completed online or on paper. They usually include a series of questions for participants. Each participant completes the survey and then submits it (usually anonymously) to the person (or group) who has commissioned the survey.
Observations	Observations involve one person watching a person or group of people for a specific period of time and then recording their observations in a systematic way.

> ## Example
> ### Collect, analyse and prepare data on information needs to inform decision-making
>
> Maude, a senior disability worker, is collecting data on the information needs of her colleagues to inform decision-making about her organisation's information systems. Frontline staff in the organisation spend most of their time off-site and have limited time to participate in office-based activities, so Maude will collect data from them via a brief online survey.
>
> Maude will also consult with a number of teams based in the main office, including some members of the evaluation team. When Maude discusses options for data collection with the evaluation team, they propose a focus group as it will allow them to 'bounce ideas' off each other. The manager of the evaluation team supports this approach as it takes less time away from the team than individual interviews.

Analyse data

There are many ways to analyse data; some methods involve complex calculations, while others are more straightforward.

When you analyse data, you seek to make sense of it. For example, let's say you have collected data via an online survey tool. Forty people completed your survey and now that the survey is closed, you have a spreadsheet with 40 rows (1 row for each participant) and 15 columns of data (responses to 15 survey questions). By itself, this spreadsheet of numbers does not tell you about the information needs in your organisation. You will need to analyse the data to make sense of it and answer your question about information needs.

The data you collect will either be quantitative or qualitative. Quantitative data is numeric – it tells you how often or how many. Qualitative data is in the form of words – it tells you about experiences, thoughts and feelings.

The type of data you have collected will determine the methods you use to analyse it.

Analysing quantitative data	Unless you are undertaking a complex, comprehensive project, straightforward quantitative data analysis methods are typically sufficient. Examples of these include: • Frequency – how often something has occurred • Percentages – the amount, number or rate of something in relation to the whole • Mean – the average score
Analysing qualitative data	Qualitative data is analysed by identifying patterns and meanings. The most common method for analysing qualitative data is thematic analysis. This involves identifying common issues, ideas and opinions.

Video: Qualitative and quantitative data
This video explains the differences between qualitative and quantitative data: aspirelr.link/yt-quali-quanti

Prepare data

The data you collect and analyse regarding information needs will be used for decision-making.

To make the decision-making process as straightforward and efficient as possible, you will need to prepare the data you have collected and analysed. This might involve:

• summarising the findings of your analysis in a succinct document

• highlighting the most important findings of your analysis in 5–6 dot points

• using the findings of your analysis to create a series of slides for a presentation

• creating graphs and tables to illustrate the findings of your analysis.

Whatever method you use, always keep your audience in mind. You can do this by asking questions such as:

• Who will be using the data to make decisions?

• What format would they prefer or expect?

• How much background information needs to be provided?

For example, perhaps you will be working in an informal way with your manager to make decisions about the findings of your analysis. A simple dot-point list of key findings may be sufficient. On the other hand, if you are preparing the data for a group of senior managers at a meeting, you may need to create some slides that include graphs and tables that you can speak about.

Remember also that you are preparing the data for the purposes of decision-making. Therefore, the most important information will be those findings in your analysis that are relevant to that issue. Providing a long explanation of how you collected the data, for example, along with a very short description of your findings, will most likely not be as useful as a more comprehensive description of your findings and less information about the methods you used to collect the data.

Here are some tips on preparing and presenting data:

Use graphs to help the audience interpret quantitative (numeric) data. Various types of graphs can be used, including bar graphs, pie graphs and scattergrams.

Use a table to set out information about different options. This makes it easier for your audience to compare the options.

Use simple and concrete language to describe findings and avoid 'flowery' (i.e. elaborate and flamboyant) language.

Use headings and numbering to help make documents more accessible. Use section breaks, page breaks and white space to make documents more readable.

If you are presenting data in a slide presentation:
- use a sans serif font, such as Arial
- use a large font size, no smaller than size 28
- limit slide text to five main points only
- make text brief and concise.

Practice Task 4

Question 1

List two methods that could be used to collect data about information needs in an organisation.

Question 2

Which of the following methods can be used to analyse quantitative data?
Tick all that apply.

- ❑ Thematic analysis

- ❑ Frequency

- ❑ Percentages

- ❑ Mean

- ❑ Discourse analysis

Question 3
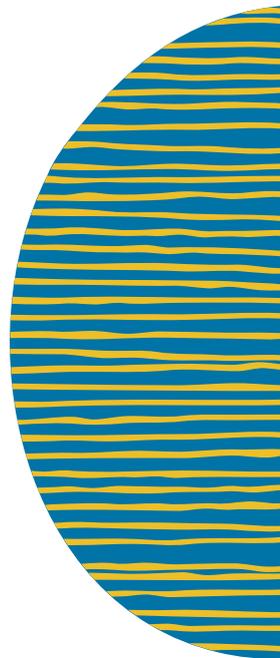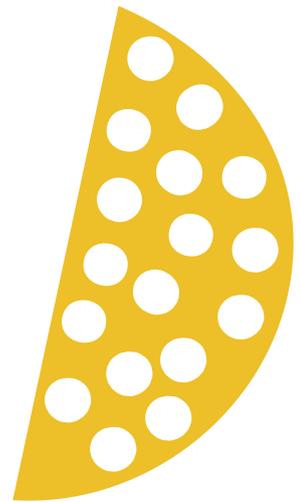
A team leader is preparing data to assist in the process of decision-making about information needs in her organisation.

List two methods the team leader could use to present the data.

Summary

- Information systems are used to support an organisation's management, operations and decision-making.

- Statutory information requirements are laws that organisations must follow in relation to recording, storing and accessing information.

- Some statutory information requirements apply to all health and community services organisations, while others are only relevant in some settings and sectors.

- Organisations have their own policies and procedures about how information is recorded, stored and accessed.

- Organisations need to factor in ethical considerations when they are dealing with issues relating to recording, storing and accessing information.

- Systems analysis involves an investigation of a procedure to determine its goals and objectives and create a new or modified system.

- The method chosen to collect data about information needs in an organisation will depend on what is feasible and appropriate in the context of the workplace.

- The data collected about an information system will either be quantitative or qualitative: quantitative data is numeric and qualitative data is in the form of words.

Learning Checkpoint 1

Identify and address information requirements

Part A

1. A worker wants to explain how the work systems in his organisation change over time.

   Identify the model that is most appropriate for this task, and name the stages that are involved when using this model.

2. Match the systems analysis theory on the left to its description on the right.

Work systems theory	Proposes that organisations are strongly influenced by their environment
Open systems theory	Concerned with breaking a whole thing into its parts and learning how those parts work together within a system
General systems theory	Proposes that the components and interactions within a system should be aligned with the organisation's goals

3. Suggest two questions a worker could consider when preparing data to 'keep the audience in mind'.

4. List three laws that are relevant to how organisations store personal and sensitive information provided by clients and/or employees.

5. A worker has come to their manager to ask for advice about a client who has made a vague threat to harm a member of their (the client's) family.

Explain what ethical considerations the worker and manager may need to consider in this situation.

Part B

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

> ## Case study
>
> Shona works as a family support worker at Finch Valley Family Services. The service provides a range of health and community supports to local families, such as low-cost counselling, a food bank, a toy library and a first-time mothers' group.
>
> Finch Valley Family Services employs 45 people in four teams – Community Services, Health, Research and Policy, and Operations and Administration (including information technology and human resources).
>
> Shona is leading an internal project to identify and address statutory and organisational information requirements at Finch Valley Family Services.

1. List two mechanisms that Shona could use to identify the organisation and statutory information requirements of Finch Valley Family Services.

2. Briefly outline how Shona would know which mechanisms for identifying the service's information requirements are appropriate.

3. List two people Shona could consult with to identify gaps or inadequacies in the service's information systems.

4. Briefly describe the steps Shona should follow if she undertakes a Cause and Effect Analysis to understand breakdowns in how information is recorded, stored and accessed in her organisation.

5. Describe how Shona would know what corrective actions to take to resolve any breakdowns she identifies.

6. Shona needs to collect data from her colleagues about their information needs. However, although her colleagues are keen to help her, most are under intense time pressures with heavy workloads.

Explain which data collection methods would be appropriate in this instance.

7. Shona has qualitative data she needs to analyse. Describe a method she could use for this purpose.

Topic 2: Review options for information management

2A Identify and evaluate sources of information

2B Identify, evaluate and prepare options for the development of information systems

2C Identify, calculate and evaluate financial and technological resources

2A Identify and evaluate sources of information

Organisations collect and store information from a range of sources.

Some of the information collected and stored by an organisation will be entered by staff who work directly with clients. For example, frontline staff in a community services organisation might be involved in entering information about clients into a database. Other information will come from external sources, such as contractors and funding bodies.

Identify sources of information

It is important that the information collected and stored by an organisation is accurate and complete.

The information also needs to be available to employees at the time that it is needed.

Here are some examples of ways to identify sources of information in a system:

Consult with key personnel	Key personnel in your organisation, such as information technology (IT) staff and operational managers, will be able to provide you with details about the sources of information.
Review organisational policies and procedures	Organisational policies and procedures relating to recording, storing and accessing information will provide details about sources of information.
Review flow charts and diagrams relating to information systems	Information systems are often represented in visual formats such as flow charts and diagrams – these provide details about sources of information in the system.

Here are some examples of sources of information in a system:

Information source	Example
Online forms	• Requests for information • Job applications • Client complaints
Incident reports	• Reports about workplace accidents • Reports about notifiable events • Statistics on notifiable events

Information source	Example
Client data	• Client contact details • Client history • Results of assessments
Staff records	• Staff contact details • Staff emergency contact details • Performance management documents
Staff surveys	• Staff wellbeing survey • Staff satisfaction survey
Project management records	• Project goals • Project time lines • Collated information about the progress of multiple projects (e.g. which are 'on track' and which are delayed)

Evaluate sources of information

The quality of information in an information system is determined by a range of factors, including the following:

• Accuracy	• Usefulness
• Completeness	• Relevance
• Timeliness	• Conciseness
• Understandability	• Clarity

One of the factors that determines the quality of an information system is the quality of the information stored, delivered and produced by the system.

Priorities in regard to information quality will differ between organisations. For example, conciseness may be a high priority for one organisation, but a lower priority for another. In general, accuracy, timeliness and completeness are high priorities for most organisations.

The quality of the information in an information system influences users' satisfaction with the system, as well as the potential benefits of the system for the organisation.

For example, if client information is often incomplete, this will have a negative effect on users' satisfaction with the information system itself – they may view the system as inadequate. Similarly, if information about the progress of clients is inaccurate, it will be of little use to managers who use that information to make decisions about resourcing and client support needs.

Methods for evaluating quality

There are numerous ways of evaluating the quality of information in an information system.

Here are two examples:

Subjective (qualitative) assessment measures	This method involves assessing the perceptions of different stakeholders regarding the quality of information, such as: • the staff who enter information into the system • the staff who are responsible for storing and retrieving the information • the staff who use the information. You can do this using a simple questionnaire such as a Likert scale.
Objective (quantitative) assessment measures	This method involves using actual records in the system to assess information quality. For example, if you are assessing the completeness of information, you could calculate how many client records are complete compared to how many are incomplete. A high proportion of incomplete records may indicate poor-quality information.

Source: https://link.springer.com/referenceworkentry/10.1007/978-0-387-39940-9_496

You can also combine these two methods for a more rigorous approach. For example, an objective assessment will allow you to validate what stakeholders tell you about the quality of information in the information system.

As information is constantly added to your organisation's information system, it is not sufficient to undertake a one-off evaluation of information sources. Rather, this process should be undertaken periodically, according to the requirements and policies of your organisation.

Example
Identify and evaluate sources of information

Heath is a team leader at an outreach service for vulnerable youth. The organisation collects and stores a range of information and data, including client data that is used for evaluation purposes, personal information about employees that is used in emergencies, and contracts relating to grants and funding.

Heath is evaluating the quality of the client data that his colleagues collect, store and access. He begins by developing a brief survey for those staff who enter, store and access this information from the organisation's information system. The survey includes questions about the accuracy and completeness of the information.

Health also randomly selects 15 client files that he reviews himself for their quality, including their accuracy and completeness. Two of the files are missing essential information – the client's home address, phone number and emergency contact details. To assess how common this problem of missing client information is, Health does a search of the database and, out of 463 files, he finds 39 that have no information about a client's home address, phone number or emergency contacts.

The results of the survey support the findings of Heath's objective assessment measures: on a Likert scale of 1–5, where 1 represents no concerns and 5 represents significant concerns about incomplete client data, most respondents reported 'moderate concerns'.

Practice Task 5

Question 1

Identify three examples of sources of information in an organisation's information system.

Question 2

Which of the following are considered important by most organisations when it comes to information quality? Tick all that apply.

❑ Completeness

❑ Relevance

❑ Timeliness

❑ Clarity

❑ Accuracy

2B Identify, evaluate and prepare options for the development of information systems

In the process of developing information systems, it is essential to consult with the system's users.

The users of an information system have firsthand insight into the system's strengths and weaknesses. Understanding users' appreciation of, or frustrations with, the system will help to inform system development because it needs to work for the people who use it.

Although users will most likely have a range of ideas about how the system could be improved or enhanced, each option needs to be evaluated. Organisations have resource limitations – some options may be out of reach because they are too expensive, for example, or they will take too much time to implement.

Questions to consider during the process of identifying, evaluating and preparing options for information systems include the following:

> When assessing options for the development of information systems, you will need to identify, evaluate and prepare those options.

Identify options	• What options are available for improving, adapting or enhancing information systems?
Evaluate options	• What options for improving, adapting or enhancing information systems are feasible and appropriate? • Which option(s) will best meet the needs of users? • Which option(s) will allow your organisation to best meet organisational and statutory information requirements?
Prepare options	• What is the best way of presenting the options to decision-makers? • What information needs to be included when preparing options for decision-makers?

When identifying, evaluating and preparing options, you will need to consult with the people in your organisation who use those systems. This might include:

- frontline workers (i.e. staff who work directly with clients)
- team leaders and managers
- administration and operational staff
- volunteers.

In most organisations, almost every worker will use the organisation's information systems at least once during their working day. Some workers will use these systems more than others, and different teams will have different levels of familiarity with specific aspects of the system.

Information technology options

When identifying options for information systems, you will need to know about the range of current and emerging information technologies.

Here are some examples of current and emerging information technologies that organisations can use to record, store and access information:

Type of information technology	Description
Cloud computing	The use of a third party for storage and computing needs The 'cloud' is the internet – information is stored and accessed via an internet connection
Mobile applications	A computer application that runs on a mobile device, such as a phone or tablet
Accounting software	A range of software packages give organisations the ability to control records, such as payroll requirements
Antivirus software	Scans programs and files coming into a system and typically removes malware
Firewalls	A network security device that monitors traffic coming in and out of a system and either permits or blocks data
Content sharing applications	When staff need to share files, documents, information or data, they can use content sharing applications (e.g. Dropbox, SharePoint)
Issue tracking applications	Help businesses respond to issues raised by customers or employees by providing a central location where they can assign, record and track the progress of issues until they are resolved (e.g. Jira, Redmine)

Source: https://www.business.qld.gov.au/running-business/finance/essentials/record-keeping

Consultation and communication

Consultation involves one person (or one group of people) talking and listening to another person (or group of people) in a two-way process. When people consult with others, they seek out each other's views and share their own.

Consultation is a two-way process.

In this case, you are consulting with other workers in your organisation to identify, evaluate and prepare options for developing the organisation's information systems – the workers are the 'users' of those systems.

Communication models provide an insight into the process of consultation. There are three main models of communication. Consultation is best reflected in the transactional model of communication.

Linear model	In this model, communication is seen as a one-way linear process. The sender (the 'source' of the message) transmits a message (sound, word, behaviour) through a 'channel' (the pathway or route of communication) to the receiver.
Interactive model	In this model, communication is seen as a two-way interactive process. The sender transmits a message and the receiver responds. There is a flow of communication and feedback between the sender and receiver via two channels. The way the sender and receiver construct messages is influenced by their experiences, environment and culture (their 'field of experience').
Transactional model	In this model, communication is a transaction. Rather than being senders and receivers, people are viewed simply as communicators. According to this model, communication is a more dynamic process than in the linear and interactive models.

The consultation process

The consultation process typically involves four steps: planning, developing materials, consulting, and reviewing and reporting.

Here is more information on the steps to follow when undertaking consultation:

1	Planning	The planning phase involves deciding how the consultation will be undertaken and who will be involved.
2	Developing materials	The developing materials phase might involve devising questions for participants or developing information to share with them about IT options.
3	Consulting	In this phase, users are invited to participate in the process and undertake the consultation.
4	Reviewing and reporting	In this phase, participant feedback is collated and considered, and findings are reported on. The report might be to the people who participated in the process and/or others, such as managers, who need to know about the findings.

Source: https://www.parliament.act.gov.au/__data/assets/pdf_file/0003/1389315/Exhibit-14-CHS-Consultation-Guidelines-for-Managers.pdf

Consultation techniques

A range of techniques can be used for consultation.

The following table lists common consultation techniques. The descriptions of the techniques provide an insight into the factors you might need to consider when selecting a technique. For example, if you want participants to work together on solutions, a workshop or focus group would be more useful than an online survey or poll.

In some cases, more than one consultation technique will be the best approach. For example, you could begin with one-on-one interviews with key stakeholders to identify options and then undertake a broader consultation with users to evaluate those options.

Focus groups	Focus groups give you the opportunity to verify issues and potentially develop solutions with a small group of users. The recommended number of people involved in a focus group is 8–10. Focus groups are typically led by a facilitator who poses questions to participants. A notetaker may also be needed to record the responses.
Workshops	A workshop is different from a focus group because there is an expectation that participants will work together to find solutions to problems. Workshops are typically led by a facilitator who helps to coordinate the process.
One-on-one interviews	One-on-one interviews are useful for understanding issues specific to individual users and gives them the opportunity to speak confidentially.
Online surveys and polls	Online surveys and polls are useful in a large organisation where you need to gather the views of many users. They may be more convenient for busy workers who do not have time to participate in an interview, focus group or workshop.

Asking questions during consultation

Regardless of the consultation technique used, asking the right questions is key to conducting a successful consultation.

There are two basic types of questions:

- **Open-ended questions** broaden discussion and encourage people to participate in a dialogue. These questions are useful for learning about people's attitudes, thoughts and feelings.

- **Closed-ended questions** require a specific and direct answer to a specific and direct question. These questions are useful for gathering information and clarifying situations.

Here are some examples of open- and closed-ended questions that could be used during face-to-face consultations – such as focus groups, interviews and workshops – to assess and analyse options for information systems.

Question	Identifying options	Evaluating options
Open-ended	• 'What options are available for addressing this gap in our information system?' • 'What would you need to make the process of recording information easier?' • 'In your previous role, what options were available for accessing information?'	• 'What might be the advantages of this option, do you think?' • 'What makes option A more feasible than option B, in your opinion?' • 'What are your thoughts about the feasibility of this option for staff who are working off-site?'
Closed-ended	• 'Cloud computing would help the organisation with storage of information – is that what you're saying?' • 'This is an option that is used in organisations similar to ours – is that correct?' • 'Is this technology available in Australia?'	• 'Is the technology easy for people to use?' • 'Is option A better for our needs than option B?' • 'Is this option too expensive?'

Example

Identify, evaluate and prepare options for the development of information systems in consultation with users

Heath, a team leader at an outreach service for vulnerable youth, is identifying options for developing his organisation's information system by consulting with the system's users.

Heath's organisation is relatively small, only employing about 40 staff. In consultation with staff, he decides that a focus group is probably the best way of identifying and evaluating options.

Heath asks a member of his team to take notes on their laptop during the focus group. He sends an email to all staff inviting them to participate in the focus group, noting that a maximum of 10 people would be ideal. He receives eight responses accepting the invitation.

Prior to the focus group, Heath prepares a list of open-ended questions to ask the participants. Open-ended questions will help encourage participants to engage in discussion. He may also need to ask some closed-ended questions for clarification purposes.

Skilled questioning

In general, people tend to be more open when asked questions in a casual way, compared to a more formal approach.

However, in some cases – such as when you are asking questions of a person in a very senior role – a formal approach will be more appropriate.

Showing that you are listening to someone when they are responding to your questions usually elicits a positive response. One of the ways you can do this is by asking follow-up questions.

Here are some other ways you can show you are listening to people when they are responding to your questions. Together, these strategies are referred to as 'active listening'.

Strategy	How to demonstrate this when asking questions
Pay attention	- Face the person you are asking questions of. - Give the person your undivided attention. - Do not look at your phone, watch or other people in the room.
Show you are listening	- Be aware of your body language (e.g. crossed arms can be read as judgment). - Use brief verbal comments to encourage the person (e.g. 'Okay', 'I see' and 'Yes, I understand what you're saying'). - Use facial expressions to encourage the person (e.g. nodding and smiling).
Provide feedback	- Reflect on what the person has said by paraphrasing. - Summarise the person's comments. - Ask related and relevant questions.
Respond appropriately	- Try not to interrupt the person unnecessarily. - Respond openly and honestly. - Treat the other person respectfully.
Defer judgment	- Demonstrate empathy and a non-judgmental attitude. - Avoid making assumptions. - Listen to the entire answer to your question before commenting.

Prepare options

Once you have identified and evaluated options, it is time to prepare the options for the decision-making process.

When you prepare options for the decision-making process, you highlight the key features of each option so they can be easily compared and assessed.

One way to prepare the options is to present them in a table format. The table could include a concise summary of each option, along with information about the pros and cons of each based on your own research and consultation with users.

Preparing the options is useful for you when making decisions, but it is also especially useful for other people who have not been involved in the process. Therefore, remember to keep your audience in mind. Consider the following:

- Who is the audience?
- What format (e.g. presentation, written report) would they prefer or expect when being presented with options for decision-making?

The process of preparing the options should also involve consultation with users. This not only gives them a sense of ownership over the process but also has practical benefits. For example, users can ensure that the information you prepare accurately represents their perspectives. This is important as the users understand how the information systems work 'on the ground'.

Here are some examples of how users might be involved in preparing options for the development of information systems.

Providing information about the pros and cons of options from a user's perspective

Providing information about rationales for change from a user's perspective

Checking draft documents or providing feedback on presentations to ensure they accurately represent users' experiences and perspectives

Practice Task 6

Question 1

List the two types of questions you can ask users to identify and evaluate information systems.

Question 2

Explain three ways that users might be involved in the process of preparing options for developing information systems.

Question 3

Provide three current or emerging information technologies relevant to addressing organisation requirements.

Question 4

List the three models of communication.

Question 5

Number each step from 1 to 4 in the order you would follow during a consultation process.

	Developing materials
	Consulting
	Reviewing and reporting
	Planning

Question 6

Match the consultation technique on the left with its description on the right.

Online survey	Useful for understanding issues related to specific users
Focus group	Used in a large organisation to gather the views of many users
Workshop	Used to verify issues with a small group of users (8–10 people)
One-on-one interviews	Participants are expected to work together to find solutions

2C Identify, calculate and evaluate financial and technological resources

Information systems require financial and technological resources.

When reviewing options for information management, it is necessary to identify the resources needed to support and operate the information system.

Information about the financial and technological resources required to support and operate a system helps with the process of evaluating and analysing different options.

Identify resources

The process of identifying technological and financial resources might involve:

- consulting with internal staff about the resources required for different options and the technology needed to fill gaps in the information system

- consulting with external businesses, IT specialists or consultants about the cost of devices, maintenance, training, software licences, etc.

- reviewing product information, such as online information about different types of software

- reading user reviews, such as reviews of software.

Here are some examples of the technological and financial resources required for an information system:

> When reviewing the options for information management in an organisation, it is necessary to identify the technological and financial resources required for each of those options.

Type of resource required	Technological resource example	Financial resource example
Hardware	• Laptops • iPads • Smartphones • Keyboards • Monitors • Printers • Scanners	• Purchase or rent devices • Maintain and repair devices • Pay for running costs (e.g. electricity)
Software	• Software installation • Software licences • Operating instructions and procedures	• Purchase software • Pay for software licences • Pay for training for staff to learn how to use software

Type of resource required	Technological resource example	Financial resource example
People	• Technical personnel • Clerical personnel • Systems analysts	• Pay for consultants • Pay for training for existing personnel • Employ new staff with the skills to use the technology (e.g. an IT systems administrator)
Data	• Databases to hold processed data • Knowledge management systems	• Purchase database or licence • Purchase knowledge management system or licence • Pay for training for staff to learn how to use systems
Network	• Internet • Intranet • Computers • Network operating systems	• Pay for internet packages • Purchase devices

Source: https://www.mbaknol.com/management-information-systems/components-of-an-information-system/

Calculate resource costs

You will need to calculate the financial resources needed for the different options you have identified.

When calculating costs, you will need to consider the expected costs (such as the cost of software licences required), as well as the less obvious unexpected costs (such as the cost of migrating data to a new system).

Here is an example of a breakdown of costs for new software:

Expected costs	Unexpected costs
Initial licensing fees	Ongoing licence renewal fees
Implementation	Ongoing maintenance
Training	System downtime
	Migration of data to new system

For more information about writing a business case for new software, go to:
aspirelr.link/software-business-case

Evaluate resources

The final step in this process is to evaluate the resources required for information systems.

Evaluation involves an assessment of value or worth. In this case, evaluation involves an assessment of the value or worth of the different options you have identified.

Some questions to consider when evaluating the technological and financial resources required for different options include the following.

Which option:
is the cheapest?
is the most expensive?
has the lowest running costs?
does not require staff to undertake additional training?
is available immediately?
would take the least amount of time to implement?
is being used by other organisations similar to ours?
has been effective in other organisations similar to ours?

When evaluating options, it can be useful to organise the information in a table that allows comparison. The table could include information such as:

- comparative costs
- training requirements for each option
- timing considerations for each option
- the pros and cons of each option.

Example

Identify, calculate and evaluate financial and technological resources required for systems

In consultation with his colleagues, Heath has identified three options for developing his organisation's information system, related to the interface that frontline staff use to record client information. The options are to make alterations to the existing interface, replace the interface or enhance IT support for frontline staff when they are using the interface.

Heath has identified and calculated the resources required for the three options and organised them in a table to help with the process of evaluating them. For each option, the table includes information about cost, training requirements, timing considerations, and pros and cons.

Practice Task 7

Question 1

List two examples of financial resources required for a new information system.

Question 2

Identify two examples of hardware resources required for an information system.

Question 3

Which of the following costs need to be considered when calculating the cost of new software? Tick all that apply.

❑ Ongoing renewal fees

❑ Ongoing maintenance

❑ Ongoing review

❑ System downtime

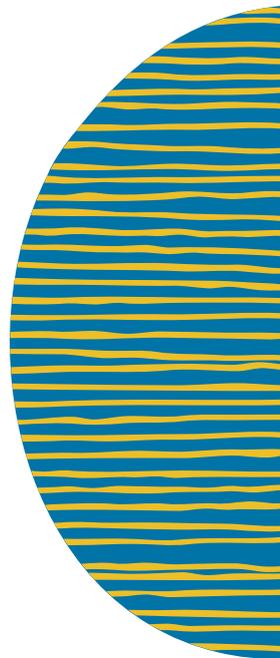❑ Migration of data to new system

Question 4

List three questions to ask when evaluating the financial and technological resources.

Summary

- One of the factors that determines the quality of an information system is the quality of information stored, delivered and produced by that system.

- The quality of the information in an information system influences user satisfaction, as well as the potential benefits for the organisation.

- It is not sufficient to undertake a one-off evaluation of information sources; rather, this process should be undertaken periodically, according to the requirements and policies of the organisation.

- The users of an information system will have firsthand insight into the system's strengths and weaknesses.

- Consultation is a two-way process; when people consult with others, they seek out each other's views and share their own.

- Questions are a key tool for the person undertaking a consultation. In general, people tend to be more open when asked questions in a casual way, compared to a more formal approach.

- When you prepare options for the decision-making process, you need to highlight the key features of each option so they can be easily compared.

- When calculating the costs of resources for an information system, you will need to consider the expected and unexpected costs.
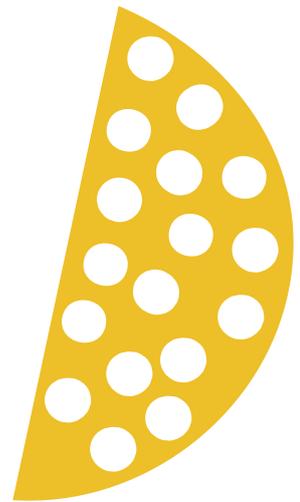
Learning Checkpoint 2

Review options for information management

Part A

1. List two techniques that could be used to consult with users about options for information systems.

2. Briefly outline the benefits of consulting with users during the process of preparing options of new information systems.

3. Match the technology on the left with its description on the right.

Antivirus software	Technology that gives organisations the ability to control records such as payroll requirements
Accounting software	Use of a third party for storage and computing needs
Cloud computing	A network security device that monitors traffic coming in and out of a system and either permits or blocks data
Firewalls	Technology that scans programs and files coming into a system and removes malware

4. A worker is undertaking an evaluation of the quality of information in their organisation's information system by measuring the subjective assessments of stakeholders.

Identify two groups of stakeholders they could speak to for this purpose.

5. Briefly describe which model of communication best reflects the process of consultation.

Part B

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

Case study

Nazeem works as a manager at Thinking Well, a community-based mental health service. In consultation with the other staff who work at the service, Nazeem is reviewing the options for information systems in his organisation.

1. List two ways of identifying sources of information in Nazeem's organisation.

2. Outline the steps Nazeem would follow in the consultation process when identifying and evaluating options for the development of information systems.

3. Identify three groups of people that Nazeem should consult with when identifying and evaluating options for developing Thinking Well's information systems.

4. Nazeem is preparing the options for developing Thinking Well's information systems based on his consultation with users. He will be presenting these options in a document for a panel of senior managers who will be using the information to decide on the best way forward.

Briefly explain the information Nazeem should provide in this document and how it should be presented to make it easy for the panel to compare the different options.

5. Identify three people Nazeem could consult with or resources he could use to help him identify the technological and financial resources required for Thinking Well's information systems.

6. Identify the costs that Nazeem should consider when evaluating a new user interface.

7. Nazeem needs to present his findings to his manager. He is using a table to compare the options. List three pieces of information it would be useful to include in this table to help the manager evaluate the financial and technological resources associated with each option.

Topic 3: Establish and manage systems to record and store information

3A Develop, implement and document systems for recording, storing and accessing information

3B Implement strategies to address any gaps in meeting current information requirements

3A
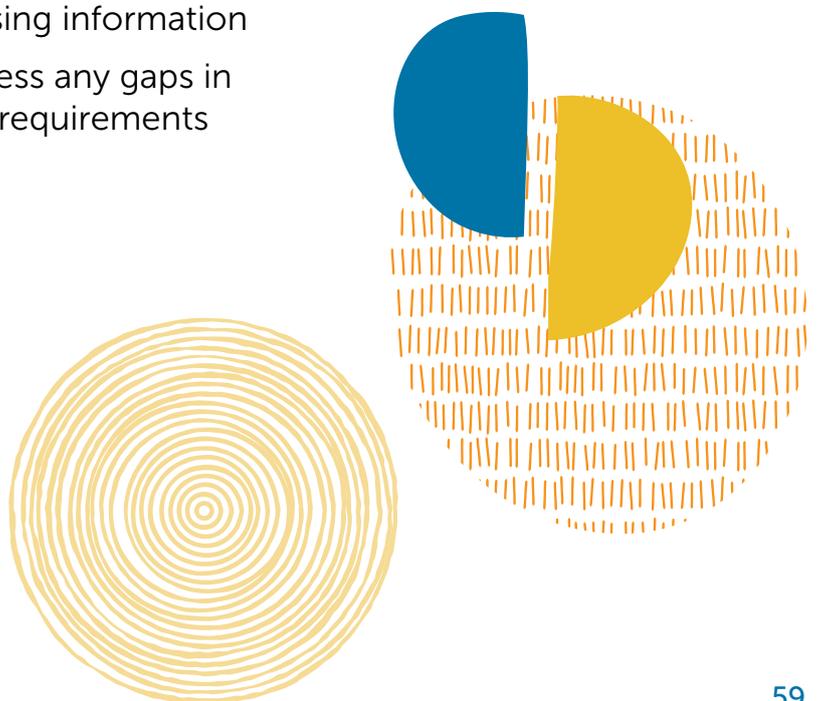
Develop, implement and document systems for recording, storing and accessing information

Health and community services organisations collect and store a range of different types of information.

The information that health and community services organisations collect and store includes:

- client data (involving personal and sensitive information)
- employee records
- financial information
- information and data relating to programs and projects.

To meet their statutory and organisational requirements – and to ensure they are operating in an ethical way – health and community services organisations need effective information systems. The ideal system for recording, storing and accessing information within an organisation should be acceptable to users and be delivered on time and within the available budget.

The characteristics of effective information systems are as follows:

Effective information systems are key to ensuring that information is managed and stored in an effective, safe and ethical way.

Availability and accessibility	Information should be easy to access.
Accuracy	Information needs to be accurate enough for the purposes for which it is being used.
Reliability and objectivity	Information needs to be trustworthy – users need to be confident that the information is reliable and objective.
Relevance and appropriateness	Information should be relevant to the purposes for which it is being used.
Completeness	Information should cover all the details required by the user.
Conciseness	Information should be brief enough that it can be examined and used in an efficient way.
Presentation	Information that is presented in an aesthetically pleasing way can be easier for users to understand.
Timing	Information needs to be available at the time that it is required.

Source: https://bootpoot.tech/what-is-information-system-definition-characteristics-and-types-of-information-system/

Develop and design information systems

Methodologies and planning are key to developing and designing effective information systems.

Attempts to improve or enhance information systems within organisations often fail to meet users' needs, or they go over budget or are not delivered on time. The reasons for this can include lack of a clear plan for system design and development, or no sound methodology to guide the process.

Methodologies are 'problem-solving processes'. They are useful when the solution and the outcome of a project are not predictable. The basis of most methodologies is a three-part process:

1. Plan: build a full picture of the problem and develop practical strategies and plans to solve it.

2. Develop: develop a solution according to the plans.

3. Manage: implement the solution and monitor and assess the results.

Common methodologies used in the field of information systems include the following:

Strategic information systems planning (SISP)	The process of determining what computer-based applications will help an organisation to achieve its objectives. SISP is used to align information technology (IT) with the strategic goals of an organisation in order to identify new opportunities.
Systems development methodologies (SDMs)	A process used within organisations to analyse, design, implement and maintain information systems. The process involves five key stages: planning, analysis, design, implementation and maintenance.
The waterfall model	The oldest and most well-known methodology for designing and developing information systems is the 'waterfall'. The waterfall model involves six stages: feasibility, analysis, design, implement, test and maintain. The results of each stage inform the next (e.g. feasibility informs analysis, analysis informs design, and so on).

Sources: http://ufdcimages.uflib.ufl.edu/AA/00/01/17/04/00001/InformationSystems.pdf; https://www.ijsr.in/upload/105047310905.pdf

Any systems you develop must meet organisation and statutory information requirements. Laws on privacy and confidentiality are especially important to health and community services organisations because they collect personal information from clients.

The Office of the Australian Information Commissioner (OAIC) recommends that organisations subject to the *Privacy Act 1988* (Cth) consider how they will protect personal information during its 'life cycle'. The life cycle of information refers to the process of collecting, storing and destroying personal information.

When developing and designing information systems, it is useful to consider how your organisation will protect clients' personal information at each stage during the life cycle.

Consider whether to collect personal information	Consider whether the collection of personal information is necessary to carry out activities.
Incorporate privacy by design	Privacy should be incorporated into an organisation's planning, staff training, priorities, project objectives and design processes.
Assess security risks	Assess security risks to personal information on a regular basis. You can do this via a privacy impact assessment (PIA), an information security risk assessment and a regular review of security controls.
Take appropriate steps and put strategies in place	Consider appropriate security measures to protect personal information and take actions to ensure your organisation is satisfying their obligations under the Privacy Act.
Destroy or de-identify personal information	When personal information is no longer needed, it should be destroyed or **de-identified**. Destroying or permanently de-identifying personal information is a risk mitigation strategy.

Source: https://www.oaic.gov.au/privacy/guidance-and-advice/guide-to-securing-personal-information

For more information about securing personal information, go to:

aspirelr.link/oaic-securing-information

De-identified information
Information from which an individual's identity is no longer apparent or cannot be ascertained.

Implement information systems

Implementation is the process of turning strategies and plans into action.

The process of implementation can 'make or break' a strategy. Effective implementation can lead to a successful long-term initiative, while ineffective implementation can mean that a strategy never gets off the ground – regardless of how well thought-out that strategy might be.

A range of pitfalls and obstacles can interfere with the implementation of a new process in the workplace. It is useful to consider these when implementing systems for recording, storing and accessing information in your workplace.

Lack of ownership	If staff do not have ownership of a plan, they will be less committed to it.
Lack of communication	The plan must be communicated to staff so they understand how they can contribute.
Daily issues take precedence	Staff can get bogged down in day-to-day issues relating to their work which causes them to lose track of long-term goals.
Separation from management	A plan that is seen as separate from essential management processes may not be effective.
Overwhelming plans	If a plan is too complex or unwieldy, employees will become overwhelmed and may not follow it, or follow it incorrectly.
Meaningless plans	If employees see a plan as not relevant or useful to the work they do, they most likely will not be committed to it.
No method for monitoring	Staff need to have a sense of forward momentum – if there is no method for monitoring the progress of a plan, it is difficult to demonstrate movement.
No accountability	Every action, strategy and goal must have an owner – accountability helps to drive change.

Source: https://onstrategyhq.com/resources/strategic-implementation/

Consider workload

When implementing information systems, it is important to take the workload of staff into consideration.

To understand workloads and their implications, it is important to understand workload models – here are three examples of these:

Multiple resources theory	People use mental resource 'pools' for multitasking, such as typing at the same time as talking on the phone. Mental resource pools include: • perception, cognition and response • inputs from the senses • reasoning and processing. According to this theory, it is possible for people to multitask if they are not drawing on the same resource pool for each task.
The 80/20 rule	According to the 80/20 rule, 20% of the work we do takes up 80% of our time; whereas 80% of the results we create will come from 20% of our effort. The implication of the 80/20 rule is that by prioritising their work, employees can focus their time and effort on the 20% of work that creates the majority of their results.

Parkinson's law	Parkinson's law is a commonly known theory which claims that work expands to fill the time we have available for it.
	People generally prefer to appear busy rather than idle because it makes it look like they are getting their work done. Thus, rather than completing a task quickly then doing nothing, they may stretch it out to fill the time available.
	In addition, if workers allocate too much time to a task, they may procrastinate and not complete it until the last minute. However, if they do not allocate enough time, they may not be able to complete it.

Source: https://smallbusiness.chron.com/theories-workload-time-management-24846.html

Ensure effective implementation

A range of actions can be taken to contribute to the effective implementation of information systems.

Here are some actions that organisations can take to help ensure the successful implementation of information management systems:

To encourage a sense of ownership, consult with users when developing the information system and ask them for feedback as the system is being rolled out.
Make sure all staff are informed about any new procedures and processes – communicate expectations clearly.
Where required, provide users with training to use new software – this can help to ensure the reliability and consistency of the information within the system.
Show staff how they will benefit from the new information system. If people understand the 'relative advantage' of a new approach in the workplace, they will be more likely to accept it.
Engage managers in the process of implementation. Make sure they understand the roles and responsibilities of their team members when it comes to the new information system.
Prepare manuals, procedures and other explanatory materials to help managers and staff learn about and follow any new procedures relating to the information system.

Source: http://www-personal.umich.edu/~steiss/page41.html

Create an implementation plan

An implementation plan can be helpful for adapting abstract strategies into real-world action.

The benefits of developing an implementation plan include that it helps to build trust among stakeholders and helps to make sure everyone is 'on the same page'.

An implementation plan can be presented as a written document. The plan should include the following information.

Objectives	Risk assessment
Scope assessment (i.e. the work required)	Stakeholder, team and process management plans
Deliverables	Team member roles and responsibilities
Task due dates	Resource management
Scheduling	Communication tools

More information about developing an implementation plan is available at:
aspirelr.link/implementation-plans

Example

Develop, implement and document systems for recording, storing and accessing information

Kylie is a senior project officer at an alcohol and other drugs (AOD) service. She is leading a team responsible for implementing a new system in her organisation to record, store and access information.

To promote a sense of ownership over the new system, Kylie and her team consulted with staff at the beginning of the design process and asked for feedback regularly throughout the development process.

When the system is rolled out, Kylie and her team are planning to ensure that supervisors understand the roles and responsibilities of their staff when it comes to recording, storing and accessing information. They also have a plan for clearly communicating expectations to staff regarding the new processes and procedures.

Document information systems

Documenting an information system provides a guide to the organisation's approach to recording, storing and accessing information. This will help to ensure the system is implemented consistently across the organisation. It can also help with maintaining and monitoring the system over time.

The key to a successful information management system is to ensure that it is implemented consistently over time.

A range of tools can be used to document a system. These tools are typically visual diagrams or flow charts, rather than narrative descriptions.

Here are some examples of tools for documenting information systems:

Data flow diagram	A data flow diagram is a graphical description of data sources, flows, processes, storage and destinations. It uses symbols such as rectangles, circles, arrows and labels to demonstrate each component of the information system.
Document flow chart	A document flow chart is a graphical description of the flow of documents (including electronic documents) and information between teams or departments in an organisation.
System flow chart	A system flow chart is a graphical description of the relationships among input, processing and output in an information system. It typically incorporates connected symbols that are used to demonstrate what happens to data within a system.

Source: https://www.joho.org/en/systems-documentation-techniques-chapter-3; https://www.lucidchart.com/pages/data-flow-diagram

Practice Task 8

Question 1

Which of the following methodologies are used to design and develop information systems? Tick all that apply.

❑ Strategic information systems planning (SISP)

❑ The fountain model

❑ The waterfall model

❑ Systems development methodologies (SDMs)

❑ Strategic development planning system (SDPS)

Question 2

List three pieces of information that should be included in a plan for implementing an information system.

Question 3

Identify two tools that can be used to document information systems.

Question 4

Suggest two workload analysis models.

3B Implement strategies to address any gaps in meeting current information requirements

Even if an organisation has a well-functioning information system, there may still be gaps in the system.

When there are gaps in an information system and an organisation cannot meet current information requirements, these gaps need to be addressed with appropriate and effective strategies. It is important to consult with users of the information system when implementing strategies to address gaps.

Gaps in an information system could relate to the ability of the organisation and its staff to:

- protect data or keep it confidential (privacy)

- access information (e.g. freedom of information [FOI] requests)

- retain and store information and data

- distribute information

- record information accurately.

Where gaps in information systems are hindering the ability of the organisation or its staff to meet current information requirements, strategies to address these gaps will need to be implemented – here are some examples:

> Gaps in meeting current information requirements could relate to statutory or organisational requirements.

Staff do not see information security as a priority	• Provide training and resources to foster a culture of privacy and security awareness among staff and management. • Establish clear procedures for oversight of information security, such as designated individual(s) who know what personal information is held by the organisation and where and how it is held.
Staff are unclear about their responsibilities regarding ICT privacy and security	• Provide induction training for all new staff about information and communications technology (ICT) security. • Develop policies that clearly outline the organisation's obligations under the *Privacy Act 1988* (Cth), and make sure staff are able to access those policies.
Information within the system is outdated and unnecessary	• Implement systems for periodically deleting data that is no longer needed.

There is no established process for recovery of information in case of disaster	• Develop a disaster recovery practice that outlines how the organisation will deal with a disaster, such as a cyberattack or a natural disaster. • Strengthen the backup system that enables data to be stored separately so it can be restored later if needed.
Information entered into the system is routinely incomplete	• Anticipate mistakes in data entry and use strategies to address these, such as automatic detection of incorrect email formats.
Information is being accessed by unauthorised users	• Implement authentication procedures. • Provide training around weak passphrases and passphrase reuse. • Remind staff regularly of their obligations to handle personal information appropriately.
Information is difficult to find within the system	• Update organisational policies so they clearly explain how information is collected and where and how it is stored. • Implement or strengthen file-naming conventions.

Consult with users

As with the other steps involved in developing information systems, the process of implementing strategies to address gaps should be undertaken in consultation with users.

Users will have an understanding about why gaps exist and may also have ideas about how to address them.

Remember the following tips when consulting with staff:

• Employ a consultation technique that makes it as easy as possible for staff to participate. If staff often work outside the office, for example, use a survey to gather information rather than a focus group.

• Ask open-ended questions to identify potential strategies.

• Ask closed-ended questions to evaluate potential strategies and clarify understanding.

• Show people that you are listening to them – this helps elicit a positive response.

• Ask follow-up questions to demonstrate that you are listening.

Example

Implement strategies to address any gaps in meeting current information requirements

Kylie, a senior project officer at an alcohol and other drugs (AOD) service, has worked with a team to develop and implement a new information system in her organisation.

Consultations with staff led to the identification of some gaps in the existing system that are hindering the organisation's ability to meet current information requirements. One major gap is that new staff are often unaware of their responsibilities regarding ICT security.

To address this gap, Kylie and her team collaborate with the HR team to include information about staff responsibilities regarding ICT security in induction training for all new staff.

Practice Task 9

Question 1

While developing an information system within their organisation, a worker finds that some personal information in the system is being accessed by unauthorised users.

Identify two strategies the worker can implement to address this gap.

Question 2

Explain why it is useful to consult with users about strategies to address gaps within an information system.

Summary

- Effective information systems are essential for ensuring that the information in an organisation is managed and stored in an effective, safe and ethical way.

- Information systems must meet organisation and statutory information requirements; laws around privacy and confidentiality are especially important.

- The process of implementation can 'make or break' a strategy. Effective implementation can lead to a successful long-term initiative, while ineffective implementation can mean that a strategy fails.

- Multiple pitfalls and obstacles can interfere with the process of implementing a new process.

- An implementation plan can be helpful for turning abstract strategies into real-world action.

- Where gaps in information systems are hindering the ability of the organisation to meet current information requirements, strategies to address these gaps need to be implemented.

Learning Checkpoint 3

Establish and manage systems to record and store information

Part A

1. Match the methodology used in information systems (on the left) with its description (on the right).

The waterfall model	The process of determining what computer-based applications will help an organisation achieve its objectives
Strategic information systems planning (SISP)	A process used within organisations to analyse, design, implement and maintain information systems
Systems development methodologies (SDMs)	The oldest and most well-known methodology for designing and developing information systems (with six stages)

2. Briefly describe one method used to document information systems.

3. Which of the following accurately describes the 80/20 workload rule? Tick all that apply.

   ❑ 80% of the work we do takes up 20% of our time.

   ❑ 20% of the work we do takes up 80% of our time.

   ❑ 80% of the results we create will come from 20% of our effort.

   ❑ 20% of the results we create will come from 80% of our effort.

   ❑ 20% of the work other people do involves 80% of other people's efforts.

Part B

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

Case study

Griff is a team leader at a large non-profit organisation that provides community services to vulnerable families and children. Griff is working with a team of staff at his organisation to implement a system for recording and storing client information. The system must allow the organisation to meet its statutory and organisational requirements.

1. Briefly describe at least three things Griff could do to help ensure the effective implementation of the information system.

2. During the process of consulting with staff, Griff and his colleagues realise that some staff do not understand the importance of information security and see it as an administrative burden.

   Briefly outline two strategies that Griff and his colleagues could implement to address this gap.

Topic 4: Develop staff and resources

4A Analyse staff training needs and organise training

4B Develop educational resources and guidelines and recruit appropriate expertise
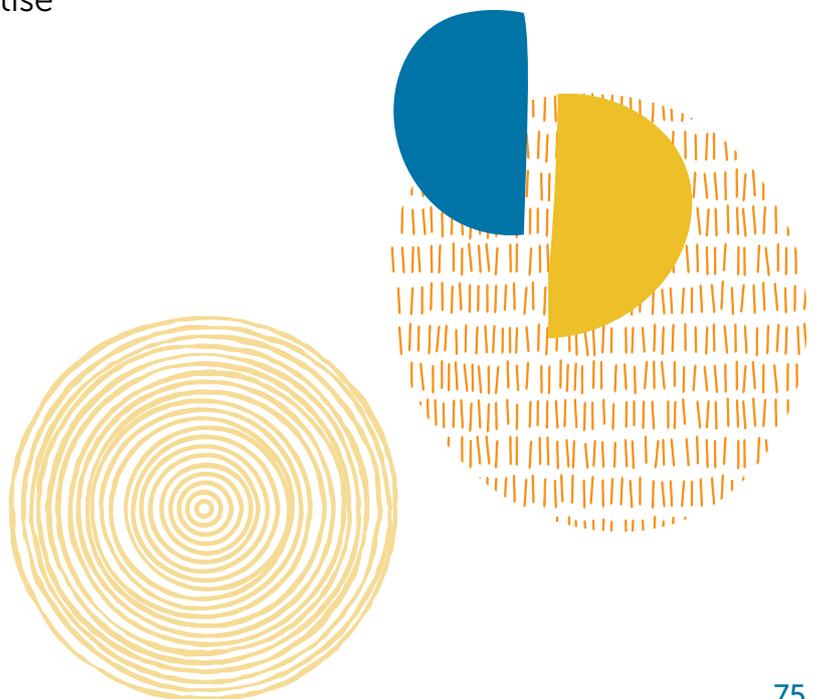
4A Analyse staff training needs and organise training

Human resources are a key component in any information system.

Training is important for ensuring staff in an organisation have the knowledge, skills and/or abilities (KSA) they need to record, store and access information.

It is important to identify training needs among staff as they are likely to have diverse KSA; training needs analysis (TNA) can help to identify gaps.

Here are some examples of staff training needs relating to legislative and organisational requirements:

Type of requirement	Example of staff training need
Legal requirements	• Being aware of privacy laws • Managing data privacy • Understanding freedom of information laws • Handling complaints and grievances • Fulfilling work health and safety information requirements • Fulfilling requirements relating to internal disputes and complaints
Organisational requirements	• Understanding cybersecurity • Recording and storing employee information • Following ethical research and data collection practices • Understanding profession-specific ethics (e.g. social work)

Undertake training needs analysis

Training needs analysis (TNA) is a systematic process that involves identifying the gap between the actual and required knowledge, skills and/or abilities (KSA) for a job.

In other words, TNA helps an organisation determine the KSA that employees currently have, and the KSA they need to do their job effectively.

TNA typically involves five steps. Each step includes common tasks, which are outlined in the following table.

1	Define goals	Identify organisational goals and strategies priorities.
2	Outline required skills and knowledge	Identify the KSA that the organisation needs to achieve its goals.

3	Evaluate current skills	Compare the needed and actual KSA of the organisation's workforce.
4	Identify gaps and causes	Identify any gaps in the needed and actual KSA of the organisation's workforce. Identify the causes of those gaps (not all of which will be a lack of KSA).
5	Establish training needs	For those gaps that are caused by a lack of KSA: a. Identify which KSA would have the biggest impact on goals (as identified in step 1) b. Identify the biggest gaps in KSA c. Combine (a) and (b) to come up with the most urgent KSA that need to be addressed

Source: https://www.training.com.au/workforce-training/library/training-needs-analysis/

Video: Training needs analysis and learning needs analysis

This video describes the differences between training needs analysis (TNA) and learning needs analysis (LNA): aspirelr.link/yt-tna-lna

Workplace training can improve the productivity of employees and the quality of services. It can also contribute to employee and client satisfaction. Here are some examples of different training methods:

Coaching	Coaching is a peer-to-peer relationship where one person helps another to develop skills or develop their practice.
Mentoring	Mentoring is a supportive relationship between someone who is experienced and knowledgeable and a less experienced, less knowledgeable person.
Online training	Online training is undertaken by employees on their computer or smartphone. Online learning is especially useful for organisations that have multiple sites and/or employees working remotely.
External webinars	Webinars are online sessions for educational or training purposes. They might involve an expert presentation or panel. Webinars are provided by a range of institutions, including government agencies, peak bodies and non-profit organisations.
Face-to-face training	Traditional face-to-face workplace training involves an educator presenting materials to a group of employees. Highly skilled educators can match their training style to the people in the room.

> Workplace training provides employees with the opportunity to develop knowledge and skills for their job.

Sources: https://www.edgepointlearning.com/blog/top-10-types-of-employee-training/; https://business.vic.gov.au/business-information/staff-and-hr/staff-management/train-and-develop-staff

Organise training

Once the TNA has been completed, it is time to organise training to fill the gaps in KSA.

Key factors to consider when organising workplace training include the following.

Learning style	Consider the learning styles of the people who will be receiving the training. Does the training address visual, auditory and kinetic learning styles?
Delivery mode	The delivery model could be face-to-face or online training, or a mixture of both.
Budget	The budget available will determine the options for training. For example, webinars are typically cheaper than face-to-face training, although it depends on what is being taught and by whom.
Delivery style	Delivery-style approaches include 'sage on the stage' (such as a lecture format) or 'guide on the side' (such as coaching).
Audience	The audience are the people who will be receiving the training. They will have differing needs and preferences in terms of the delivery style and timing of the training.
Content	What will the content of the training include? Is it pitched at the right level? Is it appropriate to the context where staff are working?
Time line	The urgency of the training will influence the options for training. For example, face-to-face training that is only available in six months' time may not be suitable. Similarly, training that takes one day may be preferable to training that takes one week, depending on the available time and workload of the trainees.
Effectiveness	What evidence is available to demonstrate that a training option works? Is the training provider able to offer any data or testimonials about training effectiveness?

Prepare a training action plan

One tool that can assist you with the process of organising training is a training action plan.

This will help you plan how your organisation will go about filling the gaps identified through the TNA.

A training action plan should include information about the following.

Information to include	Description
The goal	Link the goal of the training action plan to the TNA findings – for example, if the TNA identified that employees do not have the knowledge required to retrieve data from the database, the goal of the plan could be 'to improve staff skills in data retrieval'
What will be done	The actions that will be undertaken
Who will do it	Who will be responsible for each action
By when	When each action needs to be completed by
Resources	The resources available and the resources needed (e.g. financial resources, human resources)
Potential barriers	Who might resist the actions and how might they resist
Communications	How and how often the actions will be communicated to the relevant audiences

The plan could also include information about:

- evidence of success (how will you know you are making progress?)

- the evaluation process (how will you determine that the goal has been reached?).

Source: https://www.sampletemplates.com/business-templates/action-plans/training-action-plan-samples.html

Example
Analyse staff training needs and organise training

Marco is an operations manager at an organisation that provides health services and social supports to Aboriginal and Torres Strait Islander people living in an inner-city area. He is analysing the training needs of staff in the organisation to assess their knowledge, skills and abilities (KSA) in relation to the organisation's information system.

After conducting training needs analysis (TNA), Marco identifies a need for training that focuses on recording and storing client data. His consultations with staff indicate that an instructor-led training session would be the best method of improving KSA in this area.

Marco develops a training action plan to help him, and his colleagues, plan how this training will be delivered. The plan includes information about who will organise the training session, when it needs to be done by, and how information about the session will be communicated to staff.

Practice Task 10

Question 1

Briefly explain what information a training needs analysis provides to an organisation.

Question 2

Number each step from 1 to 5 in the order you would follow to undertake a training needs analysis.

	Outline required skills and knowledge
	Evaluate skills
	Establish training needs
	Define goals
	Identify gaps and causes

Question 3

List five factors that need to be considered when organising workplace training.

4B Develop educational resources and guidelines and recruit appropriate expertise

Information and educational resources provide staff with guidelines around how to use information systems correctly.

Resources for staff about information systems can complement training and help educate staff about how to use, record, store and access data in a correct, safe and ethical way.

Information and educational resources relating to information systems could be online or in hard-copy format. Expertise from within or outside an organisation may be required to assist with developing resources.

The development of information and educational resources typically requires knowledge, skills and/or abilities (KSA) in areas such as writing, formatting and editing. It may also require the input of people with skills in web design (for online resources) and educational/learning design.

When working with a team of people to produce resources, you will need to provide support and supervise the process and the team. Here are some ways you might do this:

> The development of information and educational resources will most likely involve a team of people.

Hold regular meetings with the people who are involved in developing the resources – use meetings as an opportunity to brainstorm and address any problems that arise.

Use negotiation skills to delegate tasks and match people with the tasks that reflect their KSA.

Use project management tools to map out a plan of who needs to do what and by when.
- Examples of project management tools include Gantt charts, PERT charts and online software tools such as Trello and Wrike.
- Once you have a plan, share it with the people who are involved in developing the resources to ensure they are aware of their role and responsibilities. Regularly update the plan to help keep others informed of progress.

Update stakeholders (e.g. staff, managers) on the progress of resource development and when resources will be available.

Seek out and/or provide feedback on draft documents.

Monitor the budget for producing the resources and ensure the project progresses within the approved budget.

Sources: https://www.hurix.com/best-practices-editorial-project-management-publishers/; https://www.skillsyouneed.com/lead/delegation.html

For more information about negotiation skills, go to: aspirelr.link/syn-negotiation-skills

For more information about Gantt and PERT charts, go to: aspirelr.link/pert-gantt-chart

Develop content and format guidelines for resources

To ensure resources are clear, logical and easy to understand, you will need to develop content and format guidelines.

Content guidelines could address factors such as clear and concise language and document structure. Format guidelines could address factors such as font choice and size, the use of white space, margins and text alignment – all of which influence the readability of a document.

When developing content and format guidelines for resources, you will need to consult with stakeholders. For example, you could consult with a publications or communications specialist in your organisation to get advice on the information that should be included.

The method you use to consult with stakeholders will depend on your organisation's policies, processes and culture. For example, if you are working in an organisation that has many sites across multiple locations, consultation via email may be appropriate. In a small organisation with a single site, however, it may be expected that colleagues will have informal face-to-face conversations when asking for advice, feedback or guidance.

Example
Develop educational resources and guidelines and recruit appropriate expertise

Marco, an operations manager at an organisation that provides health services and social supports to Aboriginal and Torres Strait Islander people living in an inner-city area, is supervising the development of information resources designed to provide staff with guidance around how to record and store client data.

Before he starts planning the information resources with the help of a staff member who has specialist skills in communications, Marco consults with the staff who will be using the resources. Because staff are often working in the community and have limited time in the office, Marco uses a brief survey to gather their input on the content and format of the resources.

The survey Marco develops includes questions about what format would best meet staff needs and what information is essential to include.

Recruit expertise

In the course of developing resources, it may be necessary to recruit people with specific types of expertise.

Here are some examples of people with specific expertise who may be able to assist with different aspects of resource development:

Expertise	Provided by
Web design	Graphic designer (with web design expertise)
Educational/learning design	Educational/learning designer
Copy editing	Copy editor
Structural editing	Structural editor

If you are unable to find someone with relevant expertise internally, you may need to recruit externally. External experts may work for an organisation, or they could be consultants who work for themselves.

Here are some factors to consider when recruiting experts for specialised tasks:

Recruit the person who best fits the task – their experience, skills and attitude should correspond with your requirements and expectations.

Some organisations have a database of employee knowledge and skills that can be used to identify staff who can provide specific expertise to projects.

The best way to find a good consultant is usually via word of mouth. Ask other people in your organisation about consultants they have worked with and would recommend.

LinkedIn provides another source of information about consultants. Use key terms related to the expertise required to search profiles and blog posts.

Groups that represent specific professionals (e.g. editors) often have searchable lists of experts who can work on a freelance or consultancy basis.

Practice Task 11

Question 1

List two tools that can assist with project management when developing information and educational resources.

Question 2

List two formatting factors that can influence the readability of a document.

Question 3

Identify two types of expertise that might be needed when developing educational resources.

Summary

- Training is important for ensuring staff have the knowledge, skills and/or abilities (KSA) they need to record, store and access information.

- Training needs analysis (TNA) involves a five-step systematic process to identify the gap between the actual and required KSA for a job.

- A training action plan can help with the process of planning how to fill the gaps identified through TNA.

- The development of information and educational resources typically requires KSA in areas such as writing, formatting and editing.

- Information and educational resources need to be clear, logical and easy to understand.

- The most appropriate method used to consult with stakeholders will depend on an organisation's policies, processes and culture.
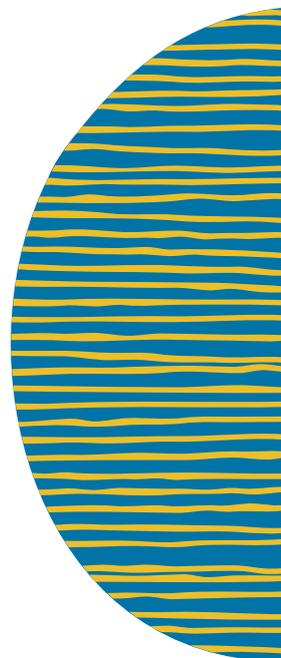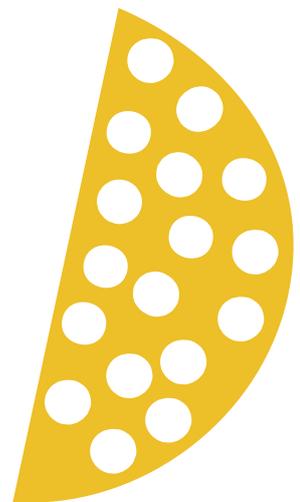
Learning Checkpoint 4

Develop staff and resources

Part A

1. Which of the following tasks are undertaken during the third phase of training needs analysis? Tick the correct response.

❑ Identify the knowledge, skills and/or abilities the organisation needs to achieve its goals.

❑ Compare the needed and actual knowledge, skills and/or abilities of the organisation's workforce.

❑ Identify any gaps in the needed and actual knowledge, skills and/or abilities of the organisation's workforce.

❑ Identify the cause of gaps in the knowledge, skills and/or abilities of the workforce.

❑ Identify organisational goals and strategic priorities.

2. List three examples of staff training relating to the legislative or organisational requirements of an information system.

3. Identify two experts who can assist with the development of educational resources.

Part B

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

Case study

Amelia works as a team leader at an organisation that provides services and supports to parents of children with disabilities. She has analysed the training needs of her team regarding the organisation's information system and now needs to develop an action plan for delivering that training.

She also needs to work with other team leaders to support and supervise the development of educational resources for staff to provide them with information about how to correctly record, store and access client data.

1. List three types of information Amelia should include in her training action plan.

2. Identify three things Amelia can do to support and supervise the development of the educational resources for staff.
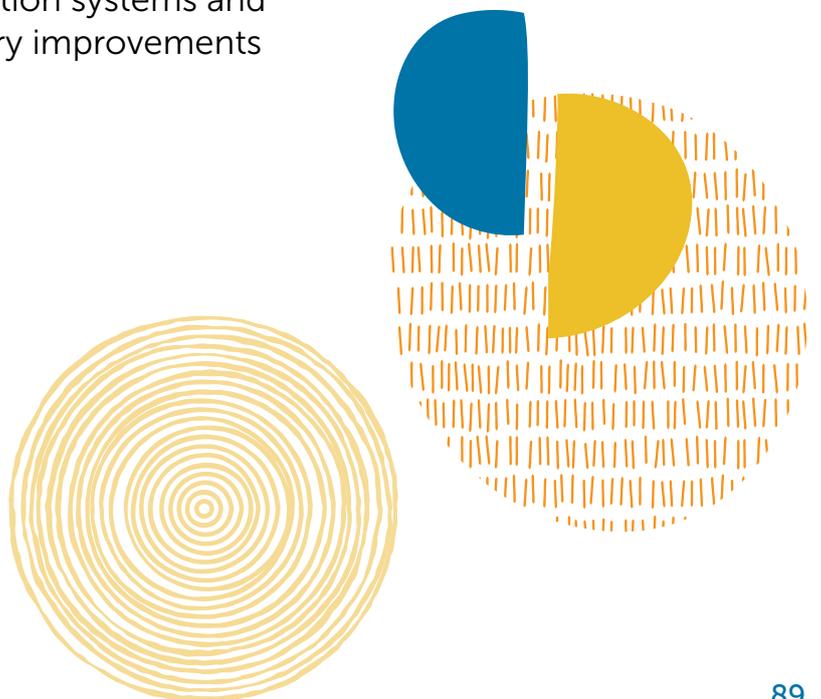
3. Amelia and her colleagues have a rough outline of an information sheet designed to provide staff with information about how to record client data correctly.

Provide examples of two questions that Amelia could ask her team to help develop the content and format of this document.

Topic 5: Evaluate and maintain quality information systems

5A Evaluate adequacy of information systems
for effectiveness and security

5B Monitor information, information systems and
resources and make necessary improvements

5A

Evaluate adequacy of information systems for effectiveness and security

Information systems need to be effective, efficient and secure.

By evaluating information systems, organisations can ensure that the information and data they collect and store is useful, reliable and safe.

Integrity of the information system is critical – it needs to be free from manipulation, such as the improper use of personal information or an accidental breach of data privacy.

When you evaluate an information system, you are ensuring that it is effective, efficient, secure and has integrity. Here is a description of each of these terms as they relate to information systems.

Effectiveness	The system successfully produces the desired result.
Efficiency	The system is producing the intended results with the least amount of time, effort and resources required.
Security	The system is safe from interference and malicious intrusion.
Integrity	The system performs as intended and is free from manipulation, whether intentional or accidental.

Evaluating systems routinely ensures that improvements can be made, and new approaches and technologies can be introduced when required. In other words, it is not enough to evaluate an information system once and then leave it to function as is.

Use strategies to evaluate information systems

There are three types of strategies for information system evaluation: goals-based, goal-free and criteria-based evaluation.

Here is a description of each type of information system evaluation strategy:

Goals-based evaluation	• Explicit goals for the information system are used to measure it.
	• A goals-based evaluation involves measuring whether predefined goals are met, to what extent and in what ways.
	• What is measured depends on the predefined goals for the system.
	• Both quantitative and qualitative measures can be used.

Goal-free evaluation	• No explicit goals are used in a goal-free evaluation. Instead, data is collected on a range of actual effects, and those effects are then evaluated according to their ability to meet demonstrated needs. • In a goal-free evaluation, there is no communication of system goals and no language relating to goals is used – only outcomes and effects are measured. • The objective and potential benefits of a goal-free evaluation are that it avoids a focus on narrow objectives and it avoids overlooking unintended outcomes.
Criteria-based evaluation	• For a criteria-based evaluation, some general criteria are used to evaluate the system. Criteria can be in the form of checklists, principles or quality ideals. • This method focuses on the information technology (IT) interface and/or the interaction between users and systems, with the criteria providing the basis for the evaluation.

Source: https://www.civilserviceindia.com/subject/Management/notes/evaluation-of-information-systems.html

Example
Evaluate adequacy of information systems for effectiveness and security

Neville works in the operations team of an organisation that provides mobile health services to people experiencing homelessness. One of Neville's responsibilities is to routinely evaluate the information system that the organisation uses to ensure it is working effectively and efficiently, and that the information in the system is secure.

The method Neville uses to evaluate the information system is criteria-based evaluation. He has a checklist that is based on a list of criteria to evaluate the system.

Introduce new methods as needed

Where an information system is not performing as required, new methods for recording and storing information will need to be implemented.

An evaluation of the adequacy of an information system may identify the need for new methods to improve its effectiveness, efficiency, security or integrity – on the following page are some examples.

Methods for improving the effectiveness, efficiency, security or integrity of an information system
Introducing a different interface that makes it easier for staff to enter data efficiently
Introducing a new file-naming convention for storing data
Scanning hard-copy documents into the system rather than entering data manually
Upgrading hardware or software
Outsourcing the secure destruction of hard-copy information
Implementing a system that enables staff to identify and report data breaches
Introducing new security procedures in a building, such as security doors with codes, to restrict access to spaces where staff access client information
Repositioning workstations so computer screens cannot be easily read by third parties

Practice Task 12

Question 1

Explain what is meant by the term 'integrity' when it comes to information systems.

Question 2

Briefly outline four methods for improving the effectiveness, efficiency, security or integrity of an information system.

5B Monitor information, information systems and resources and make necessary improvements

Ongoing monitoring of information systems and resources ensures that those systems remain effective and current.

Information systems need to be monitored on an ongoing basis; incremental improvements can be made to ensure the system is working effectively.

Consultation with users should be an integral part of ongoing monitoring of the system. Asking users to provide feedback on the system will help you identify potential improvements.

Develop a monitoring and evaluation plan

A monitoring and evaluation plan will help you determine what data you are going to collect for evaluation and monitoring purposes, how that data will be analysed and how the findings will be disseminated and/or used to improve the system.

Ideally, a monitoring and evaluation plan should be developed when you are designing the information system. This ensures that there is a strategy in place for monitoring and evaluation as soon as the system is implemented.

> A monitoring and evaluation plan will assist with maintaining quality information systems.

When monitoring the ongoing development of the information system, you will also need to monitor training resources – this includes any training provided to staff, as well as educational resources. For example, perhaps all new staff are provided with training on how to use a specific database and given written information about how to use specific software. You will need to monitor that training and those resources on an ongoing basis to ensure they are delivering the required outcomes.

The steps involved in developing a monitoring and evaluation plan are as follows:

Identify goals and objectives	Defining the goals and objectives of the information system involves determining what it is expected to do and how you will know that it is working.

Define indicators	Indicators allow you to track progress towards goals.
	Process indicators focus on what is being done to achieve the goals and answer questions about 'how much' and 'how many'. For example, how many training sessions have been delivered to staff?
	Outcome indicators track how successful the system is at achieving the outcomes. For example, outcome indicators might tell you whether there has been a reduction in the number of incomplete files.
Define data collection methods and time line	You must specify the methods you will use to gather data and how often that data will be collected.
	The source of data will depend on the indicator being measured. For example, if you are measuring whether training is effective, the source of data might include new employees who have undergone training.
	Once you have decided what data will be gathered, you will need to decide how often it is collected. For example, you could collect data from new employees about training every six months.
Identify roles and responsibilities	It is likely that multiple employees will be needed to assist with the process of data collection.
	It is important for employees to be aware early on of their roles and responsibilities when it comes to data collection.
Create an analysis plan	When data has been collected about the information system, it will need to be compiled and analysed.
	You will need to decide ahead of time who is going to analyse the data collected and how it will be analysed.
	Remember that qualitative and quantitative data are analysed using different methods and require different skills.
Plan for dissemination	You may need to disseminate the findings of your monitoring and evaluation activities to other people in your organisation.
	If this is the case, your plan should include information about how findings will be disseminated and how often.

Source: https://thecompassforsbc.org/how-to-guides/how-develop-monitoring-and-evaluation-plan

> For more information about developing a monitoring and evaluation plan, go to:
> aspirelr.link/mon-eval-plan

Consultation with users is essential in the process of monitoring information systems. Users have firsthand experience and knowledge of how the system is working and what could be improved.

Monitor information in an information system

Another aspect of monitoring information systems is to monitor the information itself.

When you monitor the information in an information system, you monitor the validity, currency and usefulness of that information. The meaning of each of these terms in relation to information is as follows:

Validity	The information is reliable – it is accurate and complete.
Currency	The information is up to date.
Usefulness	The information can be used for the purpose for which it was intended.

Where information in the system is no longer useful, it will need to be either stored or disposed of. You will need to take appropriate actions to store and dispose of information. For example, you will have organisational policies and/or procedures for the disposal of personal information, such as client records.

To ensure your organisation is meeting statutory requirements, it must take reasonable steps to destroy or de-identify information as needed – here are some examples:

| If destruction of personal information is outsourced, you must ensure that information is properly handled. |
|---|
| If your organisation disposes of personal information in the garbage or through recycling, it should be destroyed first via methods such as shredding or pulping. |
| When disposing of hardware, it needs to be 'sanitised' so stored personal information cannot be retrieved. |
| Backups of personal information in digital format need to be destroyed properly. |

Source: https://www.oaic.gov.au/privacy/guidance-and-advice/guide-to-securing-personal-information#destruction-or-de-identification-of-personal-information

Implement strategies to improve information systems and resources

Continuous improvement of information systems and resources is essential for ensuring the system remains effective.

The continuous improvement cycle provides a foundation for this process. Rather than waiting until a project, initiative or program is completed, this continuous improvement cycle is designed to allow for incremental changes over time.

The most widely used tool for continuous improvement is the plan-do-check-act (PDCA) cycle.
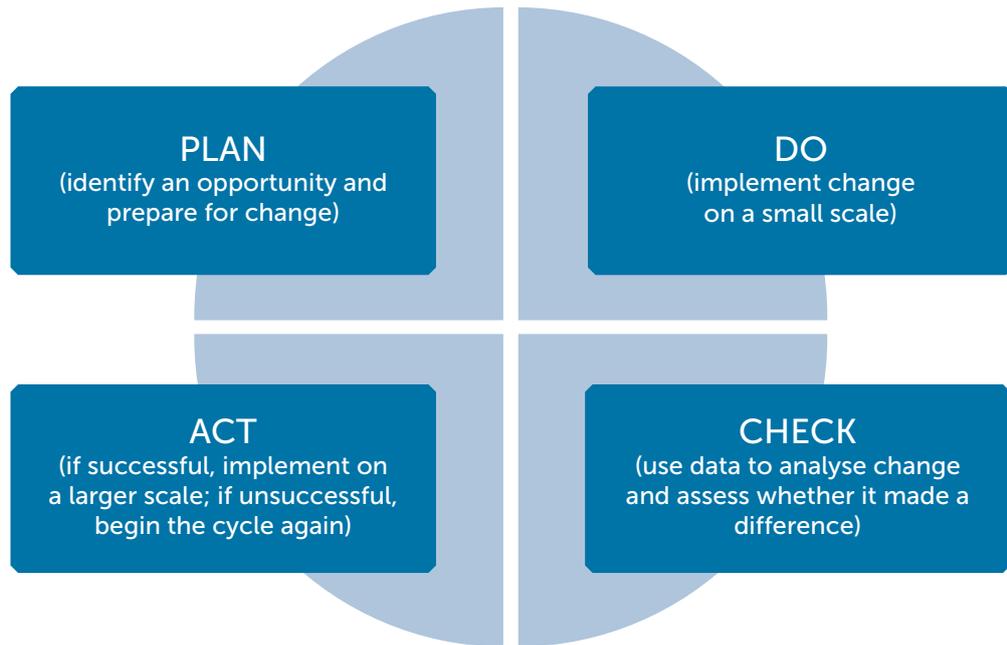
When using the PDCA cycle to improve information systems, you will need to:

- continuously identify opportunities for improvement to the system – for example, you could identify opportunities for improvement via user feedback

- prepare for change – consulting with users to prepare for change will be essential

- implement the change on a small scale – for example, perhaps implement it among a small group of staff in a single team

- collect data to analyse whether the change has made a difference – data could be quantitative or qualitative

- implement the change on a larger scale if it is successful – for example, roll out the change to multiple teams or sites

- begin the cycle again if it is unsuccessful – identify alternative opportunities to improve the system and follow the cycle through again.

Example
Monitor information, information systems and resources and make necessary improvements

Neville is using the plan-do-check-act cycle to monitor his organisation's information system on an ongoing basis. Users provide ongoing feedback on the system, such as information about unwieldy or inefficient processes.

Neville uses that feedback to identify opportunities for improvement, which he presents to a small group of users to evaluate its feasibility. He then implements the change among a small group of users and collects information from the system and/or the users to determine whether the change has solved the problem.

Where a strategy has been successful, Neville works with relevant colleagues to roll it out on a larger scale. Where it has not been successful, Neville tries another strategy, based on the opportunities identified by users.

Practice Task 13

Question 1

Number each step from 1 to 6 in the order you would follow to develop a monitoring and evaluation plan.

	Define indicators.
	Create an analysis plan.
	Plan for dissemination.
	Identify goals and objectives.
	Identify roles and responsibilities.
	Define data collection methods and time line.

Question 2

Briefly describe the meaning of 'validity' when it comes to the information in an information system.

Question 3

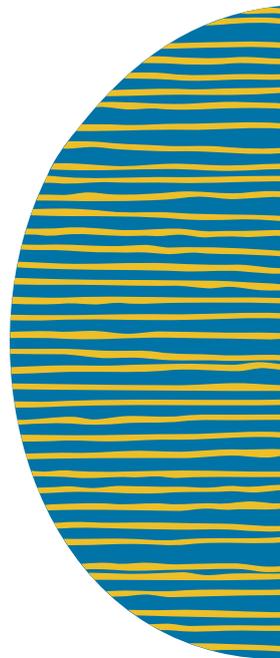Suggest an appropriate strategy for recycling hard-copy records that contain personal information.
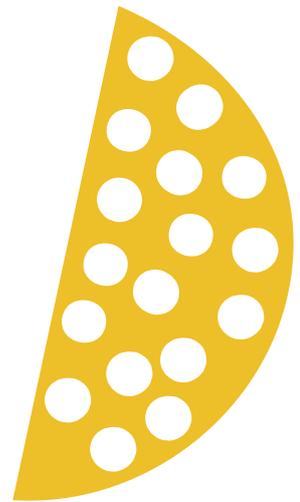
Question 4

Which of the following steps are involved in the continuous improvement cycle? Tick all that apply.

❑ Decide

❑ Plan

❑ Change

❑ Act

❑ Do

Summary

- Evaluations of information systems help to ensure they are effective, efficient, secure and have integrity.

- Information systems need to be monitored on an ongoing basis; incremental improvements can be made to ensure the system is working effectively.

- A monitoring and evaluation plan will help to determine what data needs to be collected, how that data will be analysed and how the findings will be disseminated and/or used.

- A monitoring and evaluation plan should be developed when an information system is being designed.

- Monitoring the information in an information system involves assessing the validity, currency and usefulness of that information.

- Information in a system that is no longer useful needs to be stored or disposed of.

- The continuous improvement cycle provides a foundation for the continuous improvement of information systems.

- The most common tool for continuous improvement is the plan-do-check-act (PDCA) cycle.

Learning Checkpoint 5

Evaluate and maintain quality information systems

Part A

1. Which of the following are potential benefits of a goal-free evaluation? Tick all that apply.

   ❑ Avoids a focus on narrow objectives

   ❑ Avoids unwieldy data collection processes

   ❑ Avoids overlooking unintended outcomes

   ❑ Avoids misinterpretation of data

   ❑ Avoids resistance from users

2. One of the steps involved in developing a monitoring and evaluation plan is defining indicators.

   Explain the difference between a process indicator and an outcome indicator.

3. Describe what a worker should do if they are using the plan-do-check-act cycle for continuous improvement, and a strategy they have implemented is unsuccessful.

Part B

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

> ### Case study
>
> Inge works at a small organisation that provides a range of supports to refugees and asylum seekers and their families.
>
> She is responsible for evaluating and maintaining the information system at the organisation. As part of her role, Inge needs to monitor the ongoing development of the information system and identify potential improvements. While evaluating the system her organisation uses to record and store data, Inge discovers a problem.
>
> A client who came to the office was walking past a staff member who was entering information into another client's file. The client looked over the staff member's shoulder and said that he knew the person whose file was being updated and asked if he could take a closer look at it.
>
> When discussing the problem with other users, Inge discovered that other staff are very aware of this risk but are unsure how to resolve it.

1. Suggest at least one strategy Inge could implement to ensure the security and integrity of client information.

2. The current procedure in the organisation is to replace hard drives on a three-yearly basis. Briefly outline what Inge's organisation should do before the old hard drives are replaced.

Glossary

Brainstorming

An unstructured method of generating ideas used by a group of people to solve a problem.

Confidentiality

The principle of keeping personal information private, unless the person consents to sharing the information with other parties.

Corrective action

An action that eliminates the cause of a problem or undesirable situation.

De-identified information

Information from which an individual's identity is no longer apparent or cannot be ascertained.

Informed consent

Permission granted by a person who has full understanding of the reasons and consequences of what they are agreeing to.

Personal and sensitive information

Information that is protected by law and must be carefully protected from unauthorised access.

Policy

A course of action proposed by an organisation as a basis for making decisions.

Privacy

A fundamental human right designed to protect people from intrusion and to selectively express themselves.

Procedure

An established or official way of doing something.