Learner Guide

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ICTICT517

Match ICT needs with the strategic direction of the organisation

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MAKE GREAT HAPPEN

tafe Queensland

Unit version	Document version	Release date	Comments/actions
ICTICT517	Version 1	January, 2022	

Introduction

This Learner Guide has been developed to support you as a resource for your study program. It contains key information relating to your studies including all the skills and knowledge required to achieve competence.

What is this unit about?

This unit describes the skills and knowledge required to ensure information and communications technology (ICT) products and systems match the strategic direction of the organisation.

It applies to individuals whose responsibilities may include improving, evaluating, acquiring, maintaining and supporting ICT for organisations.

Where can I get more information?

For further information on your qualification, accredited course or Unit/s of Competency, please go to: ICTICT517 - Match ICT needs with the strategic direction of the organisation

TAFE Queensland student rules

TAFE Queensland student rules are designed to ensure that learners are aware of their rights as well as their responsibilities. All learners are encouraged to familiarise themselves with the TAFE Queensland student rules, specifically as they relate to progress of study and assessment guidelines. A full guide to student rules can be found at Student rules[1].

Information to support your learning and assessment

There's always someone to help you. Undertaking further study can bring both excitement and challenges. Our Student Services, Learning Support and Library staff can help you make the most of your time at TAFE.

Callout panels

A number of panels have been designed to help guide you to important information and actions throughout this Learner Guide. The full choice of panels you are likely to encounter to support you in your studies are included below. NB: not all the panels will be used in every learner guide.

Applied - *how things work*	Case study	Example	Scenario		
Action - *things you do*	Activity	Assessment	Journal	Self-check	
Alert - *things to take special note of*	Did you know?	Tip			
Knowledge - *things to learn*	Reading	Sustainability	Legislation	Note	Research
Understanding - *what you have learned*	Discussion	Recall	Reflection		
Warning - *things you must know*	Important	Safety			
Other	Video	Weblink			

[1] http://tafeqld.edu.au/current-students/student-rules/

Contents

Welcome

Welcome to the *ICTICT517 Match ICT needs with the strategic direction of the organisation*, unit.

By completing this unit, you will be able to:

- Evaluate current strategic plan and propose changes
- Evaluate effect of changes
- Plan implementation of changes

Strategic Plans

Introduction

As an IT professional you will need to understand how the company you work at plans for the integration of new technology into its information technology infrastructure. This planning process is often summarised in a document called a business strategy. Members of the IT team need to be aware of the company's business strategy because they are often asked to provide information needed to make decisions about new technology and they may be involved in the procurement and deployment of new technology.

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Objectives

By successfully completing this topic you will be able to:

- access and understand a strategic plan
- describe how a strategic plan relates to the industry environment in terms of:
  - technological currency
  - competitiveness in the marketplace o long term viability of the company
- interpret how the organisational goals are derived from the strategic plan
- compile a gap analysis to describe:
  - where the business is now
  - where the business needs to be
  - the differences between the two perspectives.

How we get from where we are to where we need to be:

- compile a report to deliver this information to decision makers including:
  - what information is required to make good decisions
  - what form the report should take
  - who the report should be submitted to?

The Elements

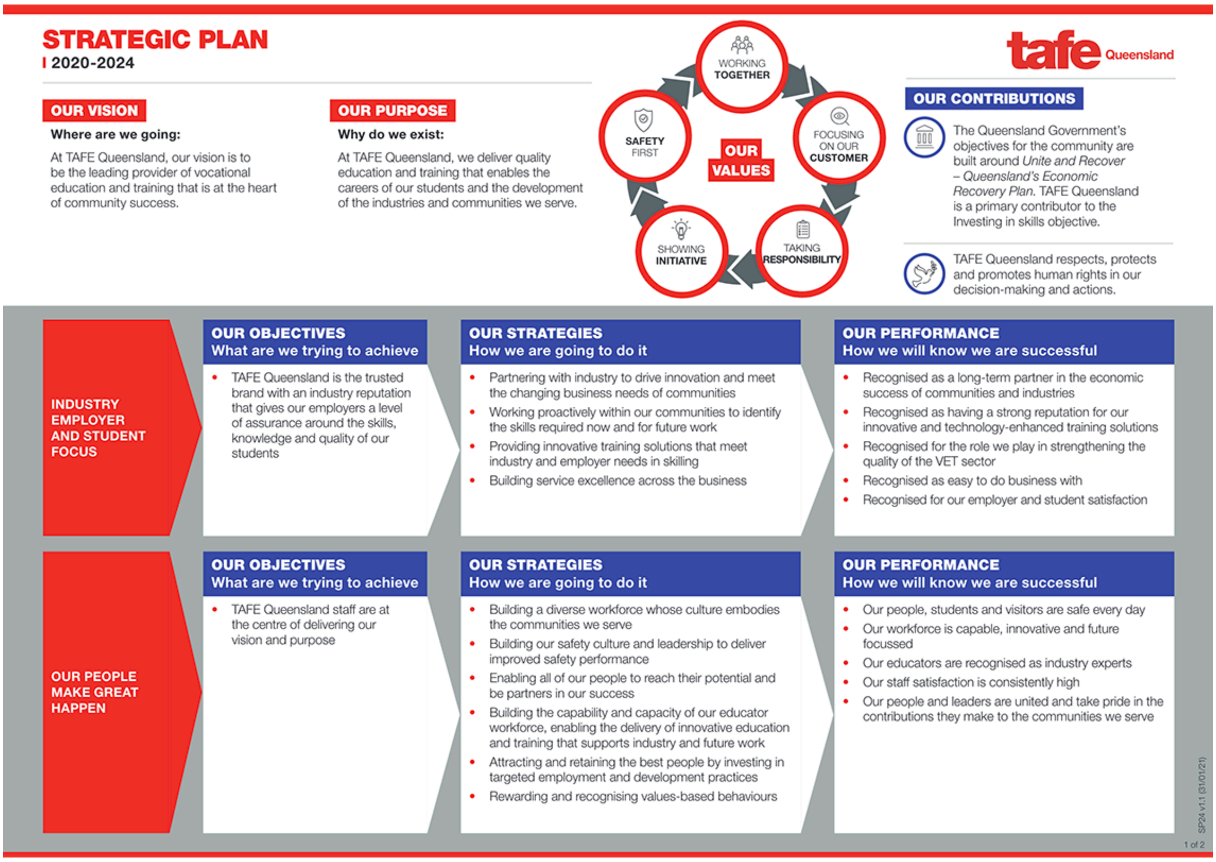
There are 4 to 7 elements to a strategic plan, depending on the circumstances, and which expert you reference. In the first part of the topic, we will look at some of the basic elements that should be considered when developing a strategic plan.

Vision

A vision statement provides a positive guide for taking current and future courses of action. It sets the atmosphere and provides a point on the horizon that the organisation can strive to.

An example of a company with a strong vision statement is TAFE Queensland, the largest training provider in Queensland that has a history of serving the Queensland community of over 135 years.

'At TAFE Queensland, our vision is to be the leading provider of vocational education and training that is at the heart of community success.'



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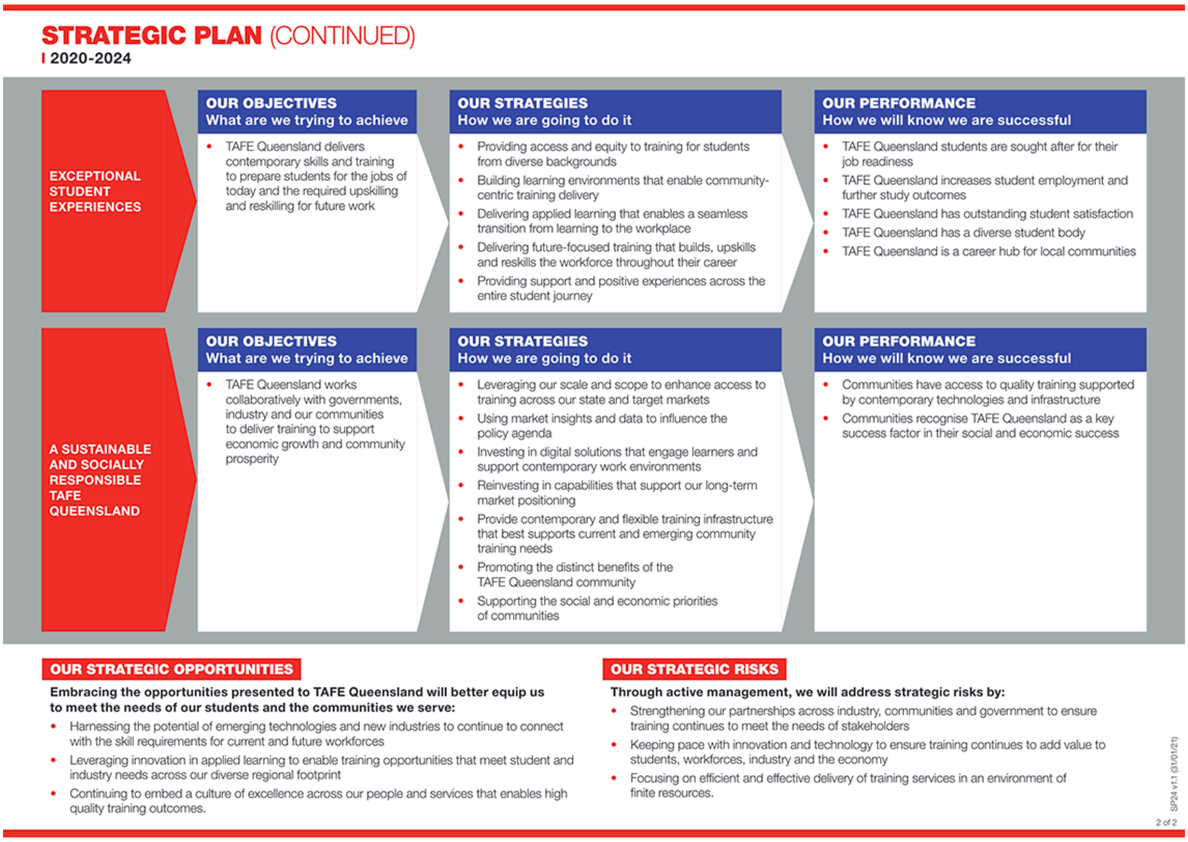

STRATEGIC PLAN (CONTINUED)
2020-2024

EXCEPTIONAL STUDENT EXPERIENCES

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland delivers contemporary skills and training to prepare students for the jobs of today and the required upskilling and reskilling for future work

OUR STRATEGIES
How we are going to do it

- Providing access and equity to training for students from diverse backgrounds
- Building learning environments that enable community-centric training delivery
- Delivering applied learning that enables a seamless transition from learning to the workplace
- Delivering future-focused training that builds, upskills and reskills the workforce throughout their career
- Providing support and positive experiences across the entire student journey

OUR PERFORMANCE
How we will know we are successful

- TAFE Queensland students are sought after for their job readiness
- TAFE Queensland increases student employment and further study outcomes
- TAFE Queensland has outstanding student satisfaction
- TAFE Queensland has a diverse student body
- TAFE Queensland is a career hub for local communities

A SUSTAINABLE AND SOCIALLY RESPONSIBLE TAFE QUEENSLAND

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland works collaboratively with governments, industry and our communities to deliver training to support economic growth and community prosperity

OUR STRATEGIES
How we are going to do it

- Leveraging our scale and scope to enhance access to training across our state and target markets
- Using market insights and data to influence the policy agenda
- Investing in digital solutions that engage learners and support contemporary work environments
- Reinvesting in capabilities that support our long-term market positioning
- Provide contemporary and flexible training infrastructure that best supports current and emerging community training needs
- Promoting the distinct benefits of the TAFE Queensland community
- Supporting the social and economic priorities of communities

OUR PERFORMANCE
How we will know we are successful

- Communities have access to quality training supported by contemporary technologies and infrastructure
- Communities recognise TAFE Queensland as a key success factor in their social and economic success

OUR STRATEGIC OPPORTUNITIES

Embracing the opportunities presented to TAFE Queensland will better equip us to meet the needs of our students and the communities we serve:

- Harnessing the potential of emerging technologies and new industries to continue to connect with the skill requirements for current and future workforces
- Leveraging innovation in applied learning to enable training opportunities that meet student and industry needs across our diverse regional footprint
- Continuing to embed a culture of excellence across our people and services that enables high quality training outcomes.

OUR STRATEGIC RISKS

Through active management, we will address strategic risks by:

- Strengthening our partnerships across industry, communities and government to ensure training continues to meet the needs of stakeholders
- Keeping pace with innovation and technology to ensure training continues to add value to students, workforces, industry and the economy
- Focusing on efficient and effective delivery of training services in an environment of finite resources.

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Weblink

View the complete document if required TAFE Qld Strategic Plan 2020-24.pdf

Or go to Appendix A to see a copy at the end of this learner guide

The TAFE Queensland's vision statement has two parts with just a single sentence, the vision statement tells you exactly what the company aims to achieve. Namely, to be the leading provider of vocational education and training. The vision also aims to be the centrepiece for providing success for the community in the training they provide.

Vision statements need to be simple and clear. The statement does not need to be paragraphs long, but just one or two sentences, or even a number of short concise sentences.

Research

Research the following and view their vision statements.

CSIRO Australia[2]

BlueScope[3]

Monash University[4]

[2] https://strategy.csiro.au/strategy-at-a-glance/our-purpose-and-strategy-2/#:~:text=Our%20vision,to%20boost%20Australia's%20innovation%20performance.

[3] https://www.bluescope.com/bluescope-news/2020/11/our-brand-is-evolving/

[4] https://www.monash.edu/__data/assets/pdf_file/0004/169744/strategic-plan-print-version.pdf

Mission/Our Purpose

Depending on the industry sector the organisation in categorised in, will dictate which heading they use for this part of the topic. While industry sectors use "Mission" as a heading, the education sectors have a tendency to use the heading "Purpose", whichever way it still means the same thing in the end. Without a mission or purpose, the organization lacks the why and how. If everyone in an organisation has their own interpretation of the vision, it can lead to conflicting strategies and initiatives.

For TAFE Queensland their message is simple but covers a lot of ground.

> 'At TAFE Queensland, we deliver quality education and training that enables the careers of our students and the development of the industries and communities we serve.'
>
> TAFE Queensland

The first part of the statement is what TAFE Queensland does, delivers quality education and training. The second part looks at the students themselves by stating that what TAFE Queensland does benefits the careers of the students. The next part implies partnership with the industries that students are trained for, and the final part is the TAFE Queensland is part of the greater community.

As you can see from above, the 'Our Purpose' statement is a simple but concise message, and although being just one sentence it explodes into more broader meanings.

Weblink

Read the statement from Bega[5]

Example

The statement from Bega is a bit longer than usual, however, this is how the organisation feels they want to present it. The other point to note, this statement is actually under the heading "Aspiration". Sometimes organisations will present information under their own headings, even though it still means the same things stated under Mission or Our Purpose headings.

[5] https://www.begacheese.com.au/investors/

Objectives

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A business objective is a result that a business organisation intends to achieve. To be able to create good objectives, they should be clear, measurable and be backed by multiple strategic programs across the organisation.

With TAFE Queensland they have four parts for their objectives. The reason for this is because of the size of the organisation and the different areas they have identified. These are industry, staff, students, and community responsibility. Although these types of sections can be applied to other organisations, in most parts every organisation will be unique and therefore the objective structure will be different.

Strategy

366791297 / PureSolution / shutterstock.com

A strategy is where you bring together the objectives and implementation to achieve the desired result. Strategies are much more specific than the previously discussed parts of the plan as it will show how items are going to be achieved. Depending on the industry the organisation belongs to will sometimes dictate if the strategies will be public or not.

Looking at the strategies for TAFE Queensland these are made public because the organisation is trying to entice the public to enrol in a training course, so it is beneficial to have the whole strategy plan available. This is the norm for most public institutes, and the education/training sector. However, this is not so for a lot of the private sectors, especially for research and design where you do not want to show any plans that could expose intellectual property.

Strategies should map long-term plans to goals and actionable steps, nurture innovative thinking, as well as foresee and diminish potential pitfalls.

Strategic plans are normally based on a 3–5 year period, and there may be a separate plan for each individual objective within the organisation. As you can see with the TAFE Queensland plan it is based on a 4-year period. However, one thing to keep in mind is that a strategic plan is flexible and can be changed based on circumstances that occur, such as a pandemic, shift in technology, increase in unforeseen workload, etc.

Approach

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Within the strategy, an organisation will have statements of how they will approach each strategy. In our example we are using the statement "How we are going to do it" to tackle that strategy. This is the detail section of the document as you are giving a roadmap to the organisation's stakeholders of how the organisation will proceed to meet the objectives.

Benchmark

338920571 / iQoncept / shutterstock.com

As with any type of plan, you need to have a benchmark, or measure of achieving the goal, to make the plan worthwhile. In our example TAFE Queensland has used the wording "How we will know we are successful".

Most of the measure are going to be obtained through feedback from students, industry, and the community. Other industry sectors would use different measures to track their success. Organisations in the engineering sector may use project planning and key project points as a measure, where a real estate organisation may use income or properties sold as a measure.

Example

This link has some sample Strategy Plans from On Strategy: Sample strategic plans[6]

Video

For more information about strategic planning see the following videos.

ICTICT517 - Benchmark

Note: *Videos will play one after the other. If you want to watch them at separate times, use the playlist menu in the top right corner of the video.*

[6] https://onstrategyhq.com/samples/

Reflect

Thinking about the example strategic plans.

- What are some of the common features?
- What differences are there between a for-profit strategic plan and a non-profit strategic plan?
- What is the relationship between strategic objectives and corporate goals?

Gap analysis

Gap analysis is the process of comparing the actual current conditions against the potential or desired conditions. The objective is to identify in detail the gap between where the business is now and where it needs to be. Once we have this information, we can plan a strategy to achieve the desired objectives. The ultimate purpose of the gap analysis is to provide recommendations to the business on how to achieve best practice.

Video

What is Gap Analysis? Importance of Gap Analysis[7] Importance of Gap Analysis by Eye on Tech.

In IT we often refer to our combined hardware, software, and network technologies as the "operating environment". The gap analysis allows us to evaluate the existing operating environment and compare it with possible alternatives. When we consider introducing new technology we are proposing changes to the operating environment and these changes must be evaluated in terms of:

- Feasibility – is it possible?
- Compatibility – will it work with the existing technology?
- Scalability – will the IT infrastructure be able to grow?

These decisions can be made once a thorough gap analysis has been done and the cost efficiencies have been identified.

[7] https://www.youtube.com/embed/LzmNgL7KcSg?rel=0

Cost-effectiveness

103587458 / Ivelin Radkov / shutterstock.com

When analysing the business strategy to make better decisions, it is also useful to analyse the cost effectiveness of technology choices. Improving cost effectiveness is an important method for establishing the company's viability and ongoing business prospects. Two or more options are compared to determine the most economically efficient way to achieve a goal. By comparing options, it is possible to decide which choice to make to assure the best use of resources. All successful businesses must monitor how they use their resources and make the right decisions for the company's future. For example, should a small business invest in new hardware and software to implement new virtual servers, or should they lease virtual servers over the Internet (cloud technology) instead?

When doing a gap analysis, the key to getting it right is having the correct information about not only the current conditions but also as much detail as possible about the company's long-term strategy.

Tip

Different businesses document their plans in different ways. Some of the documents that may be used are:

- a vision statements
- an organisational goals document
- a five-year plan
- a manual of policy and procedures (MOPP).

Case study

Daydreams Travel Agency[8]

Refer to Case Study Daydreams Travel Agency document for further information on Daydreams Travel Agency, including:

- the current IT budget and infrastructure
- responsibilities of the IT department
- technology strategic plan
- business needs
- company policies.

We will refer to this document throughout this unit.

Activity

Compare and contrast

This can be a team or individual activity.

Using the information from the Case Study Daydreams Travel Agency create a compare and contrast graphical organiser. Include the current conditions of the business on one side of the chart and the desired conditions on the other side.

Your comparison should have both qualitative and quantitative perspectives.

A quantitative comparison is concerned with various ways of measuring the infrastructure. A qualitative comparison digs deeper into the detail and focuses on specific features of the technology.

[8] https://connect.tafeqld.edu.au/content/enforced/365993-MO_ICT50220_ICTICT517_TQM_01/ICTICT517/media/ICTICT517_Case_Study_Daydreams_Travel_Agency_LHO_TQM_v1.pdf?_&d2lSessionVal=djqPJ8NWAUKZfqSXnQ9thTBkW&ou=365993

The reporting processes

The information that you collected from the case study and put into a compare and contrast chart should start to create a clear picture of the gap. Now we need to refine that information into a report that will be submitted to the company. This is called an interim report and is submitted before the final report, but after sufficient information is available to help the company make decisions.

447406066 / SFIO CRACHO / shutterstock.com

A full report, including the advantages and disadvantages of change and the objectives and implications, will be compiled after additional information has been collected. The interim report should be submitted to the appropriate person. In most cases 'the appropriate person' is whoever assigned the task to you, but you may also be expected to share this information with others such as managers of other departments, people at higher levels of administration, or someone in the finance department to discuss the costing details of the proposal.

Activity

Discuss within your team how best to convert the information from the graphic organiser into an interim report. Create a draft document of bullet points to build an outline for the interim report.

Interim report

Create an interim report to summarise the current status of your work for Daydreams Travel Agency. This should be an informal document that contains the vital information from the compare and contrast chart in plain English. It should not be more than one page and should include:

- your name
- the date
- the topic of the report
- a summary of the information that you have collected so far.

Topic summary and review

The topic you have just completed is about how companies create business strategies and strategic plans, and how we use them to plan for deploying new technology. We have discussed four aspects of that process:

- analysing a strategic plan
- future technology needs
- developing a gap analysis
- creating an interim report.

The strategic plan is a document that businesses use to plot a path to growth and profitability in the future. Every business needs to do this in order to survive. Because technology is often important for the company's future, the strategic plan may discuss how new technologies should be implemented.

By studying the strategic plan, we can get an idea about where the business needs to be in the future with its use of technology. If we compare the future needs of the business to where the business is now, then we may be able to use that information to create a plan to make the necessary changes.

A gap analysis is often presented in graphical form using a compare and contrast or another graphic organiser. The information from a gap analysis can be translated into plain English and written into a report. IT professionals are often called upon to submit reports to decision makers to give them the information they need to make the right decisions.

Self-check – Strategic plans

Write a definition for the following term. Business strategy

....

....

Write a definition for the following term. Strategic plan

....

Write a definition for the following term. IT infrastructure

....

....

List three (3) questions that you would ask a business owner to get ideas about their strategic plan for the company.

....

....

List three (3) documents that you would examine to identify a company’s policies, procedures, priorities, and future direction.

....

....

Check your answers at the end of this Learner Guide

Evaluating an Organisation

Introduction

In this module you will learn the skills and knowledge required to Identify client requirements.

Objectives

By successfully completing this topic you will be able to:

- analyse and identify client requirements
- document client requirements.

Evaluation is a procedure that seriously examines an organisation. It involves gathering and examining information about the organisation's characteristics, activities, resources, and goals. The purpose of the evaluation is to make findings about the organisation, to improve its efficiency, and provide a proposed outcome that benefits the organisation.

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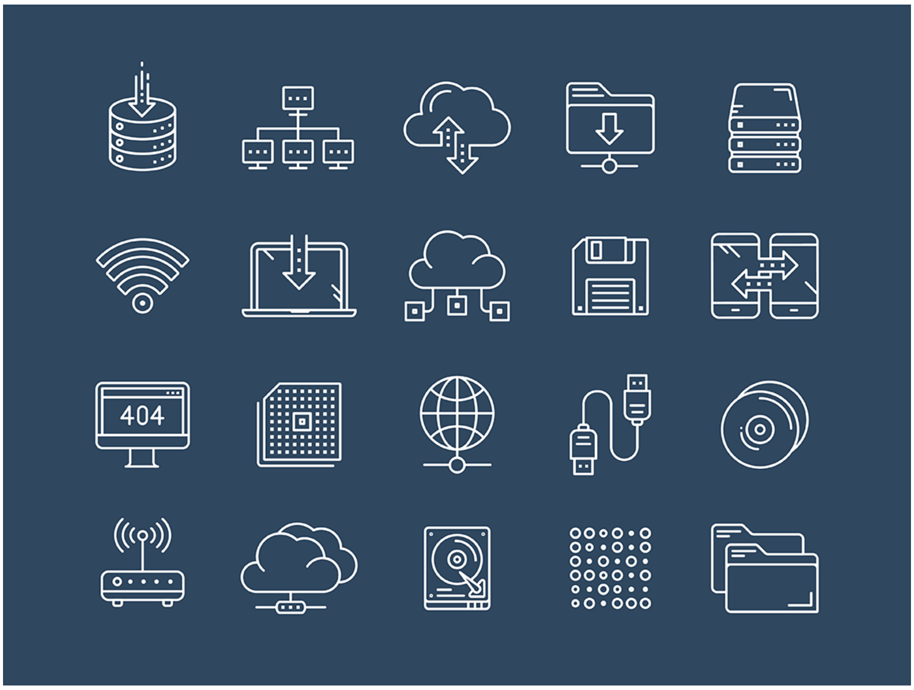
The IT Infrastructure

What is IT infrastructure

The IT infrastructure is not just one thing, it consists of all elements that support the administration and usability of data and information. These include the physical hardware, data storage and retrieval, network systems, and software to support the business goals of an organisation.

The IT infrastructure also includes training, policies, testing and monitoring, support, upgrades, repairs, and hiring of staff or outside organisations.

As with any IT team, they operate typically behind the scenes. All daily operations of an IT infrastructure, such as emails, internet, file, data access, etc., are all technologies that are supported by the IT team.



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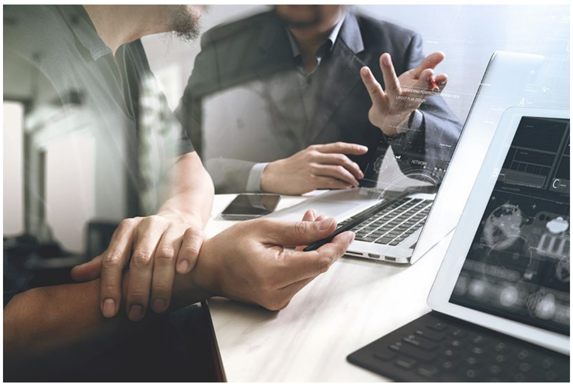
Weblink

View some of the most common network components.

Determining Your Network Infrastructure Needs[9]

[9] https://docs.oracle.com/cd/E19263-01/817-6440/infrastrc.html

Client requirements



519283423 / everything possible / shutterstock.com

It is important that the client's requirements are clearly identified so that the most suitable solution can be selected. These requirements include identifying the business goals and how the new or upgraded computer systems will support the business processes. Constraints such as budget and timeframe for implementation need to be identified. There are a range of methods that can be used to gather information from the client, including client meetings and interviews. It is useful to plan the discussion before the meeting so you can get all the necessary information. Generally, open questions will allow the client to best describe their requirements.

Questionnaires are used when you have to gather input from many people. Observation means observing how a system works and how people are using the system. Observation is a good technique to use to understand how a system works and what changes are required for an upgrade or new system. Confirming the client's requirements involves developing documentation to ensure you and the client have the same understanding of requirements. This documentation may be based on pre-existing documents that can be used as a template.

As we explore and understand the client's needs, we may discover additional requirements which have been overlooked. For example, it might become apparent that additional power outlets will be needed for the recommended system. Further arrangements have to be made, such as who is expected to solve the problem of whether the client would prefer to use power boards or have power outlets installed.

New technologies may also lead to new requirements from the client. There is often a great temptation to the client to add optional features or new devices to a recommended solution. While each addition may only be small, they impact upon the total system's price, as well as the installation and support costs.

It is important that any altered or additional requirements that might be discovered are documented. In some small organisations (for example, your own business) such amendments and additions might be confirmed verbally. However, you should be overly cautious of verbal agreements. Before proceeding with any work, confirm the verbal agreement with a written agreement. Written documentation leaves much less chance of error, as may be the case with memories recalling facts differently.

Identify client requirements

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Whether you provide a service to internal or external clients, it is worth remembering and following the fundamental principle of client service:

If your service responds to clients' needs and makes your client feel valued, you and your organisation will build and maintain a strong reputation.

The process of identifying and documenting client requirements can take many forms. It can be an informal process where you are asked to provide help for a friend selecting a new printer. In a business environment it is usually a more formal process, where your supervisor assigns you the task of working with a client group to select or develop new computer resources.

The general steps to follow in identifying clients' needs are the following:

1. Preparation
2. Understand the business goals.
3. Understand the organisational guidelines.
4. Define the client's requirements clearly.
5. Identify the roles of stakeholders.
6. Identify sources of information.
7. Investigation.
8. Develop an understanding of the existing system.
9. Investigate alternatives to the existing system.

Note

Not all these steps are performed every time.

Important

In addition to profiling the infrastructure we need to know if the IT team has the skills and knowledge to do the work.

Or, what skills and knowledge will need to be provided from an outside source?

This is a topic for another unit, but it is an important part of the evaluation of capability for change.

Consult with your client

When you meet with your client, use active listening strategies, effective questioning skills, and direct observation to best determine their requirements. From there, you can sort and sift the information received, research a range of possibilities, and stay in regular communication with them.

In being an active listener, you encourage the speaker to talk freely. However, be aware of spending too much time discussing what is not relevant to the task at hand.

Video

Active Listening Skills[10]

Use **different types of questions** for different reasons. Below are some questioning techniques that may shed light on a client's request.

Open-ended and closed questions

Open-ended questions gather more information. Someone answering an open-ended question cannot answer with a 'yes' or 'no' because it wouldn't make sense. Closed questions do require a 'yes' or 'no', or a similar response. These are used to clarify what you've received or to seek confirmation of the idea that you have.

1230241258 / Mark Agnor / shutterstock.com

Example

Open-ended questions:

- What kinds of products are you interested in purchasing?
- What do you need the equipment for?

Closed questions:

- Are you saying that your email system is not working?
- Are you sure that you're happy for your repayment levels to fluctuate?

[10] https://www.youtube.com/embed/7wUCyjiyXdg?rel=0

What-if questions

Sometimes your client may come to you for expert advice because they cannot decide between options, and they need you to help them make an informed choice. You can help them decide by asking hypothetical questions. You'll also be able to explore the possibilities with the client (or on your own). You'll also be able to bring out any reservations that you or the client may have.

Example

- If I choose this option, what would the risks be?
- If I choose a second option, would I face the same risks?
- Would I be more comfortable with a low risk and low return option?

Sorting and sifting questions

Sometimes a client might give you a lot of information. These are usually clients who do not really know what they want, inclined to talk a lot, do not get to the point, or talk in a stream-of-consciousness manner. Some of this might not be relevant to their request and you would need to sift through the information.

Another example of when you'd need to ask yourself sorting and sifting questions is when you're faced with lots of information when carrying out research (say, research that will enable you to inform the client of their options).

Example

- Is this bit of information really relevant to solving the client's problem?
- Is this information from a reliable source?

Clarification questions

Sometimes your client may give you a whole lot of facts that do not make sense. You may think, for instance, that some of the information is relevant. Sometimes opinions may not seem logical or coherent. Information may seem contradictory. Before you dismiss that information as useless, ask for clarification. Perhaps the client had not explained in great detail because they had assumed that you had the prior knowledge to understand what they were saying.

Example

- How did you arrive at that conclusion?
- How does your conclusion follow from the facts you outlined? What do you mean by 'friendly ambience'?
- Exactly what will be the main purpose of the computer?

Planning questions

Sometimes your client will need your help to plan ahead. A property loans officer, for example, might help clients choose a loan type that suits them over the long term. You would also need to ask yourself planning questions when prioritising requests either from one client or a number of them.

Example

- Which problem of the clients should I attend to first?
- Do you want to pay off your loan sooner?

Strategic questions

As you go about the process of determining and analysing your client's requirements, you need to be constantly asking yourself or your client strategic questions.

Example

- Have you thought about how we could approach that problem?
- Should I research that area further before I make a recommendation to the client?
- How best do we proceed from here?

Organising questions

These allow you to structure your information. Without a structure, the information would just be bits and pieces without any discernible patterns. With a good structure, you'll be able to see trends or themes and how information fits together, as well as compare and contrast the information you gather.

Example

- Which three areas are you most interested in the two of us exploring?
- What plans do you have for each of these areas?

Probing questions

Probing questions go deep into the issue or problem. They aim to dig out insights and uncover underlying causes.

Example

- Exactly what accounting tasks do you find difficult to perform manually?
- Why do you find these difficult?
- What are these tasks (give details of each)?
- How long does it take you to perform each task?

Divergent questions

A client may come to you with a problem. Both of you may already know about the advantages involved in a certain way of doing things. Now you can both explore the risks. Once you are familiar with a certain area, you can use divergent questions to help you explore territory that is related to what you already know.

Example

We have now arrived at a list of things that you need to do while in Paris. Now let's look at the things that you should not do.

Devil's advocate questions

A client may decide that they want a certain type of equipment. Everyone is using that type of equipment. However, you want to make sure that that's what they really need. What they want and what they actually need may be different. Provocative questions help you eliminate myths, fallacious arguments, hype and the like. They help you arrive at facts or the 'truth'.

Example

- I know that this is the latest model on the market and that everyone in your school says that you need to purchase it. However, do you really think it's what you need?
- Will it be appropriate for the weather conditions in your country? Has anyone ever researched the problem?
- What evidence do they have?

You can sometimes gain a good insight into a client's needs by direct observation. Plan to spend sufficient time with a client to record the activity being performed in relation to the project. Take notes on what users do, when they do it, the sequence of tasks, and with whom they interact.

Analyse client requirements

Some client requests and requirements are quite straightforward. Others, however, can be quite complicated and will need a lot of thinking through on your part as well as your client's. You may have heard of technology purchased by an organisation that ends up being hardly used. Or equipment purchased, for example, by isolated communities, that breaks down and then is left to rust because parts are not easy to get, and the experts are all in the city. You may have heard of systems that are set up that fail to meet the organisation's needs or soon get outdated. In these cases, the client may not have had a clear idea of exactly what was required – and may have asked for something they thought they needed. Or the 'expert' or supplier may not have accurately determined or analysed the client's needs.

Before meeting with clients to discuss their requirements, you should be prepared. Thorough preparation should allow you to get all necessary information during a meeting with your client. You should understand your organisation's standards and policies, as well as plan to get the required information from the client in a short time. It is a good idea to have a standard set of questions to ask your client. Having these questions printed out and ready to use will further improve the quality of your service. It is very unlikely you will forget to ask a written question about a particular item, but a question could be overlooked if you try to commit it to memory. The answers to these questions will not only provide you with the information you need but will also allow you to confirm the answers with the client and your supervisor.

As well, your client will perceive your service as well planned and organised. From this standard set you can create a subset of questions which will be relevant to your client's situation. The standard set of questions should be provided by your supervisor. However, if you want to create your own set, make sure that it is approved by your supervisor. Remember that all information collected from a client will help you and your supervisor to decide about the service provided to a client. So, it is important that you not only ask the right questions, but you also record the client's answers accurately. Your questions should be worded in plain English without any technical jargon (if possible). If jargon is used it should be explained to the client. Acronyms should not be used at all. You need to specify the areas in which you need information from the client.

Suppose you have determined your client's requirements. You have collected from the client the information that is on the template we have just looked at. You will now look at that information and ask yourself questions such as:

- Does the client know exactly what they want?
- Is there anything I need to research to help the client make a more informed decision?
- Would I be able to meet the client's requirements?

In other words, you analyse what the client has said their requirements are. You might then decide to carry out research on the subject. You might find that there are other ways of solving the problem than what you or the client had decided. Your research may involve anything from consulting other people in your organisation to reading up on the subject, for example, on the internet and in journals.

Change management in the IT environment

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Before beginning any significant change to an IT infrastructure, it is important to clearly identify the objectives.

What exactly are we going to change?

Answering this question is important because changes to an IT system in any business can have direct and immediate implications. There are many things that can go wrong so we need to manage the change process.

The risks of unmanaged or ad hoc changes are well known – this is why organisations such as the Information Technology Infrastructure Library (ITIL) have developed formal processes to help IT professionals get it right. Formal IT change management is beyond the scope of this unit, but the following video provides a brief discussion of the goals and objectives of IT change management as stated in the ITIL guide.

Video

Brief discussion of the goals and objectives of IT [Change Management | ITIL V3 Foundation | ITIL Basics | Simplilearn](https://www.youtube.com/embed/PlKsAZrwcD8?rel=0)[11]

You will notice from this video that one of the goals of change management is to 'respond to business and IT requests to align services with business needs. This is consistent with the main purpose of this unit – matching ICT needs with the strategic direction of the enterprise – and emphasises the importance of making changes that directly support the company's immediate and long-term goals.

[11] https://www.youtube.com/embed/PlKsAZrwcD8?rel=0

Did you know?

As an IT professional you can specialise in change management by becoming certified in ITIL processes. You can also learn more about change management through books and courses.

Example

By identifying the objectives of a change to the IT infrastructure we can better understand how that change will impact the company. For example, if we decide to replace a server, we might initially say that our objectives are:

- Remove the old server.
- Install a new server.

However, if you think about the process in more detail and discuss the change within the IT team you will see that there are more steps involved. A more accurate list of objectives might look like this:

- List the functions of the server to be replaced:
  - file storage
  - email services
  - DNS and DHCP services
- List the technical specifications of the server to be replaced:
  - memory
  - storage capacity
  - processing power
- Do some research to help decide the best replacement server.
- Implementation:
  - Install the server in the rack.
  - Install an operating system.
  - Install application programs.
  - Migrate data from the old server to the new server.
  - Test the new server to make sure that everything works as expected.

This list of objectives is just a starting point. The more you discuss the changes, the more details will emerge about the implications. For example, your old server provides DNS services to the client computers. This means that if you take that server offline for any time at all, the company's workstations may not be able to connect to the network.

Outdated architecture


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When advising or providing recommendations to a client on their IT infrastructure you need to make sure you minimise any future problems, being support, hardware performance, or ease of use. There are a few things to look for when gathering information at a client's site that will raise red flags for future operations.

The first would be the desktop operating system and applications being used across the network. An audit of the network will show you the software installed and would be the starting point for your planning.

What you need to achieve is a **S**tandard **O**perating **E**nvironment (**SOE**) for the client's site, meaning that the desktop operating system and applications are the same across the networked computers.

Supporting an organisation with an SOE gives great benefits to the support staff, as they know that each computer will have identical software across the site. Therefore, there is no scenario where one office computer is running Microsoft Windows 7 Professional while another has version 10 installed. The users on site also benefit from an SOE as they can move from one workstation to another which will help with productivity.

Computer systems will also need to be investigated in regard to what is old and needs to be removed from the business, and what stays. It is good business practice to have the client replace any computer system that is not in warranty. This is not that difficult today as most brand name systems will offer 3, 4 and even 5-year next day on-site warranty options on their computers. If a client has arranged to lease through their financial institute for the term of the warranty, this becomes an operational expense and not capital, making it better tax wise for the client. It also means that if the client leases new equipment when the warranties expire, they will always have their computer system cover for on-site repairs.

Weblink

Here are some brand name business systems:

Desktops, Workstations & All-in-Ones for Work | Dell Australia[12]

Business Desktops | HP® Australia[13]

Desktop Computers & All-in-One PCs (acer.com)[14]

As with the computer systems, the network would also need standardisation of the hardware. This would mean that you should not mix switches and routers that have varying bandwidths, as this can cause bottlenecks in the transmission of data packets. It is also an idea to keep the same vendor range across the network so as to be consistent with your knowledge of the product you are supplying. This always benefits the client, as knowledge of what a product can do, what quirks it has, and its limitations is always a plus.

Weblink

Some of the brand name business networking products:

Networking - Enterprise Wired, Wireless & Data Centre Solutions | HPE Australia[15]

Products, Solutions, and Services - Cisco[16]

Solutions for Business (netgear.com.au)[17]

Business Networking Solutions - D-Link Australia New Zealand[18]

[12] https://www.dell.com/en-au/work/shop/scc/sc/desktops?~ck=mn

[13] https://www.hp.com/au-en/desktops/business-desktops.html

[14] https://www.acer.com/ac/en/AU/content/professional-group/desktops

[15] https://www.hpe.com/au/en/networking.html

[16] https://www.cisco.com/c/en_au/products/index.html

[17] https://www.netgear.com/au/business/

[18] https://www.dlink.com.au/business-solutions

Also replacing printers that are out of maintenance agreement, or just old but still working, is a viable option for the client. It is easy to convince a business client in replacing a high-volume old printer with a new model once the operating costs are worked out. The reason being is that newer printers normally have a cheaper cost per page than older models and if figures can show a cost benefit within 3 years most clients will take the recommendation.

Weblink

Some of the brand name printers:

Business Printers and Office Printers for Small, Medium, and Enterprise | HP® Australia[19]

Office Printers | KYOCERA Document Solutions[20]

Printers for Business - Epson Australia[21]

[19] https://www.hp.com/au-en/printers/business-printers.html

[20] https://www.kyoceradocumentsolutions.com.au/products/printers

[21] https://www.epson.com.au/products/printers_For_Business/

Auditing an existing IT infrastructure

As mentioned previously, you need to know what hardware and software exist on a client's IT infrastructure before you can make any recommendations or give advice. This structure can vary from a micro business with a few computers in a workgroup setting, to a small business with a single server running a domain with a dozen devices connected, and through to a departmental organisation with multiple servers and hundreds of devices connected using multiple WAN connections.

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Weblink

There are multiple computer and network auditing and asset management tools on the market at present. These tools range from simples' ones, like Belarc Advisor.[22]

To more comprehensive tools that look at the whole network, such as Spiceworks[23].

Like any tool you will use, it is only as good as your knowledge of how to use it.

Case Study

Again, referring to the information on **Case Study Daydreams Travel Agency** provided earlier and, in particular, note the information on the company's current IT infrastructure.

[22] https://www.belarc.com/products/belarc-advisor

[23] https://www.spiceworks.com/free-pc-network-inventory-software/#features

Activity

A closer look at the case study

This is a team activity.

Discuss within your team what you can tell about the Daydreams Travel Agency current IT infrastructure. Make notes on the following:

- What hardware and software components can you list?
- What can be said about the currency of the technology?
- Draw a topology based on the information available.

Reach agreement with your client

It is important that you and your client agree on certain decisions, for example, the specifications of the job and the scope of the job. You would not want a client to say at a later date that they were not satisfied with the service you provided. You would also want to pre-empt any later misunderstandings. Finally, you would want to make sure that your organisation is not taken to court.

See below to learn more about some of the information required from the outset of the job or project.

- **Extra costs -** It is important to ensure that the client is fully aware of how much they need to pay and for what service. Are there any extra costs that could be incurred by the client? Are there any extra charges or penalties the client could be asked to pay?
- **Scope of the job -** Both you and the client should agree on exactly what you are supposed to do. They should know what they have to provide. What are the parameters of the job (or project)? Exactly what lies outside the brief?
- **Specifications -** It's important to spell out the details that you will need to attend to in order to do the job.
- **Agreement or contract -** Is there a document such as a service level agreement?
- **Changing of the brief -** Sometimes halfway through a job, a client may want to change their original brief. Is there a deadline for changes to the brief? Which specifications can be changed? Is there a penalty?
- **Options -** Let the client know what their options are. Provide information on the features of each option.
- **Possibilities -** The client may make a request for a certain service or product. However, they may not be aware of other options or other possibilities.
- **Recommendations -** Is it your organisation's policy to give recommendations to the client? Sometimes clients request that you do. Make sure you carry out research.
- **Process -** The client needs to be aware of the processes you'll take when carrying out the client's request. Is the client part of this process? Will they be consulted? When will they be consulted?
- **Roles -** It's important to clarify the roles of everyone on the job. What is your role? What is their role? What are the roles of each person on the project?
- **Consultation -** Will the client be consulted? At what stages of the job or project will this consultation occur?
- **Contact person -** Can the client contact you or someone in the organisation if they have queries?

- **Timelines -** What are the dates for the completion of the job (or various parts of the job)? Will there be penalties if deadlines are not met?
- **Job guarantee -** Is there a job guarantee? If the client is not satisfied with the service, is there recourse (someone or a regulatory body they could contact perhaps)?

  Once you have agreed on this information, it would be a good idea to put it down in writing. It could simply be in the form of a letter to the client where you say something like "below are the decisions we made and agreed to at our meeting on …" or it may be in the form of a contract or service level agreement.

Activity - Service level agreement

Your client has requested that your company provides a Service Level Agreement (SLA) to cover their IT infrastructure. The client has some knowledge of what they require with technical support; however, there are areas that they are unsure about. After your initial discussions with the client in regard to the SLA, you then proceeded to investigate a solution. What should be your next steps?

Sample answer

Your next steps should be:

- Identify and document the amount of technical support the client will require.
- Discuss and agree to the level of technical support identified with the client.
- Provide pricing for the implementation and await the client's response.

Document client requirements

After an analysis of the client's requirements, you should fully document the requirements and report them to your supervisor. This document may take many forms but should include the following:

- background information such as company details
- problems and issues that may have led to the client's request
- questions and answers from your meeting with the client, as well as a list of any essential criteria
- other options or possibilities of which the client may not have been aware
- any information for the client that will help them understand what they are getting into before you go ahead with the job (or project).

A covering memo should be attached, stating the purpose of your report, and asking the supervisor for their acceptance of the report.

Activity – Log a request

The help desk has received a call from an internal client whose email service appears to be disrupted. There is a recording of the call.

As part of your training, your manager would like you to listen to the call (a transcript of the call is also available) and enter the relevant information in the call log proforma provided below so that you can pass the problem on to the technical manager.

Please note that the information must be entered according to the help desk support procedures provided. Also remember that you'll need to keep the client informed of the progress on the call as well.

Deliverables

- Complete a call log entry for the help desk database to record details of the call from the client.
- List any other action you will take in relation to this call.

Tools

- Call log proforma[24] (DOCX, 52KB)
- Help desk call transcript[25] (DOCX, 53KB)
- Help desk policy procedures extract[26] (DOCX, 53KB)

Go to Appendix B for copies of the above forms for your use.

[24] https://connect.tafeqld.edu.au/content/enforced/365993-MO_ICT50220_ICTICT517_TQM_01/ICTICT517/media/ICTICT517_Call_Log_Proforma_LHO_TQM_v1.docx?_&d2lSessionVal=djqPJ8NWAUKZfqSXnQ9thTBkW&ou=365993

[25] https://connect.tafeqld.edu.au/d2l/le/content/365993/viewContent/23173820/View

[26] https://connect.tafeqld.edu.au/content/enforced/365993-MO_ICT50220_ICTICT517_TQM_01/ICTICT517/media/ICTICT517_Help_Desk_Policy_Procedures_Extract_LHO_TQM_v1.docx?_&d2lSessionVal=djqPJ8NWAUKZfqSXnQ9thTBkW&ou=365993

Building for the future

With any client IT infrastructure upgrade or replacement, you need to ascertain the client's needs for the future, not just what they require now. There have been occasions when a computer system in a business has been replaced only to find out six months later that the vertical software product, they are using requires more power than what the replacement has.

Investigating and knowing the IT market segment you are supporting is a key ingredient for success. If you want to establish a business that installs and supports medical clinic management systems, you will need to create a communication corridor with the software vendor to keep abreast of what changes are occurring, and where they are going with their software package in the next few years.

When an Australia based software developer for a medical management package was moving away from an early 2000 database to an SQL database it required a higher specified server for the network than previously stated. This was part of a plan for the vendor to have better client support in place for the next 5 years, which did work. However, if a business supplying the server did not know this then within the year the client would have the added expense of upgrading the CPU, RAM, and possible HDD storage.

Whenever investigating upgrading or replacing with new any type of device or even an entire network infrastructure, discuss with the client where they see their business in at least 3 years and develop a recommendation around that.

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Your recommendation

Once you have investigated what the client requires, ascertained what the specifications of any system that are needed, you then need to put together a recommendation for the client. As the client is requesting from your recommendation guidance on what hardware and software, they will require to have a functional IT infrastructure that will deliver all their requirements, you need to have and show knowledge for what you are delivering.

With hardware, it is always best to establish yourself with vendors' products you feel give you the best pre- and post-sales support. Vendors like Dell, Hewlett Packard, Cisco, D-Link etc. have training and certification courses for the products they supply to the market. These types of courses will give you the knowledge and support of business hardware you would recommend to a client.

Weblink

Here is a couple of links to vendor training as examples:

D-Link Training & Certification 2021[27]

Hewlett Packard Enterprise certification and learning[28]

Tip

When recommending hardware of software to a client always state exactly what is required, with no options. Remember the client is looking at you for advice, and not maybes or ifs.

Most businesses when evaluating new equipment purchases will do some sort of comparison. Most of the time this would involve writing down notes and prices on a piece of paper and then they will make a personal judgment on what they want. Another way is to create an evaluation matrix.

[27] https://training.dlink.com.au/

[28] https://certification-learning.hpe.com/tr

So, what is an Evaluation Matrix?

The best way of showing how an evaluation matrix works is to go through a working example to properly demonstrate it is usage.

Scenario

You own a small business that requires a computer for a new employee. This employee's job is to do general office duties, such as word processing, spreadsheet, basic accounting, and research from the internet. The computer usage will be during normal office hours and will not be used for any high-end graphics work, however a small amount of DVD copying is required. There will be no data on the computer as it will all be saved to the existing server. The operating system used on the current computers is Microsoft Windows 10 Pro. Management has envisaged that the new computer hardware should cost about $2000.

From the scenario we can highlight the following items:

- High speed CPU is not required, as there is no high-end software being used.
- As the new computer is running Microsoft Windows 10 Pro and would probably be using an integrated video card, the recommendation for memory would be a minimum of 8GB.
- No storage of data is required on the computer, so only a 250GB hard drive would be required.
- As the new employee is doing general office duties, a standard 19" LCD monitor will suffice.
- DVD copying is stated, so a DVD-Burner needs to be specified.
- As with all business systems a minimum of a 3-year next day on-site warranty would be required.
- The business has an approximate budget of $2000.

The following is how an evaluation matrix would be laid out for the above scenario.

Item	Weighting	Product A Dell™ Vostro™ 200 Mini Tower	Raw Score	Weight Score	Product B HP Compaq dx 2390 Mini Tower	Raw Score	Weight Score	Product C LENOVO A57 Small Form Factor	Raw Score	Weight Score
Intel® Pentium® Dual-Core Processor E 2180	5	Intel Pentium Dual-Core Processor E2180	5	25	Intel Pentium Dual-Core Processor E2180	5	25	Intel Pentium Dual-Core Processor E2180	5	25
8 G byte RAM	8	8 GB DDR4	5	40	8 GB DDR2	5	40	4 GB DDR2	4	32
250 G byte HDD	6	250 GB SSD	7	42	250 GB SA TA	5	30	250 GB SSD	7	42
Graphics - onboard	3	Integrated Intel Graphics Media Accelerator 3100	5	15	Integrated Intel Graphics Media Accelerator 3100	5	15	Integrated Intel Graphics Media Accelerator 3100	5	15
DVD – Burner	5	16X DVD Burner	5	25	DVD Burner	5	25	DVD Burner	5	25
19" LCD display	7	23" Widescreen Flat Panel Monitor	7	49	19" Flat Panel display	5	35	19" LCD Wide Monitor	5	35
Microsoft Windows 10 pro	5	Microsoft Windows 10 pro	5	25	Microsoft Windows 10 pro	5	25	Microsoft Windows 10 pro	5	25
Warranty – 3 years next day on-site	8	3 Year Limited Warranty (Next Business Day On-Site* Service)	5	40	3 Year Limited On-Site Warranty	4	32	1 Year Limited On-Site Warranty	2	16
Price $2000	6	$1,949	5	30	$1,899	8	48	$2,150	4	24
		Total weighted score for A = 291			Total weighted score for B = 275			Total weighted score for C = 239		

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- **Item** - The first column Item, is sometimes referred to as the criteria. The criteria in this case are part of the computer specification that the product must meet.
- **Weighting -** The first column **Item** , is sometimes referred to as the criteria. The criteria in this case are part of the computer specification that the product must meet.
- **Product -** The next column **Weighting** , is the weighting factor that you would apply to each item. The weighting factor indicates the relative importance of the item, or criterion. The higher the number, the greater its importance. In this example we have used a weighting scale from 1 to 10, 10 being the highest importance.
- **Raw Score -** The next nine columns are divided into three identical layouts. The **Product A** , **Product B** and **Product C** columns, all show the brand of computer and there specifications as against the item criteria.
- **Weight score -** The **Raw Score** column shows how you would rate the product's specified item against the item criteria. This would be a scale from 1 to 10, where 5 would be the score you would give for the same criteria, any figure below 5 highlights a shortcoming, and a figure above 5 shows that it exceeds the criteria.

See the following to provide isolated details of the above.

Item	Weighting
Intel® Pentium® Dual-Core Processor E 2180	5
8 G byte RAM	8
250 G byte HDD	6
Graphics - onboard	3
DVD – Burner	5
19" LCD display	7
Microsoft Windows 10 pro	5
Warranty – 3 years next day on-site	8
Price $2000	6

Product A	Raw Score	Weight Score
Dell™ Vostro™ 200 Mini Tower		
Intel Pentium Dual-Core Processor E2180	5	25
8 GB DDR4	5	40
250 GB SSD	7	42
Integrated Intel Graphics Media Accelerator 3100	5	15
16X DVD Burner	5	25
23" Widescreen Flat Panel Monitor	7	49
Microsoft Windows 10 pro	5	25
3 Year Limited Warranty (Next Business Day On-Site* Service)	5	40
$1,949	5	30
Total weighted score for A =	291	

Product B	**Raw Score**	**Weight Score**
HP Compaq dx 2390 Mini Tower		
Intel Pentium Dual-Core Processor E2180	5	25
8 GB DDR2	5	40
250 GB SA TA	5	30
Integrated Intel Graphics Media Accelerator 3100	5	15
DVD Burner	5	25
19" Flat Panel display	5	35
Microsoft Windows 10 pro	5	25
3 Year Limited On-Site Warranty	4	32
$1,899	8	48
Total weighted score for B =	275	

Product C	**Raw Score**	**Weight Score**
LENOVO A57 Small Form Factor		
Intel Pentium Dual-Core Processor E2180	5	25
4 GB DDR2	4	32
250 GB SSD	7	42
Integrated Intel Graphics Media Accelerator 3100	5	15
DVD Burner	5	25
19" LCD Wide Monitor	5	35
Microsoft Windows 10 pro	5	25
1 Year Limited On-Site Warranty	2	16
$2,150	4	24
Total weighted score for C =	239	

When to deploy or install

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When it comes to arranging a time for any deployment, installation, or upgrade, the decision is with the client, not you. The IT sector is a service industry, and as such, we service the client in a way to minimise any disruption to their business when we do our work.

If a client's business operates the normal 5-day workweek from 8:00am to 5:00pm, then time can be arranged either after 5:00pm Monday to Friday, or on the weekend. However, if the client's industry is in hospitality the hours of available downtime for the business is limited. In this situation, you will need to negotiate with the client what time period has the minimal impact on their business and plan the project around then.

Activity

Scenario

A local clothes retailer is located on the main street in town on the outskirts of the CBD. They are a family run business that caters for menswear and has arranged for you to replace their front counter POS system and back-office administration systems with new.

For this activity, you need to write down the times you think would be best to install the new computer systems, based on your local retail knowledge. You will then compare your notes with your colleagues and discuss why the times you picked were appropriate.

Important

You must always remember that the ICT industry is a service industry, and we strive to help and update businesses with minimum disruption.

Contingencies

Whenever you do an install, deployment, or upgrade, you must always look at the risks involved if something does not work, and have a plan just in case, these are known as contingencies.

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A simple example would be if you go to a client's worksite to install a new HDD, make sure you take two. This means that if the first HDD fails its installation test then you have a contingency of having a second HDD. This is the same with the deployment of a network, it is always a good idea to have additional hardware available just in case.

Another scenario could be where you are replacing an existing standalone computer system with a new faster model, however, during the copying of the data the new system fails even though it was thoroughly tested. Your contingency in the case would be to reinstate the old system so the client can continue working, and either repair the new system or obtain another one. This could be a bit embarrassing, however, the testing report should be inside the new systems packaging which you can then show the client, just to ease the tension.

Other things that can be a problem and that you may not have control over are things like:

- electricity connections
- ethernet connections
- NBN activation
- site not ready, such as furniture.

All these items need to be verified that they are ready, and if not then the installation would need to be delayed. You really only want to go to a site once to get the job done, not going back and forth while services are being supplied, as this cost money and time for your organisation.

Final report and obtaining approval

The purpose of the final report is to document your findings and submit that information to the appropriate person for feedback. The report is part of an ongoing dialogue in which the stakeholders, including yourself, will discuss all of the important details about the proposed change. It is important to know who the "appropriate person" is. In most cases, this will be whoever has assigned the task to you. That may be the IT manager or your immediate team leader. It is up to that individual to forward the information to other decision makers in the organisation.

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Your report should be written in language that the audience will be able to understand, in other words, try to avoid using technical jargon and don't make assumptions about the reader's prior knowledge of technical concepts and terminology.

The final report is not a collection of everything that you have compiled. It should have all of the information that the readers will need to make decisions but should not be filled with details that are not relevant to the decision-making process.

Many companies may use an executive summary in their reporting templates. This is a brief section after the header and before the main body of the report that summarises the main points of the report in such a way that the reader can read only that section and have a clear idea of the report's substance, including the final recommendations.

Tip

Simple report writing tips:

- Include only information relevant to the project and decision-making process.
- Do not make assumptions about the reader's prior knowledge.
- Avoid using technical jargon.
- Include an executive summary.

The format of a report

Nearly all organisations you will be employed at will have standard templates that you can use for this report. The format is important because the template will specify what information should be provided. Most reports will have a header with the company logo and spaces for the date, a title, and a brief summary of what the document contains.

Video

Watch the following video for tips on writing an effective business report.

Creative & Practical Writing Tips : How to Write a Business Report[29]

Weblink

Access examples of commonly used business reports.

Report Templates | Free Word Templates (wordstemplates.org)[30]

[29] https://www.youtube.com/embed/twbtJ3QT_SI?rel=0

[30] https://www.wordstemplates.org/category/report-templates/

Obtaining approval

Obtaining approval might occur in a number of ways. It might be a verbal approval to go ahead with work based on the confirmation document, but you should never rely on a verbal approval. Memories of events can differ very much and lead to confusion and conflict later. One way of obtaining approval is to have the client provide a written purchase order for the work. Alternatively, the client might write a letter outlining their agreement to your requirements document, asking you to go ahead with the work.

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More information on obtaining approval.

- The standard of the goods or services to be provided.
- The price of the goods or services to be provided.
- The timelines for the project (specific tasks or the entire project).

Remember, a person's signature is generally required for an agreement to be legally binding.

Important

Ensure that all documents are signed by an authorised person from your client's organisation before you commence any work.

Activity – Report composition

This is a team activity.

Discuss with your team how you will compile your final report for Daydreams Travel Agency.

- Review report writing tips, and examples of business reports.
- Discuss the best way to present the information.
- Develop a draft that will be refined into the final report.

Topic Summary and Review

In this topic, we have discussed the skills that will help you accurately determine and analyse client requirements. We dealt with how to use active listening skills and how to ask questions that will help you elicit the information you need from clients. We also looked at how to reach an agreement with your client.

Self-check – Evaluating an organisation

By asking your client "How did you arrive at that conclusion?" you are asking them a:

- ☐ Probing question
- ☐ Clarification question
- ☐ Strategic question
- ☐ Planning question

An important principle of active listening is to do more listening than talking.

- ☐ True
- ☐ False

Items that should be agreed in an approval document between yourself and your client include:

- ☐ The price of the goods or services to be provided.
- ☐ The standard of the goods or services to be provided.
- ☐ The timelines for the project (specific tasks or the entire project).
- ☐ All of the above

List four (4) sources of information that define current IT systems.

....

....

List four (4) ways that using old technology can affect your ability to do your job.

....

....

Check your answers at the end of this Learner Guide

Self-check – IT and analysing client requirements

Match the following zone to the correct type.

Answers: *IT infrastructure; Feasible; Ad hoc network; Compatibility; DNS server; Topology; Deployment, Gap analysis.*

Zone	Type
A program that acts like a phone book for the network	
The hardware and software that we use	
Possible	
Can technologies work together	
A map of the network	
Putting technology into use	
Finding the difference between the way things are and the way we want them to be	
A network that has been planned with little or no planning	

Check your answers at the end of this Learner Guide

Develop action plans

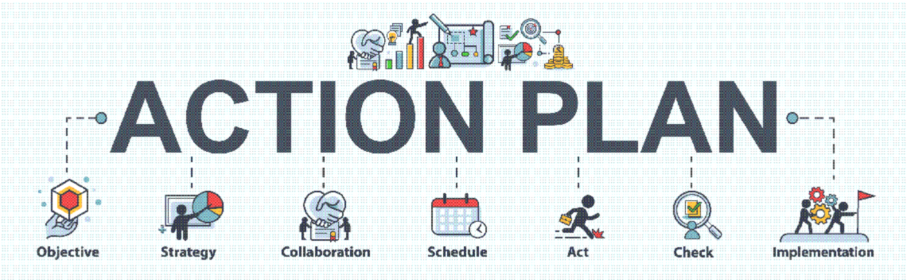
Introduction

In the previous topics you have learned how to analyse information to get a clearer picture about how best to deploy new technology for the company. Now that all of the necessary information has been collected and properly documented, the next step is to build an action plan that will give you all of the necessary steps to complete the task.

Objectives

By successfully completing this topic you will be able to:

- develop plans to implement proposed changes according to organisational policy and procedures
- document action plans, ensuring that standards, targets, and implementation methods are detailed
- forward documentation to the appropriate person for feedback and approval.



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What is an action plan?

Action plans are used a lot in IT because of the complexity of the work. When there is a risk that something could go wrong, such as insufficient resources, it helps to have a detailed plan that takes into account the risks and offers alternatives, these are also known as contingencies.

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An action plan for change

The action plan must include sufficient details to support an effective implementation. All resources must be accounted for including time and human effort. Some companies may use formal project management to achieve these goals but regardless it is beneficial to breakdown the work into discreet work packages, define the dependencies and describe the resource allocation and timeframe.

Weblink

The following web link explains the steps involved in putting together a good action plan.

Community Tool Box[31]

Activity – Draft action plan

This is a team activity.

Discuss with your team how you will build an action plan for Daydreams Travel Agency that is:

- complete – does it list all of the required steps in the right order?
- clear – can the plan provide enough information so that other people can use it as a guide to complete the work?
- current – does the action plan take into consideration the work that is currently underway, or planned to be done soon?

Refer to your notes and all the documents that you have completed so far. Then review the above web link and design a draft action plan to be further developed later.

[31] https://ctb.ku.edu/en/table-of-contents/structure/strategic-planning/develop-action-plans/main

Planning documents

Because an action plan is designed to perform a specific task it will become part of the company's collection of IT documents for current and future reference. It is at first a road map for getting work done and then it provides a record of activities that could be useful later on.

The completed action plan should:

- address all standards and targets
- consider any relevant policy and legislation
- sufficiently detail the methods of implementation.

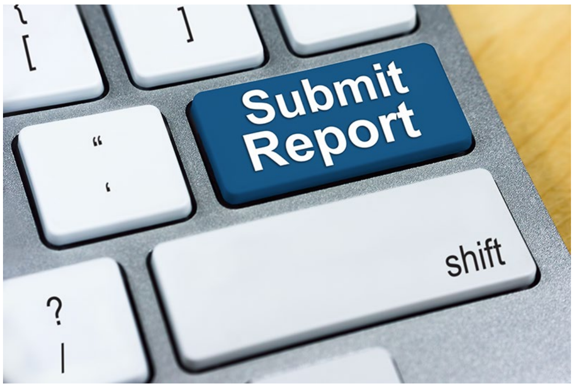
Tip

Many of the documents that we have discussed in this unit are used mainly for reference, that is, they are created and stored where they can be retrieved when they are needed. An action plan, however, is a working document that is specifically designed to enable the company to achieve strategic goals. For this reason, it is important that the action plan that you create has structure and detail and a purposeful sequence so that upon completion of the plan the desired work will have been completed.

Document submission

Earlier in this unit you created an interim report and submitted it to the appropriate person. By now you have collected additional information in the form of:

- objectives and implications of change
- advantages and disadvantages of change
- the completed action plan for implementation.



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In the final phase of this process, you have integrated the new information with the interim report, creating a final report with all of the vital information. You will now submit that report to the appropriate person.

As with the interim report, it is important to know who the appropriate person is. In most cases it will be the person who assigned the task (and possibly others), however, if you have any doubts, you should ask before submitting the report.

Also, as with the interim report, the final draft must be written with proper sentence and paragraph structure. Use bullet points as much as possible, avoid technical jargon, include an executive summary at the beginning if it is a particularly long report, and make sure that it is submitted on time.

Tip

Always consider your readers when you put together any report. The document is intended to make the relevant information as accessible as possible. It is not always the best approach to put every detail into the document because your readers may not have the time to read it all.

Topic Summary and Review

In this topic, you have learned how to put together an action plan for change that is based on legislation and organisational policy and procedures. Your action plan will have detailed all of the standards, targets and implementation methods needed to complete the job successfully. Finally, you submitted the action plan and additional information to the appropriate person for further consideration.

Tip

The purpose of this process is to provide information to help decision makers do their jobs. If and when approval is given for the action plan, then you will be able to begin the work. However, in some cases the proposal may be postponed, modified, or declined. It's important to remember that those who make decisions in any business have many other factors to consider.

Self-check - Action plan

List three (3) key requirements for a good action plan.

....

Explain why an action plan should have structure, detail, and a purposeful sequence.

....

The action plan should be submitted to the appropriate person. Which of the following is an appropriate person? (Select all that apply).

- ☐ The CEO of the company
- ☐ The person who assigned the task
- ☐ Someone in the finance department
- ☐ The manager of the IT department
- ☐ Your immediate supervisor
- ☐ The legal department
- ☐ Any of the above if instructed to do so

Check your answers at the end of this Learner Guide

Self-check answers

Self-check – Strategic plans

Write a definition for the following term. Business strategy

A company's detailed plan for succeeding and growing as a business into the future. Often includes a strategic plan.

Write a definition for the following term. Strategic plan

A plan for long term success.

Write a definition for the following term. IT infrastructure

The hardware, software and network technology which makes up the organisations complete IT platform.

List three (3) questions that you would ask a business owner to get ideas about their strategic plan for the company.

- What is the organisation's business?
- What is considered "value" to the customer?
- Which products and services does the organisation offer?

List three (3) documents that you would examine to identify a company's policies, procedures, priorities, and future direction.

- Vision statement
- Strategic plan
- Five-year plan

Self-check – Evaluating an organisation

By asking your client "How did you arrive at that conclusion?" you are asking them a:

- ☐ Probing question
- ☑ Clarification question
- ☐ Strategic question
- ☐ Planning question

An important principle of active listening is to do more listening than talking.

- ☑ True
- ☐ False

Items that should be agreed in an approval document between yourself and your client include:

- ☐ The price of the goods or services to be provided.
- ☐ The standard of the goods or services to be provided.
- ☐ The timelines for the project (specific tasks or the entire project).
- ☑ All of the above

List four (4) sources of information that define current IT systems.

- Lists of hardware and software components
- Network designs (topologies)
- Documents describing the configuration of software and devices
- Records of IT purchases

List four (4) ways that using old technology can affect your ability to do your job.

- Older technology may not be compatible with the new technology
- Connectors and cabling may be different
- Some manufacturers go out of business, therefore, will be unavailable to support their products
- Requirements change as the network grows

Self-check – IT and analysing client requirements

Match the following zone to the correct type.

Answers: *IT infrastructure; Feasible; Ad hoc network; Compatibility; DNS server; Topology; Deployment, Gap analysis.*

Zone	**Type**
A program that acts like a phone book for the network	DNS server
The hardware and software that we use	IT infrastructure
Possible	Feasible
Can technologies work together	Compatibility
A map of the network	Topology
Putting technology into use	Deployment
Finding the difference between the way things are and the way we want them to be	Gap analysis
A network that has been planned with little or no planning	ad hoc network

Self-check – Action plan

List three (3) key requirements for a good action plan.

- Address all standards and targets
- Consider any relevant policy and legislation
- Implementation methods must be sufficiently detailed

Explain why an action plan should have structure, detail, and a purposeful sequence.

Because an action plan is designed to perform a specific task, it will become part of the company's collection of IT documents for current and future reference. It is at first a road map for getting work done, and then it provides a record of activities that could be useful later on.

The action plan should be submitted to the appropriate person. Which of the following is an appropriate person? (Select all that apply).

- ☐ The CEO of the company
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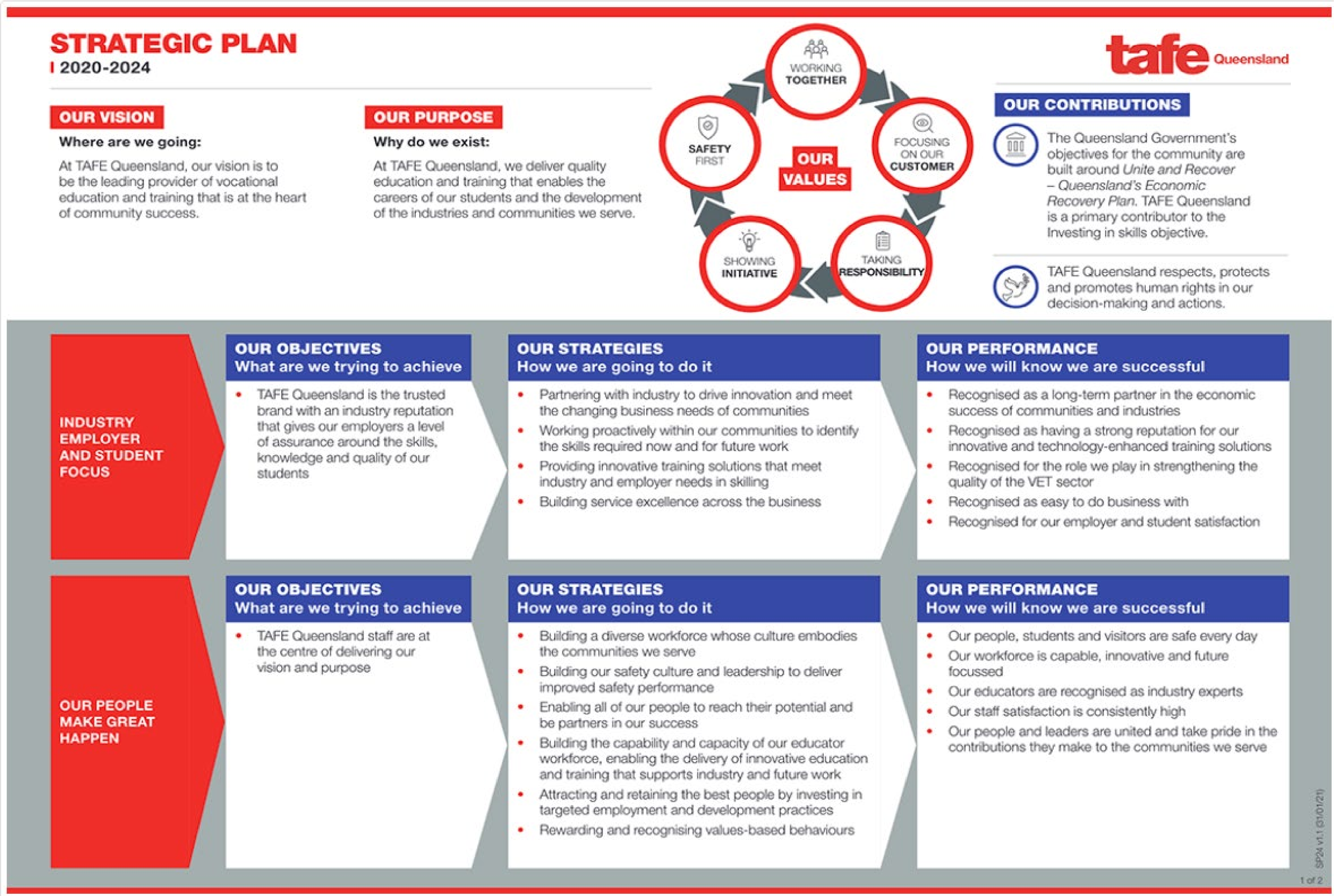
- ☐ Someone in the finance department
- ☐ The manager of the IT department
- ☐ Your immediate supervisor
- ☐ The legal department
- ☑ Any of the above if instructed to do so

Appendix A



STRATEGIC PLAN
2020-2024

tafe Queensland

OUR VISION

Where are we going:

At TAFE Queensland, our vision is to be the leading provider of vocational education and training that is at the heart of community success.

OUR PURPOSE

Why do we exist:

At TAFE Queensland, we deliver quality education and training that enables the careers of our students and the development of the industries and communities we serve.

OUR VALUES

- WORKING TOGETHER
- FOCUSING ON OUR CUSTOMER
- TAKING RESPONSIBILITY
- SHOWING INITIATIVE
- SAFETY FIRST

OUR CONTRIBUTIONS

The Queensland Government's objectives for the community are built around *Unite and Recover – Queensland's Economic Recovery Plan*. TAFE Queensland is a primary contributor to the Investing in skills objective.

TAFE Queensland respects, protects and promotes human rights in our decision-making and actions.

INDUSTRY EMPLOYER AND STUDENT FOCUS

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland is the trusted brand with an industry reputation that gives our employers a level of assurance around the skills, knowledge and quality of our students

OUR STRATEGIES
How we are going to do it

- Partnering with industry to drive innovation and meet the changing business needs of communities
- Working proactively within our communities to identify the skills required now and for future work
- Providing innovative training solutions that meet industry and employer needs in skilling
- Building service excellence across the business

OUR PERFORMANCE
How we will know we are successful

- Recognised as a long-term partner in the economic success of communities and industries
- Recognised as having a strong reputation for our innovative and technology-enhanced training solutions
- Recognised for the role we play in strengthening the quality of the VET sector
- Recognised as easy to do business with
- Recognised for our employer and student satisfaction

OUR PEOPLE MAKE GREAT HAPPEN

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland staff are at the centre of delivering our vision and purpose

OUR STRATEGIES
How we are going to do it

- Building a diverse workforce whose culture embodies the communities we serve
- Building our safety culture and leadership to deliver improved safety performance
- Enabling all of our people to reach their potential and be partners in our success
- Building the capability and capacity of our educator workforce, enabling the delivery of innovative education and training that supports industry and future work
- Attracting and retaining the best people by investing in targeted employment and development practices
- Rewarding and recognising values-based behaviours

OUR PERFORMANCE
How we will know we are successful

- Our people, students and visitors are safe every day
- Our workforce is capable, innovative and future focussed
- Our educators are recognised as industry experts
- Our staff satisfaction is consistently high
- Our people and leaders are united and take pride in the contributions they make to the communities we serve

SP24 v1.1 (31/01/21)

1 of 2

STRATEGIC PLAN (CONTINUED)

2020-2024

EXCEPTIONAL STUDENT EXPERIENCES

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland delivers contemporary skills and training to prepare students for the jobs of today and the required upskilling and reskilling for future work

OUR STRATEGIES
How we are going to do it

- Providing access and equity to training for students from diverse backgrounds
- Building learning environments that enable community-centric training delivery
- Delivering applied learning that enables a seamless transition from learning to the workplace
- Delivering future-focused training that builds, upskills and reskills the workforce throughout their career
- Providing support and positive experiences across the entire student journey

OUR PERFORMANCE
How we will know we are successful

- TAFE Queensland students are sought after for their job readiness
- TAFE Queensland increases student employment and further study outcomes
- TAFE Queensland has outstanding student satisfaction
- TAFE Queensland has a diverse student body
- TAFE Queensland is a career hub for local communities

A SUSTAINABLE AND SOCIALLY RESPONSIBLE TAFE QUEENSLAND

OUR OBJECTIVES
What are we trying to achieve

- TAFE Queensland works collaboratively with governments, industry and our communities to deliver training to support economic growth and community prosperity

OUR STRATEGIES
How we are going to do it

- Leveraging our scale and scope to enhance access to training across our state and target markets
- Using market insights and data to influence the policy agenda
- Investing in digital solutions that engage learners and support contemporary work environments
- Reinvesting in capabilities that support our long-term market positioning
- Provide contemporary and flexible training infrastructure that best supports current and emerging community training needs
- Promoting the distinct benefits of the TAFE Queensland community
- Supporting the social and economic priorities of communities

OUR PERFORMANCE
How we will know we are successful

- Communities have access to quality training supported by contemporary technologies and infrastructure
- Communities recognise TAFE Queensland as a key success factor in their social and economic success

OUR STRATEGIC OPPORTUNITIES

Embracing the opportunities presented to TAFE Queensland will better equip us to meet the needs of our students and the communities we serve:

- Harnessing the potential of emerging technologies and new industries to continue to connect with the skill requirements for current and future workforces
- Leveraging innovation in applied learning to enable training opportunities that meet student and industry needs across our diverse regional footprint
- Continuing to embed a culture of excellence across our people and services that enables high quality training outcomes.

OUR STRATEGIC RISKS

Through active management, we will address strategic risks by:

- Strengthening our partnerships across industry, communities and government to ensure training continues to meet the needs of stakeholders
- Keeping pace with innovation and technology to ensure training continues to add value to students, workforces, industry and the economy
- Focusing on efficient and effective delivery of training services in an environment of finite resources.

Appendix B

Help Desk Call Log

ICTICT517 Match ICT needs with the strategic direction of the organisation

ICT50220 Diploma of Information Technology

Log number	0437896
Reported by	
Problem	
Date	
Time	
Priority **1 (high)** **2 (standard)** **3 (low)**	
Support required	Yes / No
Technical staff required	Yes / No
Referred to	

Help Desk Call Transcript

ICTICT517 Match ICT needs with the strategic direction of the organisation

ICT50220 Diploma of Information Technology

Transcript of a client's call to the help desk

The transcript of a conversation recorded on the Help Desk at 12:50pm this afternoon.

Help desk: Help Desk. How can I help you?

Client: This is George Castellaro from Sales. My computer isn't working.

Help desk: What's on the screen now?

Client: A grey box telling me that it won't work.

Help desk: What does the box say?

Client: I'll read it out to you. 'Pegasus Mail cannot connect to the host you have specified. Make sure that your TCP/IP network driver is properly installed and configured, and that you have entered the correct host details in your Network Configuration Dialog. You should also confirm with the manager of the host machine that it is actually running a server for the protocol you were trying to use (POP3 if receiving mail or SMTP if sending it).'

Do I have to keep reading out this message? Does it make more sense to you than to me?

Help desk: No, that's fine. I get the idea. What were you doing when this message appeared?

Client: I was trying to send an email to one of our clients telling them about the new software that we are selling now.

Help desk: The message should give you a button to press to go on. Is there one that you can press? Is there an OK button?

Client: Yes.

Help desk: Click that.

Client: OK

Help desk: What happened?

Client: The message went away.

Help desk: OK, so now try to send your email again. What happens?

Client: The message comes back. OK is still the only button

Help Desk Policy Procedures Extract

ICTICT517 Match ICT needs with the strategic direction of the organisation

ICT50220 Diploma of Information Technology

First line support procedures (extract)

1. Receive requests for help from clients. Requests are logged via the Help Desk by phone, email or fax.
2. Record the request accurately. Enter details in the Help Desk database.
3. Assign appropriate priority: 1 (high), 2 (medium) or 3 (low).
4. Make initial contact with the client informing of action or progress.
5. Investigate the request. Carry out initial research if necessary.
6. Action the problem or refer it to technical support staff.
7. Follow up until resolution:
    a) Check each hour for high priority matters.
    b) Contact the client.
    c) Record progress in Help Desk database.
8. Close off the call/request when the problem has been resolved and confirm with the client that matter has been resolved.

Apart from dealing with these day-to-day requests, a client support officer is generally involved in analysing a range of support issues. For example, this may involve:

- identifying potential problems that could affect users
- working on eliminating problems before they affect users
- identifying the root causes of recurring problems (from logged calls).

