

BSBINM601

Manage knowledge and information

Release 1

Learner guide

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Aspire Version 1.1

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BSBINM601 Manage knowledge and information Release 1

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Before you begin

This learner guide is based on the unit of competency *BSBINM601 Manage knowledge and information*, Release 1. Your trainer or training organisation must give you information about this unit of competency as part of your training program. You can access the unit of competency and assessment requirements at: www.training.gov.au.

How to work through this learner guide

This learner guide contains a number of features that will assist you in your learning. Your trainer will advise which parts of the learner guide you need to read, and which practice tasks and learning checkpoints you need to complete. The features of this learner guide are detailed in the following table.

Feature of the learner guide	How you can use each feature
Learning content	Read each topic in this learner guide. If you come across content that is confusing, make a note and discuss it with your trainer. Your trainer is in the best position to offer assistance. It is very important that you take on some of the responsibility for the learning you will undertake.
Examples and case studies	Examples of completed documents that may be used in a workplace are included in this learner guide. You can use these examples as models to help you complete practice tasks and learning checkpoints. Case studies highlight learning points and provide realistic examples of workplace situations.
Practice tasks	Practice tasks give you the opportunity to put your skills and knowledge into action. Your trainer will tell you which practice tasks to complete.
Video clips	Where QR codes appear, learners can use smartphones and other devices to access video clips relating to the content. For information about how to download a QR reader app or accessing video on your device, please visit our website: www.aspirelr.com.au/help
Summary	Key learning points are provided at the end of each topic.
Learning checkpoints	There is a learning checkpoint at the end of each topic. Your trainer will tell you which learning checkpoints to complete. These checkpoints give you an opportunity to check your progress and apply the skills and knowledge you have learnt.



Foundation skills

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

The following table outlines specific foundation skills noted for your learning in this learner guide.

Foundation skill area	Foundation skill description
Reading	<ul style="list-style-type: none"> Organises, evaluates and critiques ideas and information from a wide range of complex texts. Draws on a broad range of strategies to build and maintain understanding throughout complex texts.
Writing	<ul style="list-style-type: none"> Generates complex written texts, demonstrating control over a broad range of writing styles and purpose Demonstrates sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning
Oral communication	<ul style="list-style-type: none"> Encourages discussions and applies appropriate listening and questioning techniques while consulting with specialists and other relevant personnel Presents complex information in formal situations using language, tone and pace appropriate for the audience and purpose
Numeracy	<ul style="list-style-type: none"> Uses highly-developed numeracy skills to interpret complex statistical and researched information, performing calculations on data to render it usable and reportable
Navigate the world of work	<ul style="list-style-type: none"> Works autonomously making high level decisions to achieve and improve organisational goals Takes a lead role in the development of organisational goals, roles and responsibilities Develops and implements strategies that ensures organisational policies, procedures and regulatory requirements are being met Monitors and reviews the organisations policies, procedures and adherence to legislative requirements in order to implement and manage change
Interact with others	<ul style="list-style-type: none"> Uses a variety of relevant communication tools and strategies to access and share information and to build and maintain effective working relationships

Get the work done	<ul style="list-style-type: none"> • Plans and manages activities with implications for the whole organisation • Gathers and analyses data and seeks feedback to improve plans and processes • Makes high impact decisions, analysing input from a range of sources and, where appropriate, drawing on experience • Explores new and innovative ideas through analysis and critical thinking • Uses digital technologies to manage business operations and actively investigates new technologies for strategic and operational purposes
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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 Obtain information relevant to business issues	1A Review staff and customer feedback and business performance data	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1B Identify, define and analyse business problems and issues	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1C Identify information required to reach a decision on problems and issues	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1D Source, gather and test information for reliability and validity and reject where necessary	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	1E Utilise and review formal and informal networks to access corporate knowledge not held in formal systems	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
Topic 2 Analyse information and knowledge	2A Ensure objectives for analyses are clear, relevant and consistent with required decisions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2B Identify patterns and emerging trends and interpret cause and effect	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2C Utilise and interpret statistical analyses	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident

Topic	Key outcome	Rate your confidence in each section
	2D Undertake a sensitivity analysis for all options	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2E Ensure documentation reflects the evaluation and conclusions	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	2F Adjust management information systems to meet information processing objectives	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
Topic 3 Take decisions on business issues identified	3A Ensure information is sufficient, valid and reliable to support a decision	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3B Utilise risk management plans to determine courses of action	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3C Utilise appropriate quantitative methods to assist decision-making	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3D Consult specialists and other relevant groups	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3E Ensure decisions are taken within a person's delegated accountability	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	3F Make timely decisions consistent with organisational guidelines, procedures, objectives and values	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident

Topic	Key outcome	Rate your confidence in each section
Topic 4 Disseminate information to the organisation	4A Ensure information needs are documented appropriately	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	4B Document information and ensure it is up to date, accurate, relevant and sufficient for the recipient	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	4C Develop and review communication plans and disseminate information in accordance with privacy policies	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	4D Design and test systems to ensure they provide optimum efficiency and quality and meet information requirements	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident
	4E Maintain corporate knowledge and security	<input type="checkbox"/> Confident <input type="checkbox"/> Basic understanding <input type="checkbox"/> Not confident

Topic 1

Obtain information relevant to business issues

The availability of immediate, relevant data and knowledge in any business is vital for it to maximise opportunities and succeed in an increasingly competitive and expanding global market. An important part of your role as a leader is to access and review data that can be used to inform decision making in your organisation.

In this topic you will learn how to:

- 1A Review staff and customer feedback and business performance data
- 1B Identify, define and analyse business problems and issues
- 1C Identify information required to reach a decision on problems and issues
- 1D Source, gather and test information for reliability and validity and reject where necessary
- 1E Utilise and review formal and informal networks to access corporate knowledge not held in formal systems

1A

Review staff and customer feedback and business performance data

A responsibility for most managers is to review feedback obtained from staff and customers in order to monitor organisational performance. This means accessing the organisation's knowledge management system. Make sure you are familiar with the system so you can locate the data and information that you need quickly and efficiently. For example, you may need to search relevant databases, intranets and websites, and speak with relevant personnel to find the information you need.

Management's role in managing information

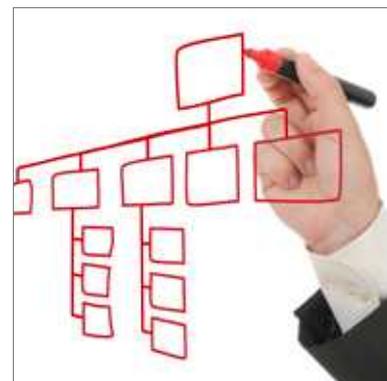
Capturing knowledge and experience that has been built by an organisation and the individuals within it can assist the performance of staff and managers and should therefore be a priority in any business planning and operations. Leaders are responsible for contributing to the development and implementation of goals and strategies that ensure critical knowledge and information is readily available for review and the organisation's performance can be monitored and important adjustments made as required. When implementing or updating an information or knowledge management system, a manager must be aware of implications relating to the following legislation, policies and procedures.

Legislation, standards and policies

- The *Privacy Act 1988* and the Australian Privacy Principles
- *Freedom of Information Act 1982*
- Australian Standard AS 5037-2005 Knowledge management – a guide
- Records management and information management policies and procedures
- Customer service policies and procedures
- Confidentiality policies and procedures

Consider needs of users

Knowledge management is a continuous process. Information must be collected, analysed and made available on an ongoing basis in order to inform responsive decision making within an organisation. When undertaking such tasks, it is important to consider the needs of all users of your knowledge management system. This means considering various departments and levels within the organisation. For example, the need to understand and use the system is different for a customer service officer in a retail organisation than it is for a storeperson in its warehouse or a department manager. The customer service officer may need to be aware of how many units of an item are available during a sale; the storeperson may need to extract data about stock levels and reorder or increase levels of available stock; the manager may need to be aware of this procedure for ordering purposes but also needs to be able to extract information on the quantity of stock that has been purchased and the total expenditure. It is therefore vital to understand your organisational structure and the roles and responsibilities within each department.



Delegation of tasks

Although you are responsible for contributing to and monitoring knowledge management within your organisation, you may choose to delegate some of the tasks to others in your team. Delegation refers to the assignment of a task or responsibility for something or someone to another person, giving them authority in that area. Taking a lead role in developing roles and responsibilities for others is a key aspect of leadership. Further details and tips on delegation are provided here.

The advantages of delegation

Delegation has many advantages, including:

- increasing the manager's discretionary time, meaning more work can be done in other areas
- developing the capabilities and knowledge of the team member to which the task has been delegated
- demonstrating trust and confidence in that team member
- maximising the quality of decision making by involving others
- improving the efficiency of decisions.

How and when to delegate tasks

The following questions may help you when delegating tasks involved in managing information and knowledge:

- Is there someone in my team with the appropriate qualifications?
- Will the task enhance the skills and experience of my team member?
- Will their involvement and commitment enhance successful implementation?
- Is there sufficient time to delegate effectively?

Tips for effective delegation

If you decide to delegate, here are some tips to do so effectively and achieve the desired outcome:

- Work within the organisational structure when selecting a delegate.
- Determine whether you delegate completely or partially, being careful to give appropriate autonomy.
- Provide adequate support.
- Link accountability to results.
- Be consistent in who you delegate to and how.

Feedback

Organisations seek feedback for many reasons and from a range of different sources. The two main sources of feedback are customers and staff because it is these two groups that are most likely to determine the success of a business. It is therefore important that managers listen to what each of these groups say in terms of how the organisation is currently meeting their needs and how it can improve. Such feedback can help measure performance, assist in identifying new markets and ideas, inform decision making and help plan for the future.

Feedback from both staff and customers can be collected informally, through open discussion in a range of forums, and formally, through more structured questioning in the form of interviews, surveys and questionnaires. Here is some information on three types of feedback.

Performance data

This can be a range of data that encompasses the various aspects of performance of your organisation, including financial performance, sales, profit and loss, compliance, efficiency, etc. It is generally data that describes how well the business is doing.

Performance is most commonly measured through data, or metrics, often in the form of key performance indicators (KPIs), management dashboards and 'phone directory-type' performance reports. For example:

- Call centre staff will answer 75 per cent of calls within 20 seconds.
- The production team will achieve a 10 per cent reduction in re-work within 6 months.

Staff feedback

Seeking feedback from staff is a crucial responsibility for an effective organisation. Staff can inform management of issues that managers may not be aware of, and provide information on morale, work practices, resourcing problems etc. Feedback is generally subjective so can contain views and suggestions from different perspectives.

A recent survey of Australian accounting firms found that less than 25 per cent of participating organisations regularly sought employee feedback in the form of surveys. Results also showed that, of the lowest performing organisations in the survey, only 10 per cent surveyed staff regularly and, of the highest performing organisations, almost 50 per cent did. This correlation indicates that gaining valid and reliable staff feedback may have a significant effect on performance.

The survey is available at: www.futuritysolutions.biz/research.

Customer feedback

Customer feedback is one of the most powerful tools an organisation can have in determining current and future success. Customer feedback can be:

- qualitative; that is, information via feedback that makes a specific comment about something
- quantitative; that is, statistical information, such as the percentage of satisfaction with a product or service; the number of complaints received.

Collect staff feedback

Traditionally, seeking feedback from staff may have been as simple as having a suggestion box in the staff room or a spontaneous chat at the coffee machine. However, the advent of technology and our knowledge-based economy means organisations must seek more varied detailed conversations with employees to achieve optimal success. The following information outlines five methods for collecting feedback.

Informal methods

Employees will happily give feedback if they are comfortable with the means by which it is solicited and, since everyone has their own preferred working and communication styles, a range of options is necessary in order to engage all staff. Informal feedback collection opportunities include:

- open discussions in staff meetings
- one-on-one discussions with managers
- impromptu group discussions
- open office policies.

Such informal methods are most likely to elicit qualitative data.

Formal methods

More formal, or structured, tools for collection of feedback data can target both qualitative and quantitative information. Such tools include:

- regular surveys completed in writing or online, usually during work hours
- incentive schemes that encourage new ideas and innovations.

Some organisations outsource the collection of data from staff to a specialist consultant who designs surveys and other data collection tools to meet the needs of the organisation. Software is also readily available to assist organisations in developing their own surveys, such as SurveyMonkey and The Survey System.

Data to collect

Whatever the data collection methods used, common data that organisations seek from staff includes:

- demographics of their staff, such as age and gender
- level of employee engagement
- communication with management
- availability of the right tools, information and time to do the job
- level of security felt
- perception of the workplace culture
- opinion on the work environment
- opinion of support from peers
- improvement ideas
- work–life balance
- thoughts on their future with the organisation
- reasons for high turnover.

Comprehensive survey

Conducting a full staff survey is often the most recommended method for gaining reliable and actionable feedback. It is recommended that this be undertaken regularly, but no more than once per year, to ensure interest is maintained. If surveys are conducted more often they should be short (no more than 10 questions) and are sometimes referred to as ‘pulse’ surveys.

Even though the original suggestion box may seem outdated when online tools are readily available, it does not mean that their ability to provide useful data is diminished. It may be a simple way to let employees know you are interested in their opinion in between survey times. Online versions of the suggestion box can also be utilised, such as an anonymous portal on the staff intranet or an online bulletin board staff may post to.

Exit interviews are useful for finding out what departing employees think of the organisation.

Encourage participation

Usually staff are keen to provide their opinions and are pleased to be asked, although it can sometimes be a challenge to get high participation levels, given that the time and commitment involved sometimes conflicts with workloads. Organisations can maximise participation in staff feedback events in the following ways:

- Offer the option of anonymity.
- Ensure easy access.
- Ensure management encourages and supports the survey.
- Provide incentives for completion.
- Allow completion in work time.
- Initiate a staff meeting or group completion session.
- Offer a range of completion formats and options to suit staff preferences.

Review and analyse staff feedback

Once data is collected, it is important that you close the loop by reviewing and acting upon it and, most importantly, by feeding back the results and actions to staff. This can be achieved by sharing at least some of the results with the whole organisation and setting benchmarks for improvement. Always involve staff in implementing initiatives towards meeting the new goals, such as a team bulletin board, regular team updates and reports in staff meetings.

In reviewing staff feedback, it may be a good idea to divide data into two categories: results to be addressed at higher management level and results to be addressed at departmental level. This way appropriate actions and decisions can be made more effectively and efficiently. Follow the steps below when reviewing feedback data.

The feedback review process

1**Look for a theme**

What has been reported by the most staff and who is most affected?

2**Look for sub-themes**

Is one team happy with the workplace culture and others not?

3**Distribute findings**

Compile data using appropriate analysis methods and make it available to staff, even if you are unsure of the actions to take.

4**Identify areas to address**

Decide where changes or actions are needed.

5**Consult with a range of stakeholders**

Seek input on changes from peers, management, affected staff and even customers.

6**Formulate changes**

Design, implement and document strategies for change.

7**Develop objectives**

Set targets and measures to determine if/when objectives are met.

8

Monitor progress

Check progress towards achieving objectives.

Example: implement and review staff feedback

A large department store conducts a pulse survey of front-of-house staff part way through the busy Christmas shopping period. The purpose of the survey is to see whether staff are coping with the increased level of sales and that staffing levels are appropriate to cater for the extra workload. A couple of questions are also included in the survey to gauge whether the staff think that, in general, their customers are happy with service at this time.

Mike, the manager responsible for the survey, plans to include only counter and floor staff in the survey, as he believes casual, seasonal gift wrappers are only temporary workers who have little understanding of the company and won't be around for long anyway. Angela, the homewares department manager, argues successfully that gift wrappers should be included as they can have a major impact on sales. She explains that:

- if they walk off the job, pass their dissatisfaction onto customers or aren't well trained, the company loses money
- gift wrapping still represents an important step in the service delivery process
- gift wrappers can be a source of valuable information about customer satisfaction; for example, when customers are having their purchases wrapped they are relaxed and can offer vital feedback about their shopping experience.

When data is collected and analysed following the pulse surveys, the organisation finds that including gift wrappers in the survey led to additional training being offered to wrappers for the remainder of the sale period. They were instructed to engage in friendly discussion with customers and ask specific questions to find out what customers were saying about their overall experience and to ensure they ended the transaction with a specific farewell, such as 'Thank you for choosing to shop with us. I hope they like the gift. See you again soon. Merry Christmas!'



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Seek customer feedback

One of the best ways to ensure you keep your existing customers, and then find out how to attract new ones, is to ask them what they think. Of course, customers can often tell you what they think without you asking! But remember, both methods for receiving feedback are equally important. Customer feedback can be positive and negative, as described in the following.

Positive and negative feedback

- Positive feedback confirms that you are on track in effectively delivering products and services.
- Negative feedback can provide valuable insights into how your business processes can be improved. It also presents an opportunity to turn a customer's negative experience into a positive one.
- Feedback can also prompt you to develop a unique product or service that differs from that of your competitors.

Word-of-mouth marketing

- Positive word-of-mouth can increase referrals and new customers but negative referrals can do just the opposite.
- Anecdotal evidence suggests that customers may tell one or two people they know about a positive experience but may tell up to 10 people about a negative one. So the ability to turn around a negative experience is an important marketing tool.

Collect customer feedback

As with staff feedback, methods for collection of data from customers can be informal and formal. It may simply be talking to them about how they feel your business, products or services can be improved or it might be seeking detailed information via a survey. Common data collection methods for seeking customer feedback can include the following.

Surveys

Surveys or questionnaires may be a printed or an online form available at reception, on the website or at the front counter. Surveys could also be targeted at segments of your customer base, via mail out or email.

Feedback forms

These may be left in a prominent position in your business for customers to access. Most businesses now have an online feedback form or other mechanism, such as a blog, where customers can leave comments and/or suggestions.

Social media channels

Use social media to engage with your customers by posting questions about your products and services and asking for their feedback directly. You can also use the tools or apps available within your social media platform, such as polls and surveys, to help you gather feedback.

Phone or email

A customer feedback hotline or email can be set up specifically to receive customer comments. A short telephone survey at the end of a customer call is also becoming common practice.

Focus groups

Focus groups and interviews can involve a select group of customers who are asked to attend an interview or group forum where they can try products or services and then provide feedback on their experience in either a group or individual environment.

Secret shopper

Many organisations employ people to act as a customer and to report back to the organisation on their experience using defined criteria. Results are then fed back to the staff and managers involved and can inform improved product or service delivery.

After sales

Customers can be contacted directly after purchasing a product or service and asked to provide feedback on their experience.

Review customer data

Analysing statistical data, such as sales, returns and profit and loss can be an indirect but useful method for understanding customer trends and preferences so that you can better cater for their needs. For example, your sales data may show that customer contact numbers increase over lunch, so you may stagger staff breaks to maximise staffed sales counters or telephones during this time to ensure your customers receive timely and prompt service.

Tips for collecting customer feedback

The methods you choose to collect customer feedback data depends on your customer base and the type and size of your business. However you seek or receive customer feedback, you should follow these tips:

- Make it as easy as possible for your customers to give their suggestions or ideas for improvement.
- Ensure you take the time to action feedback.
- Thank customers for taking the time to provide their feedback.
- Where possible, inform the customers of the action you have taken as a result of their feedback.



Analyse customer feedback

It is important that you analyse and act upon the data collected to identify trends and improvement opportunities and inform decision making and change as necessary. Customer feedback, coupled with your own analytical data, gives you a clearer insight into customer needs and habits and where you might be falling short in meeting those needs or capitalising fully on those habits. Here are some tips for managing the volume of feedback you may encounter.

Deal with volume

With the advent of the internet and social media, customers are actively providing feedback and you will likely have more feedback and ideas than you can manage! Analysing and reviewing this volume of data can be a real challenge for some organisations and many have employed whole departments specifically for this role.

Identify trends

No matter what you do, you will not be able to act on every piece of feedback you receive. You won't have the resources and you may not want to act on everything. So the challenge is to analyse the data and look for trends. Issues that are mentioned often, by a range of customers and via a range of data collection methods, will be the issues that must inform your decision making and therefore must be documented and disseminated within your organisation.

Review business performance data

The performance activities of an organisation must be documented to provide a record of the operation of the business. The data and information records kept are analysed to monitor, control and determine the performance and effectiveness of the systems the organisation has in place. Records are also kept in accordance with legislative requirements and can be used to reconcile various accounts, investigate anomalies, provide information to regulatory bodies and provide evidence at audit time. Performance must continue

to be reviewed and analysed for an organisation to remain competitive and profitable. Improvements to existing processes need to be identified, implemented and monitored to ensure the organisation continues to achieve its financial objectives. Performance data collected by an organisation may include the following.

Sales figures

Sales figures contain the value and/or amount of the total sales for an organisation for a given period of time. Depending on the industry, this may be daily, weekly, monthly, quarterly, annually or a combination of all of these; for example, in retail or other direct sales industries.

Sales figures are often generated automatically via automated point of sale terminals. Individual departments/outlets may need to report sales to a central person or department, such as finance, according to a defined time line.

Staff performance appraisals

Most organisations have defined policy and procedures for managing staff performance. Staff performance appraisals may be conducted by a manager on a six-monthly or yearly basis. These contain information about how the staff member has performed in their role against a set of pre-determined criteria, such as number of new loans approved or number of items shipped from the warehouse by their team. Some criteria may be less tangible, such as level of satisfaction within the team they manage.

Performance appraisals are also an opportunity for two-way feedback; staff can often provide data that can have an impact on decision making, such as a desire to undertake further study or training.

Third party reports

In business, a third-party is someone who is not directly related to or managed by either the party offering a product/service – the first party (or vendor) or the second party – the customer. The third party may or may not be employed by one of the other parties but is considered independent in relation to that transaction.

Third party reports are often commissioned by organisations but can also take the form of unsolicited reports produced by external organisations, such as consumer groups, media or business monitoring organisations. Examples might include audits, business analysis or research reports.

Community perception

Large organisations are increasingly becoming more aware of and interested in the power community perception can have on overall success. They invest millions in targeting issues they know may sway public opinion, such as sustainability, environmentally friendly products and procedures and healthy lifestyle. They may invest in the communities they are based in to ensure ongoing support and customer approval.

Given the investment in such initiatives, it is important for organisations to measure the success of their strategies. This is often done via community surveys, conducted using methods much like those designed to elicit customer feedback.

Market share

Market share is the percentage of a market that an organisation controls or is able to reach with its products or services. It is measured in dollar or unit terms, or sometimes both.

Market share is not constant and must be monitored continuously in conjunction with sales targets and actual sales. Market share changes as the market either grows or contracts for a range of reasons. Having data about market share is vital as it:

- demonstrates whether targets are being met in a real sense
- assists organisations in monitoring market conditions
- allows an organisation to grow or contract according to market conditions
- is a key indicator of market competitiveness
- assists organisations in determining how their performance compares to competitors' performance
- identifies opportunities to increase market share by capturing share from competitors.

Market share and sales

When market share analysis is coupled with data about sales, managers are able to evaluate both primary and selective demand in their market, gaining an insight into total market growth or decline, as well as trends in customers' selections among competitors. For example, sales growth resulting from primary demand (total market growth), less growth share captured from competitors is therefore more profitable than just market share captured from competitors.

On the other hand, a detected trend in loss of market share may need to be addressed strategically in order to avoid long-term problems. With these insights, effective decisions can be made related to developing an appropriate growth strategy.

Practice task 1

1. Research and describe what a management dashboard is and when it is used.

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2. Why is it crucial for an organisation to collect feedback from staff and customers?

3. Describe the range of feedback methods used in your organisation or an organisation you are familiar with.

4. How are feedback results managed (recorded, reviewed and reported)?

1B

Identify, define and analyse business problems and issues

The review and analysis of data, once collected, can identify trends which, in turn, may lead to the identification of significant issues or problems within an organisation. The data can also be analysed with a view to informing important decision making. For example, information from performance appraisals for a team may reveal that several staff have the same performance issue that could be addressed through training; the manager can then decide to plan for and implement that training.

Common business problems and issues

If organisations do not collect and manage data about themselves, their operations and their performance on a regular and ongoing basis, they are not tapping into new opportunities to learn and grow. More importantly, failure to regularly collect relevant and reliable data means that an organisation is not able to identify current or impending problems or issues that could impede success, or analyse emerging trends. Complaints may escalate. Problems found may be internally generated or be the result of external factors. Either way, failure to act or plan to manage issues or problems may result in reduced business performance or failure in the future.

Issues or problems may be:

- financial; for example, poor cashflow or high percentage of bad debt
- operational; for example, lack of knowledge or training of staff; not enough resources to complete work efficiently and effectively
- cultural; for example, an aging workforce or one which is dominated by one gender
- behavioural; for example, poor performance or poor work ethic amongst the workforce.

Manage data for continuous improvement

Managing data for continuous improvement of business performance involves a number of steps.

Steps for managing data

1. Establish objectives.
2. Collect data.
3. Sort data.
4. Understand data.
5. Communicate results.
6. Initiate decision-making.
7. Measure success.

Continuous data analysis

When data is collected on an ongoing basis, the analysis cycle must also be ongoing. Effective data analysis is critical in supporting actions and making informed decisions. Data analysis is the process of inspecting, extracting, categorising, understanding and annotating data in order to discover useful information, identify trends and issues and support decision-making. In order to analyse raw data, you need to follow a number of steps.

Annotate

- Develop a process for keeping notes from individual sources.
- Consolidate these pieces of information together.
- Identify and note themes.

Summarise and generalise

- Draw some relative generalisations (rather than conclusions) from the whole range of data collected.
- What patterns do you notice?
- What are the deviations?
- What are the emerging themes?
- Summarise and generalise using figures and quotations.

Code

- Develop classifications by which to group your data; for example, 'Order processing', 'Order shipment' and 'Post-sales service'.
- Code data so that it can be used and interpreted.
- Codes must be mutually exclusive.
- Codes must be exhaustive.
- Codes must be applied consistently throughout.

Surmise

- What pattern do you see?
- What does this graph tell you?
- Who could use this data? How could they use it?
- Why is this data shown in a line graph?

Concurrent analysis

Often, the concurrent analysis of two or more different sets of data, can lead to a more reliable identification of trends, problems or issues that need to be addressed. You are likely to gain information from different perspectives. The more information you receive, the better chance you have of identifying issues. Consider the following process for comparing two different samples of data collected from customer feedback.

Concurrent data analysis

- Collect data from two different sources: from surveys where responses are quantified and qualitative feedback from focus groups.
- Analyse individual findings.
- Consolidate quantitative and qualitative findings to obtain a picture; for example, response and order processing times; opinions relating to service quality.
- Summarise and report the findings to enable decision-making.

Types of data

The data your organisation chooses to collect depends on the type of business, the products and services offered and the business objectives. For example, a retail organisation is interested in sales and customer-related data, whereas a service provider is interested in its ability to meet aims defined in its Service Level Agreement. Most large organisations focus on a range of data and have a range of established collection methods used to identify trends, issues or problems. Examples of the data collection methods used for various trends, issues or problems are provided here.

Data collection methods
<p>Customer satisfaction</p> <p>Customer surveys, feedback forms, complaints, returns</p>
<p>Staffing problems</p> <p>Staff surveys, exit interviews, complaints to management</p>
<p>Financial problems</p> <p>Statistical data, such as profit and loss, balance sheets</p>
<p>External factors</p> <p>Economic data, third-party reports</p>
<p>Operational issues</p> <p>Audit results, cycle time, production data, labour and resources statistics</p>

Example: identify and analyse problems and issues

Robert has just taken over the role of ordering stock for the five takeaway outlets that operate within the grounds of the state zoo. Each of the outlet supervisors complains that they often run out of food, which makes customers angry. Robert asks them to identify which food items are most popular. They simply tell him 'It varies' and 'It's hard to say'.

Robert develops a theory that he'd like to test so that he can provide a better balance of stock to the outlets to meet daily demand. He thinks demand for food is linked to the weather conditions, so collects and analyses the weather forecasts for the past month. He identifies the periods of warm, cool, fine and rainy weather and maps them on a graph. Then he collects attendance figures for the same period. He also plots these on the graph then compares the results; not surprisingly, he finds a pattern of high attendance in fine, sunny weather and lower attendance on cooler or wet days for that period. He also sees a spike in attendance on weekends, as expected. So he knows he needs to provide more stock to outlets on the warmer, sunny days and on weekends.

Robert then looks at figures for sales of individual items in the same period. This takes a little more work but he is able to identify that the buying patterns of zoo visitors is directly related to weather conditions and days of the week. He can see a trend of an average 70 per cent spike in ice-cream sales on days over 30 degrees. Hot pies and chips emerge as popular choices on cooler days.

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Robert is now able to determine the average level of increases and the market sensitivity on particular days of the week and in certain weather conditions, and can better plan for the needs of individual outlets. An interesting by-product of his data analysis is that the food outlet at the front entrance serves the most coffee in the whole zoo, with sales spiking around opening and closing times. He orders more coffee for this outlet and is able to advise management that an extra staff member could be located there at those times and then moved to the busier main outlet in the centre of the zoo to cover the lunch rush.



Practice task 2

1. What are the benefits for an organisation of regularly identifying and analysing business issues? List three benefits.

2. Why is it essential to use information from a range of data sources when analysing a problem or issue rather than limit yourself to one source?

3. Choose from these options and record the most appropriate data source for data identification and analysis outlined in the table (the first one has been completed for you).

- | | |
|----------------------------|--|
| • Customer surveys | • Units and sales reports to conduct trend analysis |
| • Feedback forms | • Statistical data from gross profit, sales revenue, and costs reports |
| • Complaints | • Third-party report |
| • Returns | • Audit results |
| • Staff surveys | • Cycle time |
| • Exit interviews | • Incident reports |
| • Complaints to management | |

continued ...

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Data	Source
Seeking information on why staff members leave the company	Exit interviews
Seeking confirmation of a team member's performance	
Identifying how many customers were not satisfied with a newly released product	
Identifying how many accidents occurred during the past month	
Determining the number of sales transactions across a 12-month period and comparing three 12-month periods to identify seasonal trends	
Determining reasons for reduced net profitability over the past six months	

1C

Identify information required to reach a decision on problems and issues

Business problems or issues are often complex and involve multiple factors, stakeholders and influences. So it is important that relevant and sufficient information is collected in order to inform decision making that will lead to a solution. It is rare that one type of data will contain enough information on its own to assist in this process.

Access a range of information

It is not enough for a store manager to look at an empty shelf and conclude that a particular product is popular and stock levels should be increased. Perhaps one customer purchased all of the stock in a single transaction. Maybe the floor staff were distracted and neglected to refill the shelf. Decision-making in an organisation requires analysis of a range of information in order to determine the cause of a problem and then identify a solution and measure its success – rather than a spontaneous cause and effect approach. While an experienced manager can draw upon their years of knowledge and experience to trust their instincts in business, they know that this alone is not enough to inform important decision-making and things are not always as they seem.

Data used in decision-making and problem-solving must be:

- Relevant – appropriate to the problem at hand
- Sufficient – enough to demonstrate a trend and draw a reliable conclusion
- Valid – able to be relied upon for accuracy
- Robust – strong enough to clearly demonstrate trends and patterns

Data mining

Data mining, also referred to as data discovery or knowledge discovery, is the process of sourcing and analysing data from different perspectives and summarising it into useful information. More detail is provided below.

Processing data

Data mining is commonly undertaken automatically using specialised software. The software takes raw data input into the system and analyses it from many different angles, categorises it and summarises the relationships identified. Then, when a discovery request is made, it can process the data and provide a response, sorting data to meet the needs of the discovery request.

Automatically processed data can also be used proactively to assist an organisation in determining relationships between internal factors such as price and quantities available and customer buying patterns so they can better prepare to meet market demand. For example, the organisation can determine when increased stock is required to meet seasonal demands, such as Christmas, and ensure automatic orders for stock are generated, taking into account such seasonal adjustments.

Applications

An organisation may use the data analysed to manage everyday operations and problems or issues arising in a number of ways:

- Stock levels can be monitored, triggering automated re-ordering when a predetermined level is reached.
- Staff can be directed to restock shelves when a pattern indicates a spike in sales.
- The service desk staff can determine when an item that is currently out of stock will be arriving again in store and arrange a raincheck for customers.
- Marketing and management can distinguish buying patterns and establish popular brands to inform planning for future sales and promotions.

Example: identify the information for decision-making

A bank manager, Carol, wants to address the problem of increased customer complaints about waiting times for tellers. She decides that she is going to employ a part-time teller to support the others in busy periods and is undertaking research to determine when and for how long to employ this extra person.

Carol initially assumes her branch is just getting busier and she needs more staff, simply because customers are complaining more. However, when she collects and analyses the data, she finds that due to a recent marketing promotion there has been a notable increase in applications for personal loans, and that many of the applicants are coming in during their lunch breaks to sign up. The application process for personal loans is quite long and some of her staff are not appropriately trained in processing the applications, so this can take even longer at times.

With this additional data, Carol is now able to determine the true cause of the problem. Rather than spend more money on an extra teller, she introduces a system of making appointments for personal loan sign-ups outside of peak periods and allocates a trained teller to service these customers. This way she has more control over the ebb and flow of customers in the branch and can maximise staff available to serve at busy times. She also plans to train inexperienced staff in the sign-up procedure during quiet times so they can complete the tasks more efficiently. All of this can be done at no cost. The time Carol spent collecting sufficient data from a range of reliable sources proves pivotal in changing her approach to the problem and improving the outcomes.



Practice task 3

Read the case study, then complete the tasks that follow.

Case study

Maria is responsible for writing tenders in the business development department of a large company. The company is applying for a project with the local council. Contracts with local governments are critical to the success of the organisation as they represent 75 per cent of the organisation's revenue.

One of the requirements of the tender response is for the organisation to demonstrate recent experience in working with councils. This is a new requirement following the implementation of a new tendering process to increase government transparency and accountability in the awarding of contracts.

From her years of experience in the organisation, her contacts within the organisation and from brainstorming with her colleagues, Maria has come up with a list of three recent projects involving work with local councils. She proceeds to contact the three different department managers who completed these projects so she can include them in her tender response. This is time consuming but, luckily, she is able to narrow her search and include two of the three examples in her tender response.

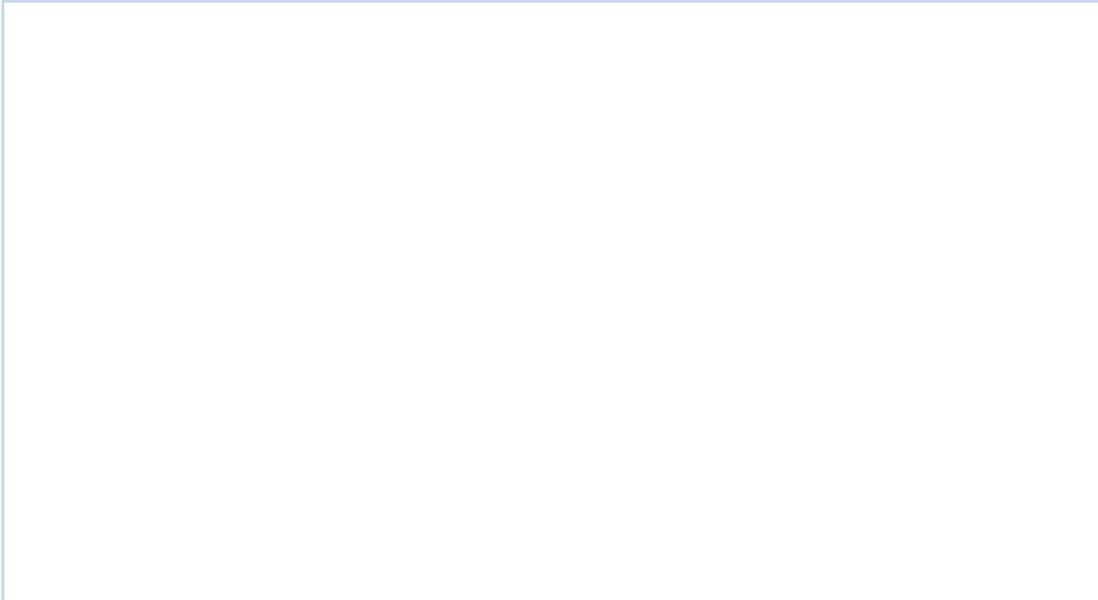
- In the first department she contacts, the staff member who managed the project is on leave but another member of their team accesses the department's shared and opens several project management documents in order to extract the information Maria needs. This takes a couple of days.
- In the second department, Maria speaks to the manager who remembers the project well and is able to recall and recite the details of the project that Maria needs immediately over the phone.
- In the third department, the previous manager has left and no-one else remembers sufficient detail about the project.

1. Explain the business issue here.

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2. Describe Maria's data collection and analysis methodology.



3. Evaluate her data collection and analysis methodology.



continued ...

... continued

4. How could better information management have helped Maria to deal with this issue?

5. What role could data mining have played in her task?

1D

Source, gather and test information for reliability and validity and reject where necessary

Data and information collected must be reliable and valid so you can be assured that it is current, relevant and accurate and can be used effectively to make decisions. Some of the data that is available to you may not meet these criteria. Over time, experienced managers learn which data they can and cannot rely on. However, it is important to remain vigilant in testing the data you collect on an ongoing basis.



Source information

Collecting the same data from a range of different sources is prudent if you want to be sure it is valid and reliable, especially if the data is from an external source. Accessing a range of data is easier than ever as technology becomes more widely available and access is fast and cheap.

The following are some examples of how technology aids the data collection and analysis process.

Internet

- To access a range of externally published data in the public domain, particularly data on competitors
- To disseminate data about your organisation
- To collect data from and target customers and potential customers

Intranet

- To house the intellectual property of the organisation
- To communicate between staff and management
- To report on news or changes to policy and procedure
- To advertise internal vacancies
- For training

Shared drives

- To store documentation and work
- To control access to data between various departments in an organisation
- To share files and other information
- To collaborate on work
- Risk management (file protection and back-up)

Barcoding
To record data about a product, including: <ul style="list-style-type: none">• price• use-by date• stock levels• manufacturer• colour• size
Data mining
<ul style="list-style-type: none">• Electronic collection of data for a specific purpose; for example, information searches, direct marketing to customers
Client management systems
<ul style="list-style-type: none">• To store data on clients, such as contact details, instances of contact, sales, projects undertaken, value of sales/projects, client manager, date of last contact• Examples of systems commonly used in business include Salesforce and GoldMine
Human resource management systems
<ul style="list-style-type: none">• To store data about staff, including résumés, contact details, experience, positions held with the organisation, qualifications, languages spoken• To record training and performance appraisal information
Specialised/customised systems
Systems that have a primary operating function but also in-built capacity data mine; for example, a travel booking system, such as Sabre, which allows access to airlines, hotels, car rental worldwide, but also stores customer data for future reference and marketing purposes

Assess the quality of information

Data must meet evidence standards before it can properly support a finding. In particular, data should always be tested to ensure 'competence'. This commonly used term in knowledge management means that the data is both reliable and valid. Data may not be reliable or valid for a number of reasons; for example, it may come from a biased source; it may be out of date; it may be inaccurate.

If you fail to ensure your data is reliable and valid, you may be taking actions based on inappropriate findings and therefore may face failure. If the data collection method is flawed then the data analysis will also be flawed. Not all information is valuable for your needs or uses. To assess the value of information, you may wish to refer to the following benchmark characteristics (adapted from Ralph M. Stair's book *Principles of information systems*, published in 2010).



Accurate – is free from error
Complete – contains all of the important facts
Economical – is relatively inexpensive to provide
Flexible – can be used for a variety of purposes
Reliable – is dependable
Relevant – is important to the decision-maker
Simple – is easy to find and understand
Timely – is readily available when needed
Verifiable – is able to be checked for accuracy

Reliable data

Data reliability is a when data is sufficiently complete and error-free to be appropriate for its purpose and context. Reliability refers both to the data itself and the source. Be aware of results from organisations that have a vested interest in the results; for example, a company that sells vitamins publishes research about the benefits of long-term vitamin supplements. While such research findings can indeed be valid, often the parameters within which the research was conducted are skewed to reach a particular finding that benefits the source. There is also the possibility that the data has not been collected accurately or the sample from which it was taken cannot be verified or is not relevant to your needs.

Reliability tests

There are two commonly used methods to test the reliability of data as outlined below.

Test-retest method

The test-retest method looks at consistency. The same test is given to a group of subjects on at least two separate occasions. If the results are similar they are considered to have a high correlation, and the higher the correlation, the more reliable the data is. For example, if you tested the knowledge of a work team member of a particular process, using the same test on different days or having the team member complete the test in different environments and the test results were very similar each time, you would consider the results to be a reliable indicator of the team member's knowledge.

Inter-rate reliability method

The inter-rate reliability method is used to test data from observations. This can be done by having two people observe the same subject and then correlate their observations separately before comparing the results. This method could be used to test the data resulting from team members performing tasks. If they are performing tasks in the same way, their results relating to the time it takes to complete the task will be reliable.

Data and information validity

Valid data is data that is correct and accurate to enable effective decision-making. This means ensuring that the correct data is collected and processed using appropriate methods to provide accurate results.

Consider asking the following questions to ensure data and information is valid:

- Is the right data being collected to be able to make decisions? For example, are we collecting information on all fixed costs like rent and electricity and not just those to purchase the products we resell?
- Is enough data being collected to make sure a true picture can be obtained?
- Are the methods for collecting the data appropriate? For example, are surveys asking the right questions to obtain results relating to key areas?

Reject information that is contradictory or ambiguous

It is important to always acknowledge any weaknesses in your findings. However, it is preferable to eliminate findings that do not meet the competence measures or appear to be contradictory or ambiguous before using them to inform decision-making. Mixed methods research (research that produces both qualitative and quantitative data), is especially prone to contradiction. This is because of the different categories and levels of data and its analysis.

For example, a manager may receive results in the annual staff feedback survey that indicate there is only a 25 per cent satisfaction rate within their team, but discussions in staff meetings and during informal group and individual discussions indicate that staff seem to be happy. The data is contradictory. So which dataset is to be believed? Which is reliable and which should be rejected? And how can the manager deal with the disparity in this data?

The following are main approaches that can be taken when there is mixed data that produces contradiction.

Triangulation

The triangulation approach, considered the most common one, uses cross verification from two or more sources to arrive at a reliable and valid conclusion.

Complementary

The complementary approach combines many sets of data from different sources to identify the data most likely to be reliable and valid.

Multi-dimensional

According to the constructing multi-dimensional explanations approach, social phenomena are multi-dimensional and, because of this, they should not be studied along a single dimension alone. This strategy allows researchers to ask distinctively different yet intersecting questions. The aim is not to combine and analyse data as a whole but to understand that the subject has multiple dimensions, some of which may intersect.

This approach relies on the notion that contradiction is not necessarily a bad thing and that it can capture the dynamic relationships that may exist. This is not commonly used in analysing business problems and making decisions related to performance as it is intangible and not easily measured.

Avoid rejecting data that doesn't support hypotheses

If you find contradictory or ambiguous information when testing data you have collected, you should avoid rejecting the data that does not support your theories or hypotheses (although it may be tempting to do so). Instead, use the opportunity to look for more data from different sources to strengthen your argument, or even consider that your hypotheses may be incorrect.

To learn more about the relationship between data reliability and validity and to see examples of tests, visit Research Methods at: www.socialresearchmethods.net/kb/relandval.php.



Practice task 4

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

Case study

Frederic is asked to undertake a staff survey of a selection of salespeople within his organisation to gauge the success of a newly rolled-out computer system. He sends the survey to the top 40 achieving salespeople out of the entire sales force of 2000 across the country. All of those in the selected sample are based in Sydney, Brisbane or Melbourne. The survey requires simple 'Yes' or 'No' responses to a series of questions about the new system.

Frederic could have adapted an existing survey used previously by a colleague but wants to make an impression and do it on his own. Afterwards, Frederic compiles the results and presents them in a series of graphs in a PowerPoint presentation at the next Board meeting.

1. Do you think the information Frederic obtained from these 40 people was sufficient to conclude how the entire sales force felt about the new system? Why or why not?

2. Comment on the validity and reliability of the data Frederic collected.

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3. What do you think would happen if the same study was done again with another 40 salespeople; for example, the 40 lowest achieving salespeople or 40 who are based in rural locations? Would the responses be similar?

4. How could Frederic improve the reliability and validity of the data?

5. What else could Frederic do better next time?

1E

Utilise and review formal and informal networks to access corporate knowledge not held in formal systems

Corporate knowledge, often referred to as intellectual property or information ‘in someone’s head’, is one of the most valuable assets an organisation possesses. Knowledge built up over time by the teams and individuals who work for the organisation cannot be easily replaced when these people leave. Instead, it must be accessed and managed regularly through informal and formal channels. If corporate knowledge stored in people’s heads is not captured, organisations may suffer consequences resulting in loss in productivity, loss of experience and a reduced competitive edge.



Capture unrecorded knowledge and information

Most corporate knowledge is captured and recorded in a range of formal and informal ways by most organisations. However, some intellectual property and corporate knowledge may not be recorded at all and remains in the minds of those that possess it, rather than being made available for sharing and mutual benefit across the organisation. Unfortunately, such corporate knowledge is often lost when the employee retires or leaves the organisation. While some consequences may have a minimal impact, some can cause major difficulties.

Failure to capture corporate knowledge can lead to:

- repetition of work or research that has already been conducted by others
- loss of intangible information about a client that might help build or capitalise on existing relationships
- loss of information about a client, leading to poor or decreased service delivery
- loss of competitive edge
- unnecessary cost
- wasted time and inefficiency finding out information that already exists
- inability to foster collaboration within and across teams
- staff forgetting information over time
- departing staff taking the knowledge with them to a competitor if ownership by the organisation is not established through documentation.

Example: capture knowledge

Lucas is about to travel to China to meet a customer and close a deal. He searches his organisation’s client management system and finds that Jasmyn, a manager of another department, has previously done business with this client. Lucas makes an appointment with her to try to get some information about the client that might give him the inside edge. He finds out that his client speaks very little English. Jasmyn tells Lucas that she used some simple cards with both Chinese and English translations to assist discussions and aid communication. As a result of Jasmyn’s information, Lucas is able to better prepare for his trip. He wishes Jasmyn had included this information in the client database.

Reasons for failing to capture corporate knowledge

Even within an organisation that has a strong knowledge management system in place, there can be sporadic failure to share information. The commitment to record corporate knowledge can vary between departments. Some managers understand the importance of recording knowledge, are invested in the process and expect their staff to contribute. Others do not. Some managers do not make staff accountable, so individual participation may vary. Some departments or individuals consider themselves time poor and do not prioritise knowledge management.

Variation can also occur within sub-groups of an organisation. For instance, ageing staff members may be proud of their years of service and use their knowledge and experience as a sign that they remain useful; they enjoy it when staff come to them for information and are wary of recording it to avoid seeming obsolete. They may also be resistant to new technologies, which may inhibit participation. A lack of training in using systems can also inhibit participation by individuals and/or teams.

The benefits of easy access to data

Failure to capture and record knowledge for easy access is a lost opportunity. Encourage staff to record what they know, such as the names of valuable customers, a solution that did not work and why, something that worked well and may be valuable again, the best ways to network, strategies that work for communicating with a specific company.

Some additional benefits of easy access to data can include:

- assistance in training for new staff
- inside knowledge of customers
- ability to reward loyal customers
- enabling best practice and knowledge transfer
- fostering communities of practice
- promoting cross-project learning
- establishing expert directories.

Use formal networks to access corporate knowledge

Formal networks for storing and accessing corporate knowledge include business plans; strategic plans; communication plans; meeting minutes; project management files; shared drives; intranet; and customer databases. The following information provides further details on different forms of knowledge and how it may be accessed or shared.

Access and storage

In most corporate environments, storing and accessing knowledge is routinely done at departmental level. Often a department has its own shared drive or portion of a larger organisational shared drive where access is managed and restricted within that department. This information specifically relates to the work done in that department, such as a project's deliverables, time lines, action plans, budgets etc. Access to some of the data in the shared drive may be restricted to management only, such as personnel files and salaries.

Share across the organisation

There are, however, many instances where the sharing of such information on a greater scale can be useful and indeed beneficial across the whole organisation. For example, a team leader may be asked by their manager to develop some standard operating procedures around safety for the department. Rather than researching requirements and legislation and devising a format, the team leader could consult existing examples within other departments and use them as a template for adaptation, saving time and ensuring a standardised approach across the organisation. Even if different departments across an organisation do quite different work, often the principles and procedures they follow can be shared and contextualised.

Forms of knowledge

Many other forms of information and knowledge could be shared across an organisation via a central repository for mutual benefit, such as:

- strategic methods and plans
- customer profiles and characteristics
- policies, procedures and work methods
- personnel traits and lists
- past experience of staff and personal and work contacts
- staff with a second language.

Maximise effectiveness of formal networks

Organisations that share knowledge widely often enjoy great benefits, but such formal networks are only truly useful if used properly. Here are some tips for maximising the benefits of formal networks.

Formal network maximisation

Reorganise and regularly clean-up existing shared drives so they are current and easy to use and access.

Link contribution to KPIs to make people accountable for recording, reorganising or centralising their corporate knowledge.

Reward contribution – it could be fun to have departments compete for targets, or achievement of targets could be linked to financial rewards, such as bonuses.

Provide training to create awareness or support staff who need assistance.

Use informal networks to access corporate knowledge

In addition to the formal networks for collecting, storing and accessing corporate knowledge, there are many informal networks that can sometimes be harder to identify and consult but can be just as valuable. The challenge is that the knowledge held informally is often intangible in nature. This information is harder to capture and generally rests with the more experienced and long-term employees. An important strategy, therefore, is to ensure that all information, no matter how intangible it may seem, is recorded; for example, a salesperson's information about a client's likes and dislikes they learned from an informal chat, should be recorded in the client database so other salespeople may use it when dealing with the client.

Here are some strategies to use to access information via informal networks.

Accessing information via informal networks

- Brainstorm with colleagues to see if anyone has information about the subject required or knows of someone else within the organisation that may.
- Ask advice from managers and supervisors.
- Initiate a discussion at staff meetings.
- Seek anecdotal advice from peers; for example, 'What worked for you last time this happened?'
- Look for ways to translate anecdotal information into real procedures.
- Pair up with a mentor.
- Look for case studies and examples inside and outside the organisation.
- Encourage membership of experienced staff in working groups, such as a policy-writing work group, so they can contribute their experience.
- Share information or pose questions on the staff intranet, a bulletin board or blog to seek advice.

Example: access corporate knowledge

A large training organisation has just implemented an expensive information management system specifically designed to house all of the learning resources its teachers develop to support delivery of courses. They did this for several reasons:

- Departments were spending too much on backfill to release teachers and allow them time for resource development.
- Often two teachers within the same department were inadvertently developing resources for the same courses concurrently for their own use when they could have been collaborating and sharing.
- Many resources already existed and could be shared, adapted and re-used rather than recreated across departments, particularly those units that were generic in nature, such as workplace safety and customer service units.
- Teachers were not saving the resources they developed, believing them to belong to them when, in fact, they were the intellectual property of the organisation. So, when teachers left, they took the resources with them.



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With the new system, the learning repository is intended as a central point for housing resources and providing access institute wide. Ownership of original version resources can be controlled and assigned to individual departments. Resources can be accessed, copied, customised and uploaded as new entries. It is a long-term approach that will take some time to see return on investment. The challenges include encouraging departments to make the initial investment in time to upload resources and ensuring entries are updated on an ongoing basis. There is also considerable training involved. But the overall benefits over time justify the effort. Senior management has planned and rolled out the implementation in stages, linking achievement of targets to KPIs in departmental strategic plans to ensure accountability and participation.

Practice task 5

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

Case study

Rita has just purchased a hairdressing salon in a small shopping strip. According to the financials she examines prior to taking over the business and the advice she has received from the two existing employees, Rita identifies that about half of the customers are regulars. She is shocked to find that there is no system for managing customer information at all. The two staff members have been at the salon for more than five years and know the regular customers well.

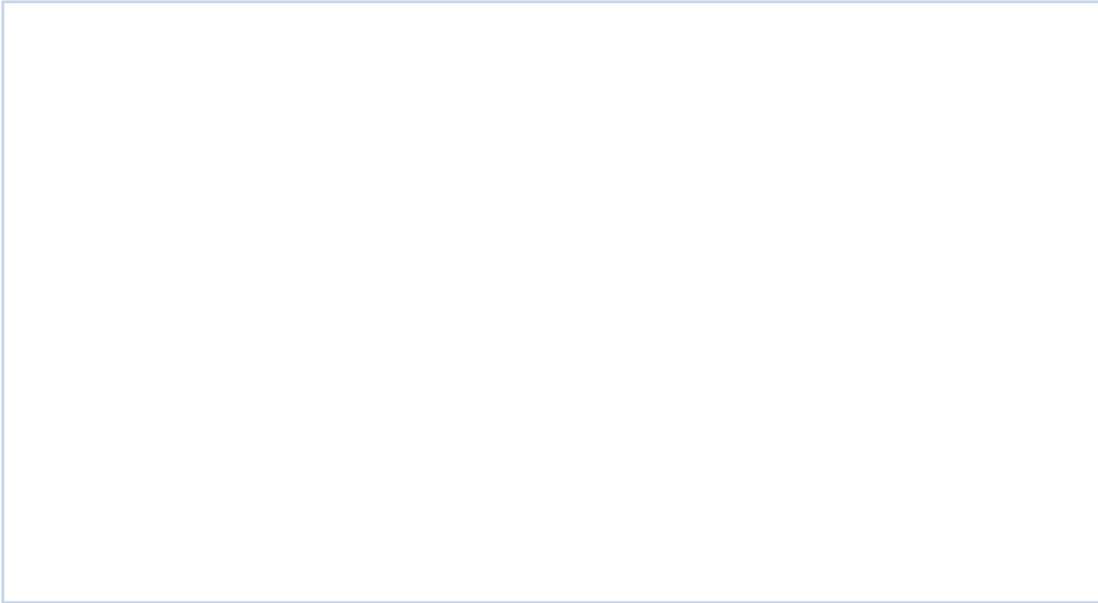
Rita can see the problems and the missed opportunities this situation presents and is determined to do something about it. She is considering two possible solutions:

- Introducing a client card system where contact details and information about the service provided are recorded at each client's visit
- Purchasing client management software and implementing an automated information management system

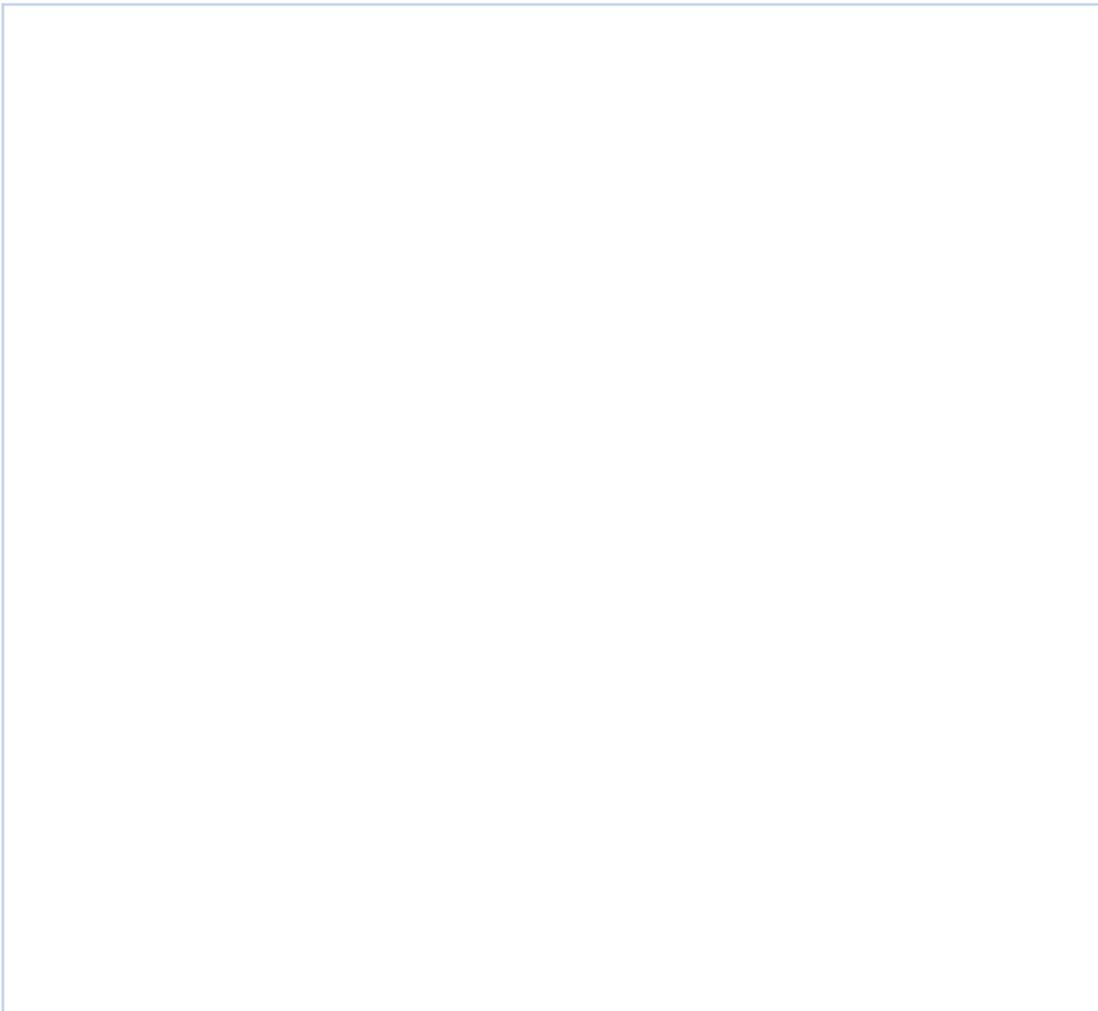
1. What are the problems and the missed opportunities this situation presents?

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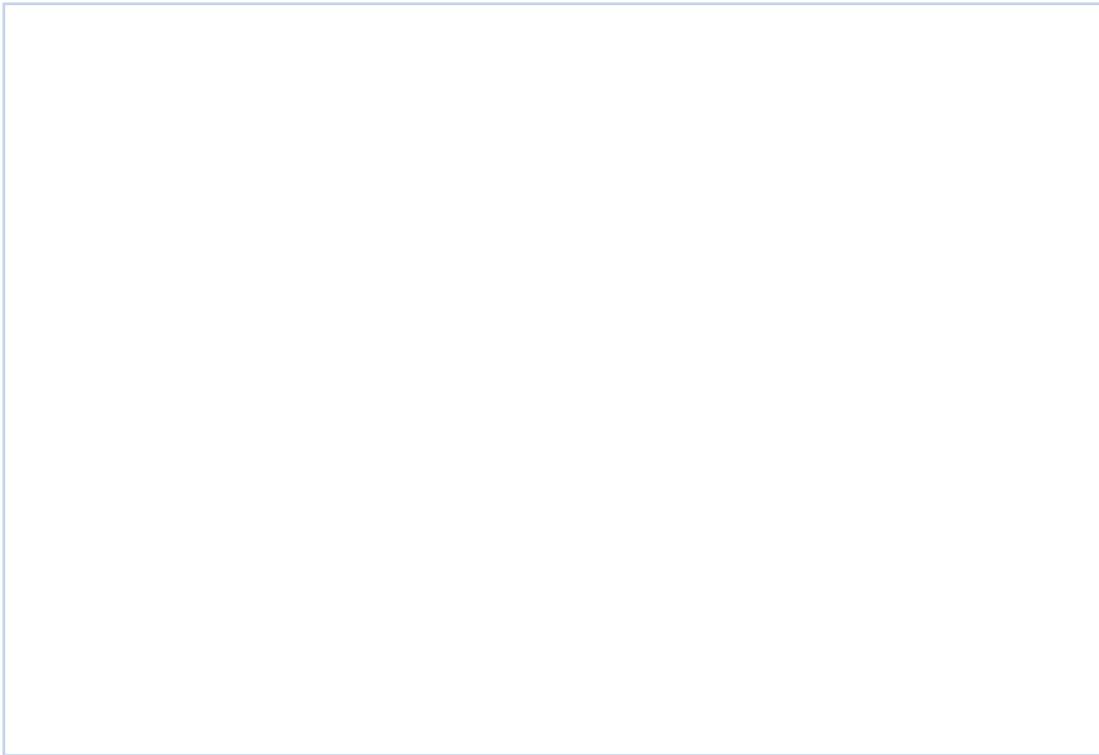


2. What are the pros and cons of each possible solution Rita is considering?

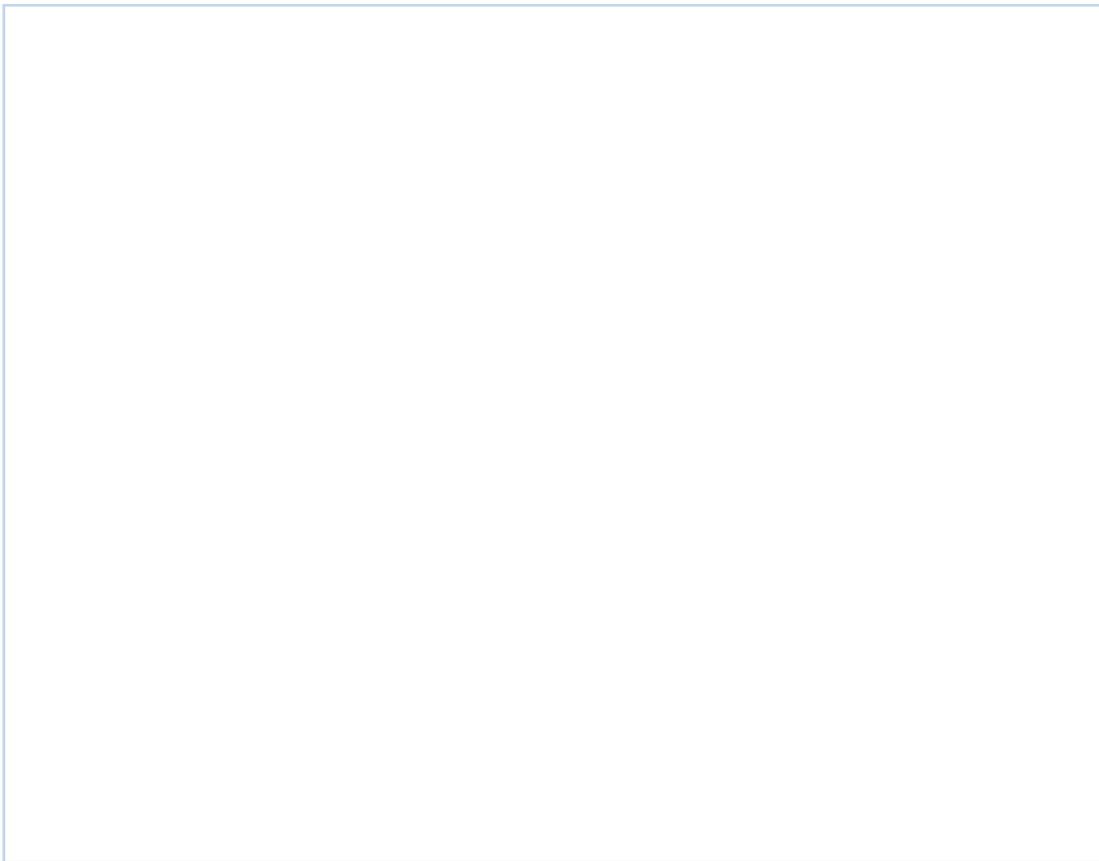


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3. What would you decide to do in Rita's position? Why?



Summary

1. It is crucial to analyse data and extract the information contained in it in order to support informed decision-making.
2. Before a leader can turn information into knowledge, they must have clear objectives, so that analysis can be targeted and focused and achieve the desired outcome.
3. Analysis of trends and patterns assists in explaining an issue or answers questions from the objectives of research.
4. A cause and effect analysis identifies the likely causes of problems. A fishbone diagram is useful for a root cause analysis.
5. Statistical analysis is particularly useful in drawing conclusions about a set of data by examining a defined sample.
6. Sensitivity analysis, also known as a 'what-if' analysis, is a method used to determine how outcomes are affected by changes.
7. It is important to ensure documented findings are clear and easy to understand for a range of audiences and uses within your organisation.
8. Documentation used to present findings should include a mix of written and visual presentation tools to present results of data analysis.
9. You should continuously monitor and adjust knowledge management systems to ensure they meet the needs and objectives of your organisation.

Learning checkpoint 1

Obtain information relevant to business issues

This learning checkpoint allows you to review your skills and knowledge in obtaining information relevant to business issues.

Part A

1. Why is effective information management, especially the ability to identify business problems through data collection, so important in a business environment?

2. What is the role of a leader in managing knowledge and information?

3. Under what circumstances can corporate knowledge be lost?

- List five consequences of failing to maintain corporate knowledge.

- Provide one test you might use for the:
 - reliability of information sourced
 - validity of the information.

Part B

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

Case study

Sanders Energy is a developer, owner and operator of renewable energy generation with interests in 15 wind farms across Australia and the US. There has been much debate surrounding public opinion on wind farms in Australian communities recently, both at a local and national level. Sanders Energy is interested to find out what people living near wind farms really think, so it commissions research in the community surrounding one of its remote sites in South Australia. The community population is 5,000, but a sample of 200 is considered suitable. Many of the residents are elderly, with limited access to computers and the internet.

- Why do you think Sanders Energy is interested in getting feedback from the community?

2. What methodology would you use to undertake research into community perception on behalf of Sanders Energy?

3. You need to find out information from your community about an issue or interest that impacts your organisation or an organisation you are familiar with. What kind of information would you want to find out, why is the information needed, and how might the results inform decision-making?

4. How would you obtain reliable community data?

Topic 2

Analyse information and knowledge

Once data is collected it must be analysed to identify trends and patterns. Use statistical analysis to determine the cause. You are then in a position to report on findings to decision-making.

In this topic you will learn how to:

- 2A Ensure objectives for analyses are clear, relevant and consistent with required decisions
- 2B Identify patterns and emerging trends correctly and interpret cause and effect
- 2C Utilise and interpret statistical analyses
- 2D Undertake a sensitivity analysis for all options
- 2E Ensure documentation reflects the evaluation and conclusions
- 2F Adjust management information systems to meet information processing objectives

2A

Ensure objectives for analyses are clear, relevant and consistent with required decisions

Data is unprocessed facts and figures without any added interpretation or analysis. Information is data that has been interpreted so that it has meaning for the user. Knowledge is a combination of information, experience and insight that may benefit the individual or the organisation. Analysing data and extracting the information contained in it in order to gain knowledge is critical for making informed decisions. Before a leader can turn data and information into knowledge, they must have clear objectives, so that the analysis can be targeted and focused and achieve the desired outcome.

Establish objectives for analyses

Analysis must be guided by the objectives you have set at the beginning of the process of data collection. Failure to formulate objectives may lead to aimless data collection which overwhelms and inhibits the analysis process. Setting objectives, or goals, encourages you to prioritise, be realistic and the make best use of time and other resources.

The objectives of data collection should be stated in the planning phase. Objectives must be clear, relevant and consistent with the decisions required. For example, an objective may be: 'To complete the analysis of the outbound logistics process by end of Quarter 4 to develop recommendations for cost and time improvements.'

The following information provides examples of questions and issues to consider in establishing objectives for analysis.

'What' questions

What issue am I addressing?

For example:

- Understanding customer buying habits

What question/s will I answer?

For example:

- When do customers shop?
- What do they shop for?
- How much do they spend?

'Why' questions

Why is this issue interesting or important?

For example:

- Determine best operating hours
- Plan staffing levels
- Control stock levels
- Determine pricing

'How' questions

How will these answers contribute to existing knowledge?

For example:

- Confirm what we already know
- Teach us more about our customers
- Challenge current thinking

How is this study relevant?

For example:

- It will help us improve performance
- It will identify new selling opportunities
- It will identify cost-saving opportunities
- It will identify service improvement opportunities

Types of objectives

Objectives for collecting data may relate to:

- providing an increased understanding of operations
- identifying areas for improvement
- identifying why we are failing or falling short of customer expectations
- identifying new market or product development opportunities
- monitoring effectiveness of a new strategy or process
- giving us an increased understanding of our market
- identifying and justifying the need for change
- calculating future resource requirements.

Confirm and revise objectives

As you begin the analysis process, it might be necessary to clarify, alter or add to objectives. Once data is gathered, it may become apparent that not all the planned research objectives can be fully answered. For example, a particular section of the target audience may not have adequately responded to a survey, or respondents may not have had all the necessary information to complete specific questions.

In addition to this, you may need to add to your original objectives, especially if you discover unexpected observations. For example, a bank manager's original objective was to determine 'How best to manage increased customer flow in the branch at lunch times'. When she identified that the long queues were the result of difficulties with completing applications, the new objective became 'How to better manage personal loan applications'.



Example: clarify the objectives for analyses

The owner of a chain of pet stores is considering adding more products and services to his business to increase revenue. He has a couple of ideas but wants to find out what will be successful. He has decided to test customer interest. This is his initial objective planning before he commences data collection and analysis.

What issue am I addressing?

- To gauge market interest in new products and services
- To determine viability of new products and services

What question/s will I answer?

- What do my customers think of my new ideas?
- How likely are they to use the new products and services?
- How often will they use them?
- How much would they be prepared to pay?
- What other services do my customers want?
- How much will it cost to provide the services?
- How much profit will I be able to make?

Why is this issue interesting or important?

- To help decide which products to introduce and how popular they may be in my market

How will these answers contribute to existing knowledge?

- Confirm validity of ideas
- Confirm my understanding of what my customers think
- Possibly give me new ideas

How is this study relevant?

- Help to determine which ideas are popular
- Help to determine which ideas are not popular
- Determine price triggers
- Inform if and how much of the service to introduce and at what price

Practice task 6

Read the scenario, then complete the tasks that follow.

Scenario

You were recently tasked with organising a conference by your manager. It was attended by a large number of delegates from across your industry. It's the first time you have organised such an event and you think it was a success but you know that there are lessons to be learned for next time. Also, your manager wants to debrief with you at the end of the month to reflect on the success of the conference and possible opportunities arising from it.

1. You have decided to contact the attendees to find out what they thought of your event. Before you do this you need to define your objective to ensure you have sufficient data for analysis. Develop a list of questions to help focus on your objective.

2. Identify your objective.

2B

Identify patterns and emerging trends correctly and interpret cause and effect

Once data has been collected and collated, the next step is to look for trends and patterns that might explain an issue or answer some questions from the objectives of the research.

- A trend is a general direction (increase or decrease) in which something develops or changes over a defined period of time.
- A pattern shows a repeated sequence. This is usually expressed in the following way: 'If A occurs, then B occurs'.



The value of trend analysis

Trend analysis is the examination of data that has been collected to identify a pattern, trend or variation in the information. Trend analysis of historical data is often used in business to forecast future trends and patterns. If you can identify trends that are occurring and any cyclical patterns that have happened in the past, you can gain important insight into what might happen in the future. The following information outlines why trend analysis is undertaken and how the findings are applied.

Why analysis is undertaken

In business, a trend analysis might be undertaken in order to:

- identify an underlying pattern of behaviour over time
- identify buying patterns of customers
- understand trends in the market
- track financial performance
- forecast future trends and patterns.

The application of findings

When an organisation has such insights it can:

- make plans for future operations
- make adjustments to meet the economic climate, either now or in the future
- introduce new products and services to meet the changing needs or patterns of consumers
- make changes in processes to address problems or issues identified in trends
- evolve and adapt the business in line with a changing market.

Forecast future trends

The ability to plan ahead for an impending downturn in the economy can be the difference between survival and foreclosure for a business. However, when using trend analysis to inform decision-making, you should consider that future trend forecasting is just that – a forecast or prediction. Even if it is based on sound and convincing data, there is always a chance that one or more factors unplanned for can impact the real outcome. For example, despite the extensive use of trend analysis in business and finance, the economic downturn resulting from the global financial crisis of 2007–2008 was largely unexpected and unpredicted.

Positive, negative and variable trends

Trends and patterns identified in data collection activities can be positive or negative. This means data could be showing increases or decreases over time. The terms positive or negative do not refer to whether the trend is favourable or unfavourable for the organisation; it is simply a way to describe how the trend is changing. For example, ‘an increase in staff resignations’ may be classed as a ‘positive’ trend, as there is an increase in the trend, even though this is not a positive outcome for the organisation.

Patterns may also vary, depending on a range of both predictable and unpredictable factors. Here are some common examples of positive, negative and variable trends and patterns commonly experienced in business. Possible sources have been added for each trend or pattern.

	<p>Positive trends</p> <ul style="list-style-type: none"> • Increase in customer dissatisfaction with not being able to order online (from customer feedback) • Increase in staff resignations (from HR statistics/exit interviews) • Increase in online sales (from sales statistics) • Increase in stress levels and employee days off (from absentee records/third-party reports)
	<p>Negative trends</p> <ul style="list-style-type: none"> • Decrease in sales (from sales statistics) • Decrease in WHS incidents (from accident reports) • Decrease in demand for music CDs (from sales data) • Decrease in rental market for DVDs (from sales data collected from one or more movie rental companies) • Decrease in interest rates (from national and global economic data/third-party reports)
	<p>Variable trends</p> <ul style="list-style-type: none"> • Airline ticket prices increasing for flights on Friday–Monday and during school and public holiday periods but decreasing for mid-week flights (from study of booking sites) • Petrol prices increasing and decreasing during the weekly cycle according to the day of the week (from study of sample petrol retailers conducted for a consumer organisation) • House prices increasing when interest rates are low (from study conducted by real estate body)

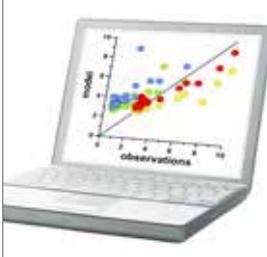
Analyse patterns

Patterns can be identified visually; for example, by plotting data in a comparative table or graph. Different visual representations are suitable for different types of data and the objectives of your analysis. For example, pie graphs are useful for showing market share, while line graphs indicate decreases or increases over a period of time.

When data is presented, analyse it carefully to see if you recognise whether any patterns are emerging. Sometimes, viewing data presented in more than one way can assist in identifying, clarifying and confirming a pattern. For example, if you analyse sales revenue over a year for a bathing suit manufacturer, you may see a pattern emerging where sales go up in the summer and down in the winter. Not all patterns are as simple as this, but the theory remains the same: You can identify patterns that will help you to predict what may happen in the future.

Record pattern and trend analysis data

There are many computerised tools you can use to present data visually for analysing trends and patterns. Microsoft Word and Excel have chart and graph design functions, as do many other business-related software products. Here are examples of types of visual tools you could use.

	<p>Run charts</p> <p>Also referred to as a line graph, a run chart shows performance over time. Items on the y-axis are graphed against a time period on the x-axis. Multiple sets of data can also be displayed simultaneously on a run chart. This is known as a multiple run chart. Upward and downward trends, cycles and large variations or anomalies can be identified using a run chart.</p> <p>Guidance in developing a run chart is available from the American Society for Quality's website at: http://asq.org/service/body-of-knowledge/tools-run-chart.</p>
	<p>Tables</p> <p>A table is a simple tool for arranging data into categories, using rows and columns. Tables are used in many contexts and for many applications. For analysis of data in a business context, a table allows a brief summary of large amounts of information from a range of sources. It can also clearly demonstrate patterns, hierarchy and comparison. Tables can order information in a variety of ways, such as alphabetical order, or in value order (from highest to lowest or lowest to highest).</p>
	<p>Scatter plots</p> <p>A scatter plot uses points (XY) to demonstrate the relationship, or pattern, between two or more sets of data. It can show different types of correlations between variables within defined confidence intervals.</p> <p>The Khan Academy provides guidance on constructing a scatter plot in their video at: www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-data/cc-8th-scatter-plots/v/constructing-scatter-plot.</p>



Pie charts

Pie charts are used to compare data, and are particularly useful in presenting percentages or proportions of market share or total sales by regions. A pie chart can be easily created from data entered into an Excel spreadsheet or accounting software program.

Draw conclusions from pattern and trend analysis

The next step is to make some assumptions, or draw some conclusions from these trends and patterns. This requires careful analysis of cause and effect, as well as a measure of intuition.

Here is a simple example:

**Low interest rates + High employment rates = Consumer confidence
= Increased retail sales**

Pattern analysis assumes that patterns in the past will continue, but be careful as this is not always the case and other unexpected factors or factors unplanned for can impact future results maintaining that pattern. For example, statistics from the Australian Bureau of Statistics may show population and growth rate increases, but an analysis may show that this is not due to a pattern of natural increases but a notable increase in overseas migrants coming to Australia. Further analysis shows that this coincides with changes in immigration policy, demonstrating that outside factors have further impacted the upward trend and the notable variation.

Here are some guidelines on how to draw conclusions from data.

Look for variations

- └ The main question to look out for in trend analysis:
 - Has a change/variation occurred?
- └ Variation always exists. So, instead of just asking whether there has been a variation, you should also ask:
 - Is the variation we can see normal or is it significant?

Determine changes

- └ To determine the answer, you can:
 - focus on the big picture rather than smaller increments
 - maximise the time frame you analyse, if possible
 - look for patterns
 - then look for anomalies.

Ask questions

Once you know the answer to the question of whether change has occurred, others will follow, such as:

- Why has/hasn't there been an improvement?
- Why is customer service satisfaction decreasing?
- What has caused sales to fall?
- Why have sales in one area grown and contracted in another?

Methods of analysis

There are a number of methods that may be used by business analysts in trend analysis, as shown here.

Time series analysis

A time series is a set of data objects collected using the same methods repeated over time; for example, measuring sales data at the end of every month and collating it over one year. Data collected irregularly or only once does not constitute a time series. A time series can be:

- a trend (long-term direction)
- seasonal (systematic calendar-related changes)
- irregular (unsystematic with short-term variations).

The Australian Bureau of Statistics (ABS) has made available guidance on time series analysis at: www.abs.gov.au/websitedbs/D3310114.nsf/home/Time+Series+Analysis:+The+Basics.

Data modelling

Data modelling analyses data from a range of sources with a view to learning from the data and formulating models for the future. It defines data elements and their structures as well as the relationships between them. It is a complex process that is usually undertaken by a data modelling specialist (internal or external to an organisation), with close collaboration with key stakeholders within the organisation, which you may need to facilitate and manage.

There are three different stages in developing a data model:

- Conceptual data model
- Logical data model
- Physical data model

Data modelling can be undertaken in different stages of a project. A data model should be considered a living and progressive document and should be stored for easy access as a benchmark for organisation-wide use.

Causal modelling

A causal model shows that a trend is the result of its relationship to other variables, and uses regression to determine cause and effect behaviour. For example, low interest rates affect the demand for housing loans, which positively affects the building industry. Causal forecasting techniques include the following:

- Regression analysis, which is a mathematical equation that relates a dependent variable to one or more independent variables
- Econometric models, which use a system of interdependent regression equations that describe some type of economic activity
- Simulation modelling, which uses software tools to explore 'what if' scenarios

To learn more about causality, refer to the Khan Academy's tutorial located at: www.khanacademy.org/math/probability/regression/regression-correlation/v/correlation-and-causality.

Interpret cause and effect

When you identify a trend or pattern, it is important to explore all causes, as well as how that pattern could affect the operation of your organisation. In other words, a cause and effect analysis identifies the likely causes of problems or indicators of success. Once you know cause and effect, you are better equipped to solve the problem or identify the actions causing the success, rather than guessing. An effective cause and effect analysis process forces teams to examine the complexity of an issue, not just the most obvious ones. The following outlines the benefits and applications of cause and effect analysis.

Benefits

Here are some of the benefits of cause and effect analysis:

- It is a useful tool for a team approach to problem solving as it is a way of visually capturing brainstorming output.
- It explores a range of cause and effect options and the implications for different areas or departments within a business at once.
- It starts with a range of possible cause and effect options and enables participants to drill down to a final root cause in order to focus problem solving.
- It can be used when there is little quantitative data available.
- It prevents people from progressing straight from a problem to a solution and forces deeper analysis to identify and fine-tune the solution.
- It is more likely to lead to a more robust and successful solution.

Applications

Here are some other situations/problems where a cause and effect diagram may be implemented:

- Continued staff resignations
- Decreasing sales
- Increasing dissatisfaction with technology
- Cross-departmental communication problems
- System problems
- Increased injuries at work
- Increased absenteeism/sick leave

Cause and effect analysis process

A fishbone diagram is often used to map the outputs of cause and effect analysis. Its name derives from its appearance resembling the skeleton of a fish when completed. It is also known as a cause and effect herringbone or Ishikawa diagram (after its developer). Cause and effect diagrams provide a structured approach to help people push beyond symptoms of a problem and to reach possible root causes.

The problem is defined on the right-hand side of the diagram then the bones of the fish represent categories of causes. Further possible causes are then brainstormed for each category, identifying as many causes as possible.

There are four steps in completing a cause and effect analysis.

Cause and effect analysis

1

Identify the problem.

Begin by stating the problem; for example, 'Employees are late for work'.

Ideally, the problem would be framed as a 'Why' question; for example, 'Why are employees late to work?'

2

Work out the major factors involved.

Determine a set of branches, or bones, adding them vertically off the spine of the fish. These branches are labelled with different categories and represent different factors that might be involved.

The categories you use are up to you. There are a few standard choices depending on your business and the purpose and subject of the analysis. Some fishbone diagrams simply use branches labelled 'when', 'what', 'who', and 'where'.

3

Identify possible causes.

Add possible causes to each branch. You should do this by brainstorming all the possible root causes of the problem, and continually asking the question 'Why?'

4

Analyse your diagram.

Now you have a better idea of possible causes, you can analyse the diagram to see if you can narrow it down to a root cause. It is possible this will involve further investigation to test which of the possible causes is actually contributing to the problem.

Consequences of failing to consider cause and effect

The process of analysing cause and effect may simply confirm what you first thought. This often happens. But the danger in not conducting a comprehensive analysis is that the root cause of the problem or issue may not have otherwise been considered at all.

For example, the bank manager who thought the branch was just getting busier with longer queues and extended waiting times for customers, was planning on hiring another part-time teller. But after a detailed analysis of the situation, the manager identified that there was an increase in personal loan applications following a promotion which took a long time to complete. If the manager had not identified the real root cause, she may have made the wrong decision. This may have helped the problem but it would not have solved it at the root cause.



Analyse patterns and trends

When analysing a trend, you are attempting to identify both short-term and long-term trends. Be aware that trends are time sensitive and the longer the time frame you analyse, the more likely you are to detect an overall trend. For example, a country's stock market may be quite volatile when analysed on a day-to-day basis, with results showing troughs of increases and decreases in the short term. However, a longer-term view may show a stronger overall upward trend over several years with the stock market increasing in value relatively smoothly.



Example: utilise visual tools to interpret data

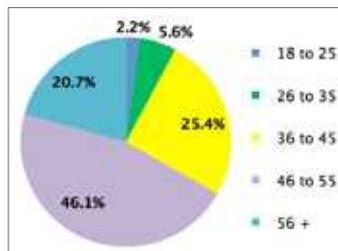
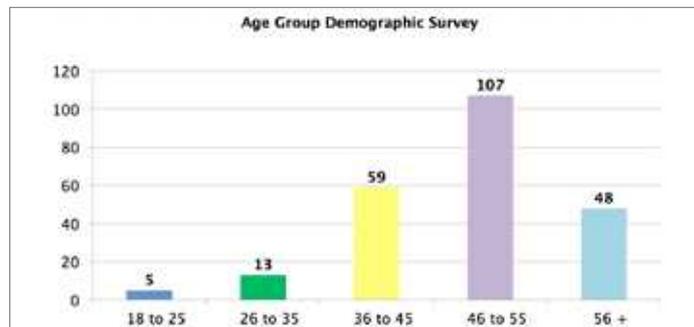
An age group demographic survey asked the question: 'What age group do you fall into?'

Data from the response to this survey question was presented in three different ways.

From this, the organisation found that 46% of respondents were aged between 46 and 55. They compared this trend to results from two years earlier, finding that there was an increase from 40%.

Further to this, only 5% of respondents were aged between 26 and 35, which was a drop from 16% two years ago.

The conclusion was drawn, that the survey respondents are ageing.



Age	Count	%
18 to 25	5	2.2%
26 to 35	13	5.6%
36 to 45	59	25.4%
46 to 55	107	46.1%
56 +	48	20.7%

Practice task 7

Think of a problem within your workplace. Develop a fishbone diagram to determine cause and effect, and identify the root cause.

2C

Utilise and interpret statistical analyses

You may need to conduct or supervise statistical analysis to interpret data that will inform decision-making in your organisation. This requires knowledge and understanding of a range of statistical analysis and other quantitative methods and relevant application in the context of your industry and organisation.

Statistical analysis can involve complex mathematical calculations, so it is important that you have highly-developed numeracy skills to interpret complex statistical and researched information. You may need to perform calculations on data to render it usable and reportable, or know how to use specialist software with built-in capability for calculation of equations. Seek further training if necessary, ask experienced colleagues or engage a mentor or coach.

Statistical analysis process

Statistical analysis is a form of data analysis commonly used to gather and examine business intelligence. It involves collecting, examining, summarising, manipulating, and interpreting quantitative data to identify causes, patterns, relationships and trends. Quantitative data is objective data that can be measured and verified through a range of statistical analysis methods. Statistical analysis is particularly useful in drawing conclusions about a set of data by examining a defined sample; for example, analysing customer data to improve the customer experience, develop new products or services or increase sales. Another example is in analysing sales data to identify downward trends or seasonal troughs so that new revenue-raising strategies can be formulated for that period in the cycle to improve performance.

Statistical analysis involves a five step process as shown here.

- 1 Describe the nature of the data.
- 2 Explore the relationship of the data to the underlying population.
- 3 Create a model to summarise how the data relates to the underlying population.
- 4 Prove (or disprove) the validity of the model.
- 5 Apply predictive analysis to develop scenarios that will help guide future actions.

Understand and apply a range of statistical analysis methods

There are many statistical analysis methods. Some of the most commonly used in business applications include:

- correlation calculations
- probability assessment
- regression analyses
- queuing theory
- trend analysis
- dynamic programming
- linear programming
- simulation
- transportation methodology.



Correlation calculations

When two sets of data are strongly linked they are said to have a high correlation. Coming from the words *co* (meaning ‘together’) and *relation*, correlation describes the relationship between statistics.

Correlation is an important tool for businesses. For example, information from calculations can be used to plan for seasonal stock fluctuations and to forecast seasonal revenue. It is important to remember that correlation does not equal cause. Note the statement: ‘Warmer weather is linked to higher sales.’ It does not say: ‘Warmer weather leads to higher sales.’

Further information about correlation is provided below.

Positive, no and negative correlation

Correlation is positive when the values increase together and negative when one value decreases as the other increases. Correlation is usually expressed as a value; for example:

- 1 = perfect positive correlation
- 0 = no correlation (the statistics have no relationship)
- -1 = perfect negative correlation

Calculation using software

There is a formula for calculating correlation but it is complex and it is unlikely you will need to calculate it manually. Many software products have inbuilt formulae for this purpose and, if your organisation uses correlation calculations, it is likely you will use such software for this purpose.

There are also online calculators, such as that available from MathPortal.org at: www.mathportal.org/calculators/statistics-calculator/correlation-and-regression-calculator.php.

Probability assessment

Probability is the measure of chance that a particular event will occur. It is measured, much like correlation calculations, using a value between 0 and 1. 0 = the event won't occur and 1 = the event will occur.

The formula is:

Probability of an event happening = Number of ways it can happen / Total number of outcomes

Values and their meanings

A value between 0 and 1 will show that there is no certainty that the event will or will not occur. Instead, these values indicate the likelihood of it occurring. For example, a probability value of 0.8 means there is a high probability, whereas a probability value of 0.3 indicates low probability.

It is the level of uncertainty that most businesses are interested in. Restaurants deal with this problem every day. How many units of each menu item should be available to cater for diners' orders? On a larger scale, caterers at a major sporting event need to determine how many pies, rolls and drinks to stock. They might use probability analysis to determine the likelihood that half of the 100,000-strong crowd wants a pie.

Application of assessment

People are usually over-optimistic in judgments. This is why accurate, evidence-based probability judgments are crucial for good decision-making.

Other examples of probability assessment in business include the following:

- Insurance companies assessing probability of a claim when determining a premium
- Car manufacturers assessing the probability of mechanical faults in determining the length of a new car warranty
- A food manufacturer using probability assessment to determine what sample of products to test for quality control purposes

Regulation analysis

Regulation analysis is the process of determining the possible impacts of proposed regulation. It may also compare the outcome to the impact of other available alternative options to find out which will be of most benefit to the organisation. The analysis includes describing the objectives of the new policy or regulation and then assessing costs and benefits of that and other proposed options. The result should be a preferred option based on robust evidence from the analysis.

Government departments often use such methods when considering new policy and legislation. Undertaking a comprehensive analysis assists them in justifying and winning public support. Stakeholders are often consulted during regulation analysis to maximise the evidence base and help ensure acceptance of the final decision.

Queuing theory

Queuing theory is the statistical analysis of waiting lines or queues. Its aim is to predict queue lengths and waiting times and works using modelling. It is very useful in informing decision-making about resources; for example, when and how many staff to roster at given times and locations throughout a department store.

A simple example of queuing theory in action is used at theme parks where signs are incrementally placed indicating wait times for a ride, such as 'There is a 30 min wait from this point'.

Applications

Queuing theory applications are broad and can be applied to the service and retail industry. However broader application includes the manufacturing industry, which uses queuing theory in determining cycle and output time for production of items.

Another common use for queuing theory is in call centre operation where operators are given targets for the number of calls received and time spent on each call. These targets have been based on some form of queuing analysis. Queuing theory is also used in traffic planning, with analysis of how often traffic lights should change, for example, to cater for traffic flow at given times of the day or week.

Analysis

Queuing theory works by analysing each aspect of the queue, including:

- the arrival process
- the service process
- the number of servers
- the number of system places
- the number of 'customers'.

Guidance on queuing analysis, with a clear example, is available from the American Society for Quality's website at: <http://asq.org/service/body-of-knowledge/tools-queuing-theory>.

Trend analysis

Trend analysis is a technique for identifying patterns or trends in the information. In its simplest form, it is possible to visually identify trends with data that has been presented in graphs. Whereas this approach is widely used, some caution needs to be exercised as visual representations of trends can be easily distorted by changing the scale or truncating the scale.

More sophisticated trend analyses can be performed statistically using linear and non-linear regression techniques. Statistical analysis will model trends against a level of confidence, which allows the user to make a judgment on the reliability of the trend. For example, a 95 per cent confidence level indicates that the identified trend will have a high degree of probability (95 per cent) of being true.

Statistical trend analysis is based on assumptions that are made about how the data should behave and caution needs to be exerted where these underlying assumptions are incorrect.

One of the common techniques used in trend analysis is linear regression, where the regression function is defined in terms of a finite number of unknown variables that are estimated from the data.

Dynamic programming

Dynamic programming is an analytical method for solving a complex problem by breaking it down into a group of simpler sub-problems. Through solving each of the sub-problems, and then combining the solutions, an overall solution can be attained.

The process of breaking a problem into smaller components can lead to issues where the same sub-problem may exist in multiples. The dynamic programming technique relies on keeping track of each sub-problem as it is solved and then using the same solution if the same sub-problem is encountered again.



Dynamic programming algorithms are used for optimisation of processes where previously solved sub-problem solutions are examined and then combined to give the best solution. An example of this is finding the best route between two points using a map. The problem is broken into components of finding the combination of roads that has the shortest route and then looking at other components such as road quality, speed limits, traffic lights. Once each of these factors of distance, speed and delays are solved, their combined solutions can then be used to find the best route.

Linear programming

Linear programming is a computational technique that is also used for optimising the outcome of a problem such as looking for the maximum profit or minimum costs, against a series of constraints. For example, in the retail industry linear programming can be used to determine the most profitable combination of products to sell based on constraints such as the amount of cash available to purchase stock, the per unit floor space that each product occupies, the shelf life and the turnover rate.

Many practical problems in analysing business operations can be expressed as linear programming problems. It is also used by other techniques such as dynamic programming, where the linear programming approach is used to solve sub-problems.

Simulation

Simulation is a technique where real processes or systems are modelled. The intent of the simulation is to predict how processes and systems will behave to either assist in their design or implementation.

Effective use of simulation as an analytical tool has a key requirement of using valid information sources to define the characteristics and behaviours that will be applied in the simulated model. The validity of a simulation can only be verified by testing simulated outcomes against real outcomes. As this is often not an option, simulations are often rigorously scrutinised against risk factors.

Simulations based on mathematical models can be readily applied into a computer simulation. Financial simulations using spreadsheet software are a good example of this. However, computer simulation may encompass virtually any computer-based representation imaginable.

The advantage of simulation is that it can:

- model long-term time frames in a short period
- apply multiple variables to determine possible outcomes and consequences
- identify problems in advance and provide opportunities for alternatives to be evaluated
- be developed at a relatively low cost compared to real processes and systems
- be continually refined as the outcomes are tested against real world outcomes.

Example: apply statistical analysis

Insurance companies take a risk-based approach to premium calculations. They take many factors into account when determining premiums to charge, such as their experience of the incidence and cost of the claims they pay under the insurance provided. Usually, the more likely the event is to occur (the probability), the higher the premium they will charge to cover it. The more the event costs, the higher the premium will be. For example, when calculating travel premiums, they will look at the age and physical condition of the traveller, the destination, the amount of time away, and the number of items the insurance is to cover.

Practice task 8

1. You are about to analyse an issue. Select a statistical analysis method that you will use and describe the objective of the analysis. For example, a correlation method is used to determine whether there is a relationship between an increase in sales and school holidays.

2. How will data be represented and documented visually from this analysis and why was this method chosen?

2D

Undertake a sensitivity analysis for all options

Sensitivity analysis is a method used to determine how outcomes are affected by changes. Also known as what-if analysis, it is often used to compare different scenarios and their potential outcomes based on a series of 'what ifs'.

Banks use sensitivity analysis to determine the borrowing capacity of clients. They calculate repayments based on current interest rates and compare them to income. They then apply sensitivity analysis by assuming a series of 'what ifs', such as:

- 'What if interest rates rise 0.25 per cent or 0.45 per cent? Could the client still afford the repayments?'



Single variable sensitivity analysis is the analysis of the change a single variable might have on an activity; for example, upgrading equipment to improve performance; increasing the cost of a product. It is possible, and often preferable, to conduct a multi-variable, or multi-channel sensitivity analysis when more than one variable is experimented with. This better reflects real projections; for example, deciding to relocate to new premises to be able to expand operations and develop a new product range.

Uses of sensitivity analysis

Sensitivity analysis has broad application in business and can be applied to almost any decision making process, regardless of the problem or the industry. The information below outlines some applications and examples of sensitivity analysis.

Applications

Sensitivity analysis has many uses, including:

- identifying points where values, thresholds or break-even values have significant impact on the outcome of a situation
- identifying sensitive variables
- understanding relationships between input and output variables
- determining the best options for a solution or strategy
- eliminating inferior, inappropriate or ineffective solutions
- assessing the inherent risk of a strategy or solution
- testing the robustness of a decision before implementation.

Examples

- An airline conducts a sensitivity analysis to determine the price for booking preferred seats. They want to identify the price a customer is willing to pay to select their own seat.
- A design firm is considering a salary increase for some staff but wants to make sure it can afford the extra cost. They undertake a sensitivity analysis to determine the cost of weekly incremental rises to existing salaries. For example, if we increase everyone's weekly salary (which is different for each employee) by \$50, the annual cost, plus on costs will be 'X' amount for staff member A and 'Y' amount for staff member B.

Benefits of sensitivity analysis

The ability to make predictions and assess the risks involved in new ideas gives leaders the confidence to make business decisions that might be complex or risky in nature. They can prompt brave changes that can have high value benefits.

Sensitivity analysis can have the following decision-making benefits:

- You can predict the impact of changes by altering variables and observing or estimating the results on the outcome.
- You can make better and more informed decisions.
- You can predict the outcome of your decisions more effectively.
- You can scenario-plan in the event that one of the 'what-ifs' you predicted actually occurs.

Sensitivity analysis process

In the past, sensitivity analysis involved many complex formulas and equations. Now there are many software applications, including Microsoft Excel, that have 'what if' functionality built in. Such software usually steps you through the process, prompting you to answer questions and fill in the blanks. With a built-in 'what if' modelling tool, you can ask your own questions and address the risks and uncertainty involved in your decision.

Whatever method you implement, here are some basic steps to follow.

Sensitivity analysis

Define a model you are testing: Determine the situation or subject to be tested.

Select variables or 'what ifs': Select the variable/s that will be changed.

Model scenarios: Experiment with parameters to develop different scenarios.

Observe changes: What happens to x if y is increased/decreased?

Process and record results: Identify the key outcomes.

Analysis guidance

Here are some tips for conducting a robust sensitivity analysis.

Be strategic in the variables you choose

Depending on the 'what ifs' you want to measure, you might choose to vary:

- the objective
- the contribution of an activity to the objective
- one of the constraint limits
- the number of constraints
- the number of activities.

Focus observations around main outcomes

For example:

- The value of the objective function for the optimal strategy
- The value of the objective function for sub-optimal strategies
- The difference in objective function values between two strategies
- The values of decision variables
- The rankings of decision variables, shadow costs, etc.

Report and summarise only key points of findings

Minimise the risk of the volume of data obscuring the important issues. For example, present summaries of activity levels or objective function values for different parameter values.

Example: use sensitivity analysis and loan payments

Branko is planning to take a loan to increase his organisation's operations. The business needs capital to develop a new product range. He visits the website of a number of banks and makes use of the institutions' calculators to calculate loan repayments. The loan repayment calculator allows him to calculate payments for different interest rates and periods. Branko is able to compare different payments, based on a variety of interest rates, periods and loan amounts.



Practice task 9

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

Case study

A large contract cleaning company is considering a price increase but wants to know how much more the customers would be willing to pay before they reduce or stop using the service.

1. Explain the role sensitivity analysis could play in determining how the price increase might affect the business.

2. Describe one possible method that could be adopted to undertake the study and explain the steps involved.

2E

Ensure documentation reflects the evaluation and conclusions

The successful transformation of data into information and knowledge relies heavily on the way it is recorded and communicated or made available for organisation-wide access. If done well, this knowledge then becomes valuable intellectual property that can be accessed throughout the organisation. This knowledge can be used for multiple purposes and by multiple personnel all with a view to informing decision-making and performance improvements.



Being able to turn data into information or communicate statistical information accurately is vital for effective decision-making. Many people may require access to the data and information that have been collected and analysed, so it is important to ensure documented findings are clear and easy to understand for a range of audiences. Make sure you follow organisational guidelines for documenting the information.

To see how information may be presented, visit the Australian Bureau of Statistics at: www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0. This web page shows how findings from an analysis of population change can be presented.

Prepare documentation to support analyses

Whatever type of presentation tools you use to convey the findings of data analysis to your colleagues, your documentation should relate directly to the original objective, support findings, summarise relevant sections of the data analysis, be clearly labelled, stand alone and be self-contained. The following provides an overview of preparing documents.

Audience and purpose

Once you have analysed the data and drawn some conclusions, you need to communicate in a way that tells a story, making the information clear, realistic, relevant and meaningful to the audience. The documentation should describe the important relationships, trends and causes that have resulted from your data analysis.

To present findings, you need to understand the target audience and ensure the documentation meets everyone's needs. For example, is it basic enough for operators to understand, yet detailed enough to be useful in informing management decision-making?

Steps to follow

- Describe the context/objectives of data collection.
- Present an overview of the situation/issue.
- Include all the supporting data.
- Define parameters and other terms if not obvious.
- Describe methodology used.
- Present findings clearly, one by one.
- Draw conclusions.
- Summarise findings and relate back to objectives.

Presentation do's

- Use visual tools, such as tables and graphs, to present and support arguments.
- Check for errors in your work.
- Use clear, simple language.
- Assume a common baseline of numeracy, literacy and understanding of content for your audience.
- Identify any limitations in the data or findings.
- Use proportions to assist in understanding data; for example, 'nearly three quarters (74 per cent) of participants...'
- Always write figures as numbers; for example, 25% instead of twenty-five per cent.
- Use rounded figures in text and raw data in tables.

Presentation don'ts

- Use jargon or department specific terms if there is also a possible wider audience.
- Include data that you are unsure of or you have quality concerns about.
- Assume single or specific use only of data, unless otherwise advised.
- Use subjective language or descriptions; for example, 'soared to 85 per cent'.

Written presentation

To best cater for a range of likely audiences, uses and preferences, you should use a mix of written and visual presentation tools to present the results of data analysis.

- Visual presentation tools allow quick access to data for meetings and management discussion where time may be limited. They also help to clearly demonstrate or support patterns and trends.
- Written presentation of data has the benefit of allowing information to be presented in more detail and often describes what is occurring in the visual presentation. Written presentation of data includes reports, fact sheets, letters, articles and case studies.

Visual tools

Visual presentations of data include:

- graphs
- maps
- tables
- charts
- dashboards
- mind maps
- diagrams
- photographs.

Example: present findings

Sacha is preparing to present the findings of a project he was given to explore the possibility of relocating the organisation to a bigger building. His objective was to identify whether a move to larger premises will benefit the organisation.

Sacha undertook a range of research and analysis methods:

- He explored trends in the industry to see whether there was a continued demand for their products.
- He analysed the effect of new competitors.
- He identified overseas markets affecting their operations.
- He interviewed stakeholders.
- He checked the financial position of the business and projected its future position based on economic conditions and recent changes to regulations.

For each issue that arose, he developed a visual representation or a written explanation; for example, a pie chart showing current market share and a bar graph showing interview results.

When it is time to present the findings, he makes sure the terminology will be understood, the visual tools are easy to interpret and use percentage proportions when appropriate, and the conclusion is based on quantitative data. He avoids subjective statements. Lastly, he checks for any errors.

Sacha uses a checklist to ensure his report is comprehensive and easy to understand. The checklist includes the following:

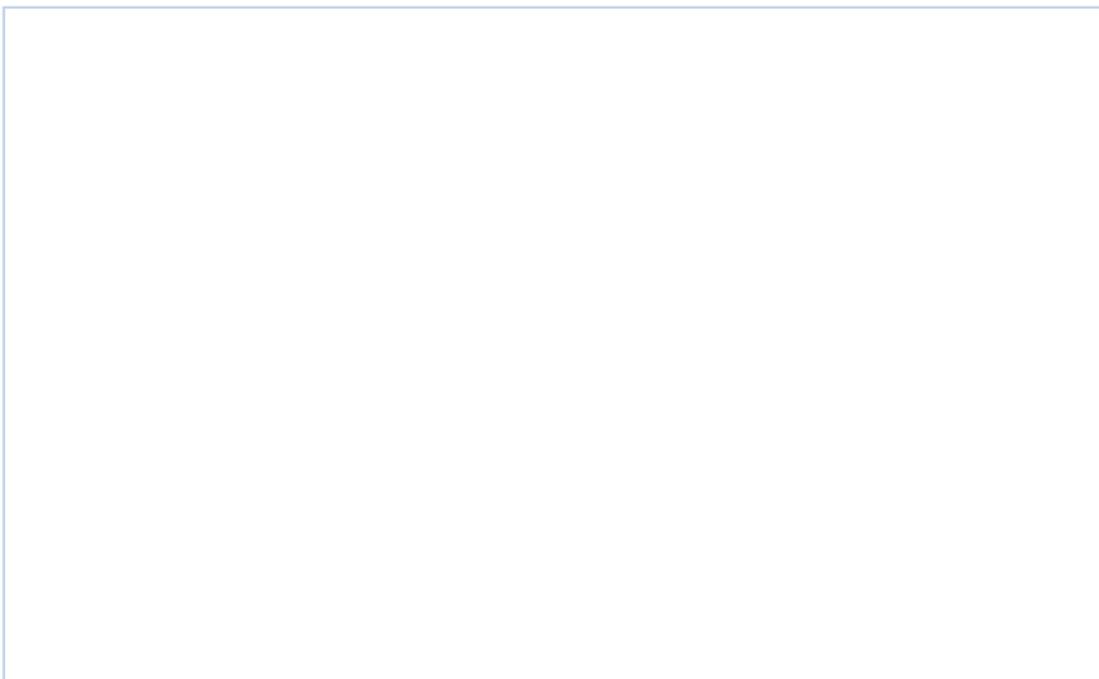
- Purpose and audience
- Objective
- Overview of project
- Methodology
- Supporting data (graphs and charts included)
- Findings and conclusion

Practice task 10

1. Use what you have learnt about features of effective data presentation to make a checklist for presenting results from research and analysis.



2. Select two different samples of data presentation found within a workplace and use your checklist to assess the effectiveness of their presentation. Describe what the presentations contained and whether the samples met the requirements of your checklist. Include the presentation samples in your response.



2F

Adjust management information systems to meet information processing objectives

When you undertake data collection and analysis activities, you may become aware of some shortcomings in your organisation's knowledge management system in its ability to process and manage the data according to your needs. Since the management of knowledge should be a cyclical process of continuous improvement, it makes sense that you should continue to monitor your systems, making adjustments where necessary, in order to meet the information needs and objectives within your organisation. You are best placed to inform this process, having contributed to the data collection and analysis process.



Understand management information and decision support systems

Corporate success depends on easy access to knowledge. Having a comprehensive knowledge management system (KMS) enables an organisation to make decisions based on sufficient and reliable data and information, improve procedures, reduce redundant work processes and retain the organisation's intellectual capital. It can also be used as a learning and continuous improvement tool.

A KMS usually comprises equipment, strategies, methods, practices, procedures and processes; all strategically designed to identify, create, represent, collect, analyse, organise, store, retrieve, distribute, share and draw on information and knowledge valuable to the work of the organisation. Depending on their core business activities, an organisation's KMS may include a variety of management systems such as those relating to financials, customers, sales and marketing, human resources, business operations, information technology and so on.

Make sure you are familiar with current practices and terminology. Some organisations have sophisticated systems while others may be more basic. Some systems are entirely computer-based, others are paper-based, while many have a combination of both forms of information in their KMS. While paper-based information is still needed (for example, the use of procedure manuals in remote locations or where internet access is limited), many organisations are moving towards a more mature system of collection and storage to capitalise on the automated processing it allows and to protect against loss of information and version control.

Maturity of a system

The maturity of a business management system within an organisation can be mapped against the following time line, keeping in mind that there are many incremental steps in between each of these stages in KMS maturity. Organisations should aim to continuously improve the way they manage information and knowledge with a view to achieving greater maturity. Following is a description of the information management maturity continuum.

Information management maturity continuum
<p>Basic</p> <p>Organisations with basic KMSs may store data, such as company policies, procedures and basic reference information, to assist employees to do their job. Email may manage communications. Computerised systems, such as point of sale terminals, facilitate work. They may also use a software product to record and store financial data controlled and accessed by finance staff.</p>
<p>Operational</p> <p>Organisations at this stage use a KMS to manage everyday operations. They may have an intranet for managing documentation across the organisation and interdepartmental communication. They might also have individual departmental shared drives where work documentation is stored. Departments may have responsibility for their own financial data but share the same software to facilitate this.</p>
<p>Mature</p> <p>Organisations with more mature KMSs manage data uniformly across the organisation not only for day-to-day operations but with a focus on strategies for the future.</p>

Information processing objectives

With the growing use of the internet and other technologies, there is more data available than ever before. It is what we do with that data that counts. Data is collected predominately to measure and improve business performance against strategic goals. Increasingly, companies are incorporating key performance indicators (KPIs), management dashboards, and other performance-based reports to assist in this task. But it is what they are doing with this data and how they are managing it that has the greatest impact on their chances for success. The following information outlines some guidelines for setting information processing objectives.

Your role
<p>You have the opportunity, and the responsibility, to ensure you understand your organisation's knowledge management system and are getting the most out of it. You also have the opportunity to make or recommend adjustments to ensure it is best suited to meet your information needs and objectives now and into the future.</p>

Determine requirements

Ask yourself: What are our information needs and objectives?

For example:

- Do you need information on-the-spot or within a given time frame to do your work effectively?
- Do multiple staff need to access the same information?
- Do they need to access it concurrently?
- How accurate does the information need to be?
- How detailed does it need to be?
- Do you need information for operational or strategic purposes, or both?

Quantify needs

You should also quantify your information needs and objectives. For example, if you need information quickly – how quickly? Within 24 hours, 2 days, immediately? When you know this, you can formulate your own checklist for measuring the success of the system in meeting those objectives.

Use a checklist

Here is a simple example of points to include in a checklist. Customise it to suit your own needs and objectives.

- Policy and procedure data to be easily accessible immediately by all staff.
- Only management level staff to have access to personnel files.
- Access to departmental shared drives by permission only to staff within that department.
- Requests for IT assistance actioned within 24 hours.

Assess effectiveness

When you know what your knowledge management objectives are, you then can proceed to measure the effectiveness of the system in meeting those objectives. This can be done by assessing actual performance against objectives and expectations. You can use a checklist to guide this process. Assessment can include observation, feedback from your team and other teams across the organisation, management advice and examination of anecdotal evidence or instances where there has been a problem in recent times. You may even choose to conduct an internal survey to assess effectiveness and identify areas for improvement.



Make adjustments

Once you have assessed the system's performance against objectives, you can take action. For example, if information requests are not turned around in 24 hours, discuss this with the IT department, establish a cause and find a solution. Maybe there are not enough staff to respond? Maybe there has been a spike in requests due to a computer virus and this is causing a backlog?

Specific adjustments to the system may need to be directed to others within and outside the organisation. Perhaps a manager has complained that his email storage is always being exceeded and inhibiting his ability to send emails. He is now dealing with an increase in customer complaints due to the introduction of a faulty product, and needs significant storage capacity. You may need to arrange for a temporary increase in his email storage. IT staff may need to manage the increased email storage request. Finance might need to arrange the acquisition of new software.

Other system adjustments

- Introducing new file naming conventions to be implemented across the organisation
- Undertaking or overseeing departmental clean-ups of shared drives to achieve consistency and facilitate easier access
- Developing a new procedure for information requests
- Introducing an online booking and tracking system for company vehicles
- Updating the online internal telephone directory
- Introducing a new online internal communication tool
- Training in the use of new budgeting software for all managers
- Updating the budget template to reflect changed pricing structure
- Applying document controls for a new confidential project

Example: identify the need for adjustments

A manager at a medium-sized manufacturing organisation uses the following questions to prepare for her assessment of the newly implemented management information system:

- Does the system have buy-in or commitment to its use, from all staff?
- Are staff motivated to use the system effectively?
- Do staff have the skills and knowledge to use the system effectively?
- Does the system enable both an operational and strategic approach to managing the company's performance?
- Are there enough/appropriate performance measures and analytics?
- Is the time focus for data within the system appropriate – is data historical or does it include future forecasts? Is it recent enough? Is it sufficiently long-term?
- Is the information of the appropriate quality?
- Is the technology up to date/sufficient enough to meet requirements?



Practice task 11

Assess an organisation's business maturity level by answering the questions in this table. Specify the organisation's overall maturity level (basis, operational and strategic) on the information management maturity continuum.

Question	Assessment Yes/No	Comments
Does the system have buy-in from all staff, particularly if it is new?		
Are staff motivated to use the system effectively?		
Do staff have the skills and knowledge to use the system effectively?		
Does the system enable both an operational and strategic approach to managing the company's performance?		
Are there enough/appropriate performance measures and analytics?		
Is the time focus for data within the system appropriate – is data historical or does it include future forecasts? Is it recent enough? Is it sufficiently long-term?		
Is the information of the appropriate quality?		
Is the technology up to date/sufficient enough to meet requirements?		
Maturity of system:		

Summary

1. The availability of immediate, relevant data and knowledge in any business is vital for it to maximise opportunities and succeed in an increasingly competitive and expanding global market.
2. Customer and staff feedback, as well as business performance data, are major sources of data that can be used to inform decision-making.
3. A knowledge management system (KMS) usually comprises equipment, strategies, methods, practices, procedures and processes, all strategically designed to identify, create, represent, collect, analyse, organise, store, retrieve, distribute, share and draw on information and knowledge valuable to the work of the organisation.
4. Leaders are responsible for contributing to the development and implementation of strategies to ensure that critical knowledge and information is readily available in order to review the organisation's performance and to ensure its effective functioning.
5. It is important that you analyse and act upon the data collected to identify trends and improvement opportunities and inform decision-making and change as necessary.
6. Data should be tested for reliability and validity before it is used to inform decision-making.
7. It is essential to capture the knowledge and experience that employees have gained over time by recording it in a formal system so it can be shared.
8. Use a range of formal and informal methods for collecting data from a range of sources.
9. While most corporate knowledge is recorded formally, some may not be recorded at all and must be captured to maximise business performance and minimise the risk of losing intellectual property.

Learning checkpoint 2 Analyse information and knowledge

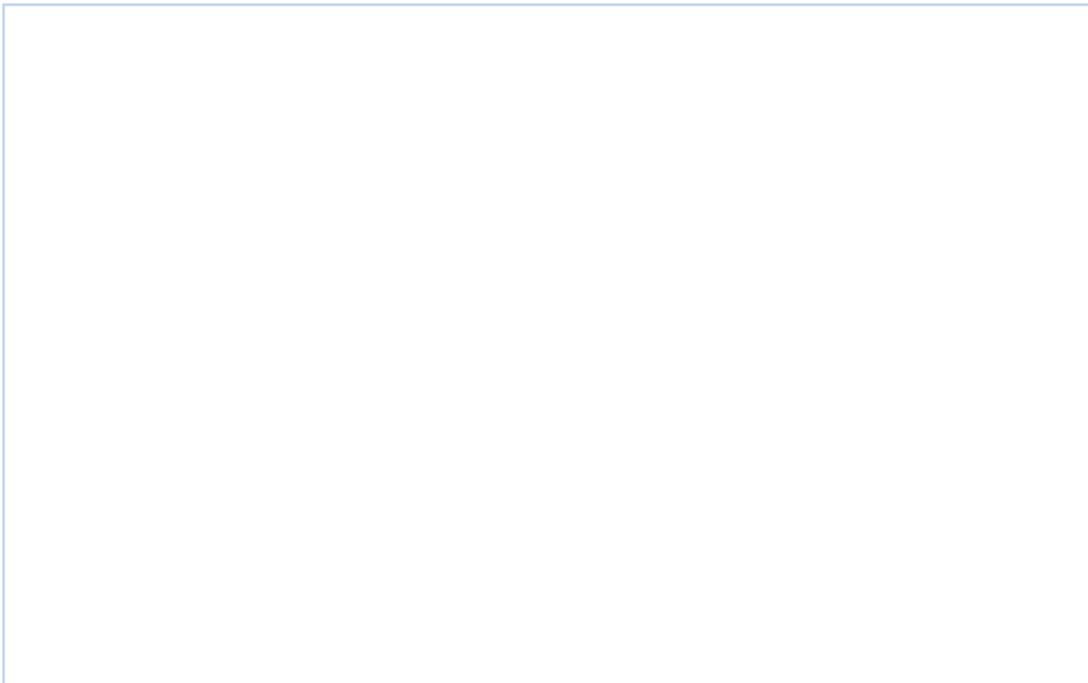
This learning checkpoint allows you to review your skills and knowledge in analysing information and knowledge.

Part A

1. Explain one statistical analysis method, including its benefit and applications.



2. How can sensitivity analysis aid decision-making in an organisation?



3. Explain the consequences of failing to comprehensively analyse cause and effect.

Part B

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

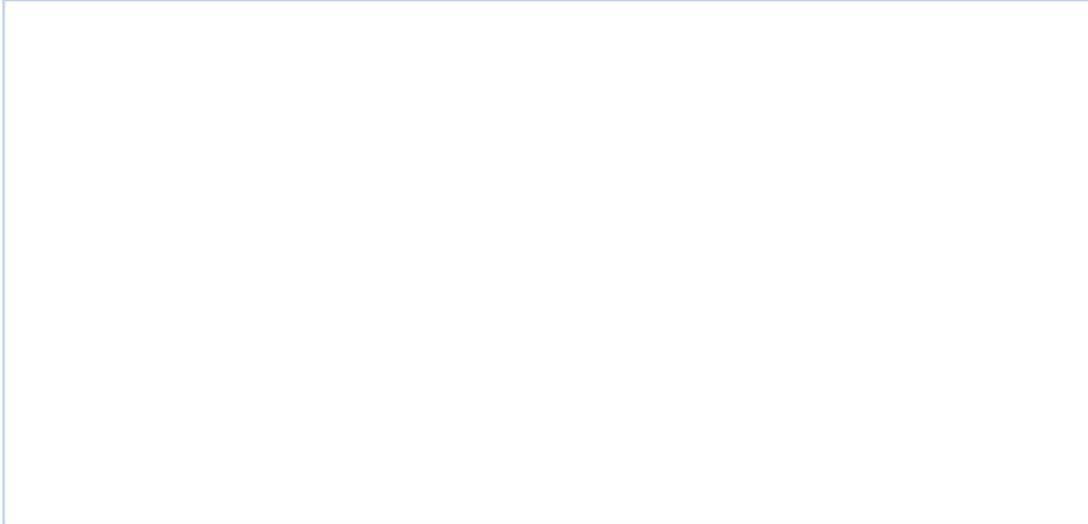
Case study

Mariana is the area manager of a large retail clothing chain. In a recent meeting with her store managers, she hears anecdotal evidence that returns seem to have increased dramatically this quarter. She decides to take a closer look at what's going on so that she can address the situation.

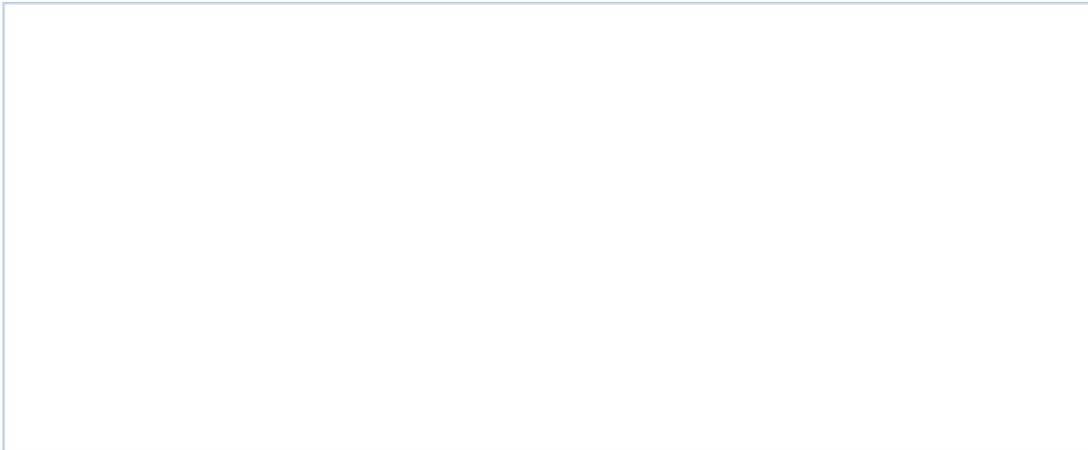
During her research, Mariana discovers that there have been several complaints from customers about the feedback tool on the organisation's website. It seems there isn't enough space in the comments section for customers to leave a detailed enough description of their problem and they are forced to wait for extended periods on a telephone hotline, which further angers them.

1. What should Mariana's objective be? Make sure it is clear, relevant and consistent with decisions required.

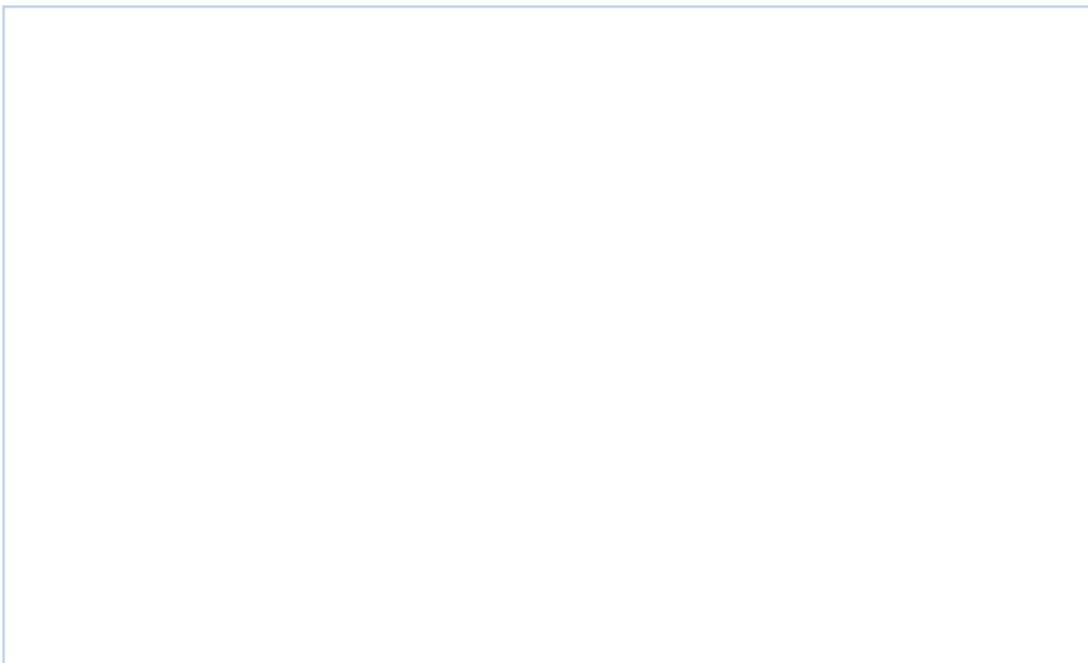
2. How could Mariana undertake research and analysis to achieve that objective? Describe the process she could undertake.



3. How could Mariana organise the data and present the findings from her research?



4. What adjustments could Mariana make to improve this situation?



Topic 3

Take decisions on business issues identified

A key responsibility for a manager or leader is to make decisions based on the research data and information that has been collected and analysed. To do this make sure there is sufficient evidence to support any decisions made.

In this topic you will learn how to:

- 3A Ensure information is sufficient, valid and reliable to support a decision
- 3B Utilise risk management plans to determine courses of action
- 3C Utilise appropriate quantitative methods to assist decision-making
- 3D Consult specialists and other relevant groups
- 3E Ensure decisions taken are within a person's delegated accountability
- 3F Make timely decisions consistent with organisational guidelines, procedures, objectives and values

3A

Ensure information is sufficient, valid and reliable to support a decision

When you are ready to make decisions based on information you have collected or accessed, there are a number of checking tasks you should undertake. You need to make sure any decision you make is based on robust data. This means ensuring that there is sufficient data to support a decision, the data is valid, it relates to the situation and is reliable (error free and non-biased) and accurate. You may wish to enlist the help of a colleague to double-check and validate the information before making any decisions.

Recheck strategies

The recheck process will be similar to the initial checking process you applied when collecting the data, but with additional inspections. You may have applied a range of comprehensive strategies, such as using reliability coefficients, the test-retest method, the parallel forms methods, the inter-rater reliability method and observation, so you should be reasonably confident that the data can be relied upon. However, it is a good idea to recheck. You may not have been involved in the initial data collection activities, you may not remember all of the details or you know it is just good practice to double-check. Always check that the statistical analysis has been correctly interpreted. Recommendations made by relying on insufficient data, inaccurate information or a biased interpretation are likely to be flawed.

To recheck, you may need to do the following:

- Check there is sufficient information for meeting objectives or making a decision.
- Scan the data to make sure nothing unusual stands out or whether results seem to contradict the evidence gathered.
- Talk to the person who conducted the data collection to ensure methods used were reliable and that results are valid.
- Double-check the raw data to ensure the statistics match the conclusion drawn to rule out misinterpretation.
- Check the data collection methodology to ensure qualitative as well as quantitative methods were used.
- Check that all the data and information gathered was addressed in the analysis and recommendations.
- Check for obvious bias.
- Return to the criteria, such as, 'Is the information presented so that it is easy to interpret and understand?'

Supplement the data

As a result of your re-checking, you may need to seek further information. This might happen when you have a problem with the sufficiency or reliability of the data. For example, you may have plenty of quantitative data but would like to supplement it with qualitative data to make sure you have considered all factors in your decision-making, or to be sure you have a customer-driven focus to problem solving. Further observation, questioning and third-party reports may need to be obtained. In some cases, a more extensive root cause analysis may need to be conducted to gain further information.

Other reasons for supplementing data

- You may decide that the data is not current enough.
- Some time has lapsed since the data was collected.
- A significant event has occurred that may mean the results are no longer valid; for example, a considerable drop in the value of the dollar.
- The trend identified, while based over several months, is no longer indicative of the current situation.
- You find that errors have been made in the statistical analysis.
- The findings appear to have been biased.

Example: check information

Gene is a gym manager. His manager in charge of memberships, Fran, has investigated the causes of the increased numbers of members leaving the gym. Fran provides a report showing an influx of new gyms in the area; supporting evidence includes statistics on the number and location of the new gyms, as well as a comparative study of the services offered and pricing structure. Fran concludes in her report that these new gyms offer similar services to their own but they are significantly cheaper.

Fran recommends that they consider lowering their prices to meet the competition if they want to halt the slide in memberships. The findings are compelling and make sense but Gene is not so sure. Many of his gym’s clientele are loyal, long-time members. Gene decides to talk to a group of these members to see if they can give him some further insight.

He discovers that the new group fitness manager has changed class times and cancelled some classes without consulting management, colleagues, customers or instructors. This situation is driving people away. The new gyms are certainly a factor prompting people to leave but not the root cause, as indicated in the initial data analysis. Gene decides that instead of changing prices, he will conduct a member survey to determine the most popular class times and use this to develop a new schedule. He plans to use it as an opportunity to ask his loyal clientele what other services they would like to see in the gym.



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Practice task 12

1. Explain why confirming information is an important step in the decision-making process.

continued ...

... continued

2. What further checks would you put in place to ensure information is sufficient, reliable and valid?

3. Give at least two reasons why you may need to seek further information.

3B

Utilise risk management plans to determine courses of action

When making any major decision within an organisation, it is good practice to conduct a risk analysis to identify the possible risks involved, the likelihood of them occurring and the consequences should they occur. Most organisations are required through work health and safety legislation to have risk management strategies in place to help with this process. These strategies should be followed before you implement your decisions. Here is some further information on risk, risk management and risk management planning.

What is a risk?

Risk is defined as exposure to the threat of danger, harm or loss. In business, risk is the probability of threat and loss that exists within an organisation's operations and environment. Examples of this risk might include loss of revenue, change in demand, competition and changing external economic factors. Risk is embedded in every aspect of every business. All risks may not be able to be eliminated or controlled. It is the organisation's ability to manage those risks that is important.

Risk management

Risk management refers to processes for identifying, assessing and prioritising risks so that they can be eliminated, minimised or controlled with minimal impact to the organisation.

There are risk management standards that have been set by various bodies, such as the Project Management Institute, the National Institute of Standards and Technology, and ISO Standards. These are intended as benchmarks to be used to guide individual implementation. They have been adopted and adapted by many organisations as standard practice. Your own organisation may have a very specific risk management procedure, including templates and guidelines to follow.

Risk planning

All new projects, ventures, changes and major decisions should undergo risk analysis and risk management planning prior to implementation.

You may be required to undertake risk management planning before you make a decision or before you implement any kind of change or new event in your organisation. Implementing risk management strategies remains good practice. Failure to do so may result in unplanned-for risk and its consequences. Having risk management strategies in place should either prevent the risk from happening or allow you to deal with it in an efficient and cost-effective way when it occurs.

The risk management process

Leaders must rely on a range of strategies when making a decision. An organisation's risk management procedures are in place to ensure decisions made are in accordance with defined strategies and that you have considered and planned for any risks involved.

The risk management process is a continuous cycle involving the following steps.

Risk management process	
Identify risks <ul style="list-style-type: none"> What are the possible risks? 	<ul style="list-style-type: none"> How many risks are there?
Assess risks <ul style="list-style-type: none"> How serious are the risks? How likely are they to occur? 	<ul style="list-style-type: none"> What are the possible impacts or consequences? What priority should be placed on controlling these risks?
Control the risks <ul style="list-style-type: none"> What strategies can we use to control the risks (accept, transfer, avoid, reduce)? What is involved in this? 	<ul style="list-style-type: none"> How much will it cost? How long will it take? What is the desired outcome? How will controls be implemented?
Review controls <ul style="list-style-type: none"> Did the controls work? How effective were they? 	<ul style="list-style-type: none"> Could they be improved? What else can we do?

Determine risk levels

A risk assessment matrix may be developed and used to evaluate a risk, where likelihood and impact is identified to determine the level of the risk where these intersect on the matrix. High risks become the priorities for treatment or control. Moderate risks need management focus. Some low level risks may be resolved through internal control such as routine procedures.

Consider the likelihood and impact of an activity you have been involved with relating to financial management and use the following matrix to determine the risk level.

LIKELIHOOD	VERY LIKELY	Acceptable risk Medium	Unacceptable risk High	Unacceptable risk Extreme
	LIKELY	Acceptable risk Low	Acceptable risk Medium	Unacceptable risk High
	UNLIKELY	Acceptable risk Low	Acceptable risk Low	Acceptable risk Medium
		MINOR	MODERATE	MAJOR
		IMPACT		

Review the risk management plan

A risk management plan is a tool used to record in detail what risks an organisation faces and the strategies in place to prevent or control them. A plan outlines the identified risks, identifies the probability of the risk occurring, identifies and analyses the impact if the risk or event occurs and identifies and evaluates proposed controls. A comprehensive plan allocates personnel, time lines, costs, resources, reporting requirements and actions to be undertaken. Risk management templates and guides are widely available on the internet and in project management software.

A major part of a leader's responsibilities is to ensure that any change implemented as part of a risk management strategy aligns with legislative requirements. You may need to review the organisation's policies and procedures to make sure they comply with legislation and regulations. For example, new procedures to control bullying need to comply with work health and safety legislation; a new workplace flexibility policy needs to adhere to anti-discrimination legislation and regulations. The checking process should be part of the continuous improvement cycle.

The following provides more information about risk management plans.

Purpose

Your organisation may have its own templates and documentation relating to risk management plans. When completed, it summarises the proposed risk management approach which has been undertaken. It might be used to:

- assist decision-making
- plan at the start of a project
- supplement overall business and strategic planning
- demonstrate capability when vying for business; for example, tenders and Expressions of Interest.

Plan elements

The risk management plan may form part of a larger document, such as a business plan, project plan or strategic plan, or it can be a stand-alone document. In some organisations, it may be added to a risk register for future reference. Whatever its form or purpose, a risk management plan should include the following details:

- The process for identifying, analysing, evaluating and controlling risks
- Personnel responsible
- Costs
- Actions to be undertaken
- Resources required
- Reporting requirements

Example: refer to the risk management plan

Susannah works for an organisation that sells specialised software solutions to industry. Based on the research and analysis Susannah has already conducted, she has determined that they should introduce a new product line, which is complex to use and requires specialist skills but is high in demand and has the potential for high profit margins. This means investing in employing three more staff to boost the sales team and training the existing team in the new product range. She considers the risks involved in implementing this decision.

Risk	Probability	Impact	Proposed controls
Cost of new staff not covered by sales of new product	Low	High	<ul style="list-style-type: none"> Develop a strong marketing plan to maximise sales. Develop individual and team sales targets to ensure break-even and, preferably, profit. Implement incentives for achievement of targets. Package salaries and contracts of new staff to achieve targets.
Inability to source suitably qualified and skilled staff	Medium	Medium	<ul style="list-style-type: none"> Enlist the help of a specialist employment consultant. Target organisations which already use the product to identify possible personnel that could be encouraged to join the organisation. Consider hiring consultants rather than salaried staff.
Existing staff unable to understand or use product	High	Medium	<ul style="list-style-type: none"> Consider employing a consultant as a mentor on a short-term basis to support existing sales staff.

Practice task 13

Use this risk management template to assess at least two risks related to a decision that is about to be made in your organisation.

Decision:			
Risk	Probability	Impact	Proposed control

3C

Utilise appropriate quantitative methods to assist decision-making

When making important decisions be wary of placing too much emphasis on observations, discussions, good ideas and your instincts. While this qualitative data may provide valuable sources of information they are often subjective, so an evidence-based approach is preferred. This means including quantitative data in your decision-making. Unlike qualitative data, quantitative data can be measured and verified. It is often harder to collect and less readily available but it is valuable because it can be used to test, hypothesise and identify trends and patterns. It can also be manipulated to test sensitivity to change.



When to use quantitative data

While your initial data analysis will include some quantitative data, you may need to supplement the information you have with further analysis to aid in the final decision-making process.

You may wish to:

- complement cause and effect analysis with some statistics to further support your conclusions
- identify more data to support your decision-making
- assess possible impacts of variables involved in your solution
- use modelling techniques to compare options and decide on a final option
- forecast the level of improved performance you can expect from a proposed solution.

How to use quantitative data

Here are some common methods used to gather quantitative data. Organisations often use a combination of these methods for gathering and using quantitative data to finalise decision-making and decide on solutions to business issues.

Surveying

Surveying involves sampling a market or target audience (customers, staff, suppliers or others) to seek responses to defined questions with a view to making statistical inferences. At this stage, questions asked could be specifically targeted towards confirming hypotheses or testing reactions to one or more proposed solutions.

Sensitivity analysis

Sensitivity analysis enables you to study how something will react if the variables that apply to it change. At this stage, sensitivity analysis could be used to test impacts of possible risks identified as part of the risk management process. Sensitivity analysis may be applied to data collected earlier or may involve collection and analysis of entirely new data.

Modelling

Modelling involves building a hypothetical scenario or series of scenarios and then applying a range of conditions and variables to assess impact. It can also be used as a risk management tool in the final stages of the decision-making process.

Cost–benefit analysis

Cost–benefit analysis enables you to decide the best course of action out of two or more possible options by measuring the value of expected benefits for each course of action and comparing them to the costs.

Break-even analysis

Break-even analysis enables you to determine how many units of a product or service must be sold in order to break even in covering its cost. If a proposed solution not only breaks even but generates a profit, then it may be considered a good option.

Feasibility study

A feasibility study predicts whether a solution is achievable and can be implemented profitably. For example, does a new product have the potential to generate profit based on the expected costs and the price that will be charged for it?

Example: use quantitative methods

André works in marketing and sales for a large retailer. He is looking for ways to increase revenue through increased sales, following instructions from senior management as a result of a recent performance review.

He has two ideas:

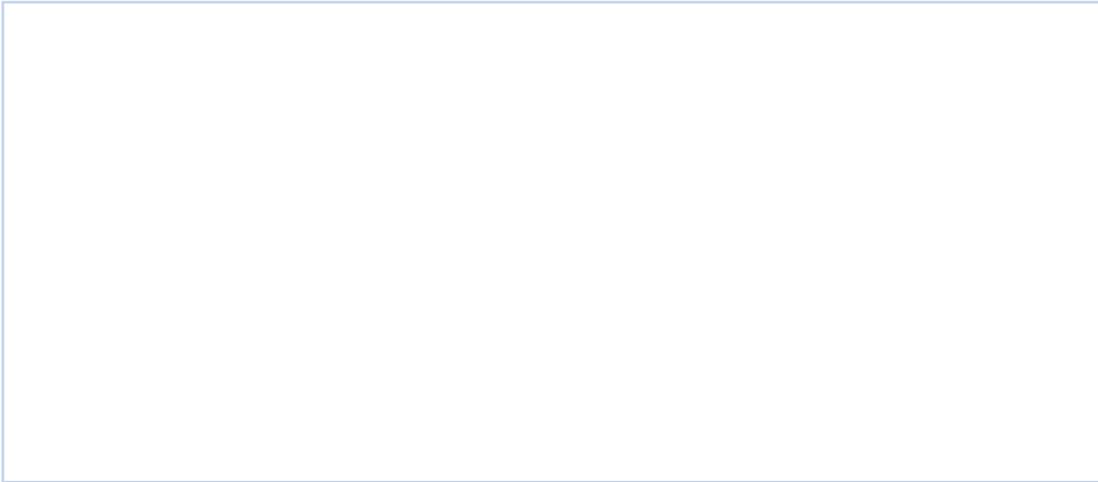
1. Introduce a new product range to attract attention and increase customer flow through the store.
2. Increase advertising activity for existing product lines.

André decides to conduct a cost–benefit analysis to estimate how much profit he could expect from each course of action so that he can choose the option that will generate more profit.

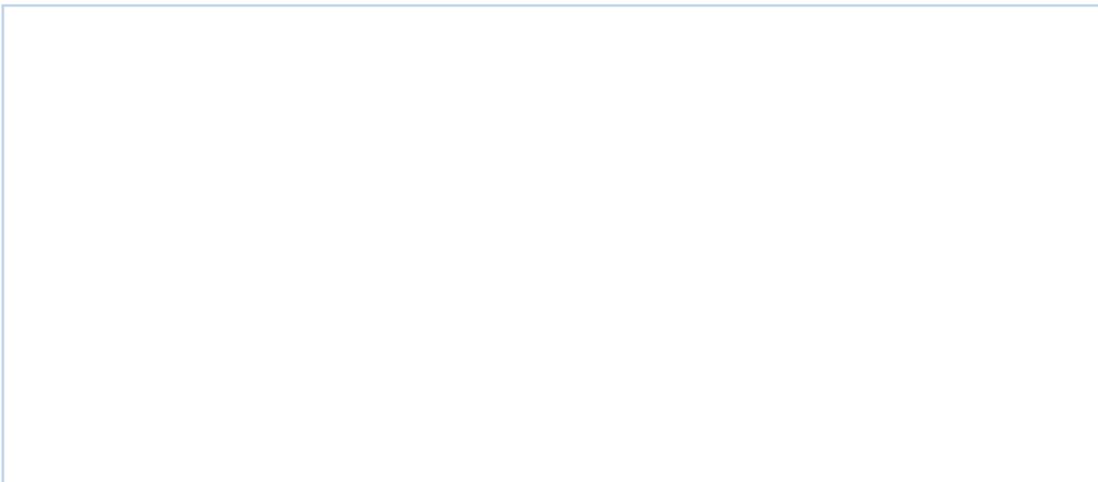


Practice task 14

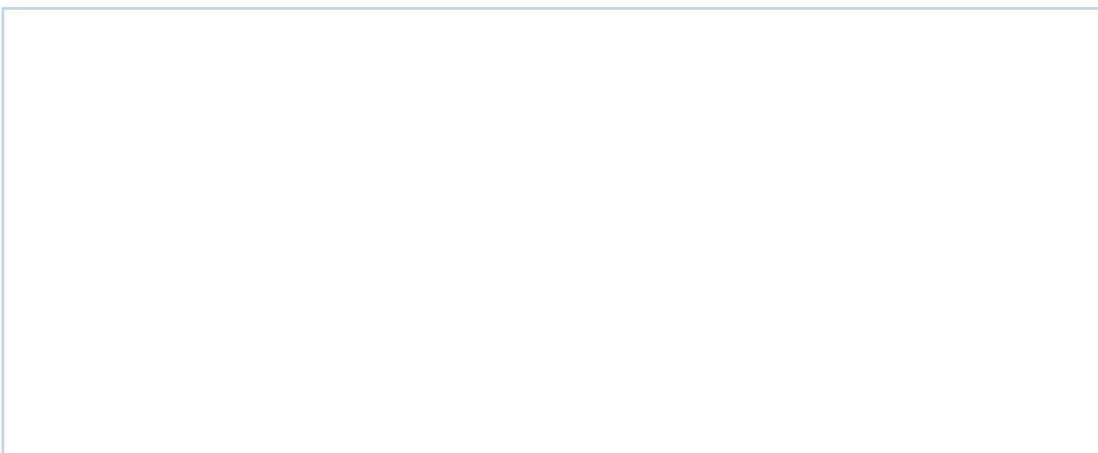
1. Develop three solutions to business problems or issues within your organisation.



2. For each solution from question 1, identify a quantitative analysis method you could use to inform the final decision.



3. Justify each choice of analysis method.



3D

Consult specialists and other relevant groups

Before deciding on a final solution to your business problem or issue, it is important that you consult with a variety of stakeholders, as well as specialists if necessary, to ensure the appropriateness and success of your solution. This helps to ensure your decision is based on accurate information founded on knowledge, expertise and experience.

In any decision-making situation or change scenario, there will be a number of stakeholders. A stakeholder is anyone who has a direct interest in or may be impacted by a decision. This could include people from a range of different areas internal and external to an organisation.

Here is list of some possible internal and external stakeholders.



Government departments, agencies and representatives
Team members and other staff
CEO, board members, shareholder representatives
Customers and franchisees
Suppliers
Industry bodies
Community groups and members

Why stakeholders should be consulted

Failure to adequately consult with stakeholders is one of the most common reasons for failure of new initiatives or changes in an organisation. Projects or decisions that genuinely seek to consult with and listen to stakeholders are more likely to succeed and be widely supported. The following information provides examples of which stakeholders could be consulted, why they might be consulted and the kinds of information you might seek when consulting them.

CEO/Board	
<p>Why:</p> <ul style="list-style-type: none"> • Sign off on high value decisions • Seek support • Request funds for investment 	<p>What:</p> <ul style="list-style-type: none"> • Can we proceed? • Are there any problems? • Do we have support? • Is this in line with high level strategy?
Customers	
<p>Why:</p> <ul style="list-style-type: none"> • Make sure they are happy • Gauge interest • Confirm cause and effect • Seek opinion 	<p>What:</p> <ul style="list-style-type: none"> • What do you think? • Will you buy it? How often? • How much would you pay? • How can we make it more appealing to you? • What is good about it? • What is bad about it? • What are we doing wrong? • What are we doing right?
Franchisees	
<p>Why:</p> <ul style="list-style-type: none"> • Seek ideas • Determine support needs • Determine training requirements 	<p>What:</p> <ul style="list-style-type: none"> • What works in your store? • How successful would this be with your customers? • Would you need help in order to implement this? • What extra training would you and your employees need?
Suppliers	
<p>Why:</p> <ul style="list-style-type: none"> • Ensure communication channels are appropriate • Advise on ordering procedures • Determine their needs • Determine supply/availability 	<p>What:</p> <ul style="list-style-type: none"> • How will we order this? • How do we make an order? • What new processes/procedures will need to be put in place? • Can we get this product? How much can we get? • When can we have it? • How often can we get it? • How much will you charge us for it?

Team/peers	
<p>Why:</p> <ul style="list-style-type: none"> • Get new ideas • Seek opinion • Test ideas • Leverage off experience 	<p>What:</p> <ul style="list-style-type: none"> • Can you think of anything else we can do? • What do you think of this? • Do you think this might work? • Has this ever happened to you before? • What did you do in a similar situation?
Managers	
<p>Why:</p> <ul style="list-style-type: none"> • Seek advice • Seek permission • Take direction 	<p>What:</p> <ul style="list-style-type: none"> • Will this be okay? • Can I ...? • How do I ...? • What do you want me to do about ...? • When do you need this by? • What do you want?
Staff	
<p>Why:</p> <ul style="list-style-type: none"> • Seek opinion • Seek buy-in • Seek cooperation 	<p>What:</p> <ul style="list-style-type: none"> • How would you feel if this happened? • How would it affect your job? • How can we assist you to do your job better? • How can we make you happier? • What help will you need to implement this? • Can you help us roll this out?
Community	
<p>Why:</p> <ul style="list-style-type: none"> • Seek opinion • Seek support • Gauge impact 	<p>What:</p> <ul style="list-style-type: none"> • What do you think of this? • Will you be upset if we ...? • How will this impact you? • What are the pros and cons for you? • What would you like to see happen? • How will it help/hurt the community?

Industry bodies	
<p>Why:</p> <ul style="list-style-type: none"> • Seek ideas and advice • Collaborate for mutual benefit • Meet industry guidelines and standards 	<p>What:</p> <ul style="list-style-type: none"> • What guidelines should we follow to do this? • How will this help our industry? • How can you help us promote this? • What are others in the industry doing? • What is the best way to do this?
Government	
<p>Why:</p> <ul style="list-style-type: none"> • Seek legislative regulatory advice • Seek support • Gain approval 	<p>What:</p> <ul style="list-style-type: none"> • Are we allowed to do this? • What rules do we need to follow? • What do we have to do? • Can you grant us a permit for this?

Select a sample group to consult

When the organisation has a large number of stakeholders in any one category, questioning a representative sample is usually enough. Many organisations form a group of key stakeholders in a focus group, reference group or steering committee that they can consult for advice and guidance in decision-making.

- Retailers and product developers often engage focus groups to test a product.
- Large projects often engage a reference group to inform various stages and outcomes.
- Highly regulated projects, such as government-funded and national projects usually require a steering committee made up of key stakeholders to ensure the project is running smoothly and meets all auditing requirements along the way.



Consult with specialists

You may also need to engage with specialists who can provide you with technical expertise, advice and their experience to help you make a decision. This expertise may not be available within the organisation and may need to be sourced externally. This might include IT specialists for implementation of new systems and software; security specialists to advise of best products and security measures; electricians to advise on lighting requirements for a new office space. Here are further details on identifying specialists, seeking advice and types of specialist advice.

Identifying specialists

It is important that you source specialists with the appropriate training, knowledge, qualifications and licensing at an appropriate price. Consider the following options:

- Hire an expert you have used before.
- Use a preferred supplier from the list on your intranet.
- Check with the purchasing department to see if there is a preferred supplier.
- Ask your manager or colleagues for a recommendation.
- Use an online directory and shop around for best price or service.

Seeking advice

Specialist advice on decision-making may be sought by telephone or email or by arranging an appointment or inspection. The specialist may need to consult on an ongoing basis for the duration of implementation and may need to work with you or members of your team to exchange information during that time.

Specialist input

- Specialists may provide:
- technical advice
 - anecdotal experience
 - statistical data
 - opinions from their perspective
 - review of tasks or testing
 - feedback
 - suggestions for implementation.

Consultation techniques

On larger scale projects or with the implementation of large or far-reaching decisions, the consultation process forms part of a broader communication plan. For smaller decisions, or those involving less consultation and a more informal approach, the process may be more simplistic and less planned or structured. Always prepare an objective so everyone is aware of what you aim to achieve from the consultation.

The following are some of the many options for communication and consultation techniques, together with examples of when they might be adopted. It is worth remembering that more than one method may be combined in many cases.

Consultation methods

- Reference groups/steering committees; for example, when multiple key stakeholders are to be represented or when strong compliance is required.
- Focus groups for customer or other small group feedback.
- User testing combined with observation to see how something works in practice.
- Surveys to gauge opinion from customers or staff.
- Informal discussions to seek peer or management advice.
- Review any written feedback from experts from within or external to the organisation (sometimes combined with key stakeholder consultation).
- Meetings to deliver information and seek immediate feedback face-to-face.
- Presentations, followed by audience feedback for executive, staff or peer approval.

Questions and guidance

When you have determined consultation methods, you need to decide who to consult and when. In other words, you may not want to consult all of your stakeholders at the same time or in the same way. Will you consult sub-groups separately? Will you consult individuals, small groups, large groups, everyone, or a small representative sample only? Whoever you consult and whatever method you choose, follow these tips that apply to formal meetings but can be adapted for any communication methods as appropriate.

Tips for running a consultation session

- Have an agenda and thank attendees for their participation.
- Speak clearly and use uncomplicated, jargon-free language, and make sure you have an interpreter if needed.
- Use a range of communication modes, such as verbal, written and visual, to maintain interest and cater for different audience needs and preferences.
- Introduce the stakeholders to your representatives and to each other, where possible.
- Explain the reason for the consultation, explain their role and outline what has happened so far and explain your objectives.
- Ask open-ended questions to maximise quality and amount of feedback.
- Listen to, record and respond to, if appropriate, answers without judgment, and answer questions.
- Have someone else take notes that can be distributed or published afterwards.
- Summarise main discussion points at the end and identify any actions that may already be obvious.
- Explain what you will do with the information and what will happen next.
- Thank participants for their contributions.
- Consider rewarding stakeholders for their contributions; for example, pay them, provide certificates or letters of participation, offer discounts.

Example: consult with others to make a decision

A company is considering a range of new learning management system software for implementation and wants to test which will be most suitable for their needs. Brandon, the manager responsible for the choice, undertakes a range of consultation with staff and management to ensure the system they choose is the most fit for purpose. He undertakes the following consultation activities:

- First, he establishes the criteria for purchase through initial discussions with senior management via a meeting. He includes managers from the departments most likely to use the system, along with those responsible for decision-making. He also includes a member of the IT department to field technical questions and offer specialist advice. In the meeting he seeks agreement about price, criteria and likely uses of the system.
- After the meeting he develops a brief to guide the selection and distributes it to the attendees for comment and sign-off.
- Brandon then takes the brief to a selected sample of likely users of the system and checks that it meets their own needs. He also surveys a wider group of users to determine their needs before finalising the brief.
- Next he arranges a trial session to test various options on the market that meet the criteria of the brief. He invites the user group he consulted earlier, first checking with their managers.
- Brandon observes the tests and talks to the focus group at the end of the trial to seek their feedback.
- Finally he reports back to the managers and decision-makers he initially consulted. He calls a meeting where he presents his findings and recommendations so that they can make the final decision.



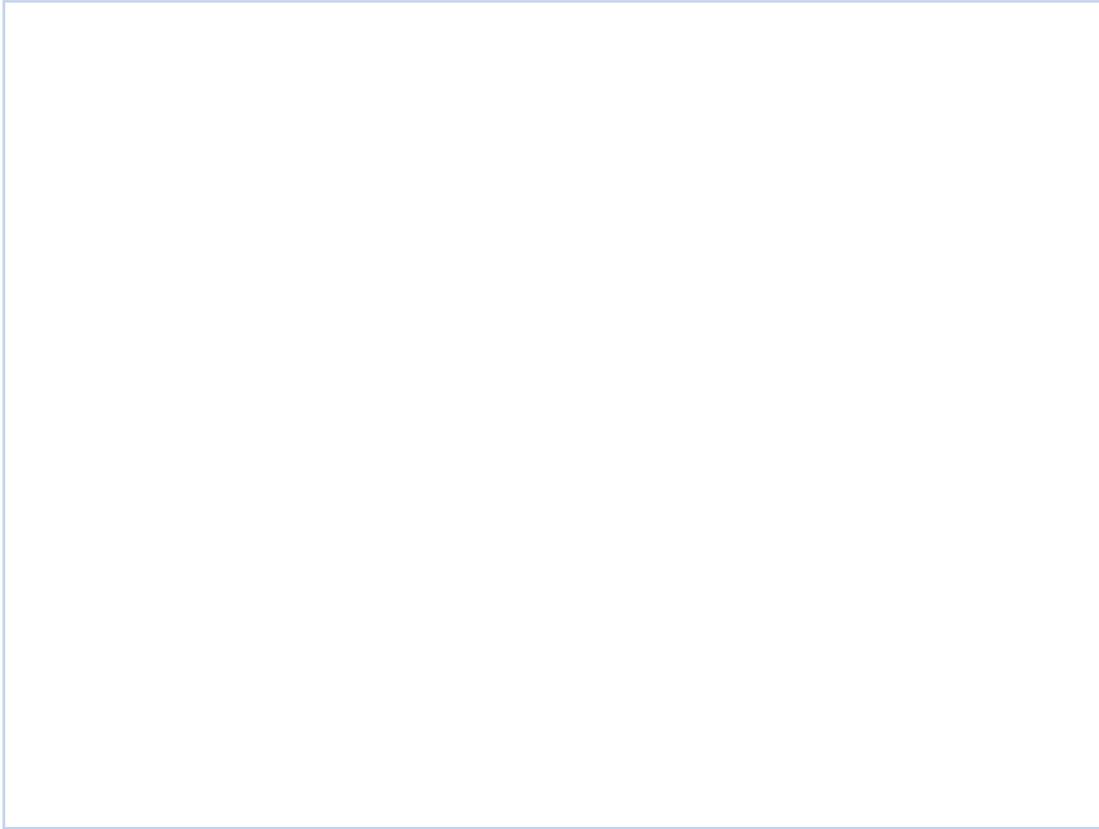
Practice task 15

1. Choose a communication technique that you could employ to consult key stakeholders about a solution to an issue that has arisen. Choose a real or hypothetical decision relevant to your work role and organisation that you want to consult about.

continued ...

... continued

2. Describe how you will undertake this consultation.



3. Write some key questions you will include in the consultation process.



3E

Ensure decisions taken are within a person's delegated accountability

Decisions are made every day in an organisation. Some decisions are made on the spot by operators and their line managers and affect daily operations. Other decisions are more strategic and may require a certain level of authority to either make or have approved. When determining the right solution to a problem or issue or making a strategic decision, you need to ensure you have the authority to make that decision or, if you are delegating the decision making, that you are doing so within the established lines of authority in the organisation. In order to determine authority for decision making you could ask your manager, refer to organisational policies and procedures, consult your position description, or identify appropriate staff by referring to the organisational chart.

Accountability and authority for decision-making

Even if you have the right supporting information and experience to make a decision, you may need to refer it to someone else for sign-off before implementation as shown below.

Why authorisation is required

Authorisation may be required because:

- the decision rests with another department
- the decision impacts another department
- the decision is shared between two or more departments
- you may not have the discretion/authority to make the decision
- the decision involves a value that exceeds the limits of your discretionary authority; for example, over \$100,000.

When authorisation is required

Examples of when authorisation is required:

- A loan manager who can only approve home loans up to the value of \$500,000, after which he must refer decisions to the area manager.
- A department manager who needs general manager approval to submit a tender for work over the value of \$1,000,000.
- A team leader who needs to apply for an exception from HR to employ people to staff a new project during an employment freeze in the organisation.
- The purchase of a new company vehicle needs to be approved by the finance department.
- All departmental strategic plans must be approved by the CEO prior to implementation.
- New staff appointments and promotions for executive levels must be approved by the board.

Justify your position

If sign-off for a decision is required from someone with a higher level of authority within your organisation, that person will want to see evidence to support the decision being proposed or expect you to make an argument for your case. This might be as simple as providing a brief explanation or a one-page summary of the situation, or as complex as a full presentation of the situation accompanied by supporting data to the board of directors. Be prepared with all the information that justifies your proposed decision before asking for its approval.

Delegation

If you choose to delegate decision-making tasks to team members, you need to make sure they have the authority to make the decision. Delegation is a valid management strategy for relieving your own workload, encouraging ownership and increased responsibility within your team, and succession planning. However, tasks must still be devolved according to organisational lines of reporting and policies and procedures in all cases. In addition, decision-making tasks devolved to you by your manager must also be in line with these policies and procedures. If you are not sure you have authority to make a decision you have been tasked with, check with your manager or organisational policies and procedures.



Example: make decisions according to accountability

Eve is an airline call centre operator. She receives a request from a customer for a refund of their discount airfare booking due to a death in the family. The customer had to return home early from their holiday and is also complaining that the airline did not offer an alternative flight to allow them to return home earlier than planned. The airline has a strict 'no refunds policy' and the caller asks for the matter to be referred to a supervisor, since Eve has no discretion to work outside of airline policy.

Eve transfers the call to her supervisor. Before taking the call, Pallavi, the duty manager, accesses the booking and double-checks the availability of flights to make sure there is no other way they can help accommodate the caller. She discovers, during this check, that the caller is a regular customer of the airline. Following a discussion with the caller, Pallavi agrees that there are mitigating circumstances and believes a refund should be offered, since there is no other way for them to resolve the problem. However, she is also unable to approve the decision. She has some discretionary authority but not for the issue of refunds. She contacts her manager directly and explains the situation on behalf of the caller, making the recommendation that they offer the refund in this case, especially since the caller is a frequent flyer of the airline.



Practice task 16

1. How do you identify your level of authorisation? List the sources you consult to identify reporting lines and the authority for decision-making that you have.

2. Use this table to develop a list of personnel, their responsibilities and limits as they relate to your job role.

Personnel	Responsibilities	Limits

3F**Make timely decisions consistent with organisational guidelines, procedures, objectives and values**

All decisions must be in line with the organisation's values, standards, guidelines and procedures as well as meet regulatory requirements. A crucial aspect in decision-making is to ensure that all decisions are made in a timely manner to ensure issues are resolved promptly, efficiently and effectively.

Ensure decisions are in line with organisational values

Values are the basis upon which an organisation operates. Organisations spend a great deal of money, time and energy building their brand, and values play an important part in how they are perceived. The values are reflected in the way staff do their work and conduct themselves, including the decisions they make. A company's brand or reputation is one of its key tools in attracting, maintaining and increasing market share. So your actions and conduct, including your decision-making, must align with these values and, more importantly, do nothing to damage this carefully cultivated image. The following information provides further details on what is required to ensure decisions are in line with organisational values.

Organisational values

Organisational values can be communicated formally, via value statements in strategic plans and through codes of conduct and policies and procedures. They may include such concepts as:

- honesty
- integrity
- accountability
- transparency
- professionalism.

Confirm values and standards

Confirm that the decisions you make are in line with the organisation's values and standards. This is particularly important when your decisions impact your community or when you work in the public sector where a high level of integrity and transparency is expected and behaviour and operations are closely scrutinised. Always check the organisation's values statement to ensure compliance.

Avoid unethical decisions

In a competitive market, it is not uncommon for unethical decision-making to occur when attempting to win business or increase profits. You need to consider those around you, your peers, customers and team, as well as the broader community, when making large-scale decisions, and consider whether there are any impacts that might not be in line with your organisational values and standards.

For example, an organisation has a policy not to allow relatives of staff to supply products to avoid conflict of interest, so awarding a contract to a new supplier because they are related to a team member is unethical.

Make decisions that support organisational objectives

When making your decision, consider how it contributes to helping the organisation meet its mission and objectives. Check the objectives in the strategic plan; these should also be reflected as goals and targets in your department's operational plan. These targets are measured by key performance indicators. For example, a decision to outsource payroll services following the retirement of the payroll manager may allow the organisation to meet the objective of streamlining finance processes to lower costs and increase net profits. Ensuring your decisions are in line with organisational objectives has a number of benefits. You may help your organisation to achieve or exceed their goals. You may even contribute to increased awareness, market share or improved image.

Failure to support objectives may result in:

- poor business performance
- failure to meet targets
- embarrassment to the company and yourself
- damage to the organisation's image
- legal action
- loss of competitive edge
- loss of confidence from management and shareholders
- loss of customers
- loss of business
- loss of your job.

Follow organisational guidelines, procedures and regulations

When making decisions you must also be mindful of organisational guidelines, policies and procedures to ensure the work you do meets industry standards, codes of practice and government legislation. Failure to follow procedures could mean you are working in an unsafe manner, not using the most preferred procedure or even breaking the law.

Here are some examples of control strategies to ensure policies, procedures and regulations are met.

Control strategies

- Ring appropriate hotlines for regulatory bodies to seek advice or confirm the legality of your decision.
- Search the internet and relevant regulatory association websites for more information.
- Ask a relevant expert within your organisation for advice, such as the WHS representative or the quality manager.
- Develop recruitment and selection preparation checklists that consider anti-discrimination and equal opportunity laws when advertising for and interviewing candidates.
- Conduct a safety audit following the implementation of a new piece of equipment to ensure team members are appropriately trained and that other WHS requirements are met.
- Establish a monitoring system that randomly selects samples for assessment, such as the recording and random monitoring of customer service team members' calls.

Make timely decisions

Decisions are often required within a time frame that might be dictated by a deadline, managerial orders, submission date, closing time for orders, limited availability of stock, or the resolution of an issue or problem. Check all documentation and confirm with relevant personnel to ensure you and all stakeholders are aware of the time lines for making a decision. In some instances, timing is crucial; for example, resolving a customer complaint, making a decision about a bullying incident, or addressing other work health and safety issues.

Failure to make decisions in a timely manner may have the following consequences:

- It may impact another person's ability to do their job.
- It may cause the organisation to miss out on business.
- It may exclude you from consideration for a tender.
- You may run out of stock.
- There may be damage to the organisation's reputation.
- It may result in disciplinary action from your manager.
- It may cause embarrassment to the organisation.
- There may be angry colleagues or customers.
- A decision may show a lack of overall professionalism.

How to ensure decisions are timely

You can't always control things at work. Despite your best efforts it may sometimes be difficult to make a timely decision. This might be due to lack of sufficient or reliable information, competing work demands, being let down by others you are relying on for input or assistance, barriers you encounter (such as unexpected legal issues), sickness or staff absence.

Some factors can be prevented or managed to ensure you make a timely decision.

Tips for making timely decisions:

- Find out what time line you are working within.
- Develop an action plan.
- Allocate target times for individual tasks.
- Monitor and stick to the action plan.
- Delegate, where possible and appropriate.
- Ask for support, such as more resources.
- Complete individual tasks concurrently, where possible, to speed up the process. For instance, don't wait for a response from one person before contacting the next one.
- Use mobile phones and tablets so that you can maximise down time, such as waiting for a meeting to start.

Example: ensure decisions are consistent with values

Daniel is a senior manager working for an organisation that claims to ensure that all products are not produced in sweatshop conditions. He makes a decision to source products from India to keep production costs low. However, Daniel does not fully investigate the manufacturing site; instead, he takes the word of the manufacturer that staff are fairly paid. A customer discovers that the products aren't sweatshop free, and posts this information on the site's Facebook page. A social media movement begins calling for consumers to boycott the organisation's products.



Practice task 17

Complete this table by describing how you ensure that when a decision is made it meets organisational values and standards, policies and procedures and objectives, and is made in a timely manner.

Decision:	
How it aligns with the organisation's values and standards	
How it aligns with organisational policies and procedures	

continued ...

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Decision:	
How it aligns with the organisation's objectives	
Two strategies used to ensure the decision is made in a timely manner	

Summary

1. It is crucial that you confirm there is enough information on which to base your decision, that the information is valid, that it relates to the situation and it is reliable and accurate.
2. As a result of re-checking data, you may need to seek further information.
3. When making any major decision within an organisation, it is good practice to identify the possible risks involved, the likelihood of them occurring and the consequences should they occur.
4. Risk can be managed by transferring the threat, avoiding the threat, reducing the negative effects of the threat or the likelihood of it occurring, or accepting the threat and planning for the consequence.
5. A range of methods can be employed to collect and analyse quantitative data to inform final decision-making.
6. Consulting with a variety of stakeholders, as well as specialists if necessary, helps to ensure that decisions are based on accurate information founded on knowledge, expertise and experience.
7. Decisions must be made within organisational lines of authority and responsibility.
8. Decisions should align with the values, standards and objectives of the organisation.
9. Decisions must take into consideration organisational policies and procedures, as well as regulations and legislation.
10. Decisions should be made in a timely manner.

Learning checkpoint 3

Take decisions on business issues identified

This learning checkpoint allows you to review your skills and knowledge in taking decisions on business issues identified.

Part A

1. You need to re-check the validity, reliability and sufficiency of data before making a final decision. Write a question for each of these aspects to ensure the evidence you use can support a decision.

Aspect	Question
Sufficiency	
Reliability	
Validity	

2. Explain why the decisions you make should reflect your organisation's values, objectives and procedures. In your response, provide the consequences of not considering these aspects.

3. What part does the role of risk management play in decision-making?

4. What are some possible consequences of not conducting a risk analysis?

5. Describe in one paragraph how you would ensure that decisions taken are within the delegated accountability.

6. List three quantitative methods you might use to assist decision-making.

7. List three strategies you might implement to ensure that organisational procedures and regulatory requirements are met when a decision is made.

Part B

Read the scenario, then answer the questions that follow.

Scenario

One of your team members complains that they are being bullied by a colleague at work. A first step is to refer to organisational policies and procedures to support your management of the situation. However, you find that none exists. After you manage the situation effectively, your supervisor suggests you form a reference group to develop a policy and procedure for the future.

1. What key stakeholder groups would you include in the reference group?

2. List the types of input these stakeholders may have in the decision.

3. What mix of consultation methods would you use?

4. How might you communicate effectively with the reference group to ensure all aspects are covered and consultation is effective?

5. Why do you think the decision to write and implement bullying guidelines was a timely decision?

Topic 4

Disseminate information to the organisation

Careful consideration must be given to how the information we provide to others within our organisation and to external stakeholders is presented, disseminated and protected to maximise business success. You must apply strategies for presenting information and communicating it to different target audiences, and monitor and maintain information and information systems for continuous improvement and security, all with a view to improving organisational performance.

In this topic you will learn how to:

- 4A Ensure information needs are documented appropriately
- 4B Document information and ensure it is up to date, accurate, relevant and sufficient for the recipient
- 4C Develop and review communication plans and disseminate information in accordance with privacy policies
- 4D Design and test systems to ensure they provide optimum efficiency and quality and meet information requirements
- 4E Maintain corporate knowledge and security

4A

Ensure information needs are documented appropriately

You or your team may be responsible for responding to requests for information. These requests may come from senior management, your manager or colleagues in other departments. Requests may also come from external sources, such as customers or suppliers. Before you respond to such requests, it is important that you clarify the details within the request to ensure the information you provide is accurate and appropriate for the needs of the person making the request. This may mean analysing requests on a case-by-case basis or designing a procedure and/or supporting mechanisms for making information requests.



Policies and procedures

Follow organisational policy and procedures for making and responding to requests for information to meet the expected or required standards and to ensure requests are made clearly and consistently and are complete. Procedures may include how to make a request, what information to include and how and when requests will be actioned so that everyone is clear on expectations. Some organisations may develop a service level agreement as part of their customer service policy that includes definitions and standards of the scope, quality, areas of responsibility and turnover times to be provided, such as 'A response will be provided within 48 hours or a free service offered'.

Typical procedures for receiving and supplying information needs:

- Confirm that you have received the request; whether it is a completed form, an email or a telephone request.
- Restate the objective to show you have understood the request.
- Confirm the audience for the response.
- Confirm the format in which the information is required.
- Confirm the scope or how much information is needed.
- Confirm time lines.
- Report on how long it will take to respond before you start the job.
- Report on any shortcomings or limitations in the response or the information contained within it.

Document the information needed

Unless requests for information are documented clearly and with enough detail, there is a danger that the information you or your team disseminate in response to the request will not be adequate or appropriate in fulfilling its original need. If you have a clear process in place for receiving information requests and have well-designed systems and checks in place, you can ensure the requests are clear and detailed enough for an appropriate response to be formulated. This can save confusion and wasted time and effort and lead to better decision-making and overall improved business performance within the organisation.

Here is some information on how documents may be handled manually or automatically.

How requests are received

Requests may be received via:

- memo or email
- verbal instruction, face-to-face or telephone
- work brief or form
- actions from minutes of a meeting
- social media or the internet (if from an external source).

Automated systems

For some functions, an organisation may have an automated system for receiving information requests; for example:

- tracking company vehicles in order to make a booking
- booking a meeting room
- requesting retrieval of files from archives.

Check requests

Requests for information may come from a variety of sources within the organisation and in a variety of ways. Whichever way a request is received, it should be checked before it is actioned to ensure it is clear and fully understood and contains enough detail for an appropriate response to be formulated. When checking incoming information requests, make sure the following criteria are satisfied.

Source of request and objectives

Is it clear from whom the request has come? You need these details in order to deliver the response and to contact the right person or department in case you need more information or if there is a problem.

What is the information needed for and how will it be used? Often this provides clarity and guides the methodology undertaken to collect and disseminate the information.

Time frame

When is the information needed? This helps you to plan workloads and assist in meeting the person's objective; for example, meeting a deadline or making a decision prior to the next board meeting.

Often an organisation has policies for agreed response times for information. These might be written into service level agreements or communicated on request forms so turnover times are clear. Knowing how long you have for finding the information may dictate the level of detail you are able to provide in your response or the methods you use to collect the information. For example, an urgent request from management may be an exception and require a response faster than normally agreed time lines.

Format and audience

How or in what format is the information required? Depending on the request, this may already be determined. The response format may depend on the objectives of the request, the audience it is intended for or the nature of the data it contains.

Who is the information intended for? This determines what is included in the response, such as the level of detail, the language and terminology used and the format it is presented in.

Parameters/sample details

What is the scale, size, demographic, price range, number, dates, period to be covered by the information provided? For example, you may receive a request from the warehouse for data on recent sales of children's size large, navy tracksuit pants so that they can analyse stock requirements following complaints from the floor manager that they never have enough stock to meet demand. You need to know what is meant by the term 'recent' before you respond to this request.

Tools for requesting information

When developing procedures for receiving information requests, you may consider implementing one of the following systems or tools, depending on the type of request and your access to resources such as technology.

Tools for requesting information

- Automated systems, such as an online booking request form
- Paper-based or email-based forms
- A card system
- A telephone voicemail request system
- SMS
- Email
- A hotline with the operator completing a request form when taking calls

Consider when the information is required

It is crucial to make sure information requests are actioned in a timely manner, appropriate to the nature of the request, its importance or the source. Information is often required within a defined or reduced time frame in order to assist in decision-making by others within the organisation. Always advise the person requesting the information if there are any obstacles or time delays in disseminating information and keep them abreast of your progress. For example, you may need to obtain legal authorisation before accessing information, which may take a while. Untimely delivery of information may impact another person's ability to complete their task, or may result in customers becoming dissatisfied. There are details on information delivery strategies and their ability to fulfil timeliness requirements.

Delivery strategies

To help ensure you can action requests in a timely manner, follow these tips:

- Find out what time line you are working within.
- Develop an action plan, allocating target times for individual tasks.
- Monitor and stick to the action plan.
- Delegate, where possible and appropriate.
- Ask for help, such as more resources.
- Complete individual tasks concurrently, where possible, to speed up the process. For instance, don't wait for a response from one person before contacting the next one.
- Prioritise tasks if necessary, making exceptions to normal turnaround times for urgent cases.

Timely methods

The way you deliver the information requested also impacts timeliness. Deadlines or levels of urgency for information will in part determine how you deliver the information. For example, urgent requests may need to be made by telephone and actioned while the person making the request waits on the line, whereas less urgent requests will result in more time to process and involve greater detail and may be delivered in writing.

Consider the following as a guide for how you might choose to deliver urgent and non-urgent information requests:

- Urgent; for example, telephone, email, face-to-face
- Medium urgency; for example, a visual presentation of findings; a meeting
- Non-urgent; for example, a written report

Example: respond to requests

Consider these two scenarios about responding to requests.

Scenario 1: Melanie

A customer needs a size 12 dress but the store doesn't have it in stock. The customer asks Melanie, the sales assistant, to check with another store. Melanie calls four stores in the area until she finally locates one. This takes some time as all the stores are busy. There is now a line of frustrated customers. The manager observes this. He knows that Melanie is new and has forgotten that information about stock held in other stores is found on the system by accessing the bar code on the dress. Melanie could have identified the store with the size 12 dress in one action and then made one call to ask them to set aside the stock. The manager makes a note to emphasise this in future induction training.

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Example

Scenario 2: Ahn

Ahn, the IT manager of a large organisation needs to respond to continued complaints from departments about the response time for helpdesk inquiries. His staff have complained that they are overworked and that the process lacks organisation. Ahn introduces an automated online booking system to log requests for help. The system acknowledges receipt of requests for help and automatically generates an expected wait time, which is dependent on workload and measured by the system. The user selects the type of problem from a list of categories and the system automatically sets a priority for the request in the queue before determining the response time. It's early days yet, but the system seems to be working well, although the helpdesk phone line needs to be maintained temporarily as part of the transition to the new procedure.

Practice task 18

1. Describe a procedure for actioning a request for information.

2. Describe ways information needs can be better documented.

4B Document information and ensure it is up to date, accurate, relevant and sufficient for the recipient

Once the information requested has been obtained, document it in preparation for disseminating it to the relevant people. Regardless of the simplicity or complexity of the information you need to ensure the information is up to date, accurate, relevant and sufficient for the recipient and that is prepared for delivery in the most appropriate format. It is also important that you monitor and regularly update information held in databases that are accessed directly by others to ensure the currency of all information released.



Consider the audience

Be sure that the presentation of information is appropriate to the target audience. You can tailor the way you document the information by understanding who they are (for example, staff, customer, board member), the purpose in requesting the information, their different backgrounds, experience, skills and knowledge, the different language and literacy needs of various users, their location, and whether the information is disseminated to a group or an individual.

Examples of different audience information requirements are provided here.

1 An operator might need to access and engage with information to help with their day-to-day tasks while a manager may need it to make strategic improvements for the business.

2 A staff member in a remote branch may prefer the information documented in a written report rather than conveyed via a teleconference.



3 A group may need the information presented in a slide format.

4 A customer will need information that is easy to understand and free of industry jargon or technical details.

Consider how the information will be used

How you document and present information also depends on the potential uses of the information. If the information is provided in response to a specific request or to meet a specific objective, a tailored response might be required. For example, an executive may ask for data on a sensitivity analysis with very specific variables, which will only be relevant to their department and can be used in an internal planning meeting. This means the format, the presentation, and even the language used can rely on a particular level of need and understanding.

You may consider providing the information in a variety of formats, to suit a range of audience needs and uses. For example, you may provide segments of information from the overall findings customised or selected and packaged to suit individual needs, such as:

- comparative departmental financial results for board members
- individual findings for each department manager to focus on
- summary data published on the intranet to communicate overall financial results to the whole staff.



Consider the appropriate format and style

A key responsibility for leaders is to present information in an appropriate style and format, taking into account the knowledge, experience and expertise of users, the intended use of the information and the level of urgency of the request. Formats may be written, visual, verbal or a combination. However, all information must be documented in some manner in order to be available for future reference.

It is essential that you have the skills to be able to generate complex written texts using sophisticated writing skills and a broad range of writing styles. Be aware of appropriate conventions and stylistic devices you can use to express precise meaning, such as using an executive summary, headings, dot-points, case studies, graphic presentations such as tables, graphs or pie charts, or a glossary. Sometimes the required format might be specified in the request from the user or may be required in order to meet a specified purpose; for example, evidence requested by an auditor may need to be presented on a specific form with answers to specific questions.

Check currency, accuracy, relevance and sufficiency

Recheck the information to ensure it is the latest information available; it is accurate, relevant to the request and sufficient for the recipient to use for the intended purpose.

Consider developing a matrix that lists the type of data, the potential audience and the required language and presentation format. You could also develop a checklist (similar to the following), to ensure the information is documented according to need.

Criteria	Yes or No	Comment/Action
Has the request objective been met?		
Does the documented information meet target audience needs?		
Is the level of the language appropriate for the target audience?		
Is information sufficiently clear and free from technical terms, industry specific language and jargon, as dictated by target audience?		
Is numerical data appropriate to the assumed level of the target audience?		
Are calculations correct?		
Is the level of assumed knowledge and skills appropriate for the target audience?		
Is the level of detail appropriate for its intended use?		
Are presentation methods appropriate for intended use?		
Is the documented information current?		
Is the documented information within the appropriate parameters (for example, time frame, sample, demographic)?		

Update databases

It is important that you monitor and regularly update information held in databases that are accessed directly by others. An organisation's databases may contain information relating to customers, products, services, staff, training, resources and assets. People rely on the organisation's information management system to provide them with information that is current and accurate. Its function of storing and providing large-scale access to information is diminished if the information it contains cannot be relied upon. For example, customers' contact details must be current and the amount of stock on hand must be accurate.

The information below outlines the consequences of failing to keep database information up-to-date and some strategies to help prevent this from happening.

Consequences

Failure to keep a database up-to-date may result in:

- inaccurate or outdated data
- poor decision-making
- mistakes
- false assumptions
- time wasted looking for more recent information
- failure to understand and capitalise on current and future trends
- loss of competitive edge
- loss of custom.

Strategies

Strategies developed and implemented to ensure databases are monitored and updated on a regular basis may include:

- allocating areas of responsibility to team members
- setting measures and targets to ensure accountability
- linking responsibilities to performance management
- developing schedules or action plans for updating and monitoring databases
- setting standards for completing entries; for example, entering new customer data within 24 hours of a new sale.

Example: document information

Results of a recent organisation-wide staff survey have just been compiled and must be communicated to the various stakeholders from within all levels of the company.

Stephan, the manager responsible for communicating the findings, decides to prepare results in a number of different ways to meet different audience segments' needs. He first checks that the information is accurate and sufficient for each of the purposes.

He prepares:

- statistical comparisons of staff satisfaction levels across all departments to be presented at the next board meeting
- a cause-and-effect analysis for each department manager so that they can identify causes of dissatisfaction in their own departments
- summaries of qualitative data, written in a clear manner without jargon for each department and plans to send them in group emails to the team members who only want to find out about results in their own department.



Practice task 19

1. You have been asked to gather information for a senior management meeting about increasing prices so a decision can be made about how to communicate this to staff and customers. Complete this checklist to document the information.

Question	Response
Who is the audience?	
How will the information be used?	
What format and style will you choose?	
How do you know the information is accurate and current?	

2. Why do you need to know about the audience when documenting information?

3. Why is it crucial for a manager to ensure that databases are updated regularly?

4C

Develop and review communication plans and disseminate information in accordance with privacy policies

A communication plan is a useful tool to help manage the appropriate, timely and effective dissemination of information within the organisation. Such a plan identifies the strategies used to distribute the information to others in line with a range of organisational policies and procedures, such as those relating to privacy and confidentiality, as well as aligning with the organisation's overall business strategy and objectives.

A communication plan

A communication plan provides guidelines and strategies to help you share the information you have gathered prior to implementing a project or a change resulting from a new decision being made. It answers questions such as, 'Does the information have restricted access?', 'What strategies can be used to disseminate the information?', 'Are there any confidentiality or privacy issues attached to the information?', 'What time lines need to be considered?', 'Do I need to consider the information's language, style and format?'

If no plans exist it may be your job to develop them so everyone involved in the organisation understands the procedures to be followed when disseminating information.

Here is some information on the benefits and features of a communication plan.

Benefits of a communication plan

An effective communication plan assists a leader by allowing them to:

- target communications accurately
- follow a predetermined structure for dissemination
- make communications more efficient and effective
- ensure consistent messaging
- maximise access to information
- manage time efficiently.

Communication plan features

An effective communication plan:

- has clear objectives
- defines all audience segments and identifies their various information needs
- details a time line for dissemination
- details roles and responsibilities for dissemination
- identifies appropriate formats and tools for delivery
- is accessible
- aligns with organisational values, standards and objectives
- aligns with regulatory and legislative requirements
- is monitored and evaluated for continued success.

Develop a communication plan

A communication plan may differ between organisations. Here is a basic example that details areas that need to be identified, clarified and confirmed before the information is disseminated.

Objective:	
Information checked for accuracy, sufficiency, currency and relevance	
Audience	
Location	
Dissemination methods	
Time line	
Policies/procedures to be met	
Security/confidentiality status	
Action	
Supporting documentation	

Comply with policy, procedures and legislation

Information must be disseminated in accordance with the organisation's policies and procedures as well as any legislative requirement in particular, laws relating to anti-discrimination, confidentiality and privacy.

Be aware of actions you can take to disseminate information to ensure no-one is disadvantaged. For example:

- A telephone or video conference is appropriate for those in remote locations or those who cannot travel to head office. Presentation materials could be emailed in advance.
- Those who cannot attend the meeting could be sent information via email prior to the meeting and given the opportunity to provide feedback.
- Those with a visual impairment may need an accessible version of the documentation, so a screen reader could be used to translate the information.



In a business environment, people often need to deal with data that is sensitive and confidential. It is your legal obligation to ensure you are not breaking the law. You must also be very aware of confidential information that your organisation may not wish to make public or may wish to limit access to.

Sensitive and confidential information

Most organisations have information they wish to keep private, such as information about pricing, products, and financial performance data. This is usually because they want to maintain a competitive edge and therefore do not want to disclose any information that might disadvantage them. Other information may be protected by privacy laws and commercial-in-confidence regulations. This includes personal information relating to staff such as salary, credit card and bank account details, and tax file numbers; contracts and tenders; and customer details. It is illegal to inappropriately share such information without the permission of the owner of the information.

You or your organisation could face legal action if you breach confidentiality agreements made with other parties. Before you circulate information, be sure it is appropriate for your selected distribution channels. If you are not sure, check your organisation's policy and procedures or ask an experienced colleague or your manager.

Before disseminating information, ask yourself:

- How sensitive is this information?
- Should my target audience have access to this information?
- Do they need this information?
- Is there a less sensitive or more anonymous way of presenting this information or conveying this message?
- What do the policies and procedures advise?

Strategies to maintain confidentiality

Here are some strategies you can employ to maintain confidential information or 'company secrets'.

Maintaining confidentiality

- Limit access to those the information is distributed to.
- Mark a document clearly; for example, 'commercial in confidence', 'private', 'not for public distribution', or 'confidential'.
- Insert a watermark to indicate the sensitivity of the information.
- Avoid communal and easily accessible distribution methods that might give inadvertent access to unauthorised personnel.
- Educate clients, staff, contractors and any other personnel who may be privy to sensitive information about the importance of maintaining confidentiality.
- Ask personnel to sign a confidentiality agreement before information is provided.
- Apply password protection on all sensitive files to limit access.

Consider the location of the audience

Location can have an impact on the way information is disseminated. Here is some information on the factors to consider and the options and strategies that could be considered in dealing with an audience's location.

Factors to consider

Consideration should be given to the following questions:

- Is everyone located in the same office?
- Is the information intended for local use or national use?
- Are some users remote?
- Do some users have limited access to the internet or other technology?
- Are there different time zones involved?

Identify options

A person's location may limit the options you have for the way you present information. For example, a face-to-face meeting may not be the best, cheapest or most convenient way for delivering information if the audience is spread nationally. Or, if a meeting is required or preferred, perhaps it can include telephone or video conferencing. Alternatively, if information delivery is not urgent, the meeting can be scheduled to coincide with other planned gatherings of the same group.

Strategies

Here are some tips for managing audiences from a range of locations:

- Provide technological solutions to allow access and participation, such as video and teleconferencing.
- Schedule meetings at a time where time zone differences have minimal impact on attendance.
- Provide hard copies or electronic versions of presentation material to remote attendees prior to or as an alternative to attendance.
- Seek alternative discussions, at a different time or in a different way, for individuals remotely located or unable to attend.
- Seek feedback from individuals prior to the meeting so that their contributions can be tabled, discussed and formally recorded in the minutes.

Consider the tone and language

Regardless of whether the information is communicated in writing or verbally, the tone and language used is important. This depends on the level of formality required, the type of information being disseminated and the abilities and backgrounds of the audience. Tone and language always need to be adjusted to meet the needs of the audience.



For example, an annual or progress report written for key stakeholders of the organisation would have a different tone and language conventions to an internal article on the staff intranet. Similarly, a formal meeting of board members should be conducted in a professional manner with complex information presented in a respectful and serious tone using industry terminology and sophisticated graphics. However, organisational information presented to staff in an internal training session could be lighter in tone and infused with a sense of fun to maintain audience interest and encourage participation. Pay attention to the tone of your voice and the pace at which you speak when communicating verbally.

Visit this website for further communication tips: www.business.qld.gov.au/business/running/managing-business-relationships/communicating-effectively-for-business/written-communication-for-business.

Example: adjust tone and language

When summarising the findings of a recent sensitivity analysis at a meeting of the finance department, the following concluding statement was made:

- As a result of the multi-level manipulation of variables, undertaken during sensitivity analysis and resultant financial modelling, a correlation coefficient of 0.89 was established between ice cream sales and warm weather, indicating a strong causal effect.

The same information was delivered to the shop assistants:

- A recent study of ice cream sales showed there was a strong pattern between ice cream sales and weather temperatures. It showed the warmer days were likely to result in higher ice cream sales.



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Disseminate information

Choose the most appropriate method of communicating the information. Always consider the number of people who need the information, the type of information, its security status, the abilities of the audience and when the information is needed.

Here is a range of different dissemination strategies for different situations. Which ones do you regularly use?

Dissemination methods

- Provide confidential information via a formal presentation to the executive committee.
- Conduct a teleconference or videoconference to staff in different locations.
- Email the dates of a conference to a manager.
- Telephone information about a customer to the sales manager.
- Hold an electronic presentation for staff.
- Provide a written report and hand it personally to the person who requested it.
- Provide copies of correspondence to a project manager.
- Source and provide a training DVD as requested by the HR manager.

Review and update the communication plan

Review the communication plans as part of a continuous improvement cycle. Evaluate the current approach then make adjustments where necessary. Strategies may change depending on organisational procedures or changes to legislation. Consider whether the audience has changed, whether more appropriate tools should be used or people need further training in understanding and following the plan.

Include a strategy for measuring the success of your plan and making adjustments to communication strategies when required. Measures of success may include the following:

- Information disseminated was accurate, current, sufficient and relevant.
- Information was presented in the appropriate format and language for the audience.
- Information was communicated in a timely manner.
- Confidentiality of information was maintained where appropriate.



Practice task 20

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

Case study

Sophie is a project manager. She is arranging a face-to-face meeting of the project team, which includes a member from the key supplier's organisation and the project's sponsor, to receive and review draft deliverables. As the project will result in significant improvements that will lead to the organisation having strong advantages over their competition, the information discussed in the meetings is extremely sensitive.

Sophie has several problems to deal with:

- Two team members can't come to the face-to-face meeting; one because she can't travel but is still keen to contribute if she can and the other because he is unavailable at that time.
- One of the attendees has a visual impairment.
- The key project officer, whose expertise is required, is overseas.
- The meeting can't be rescheduled.
- The team member from the supplier wants to bring along a member from a logistics organisation they partner with so they can learn more about the project and ways to potentially become involved.

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Practice task 20

1. What dissemination strategies can Sophie implement to manage the communication challenges, conduct the meeting successfully and ensure the confidentiality of the project's information is maintained?

2. Why is it important to update communication plans regularly?

4D

Design and test systems to ensure they provide optimum efficiency and quality and meet information requirements

Information flow relies on an efficiently designed sound knowledge management system. All the components of the system, including the equipment and the strategies and procedures required to access and input data methods, must be regularly reviewed and tested to ensure the system is up to date and continues to effectively meet information needs. This involves checking databases, intranets, websites, procedure manuals, corporate policies and professional networks, all of which house an organisation's intellectual assets or its corporate knowledge. You may wish to develop a flow chart that shows the range of components that make up the knowledge management system and how they link together. Be prepared to test or delegate the task of checking all parts of the system (such as those listed below) to ensure the technology used is efficient and enables people to obtain high quality information.

Testing KMS components

- Management or marketing information systems (MIS)
- Customer information systems (CIS)
- Customer relationship management systems (CRM)
- Learning management systems (LMS)
- Information repositories
- Financial management systems
- Communication systems
- Shared drives
- Hardware
- Software

Design and test information management systems

The purpose of a KMS is to support an organisation-wide culture of excellence in knowledge management, which places an emphasis on the philosophy of sharing information and the needs of its audiences at its centre. An ideal KMS will have a multi-pronged focus and be supported and enabled by strong infrastructure in the form of support systems, teams, structures and collaboration. You can work towards an ideal system by understanding how each component works and putting in place measures of success against which to test performance.

Here is some information on what the purpose of a KMS should be, how the performance of a KMS can be assessed and the consequences if the KMS does not perform to expectations.

Purpose

A KMS should:

- have mechanisms for monitoring measures of success and evaluating performance against them
- incorporate current and emerging tools and technology to facilitate the collection, storage, access and ideally automated or semi-automated analysis of information
- align with organisational objectives
- meet or preferably exceed user expectations
- be flexible and adaptable to change
- inform and facilitate decision-making and performance management
- aid, or preferably enhance, stakeholder engagement.

Performance tests

Each software component of the KMS should be tested by specialists (members of the organisation's information technology team and relevant area managers) to test the reliability and validity of the data inputted and that the system continues to meet user needs. For example, a marketing manager may work with the IT manager to test the CRM components by randomly sampling data to check for quality and conducting an audit to determine fitness for purpose.

Failure to do so can have the following outcomes for the system:

- Limits or prohibits access
- Discourages use and access
- Prevents use or access
- Is not intuitive
- Is difficult to use
- Requires too much expertise or training
- Doesn't respond efficiently to information requests
- Doesn't respond reliably or sufficiently to information requests

Consequences

Failure or lack of quality can also result in the following consequences, for the overall performance of the organisation:

- Inefficiency
- Failure to identify and capitalise on improvement opportunities
- Failure to improve and maximise performance
- Waste of time, resources, money, opportunity
- Loss of competitive edge
- Failure to predict trends and forecast accurately
- Inability to effectively plan
- Loss of business
- Loss of custom

Monitor the system

The proliferation of technology in the workplace has aided the collection and analysis of data in recent years. It has also meant an increase in the types and amount of data that can be captured and processed. Your KMS should undergo an ongoing continuous improvement process to ensure data is efficiently captured, processed and available for easy access. Part of your overall KMS strategy should include an action plan for scheduling and allocating responsibilities for monitoring and evaluating systems on an ongoing basis. The information below outlines how the continuous improvement cycle relates to continuous improvement of a KMS.

Plan

- Determine or revisit objectives of the KMS.
- Develop strategies to meet those objectives.

Do

- Implement strategies; for example:
- install and roll out new systems
 - adjust existing systems.

Check

Evaluate the success of strategies and actions to measure success; for example: Are identified information needs of the organisation being met or exceeded? If not, why not?

Act

Make further adjustments to facilitate continuous improvement.

Make improvements

Revisit the maturity model of a KMS (basic, operational, strategic) and use it as a benchmark for measuring current performance and future goals. When suggesting improvements, you may need to monitor and review the organisation's policies and procedures to identify whether they need to be changed to meet the improvements.

Examples of improvements that a manager may make include:

- replacing inconsistent filing conventions
- investigating new technologies or new ways of doing things
- introducing electronic rather than paper-based systems
- improving contact with the help desk
- streamlining forms and documentation by introducing standard templates
- introducing new organisation-wide project management methodologies and procedures and training staff in their use.

Implement new systems

The same testing measures that you use to evaluate existing systems may also be applied to a newly implemented system. A new system or components of a new system may require extensive trialling and consultation with key stakeholders to maximise successful implementation. Once the selection is made, further testing is required during implementation.

A leader's role is to oversee the testing and implementation, drawing on expert knowledge and skills, advice and guidance from key stakeholders, user groups and specialists.



Research new and emerging technologies

Increasingly rapid technological change and development is resulting in a proliferation of efficiency tools designed to meet the knowledge management needs of organisations. While this is excellent news for business, it provides a challenge for managers who are tasked with keeping up with new trends and emerging technologies to ensure their organisation is getting maximum value and performance from their various information management systems. Part of your role is to keep abreast of developments in technologies that may provide more efficient systems and determine the right products, systems, software and hardware to meet your organisation's information needs.

Consider the following suggestions for research opportunities.

Examples of research strategies

- Attend seminars and technology fairs.
- Subscribe to relevant industry and technology publications.
- Meet regularly with your organisation's IT people.
- Attend industry conferences.
- Talk to your peers in other offices or departments to share ideas and experiences.
- Network with others in similar roles within your industry.
- Search options on the internet.
- Attend training courses and professional development sessions.

Use current and emerging technologies for optimum efficiency

Innovative technologies have changed the way we communicate and these advances are revolutionising business and the way information is managed within organisations. Here are some examples of the ways in which these innovations have been implemented in a business or commercial context. Make sure you are aware of their capabilities and how they may be used in your organisation.

Social media

- Communicating with customers
- Receiving complaints
- Increasing the organisation's profile

Smartphones and devices

- Efficiency tool
- Remote communication not limited to phone only; for example, email, intranet, Skype

Bring-Your-Own devices

- Personalised learning
- Employees using their own devices, such as smartphones and tablets, to perform organisational tasks

Cloud computing

- Management and sharing of large files
- Management of email

Online services

- Online ordering and booking
- Supply chain management
- Customer relationship management

Wireless and mobile applications

- Booking systems
- Memo functions
- Calendar management
- To-do lists
- Remote access
- Working from home/off-site or across multiple sites

New and emerging business trends

Technology has changed the way we do business. Innovations include e-business, m-business, virtual enterprises, barcoding, and radio frequency identification tags. Consider the following evolution.

Innovation in business operations	
Traditional	Traditional business is conducted on-site in a shop or office.
Telephone	Telephone-based business emerges with the transition to a phone line to supplement traditional shop or office environment.
e-business	E-business transitions business into an online offering to supplement traditional shop or office environment.
Virtual	A virtual enterprise replaces the traditional shop or office environment.
m-business	m-business is business conducted on the move; anywhere, anytime.

New and emerging KMS technologies

With so many innovative systems and products available and new ones being introduced at an increasing pace, you need to keep abreast of developments by researching and determining what the latest trends and technologies are and what potential benefits they will provide to your organisation.

The following are some examples of new and emerging technologies specific to information and knowledge management:

- Web-based databases
- Business process re-engineering software
- Data-centric portals and gateway
- Data mining tools
- Middleware
- Data warehouses
- Online-analytical processing tools (OLAP)
- Operational databases
- Web-centric protocols



New technology challenges

While there are many obvious advantages with such new technologies, there can be some disadvantages that must be considered. These include:

- vulnerability to corruption
- loss of control over work environment

- diminished protection of confidentiality and privacy of information
- ineffectiveness of security measures
- barriers to work–life balance.

Example: design efficient information management systems

It is important for managers to regularly conduct research and keep up to date with best practice. The following websites provide information about the risks and trends associated with BYO devices in business:

- Aspect Legal at: www.aspectlegal.com.au/article/byo-devices-the-risks-and-trends/
- CIO Magazine at: www.cio.com/article/2396336/byod/all-about-byod.html

The following report describes best practices for an efficient knowledge management system:

- *Getting Knowledge Management Right: Five Best Practices for a Better Service Experience*, www.oracle.com/us/products/applications/getting-knowledge-managt-right-wp-1353041.pdf

It was published by Oracle, November 2011.

Practice task 21

1. Explain why it is crucial to regularly test knowledge management systems to ensure they meet information needs.

2. Research best practices for a knowledge management system, then choose a best practice strategy you have identified. Determine how you might implement this strategy, and identify the benefits and challenges of the practice. Complete this table.

Best practice:	
Implementation	
Benefits	
Challenges	

4E

Maintain corporate knowledge and security

Collecting, sorting and maintaining corporate knowledge is crucial and there are many consequences for failing to do this. Be prepared with a range of strategies to capture the often intangible corporate knowledge, and be aware of the security measures in place to ensure the knowledge is safely held within the organisation's knowledge management system.

Protect corporate knowledge

Corporate knowledge is a valuable asset and, like all other company assets, it should be protected. Knowledge management enhances the value of an organisation by identifying its assets and expertise, so managing and securing the information is crucial. It is also important to remember that organisations are also the custodian of other people's and organisations' data (for example customers, suppliers, contractors) so there is the extra responsibility and legal obligation to maintain the security of that data too.

Here is some information on the issues surrounding the protection of corporate knowledge.

Maintenance

You need to ensure that the policies, procedures and processes to capture knowledge are followed to ensure all knowledge can be shared within the organisation. You also need to ensure that any new projects or practices the organisation has completed or developed are captured. Access knowledge from staff who retire during succession planning and through exit interviews.

Threats

There are many threats to assets within a knowledge management system and failure to effectively maintain and secure the assets could result in:

- loss of information
- corruption of information
- version control problems
- breaches of security
- unlawful or unauthorised access
- exposure to viruses.

Consequences

These threats could, in turn, lead to problems such as:

- unlawful or unauthorised use of information
- competitor or public access to company secrets
- widespread viruses and file loss or corruption
- loss of reputation and business
- wasted time and cost involved in replacing or reconstructing information
- breaches in duty of care and other legal obligations relating to privacy and confidentiality
- loss of information that can never fully be reconstructed
- financial penalties or possible legal action.

Maintain security

There are a range of strategies an organisation can employ to protect the components and contents of its knowledge management system. Some systems and software have their own built-in security measures, but a whole KMS approach where security forms part of its overall architecture, is preferred and almost always necessary in larger organisations.

Protecting information ensures that data is able to be reliably and consistently retrieved when needed but only by those authorised to do so. The following information outlines what knowledge is being protected and what protection strategies can be deployed.

What are we protecting?	Protection strategies
<ul style="list-style-type: none"> • Data mining • Multimedia and collaboration • The internet and intranets • Databases • Communication systems • Information repositories • Operational software • Financial management software • Client management systems 	<ul style="list-style-type: none"> • Authentication and authorisation • Access restrictions, such as role-based access control (RBAC) and credential mechanisms • Firewalls and antivirus software for PCs, email and network servers • Data encryption • Virtual private networks (VPNs) • Web-based secure sockets layer (SSL) encryption • Secure semantic web and privacy-preserving data mining • Off-site storage

Seek assistance

Information architecture and security is a complex and highly expert field and many managers are unlikely to be familiar with many of the concepts and terms. However, you may be responsible for overseeing and managing the implementation of new systems or the continuous improvement of existing ones. Managing a knowledge management system is an ongoing process because organisational information needs continually change and new technologies evolve, so seeking advice and support from experts is essential.

You may need to:

- work with specialists, both internal and external, to implement and maintain solutions and security measures
- consult with users throughout the organisation to assess and monitor their information needs
- seek assistance when making a case for budget and resources required to implement changes and new technologies to senior management or purchasing personnel.



The role of policy and procedures

To supplement the technical solutions, you may need to develop policies and procedures around the use of increased security measures and the way information is accessed throughout the organisation. Here is some further information on what is required in policies and procedures to protect corporate knowledge.

Procedures

Policies and procedures may include standard operating procedures such as:

- specifying to whom knowledge can be transferred when knowledge is created
- determining access controls
- determining sharing regimes
- enforcing security measures, including disciplinary actions for breaches.

Policy development

To develop such policies, you could ask yourself and others the following basic questions as a starting point:

- What knowledge should be collected?
- What knowledge should be shared?
- What knowledge should be protected?
- How often should knowledge be collected?
- How often should the organisation check and maintain knowledge it has collected?
- Who has access to knowledge?
- What knowledge should have restricted access?
- What protection measures are there for enforcing secure knowledge sharing?

Deal with security challenges

Organisations face many challenges in maintaining the security of its information assets. Because of these challenges, an ongoing program of monitoring and evaluation is necessary. Security strategies, policies and procedures for an organisation's knowledge management system should align with its overall business objectives and strategies. These strategies should be robust and dependable and meet industry standards. They can be advertised to clients and other stakeholders when attempting to win new business and reassure existing customers. Sound KMS security is becoming an expectation, not a selling point, further strengthening the argument for its importance in the overall success of any organisation.

Security challenges may include:

- corruption from external sources, for example, information on personal UBS and files opened on personal email
- the evolution and growing use of cameras in mobile phones and the use of personal devices for work purposes
- the unauthorised integration of personal devices with work systems, leading to cross-contamination
- increased instance of staff working from home under uncontrolled conditions using uncontrolled systems, software and hardware
- remote access
- compromises caused by some wireless access with diminished capability
- human error
- development and use of sophisticated code cracking strategies and virus programs by hackers
- failure of staff, managers or even whole teams to use, understand or implement security measures
- lack of buy-in from senior management due to high costs
- lack of supporting policies and procedures or lack of detailed and ongoing planning
- proliferation of new and emerging technologies leading to out-of-date systems and strategies.

Example: maintain corporate knowledge

The following websites describe examples of knowledge management and security failures and their possible consequences for an organisation and its stakeholders.

- CSO Online, 'The 15 worst data security breaches of the 21st Century', at: www.csoonline.com/article/2130877/data-protection/the-15-worst-data-security-breaches-of-the-21st-century.html
- Forbes, Lisa Quast, 'Why Knowledge Management Is Important To The Success Of Your Company', at: www.forbes.com/sites/lisaquast/2012/08/20/why-knowledge-management-is-important-to-the-success-of-your-company/
- Global Risk Management Network, Yogesh Malhotra, 'Why Knowledge Management Systems Fail? Enablers and Constraints of Knowledge Management in Human Enterprises', at: www.brint.org/WhyKMSFail.pdf

Practice task 22

Select a strategy an organisation uses for maintaining and protecting its corporate knowledge. Complete this table by:

- describing its use: what are its objectives, what is it attempting to maintain/protect?
- describing its application: how is the strategy doing this?
- rating its level of success: how well is the strategy working?
- suggesting improvements: what else could be done instead of or in addition to this strategy?

Strategy:			
Use	Applications	Level of success	Recommendations

Summary

1. Careful consideration must be given to how the information we provide to others is presented, disseminated and protected to maximise business success.
2. Before you respond to information requests, it is important that you clarify the details within the request to ensure the information you provide is accurate and appropriate for the needs of the person making the request.
3. Make sure information requests are actioned in a timely manner, appropriate to the nature of the request, its importance or the source it is coming from.
4. Monitor and regularly update information held in databases that are accessed directly by others.
5. When documenting information, consider the most appropriate presentation format and style, as determined by use, timing and the needs of the target audience.
6. A communication plan can assist in the appropriate, timely and effective dissemination of information within and outside of the organisation.
7. Be guided by the organisation's overall policies and procedures as well as legislative requirements relating to confidentiality and security when disseminating information.
8. Ensure the knowledge management system is maintained so it continues to be effective.
9. Keep up to date with new technologies and recommend those that provide optimum efficiency and quality to the knowledge management system.
10. Corporate knowledge is considered a valuable asset and, like all other company assets, it should be protected.

Learning checkpoint 4

Disseminate information to the organisation

This learning checkpoint allows you to review your skills and knowledge in disseminating information to the organisation.

Part A

1. List the procedures that should be followed to confirm information requests.

2. List five tips for ensuring information requests are actioned in a timely manner.

3. List at least two possible consequences of failing to keep a database up to date.

4. Provide four examples of improvements that a manager may make as a result of testing knowledge management systems (KMS) to ensure information needs continue to be met.

5. When making changes to a KMS, what documents should you check to ensure the changes align with organisational requirements?

6. List five examples of new and emerging technologies specific to knowledge management.

7. Explain three strategies you could employ to maintain confidentiality of information.

8. Identify four threats to the security of information and corporate knowledge held by an organisation.

9. Explain why it is important to review and update a communication plan on a regular basis.

Part B

Use the following case study to make a presentation to your organisation to disseminate information. Read the case study, then complete the two tasks that follow.

Case study

Ella works for a company with 45 staff. She is asked to prepare procedures for a new performance management system that is being introduced to improve work performance. The new system includes an online personal performance checklist, a face-to-face meeting with the employee's manager, and a professional development plan to be completed online.

Ella finalises the procedures and has now been tasked by her manager to develop a communication strategy to implement the system. Her audience is to be the Board and the CEO, the executive management team, managers, all staff. Ella decides to present the information to the various audiences in different ways and at different times to suit their needs and backgrounds. Ella needs to ensure the whole staff is present, the information is presented in a positive way to ensure everyone understands what the new performance management system is about. She realises that the staff is made up of people from different backgrounds and with different abilities and responsibilities. Ella prepares by formulating and checking the information and planning the best way to disseminate it.

1. Complete the following table as part of Ella's communication plan.

Item	Comments
Objective	
Information checked for accuracy, sufficiency, currency and relevance	

Item	Comments
Audience	
Location	
Dissemination methods	
Time line	

Item	Comments
Policies/procedures to be met	
Security/confidentiality status	
Action	
Supporting documentation	

2. Prepare a checklist to record the information Ella disseminates to the staff during her presentation, or the information you are to disseminate in your organisation.

A large, empty rectangular box with a thin blue border, intended for the student to create a checklist as per the task instructions.

