Learner Guide

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ICTICT523

Gather data to identify business requirements

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MAKE GREAT HAPPEN

tafe Queensland

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Section 113P

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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 will I learn?

This unit describes the skills and knowledge required to identify, analyse and document business requirements.

The unit applies to systems analyst developers and project team leaders and managers who are responsible for gathering data to identify business requirements.

Are there any special requirements?

N/A

TAFE Queensland student rules

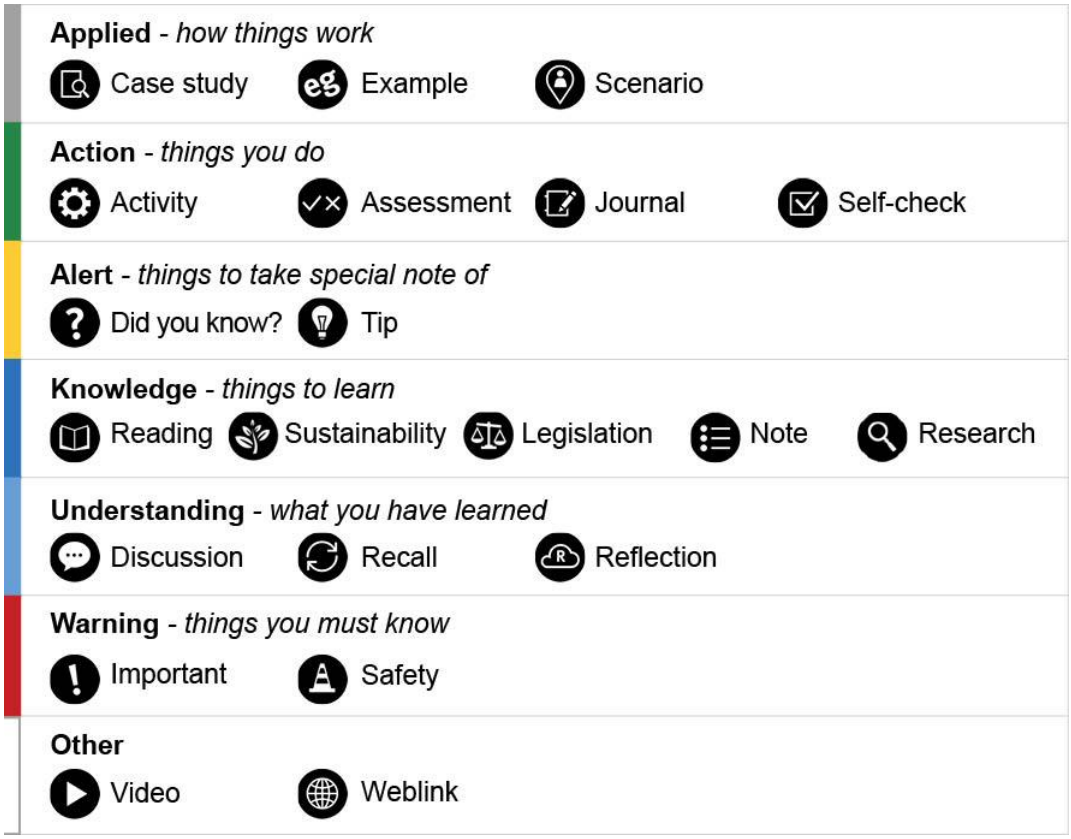
TAFE Queensland student rules are designed to ensure that learners are aware of their rights as well as their responsibilities. All learners are encouraged to familiarise themselves with the TAFE Queensland student rules, specifically as they relate to progress of study and assessment guidelines. A full 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.



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

Contents

Welcome

Welcome to the *ICTICT523 Gather data to identify business requirements*. By completing this unit you will be able to:

- Identify information sources
- Gather data
- Prepare data analysis for review.

Gather data to identify business requirements

Introduction

In this topic, you will learn how to identify information repositories, review organisational documentation, develop critical questions to elicit information from stakeholders and ensure that quality information gathering techniques are used.

Objectives

By completing this topic, it is expected that you will be able to:

- identify information repositories across the business
- review current organisational documentation
- develop critical questions to elicit information from key stakeholders.

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When a business or company identifies a problem in their system, they seek the optimum solution that will solve that problem. This involves outlining the business requirements that will provide justification for the development of a project that will provide that optimum solution.

In the context of ICT, a **requirement** is a statement of 'must have' system characteristics and comes from the need expressed by the business users or stakeholders during the analysis phase of the system development lifecycle (SDLC). Although requirements will change over time as the project evolves, there are two basic types of requirements:

1. functional requirement, and,
2. non-functional requirement.

The requirement analysis techniques for a system are:

- problem analysis (to identify the problem)
- time/duration analysis
- cost/budget analysis
- outcome analysis
- feasibility analysis.

Reading

Read this short article explaining requirement analysis[2]

[2] http://searchsoftwarequality.techtarget.com/definition/requirements-analysis

Identifying information repositories

When identifying key sources of information, it is important to know the main repositories of information in a business. These can include stakeholders, business information, business objectives and quality assurance processes.

Stakeholders

Stakeholders are the people who may be affected by or have a stake in the project. One way to characterise stakeholders is by their relationship to the project.

Primary stakeholders

Primary stakeholders are the people that are directly affected, either positively or negatively. They will either have a major role during the project or be affected by the outcome of the project. Examples of primary stakeholders are those who will build the website and everyone who will use it once it is finished.

Secondary stakeholders

Secondary stakeholders are people or groups that are indirectly affected. They are less likely to be involved during the project but will be influenced by the final project. Examples of secondary stakeholders are people in the company who will be indirectly affected by the new website as it may change how they do their job.

Key stakeholders

Key stakeholders might belong to either or neither of the first two groups. They are important people within any organisation affected by the project and are generally influential even if they are not directly involved in the project. Examples would be business owners, chief executive officer (CEO), politicians, and other important influential people.

Internal stakeholders

Internal stakeholders are those within the main organisation you are making the project for.

External stakeholders

External stakeholders are those who are not with the main organisation - customers/clients are a good example of external stakeholders.

Important

Be sure you identify the right stakeholders as this in turn leads to a successful project.

Business information

Information repositories are storage areas for the information that is created in a business.

For example:

- business documents
- documented processes and procedures
- reports
- customer data
- financial data
- databases
- employee knowledge.

Usually, there are two types of repositories:

Global: Reusable within the business.

Local: Reusable within the business.

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Business models and objectives

Business models

It is useful to know the business model that an organisation is based on.

Manufacturing model

Also known as the direct model. The organisation is the manufacturer of a service or product and sells that service or product directly to the consumer via a license, lease, or one-time payment.

Merchant model

Commonly used by wholesalers or retailers of goods and services.

Advertiser model

Based on making sales from advertising other businesses. Examples are billboards, free magazines, commercial TV and search engines like Google.

Data model

Information is a commodity in the business world. The data business model provides information to other businesses about consumer behaviour, for example, Dow Jones who provides financial news and data.

Commission model

Takes a percentage from the purchase of another company's products. In many ways, the commission model is a cross between the advertising model and the broker model.

Subscription model

Sells a service based on an ongoing subscription payment. The subscription is usually for a minimum length of time. Journals, magazines and online newspapers are common examples.

Business objectives

Business objectives can show the reason why a business operates and what they are trying to achieve. The following five objectives are common, and a business may focus on one or more of these.

1. Profitability
2. Productivity
3. Good customer service
4. Growth
5. Marketing.

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Business problems and QA

Change is a fact of life, and businesses must continually respond to change. Unwanted changes are sometimes called business problems, and categorising these problems helps to solve them.

Uncertainty

Businesses don't cope well with uncertainty. This may be in the local and global economy, in the credit markets, in how new regulations will affect business. This leads to short-term focus. The problem to be solved is to balance short-term focus with informed, long-term strategies.

Competition

Competition from other businesses for the same customers with competing products or competing prices can adversely affect a business. The problem to be solved is how to stay current and still have a viable business.

Globalisation

The opening up of global markets has added pressures to business. There are new markets, new products and services for new customers and new competitors. The problem to be solved is to better understand international markets and cultures through better information gathering and better analysis.

Finance

Access to money for investment, research and development or expansion may be crucial to grow a business. The problem to solve is how to access money that the business does not have, and putting plans in place to pay back any loans etc.

Regulation

Changing government and industry regulation is hard to plan for, especially uncertain energy, environmental, tax and financial policies. The problems to be solved are to understand the meaning of regulation and its implications on the business.

Technology

Technological improvement is increasing exponentially. This makes investment in technology a challenge as well as keeping up with the current and new systems. The problem to be solved is to develop a long-term technology strategy while remaining flexible enough to take advantage of unforeseen technology developments.

Complexity and information overload

Life is becoming more complex, even as certain tasks have become easier due to technology. The pace of change is quickening and so is access to information. The global economy is becoming more connected. The ability to make sense of the information that is available to make good decisions is becoming a challenge. The problem is how to create business models, processes, products, and services in a way that reduces complexity.

Did you know?

Quality assurance (QA) is a process-centred approach to ensuring that a company or organisation is providing the best possible products or services. When starting a new project, it's a good idea to have knowledge of quality assurance practices so these can be built into the project. Planning plays an important role regarding QA. Think about what could be improved, how it could be improved, where and when it can be improved. Techniques include analysis, meetings, brainstorming, flowcharts, entity relationship diagram (ERD), evaluation etc. These are covered in more depth later in this unit.

Organisational documentation

Current organisational documentation and the extent to which they were completed previously can be reviewed by looking at past documents.

A review document can include:

- performance indicators for individuals
- details for failing to achieve any of the goals.

Weblink

Select the following link to see an example of a document review comment sheet[3]

The following table shows the measurable performance indicators at each level and their equivalent indicator:

Outcome measures	Impact measures	Output measures
Track achievement of strategic goals.	Track progress towards outcomes. Assess the differences occurring in the short/medium term. Assess cost-effectiveness.	Feasibility study in regard to quality, timeframe, cost and coverage. Compare results/outcome to test whether impacts or outcomes changed as predicted.

The outcome of effective performance reporting should be able to:

- explain the relationship between planned performance and actual performance
- provide an overall performance indicator of the organisation.

3 https://www.era.europa.eu/sites/default/files/agency/docs/decision/decision_n161_annex2_evaluation_procedure_en.pdf

Developing critical questions

Before proceeding to developing questions that will help you obtain the information you need from stakeholders, it helps to understand the difference between **data, information,** and **knowledge**.

Tip

Data is referred to as facts entered and stored in a computer, whereas the processed data is **information** and information that is used for understanding or as a motive is **knowledge**.

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Critical questions help to get the information you need from the data stored in the interviewee's head which, after analysis, becomes knowledge. There are a variety of techniques which use critical questions to gain information including interviews, well designed questionnaires, observation, analysing business documents, prototyping and application design. In this topic we will be focusing on interview techniques.

Information system key components

Hardware

This refers to the physical layer of the information system and includes computers, networks, servers, communications equipment, printers, scanners, laptops, tablets, mobile devices, backup drives, routers, switches, and other technology-based infrastructure.

Software

System Software - controls the device and includes the operating system, device drivers, and utilities that handle tasks such as virus protection, creating backups etc.

Application Software - consists of programs that support the users and enable companies to carry out their business functions such as spreadsheets, word processors, and database management systems.

Data

This is the system’s raw material and consists of basic facts. An information system transforms data into useful information. For example, in an Employee table, the fields Employee ID, Employee Name, Employee Address are basic facts or raw data if you look at each field individually but combining these fields together makes it information about a specific employee.

Processes

Or procedures are the tasks that organisational employees perform. Procedures are often described in written documentation manuals and online reference materials.

People

The primary purpose of an information system is to provide valuable information to the users or people within and outside the company. The success or failure of a system usually depends on whether the people involved are satisfied with the system's output and operations.

The interview

During the analysis process, interviews are conducted for a variety of purposes and with a variety of goals in mind. Most of the interview questions fall into two generic categories:

Open-ended

No pre-specified answers and tend to begin with What, Who, Why, How, Where, etc.

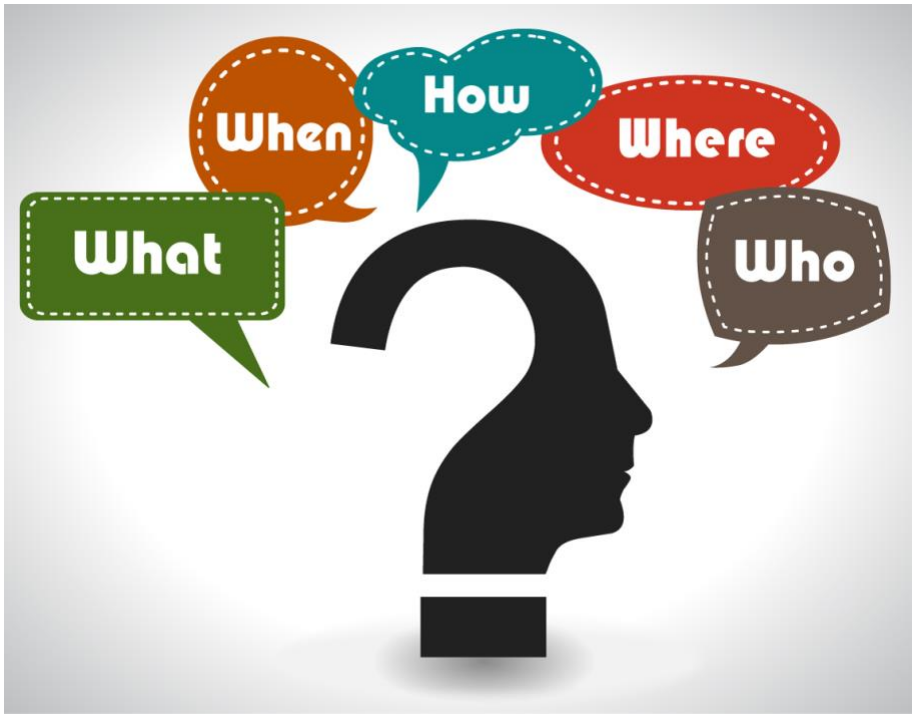
Closed

Respondent is asked to choose from a set of specified responses.

Example

"How many mobile devices do you have at the moment?"

"How old are you?"



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There are five basic steps for planning any interview.

Selecting interviewees

Select the right people to interview and ask the right questions to get accurate information. For example, if you are to develop a financial system, it is best to ask people from the accounts department rather than the sales department.

Designing the interview guide

When designing the interview guide, first establish the objectives for the interview. Determine the areas that you want to discuss. Solicit ideas, suggestions, and opinions and list the facts or topics you want to gather.

Develop interview questions

In the early stages of gathering information, questions are usually general questions and as the process continues, the questions will focus on specific topics. When developing interview questions, keep questions consistent:

- **Open-ended questions** encourage spontaneous and unstructured responses and draw out the interviewee's opinions or suggestions.
- **Close-ended questions** are useful when you want to restrict the response to specifics or when you need to verify some facts.
- **Range-of-response questions** are closed-ended questions that ask the person to evaluate something by providing limited answers to specific responses or by using a numeric scale. For example: "On a scale of 1 to 10, how good are your computing skills?"

Preparing for the interview

Careful preparation is important because this is an important meeting and not a casual chat. Also, remember that the interview can be an interruption to the other person's workday so it's important to be prepared:

- Schedule a specific day and time.
  - Send out emails to all the people involved in the interview and send a list of essential questions to the interviewee ahead of time so the person can prepare for the interview and minimise the need for a follow-up meeting.
  - You can also send a list of the documents you need access to so you can discuss it during the interview.

Conducting the interview

- Introduce yourself first, describe the project and explain your objectives for the interview. Try to establish a good relationship with the interviewee on the first meeting to receive complete and candid answers.
- Ask the questions in the order in which you prepared them and give the interviewee sufficient time to provide thoughtful answers.
- Practice engaged listening by noticing any nonverbal communication that is taking place while you also concentrate on what is being said.
- When documenting the interview, avoid writing everything verbatim and instead write down a few notes to help you jog your memory after the interview. You may wish to record the interview using your laptop, phone or a digital voice recorder but ensure you seek permission from the interviewee before doing so as many people feel uncomfortable when being recorded. If they agree, assure them that the recording will be erased after transcribing the notes.
- Before concluding the interview, explain the next course of action. For example, you might mention that you will send a follow-up email to verify the requirements that have been discussed.
- Conclude the interview by thanking the person and encourage them to contact you with any additional comments or questions.

Tip

After the interview, record the information as soon as possible. Studies have shown that 50 percent of a conversation is forgotten within 30 minutes so use your notes to record the information immediately.

Post interview follow-up

After the interview, send an email to the interviewee to express your appreciation for his or her cooperation and time given to you. The email should include:

- the date, time, location, purpose of the interview, and the main points discussed
- any follow-up questions for information that may not have been available during the interview
- a reminder, if required, for any documents that the interviewee may provide to you as discussed in the interview.

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Do's and don'ts of interviewing

The rules of interviewing are similar to the rules which govern most human interactions.

Do

- ask questions, both open-ended and closed-ended
- act in a friendly but professional manner
- listen actively
- establish a timeframe
- verify understanding through probing
- maintain control over the subject matter

- conclude positively
- allow for follow-up or clarification interviews later.

Don't

- ask questions, both open-ended and closed-ended
- act in a friendly but professional manner
- listen actively
- establish a timeframe
- verify understanding through probing
- maintain control over the subject matter
- conclude positively
- allow for follow-up or clarification interviews later.

Document

View an example of **'an interview outline'** in Appendix A at the end of this Learner Guide that could be used when gathering requirements from stakeholders within an organisation.

In this topic, you have learnt how to identify information repositories, review organisational documentation, and develop critical questions to elicit information from stakeholders and ensure that quality information gathering techniques are used.

Self-check - Key information sources

What do you understand by the term business requirements in the context of ICT?

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.....

Along with primary and secondary stakeholders, what are the three (3) other types of stakeholders as characterised by their relationship to a project?

- ☐ Tertiary stakeholders
- ☐ Key stakeholders
- ☐ Internal stakeholders
- ☐ Binary stakeholders
- ☐ External stakeholders.

What type of questions often start with What, Who, Why, Where, How?

- ☐ Open-ended questions
- ☐ Closed questions
- ☐ Both Open-ended and Close questions.

Which of the following should you NOT do in an interview?

- ☐ Listen actively
- ☐ Assume the interviewee knows what to do
- ☐ Establish a time-frame for the interview
- ☐ Conclude positively.

Check your answers at the end of this Learner Guide.

Gather data

Introduction

Although "Information gathering" or "requirements gathering" or "gathering data" is the typical terminology used in the context of systems development, it is often called "requirements definition" and is not dissimilar from what is known as "needs assessment". These conform with the system analysis and design phase of the Systems Development Life Cycle (SDLC). Data gathering is regarded as a major set of activities executed close to the beginning of the systems development project. The basic process is:

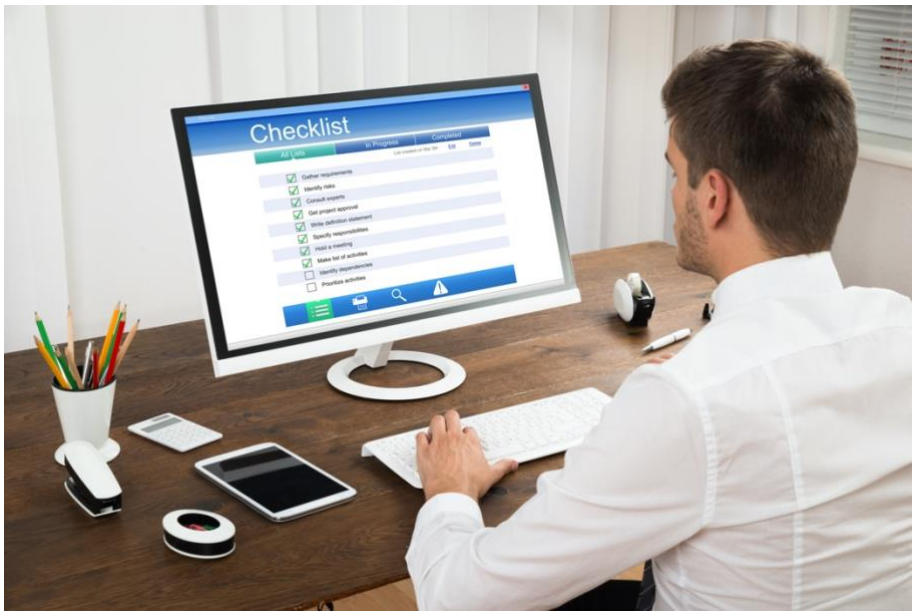
- Analysis - Find out what is required by the client and what they already have in place.
- Design - Work out how the outcome will work and what it will look like.

In this topic you will learn how to conduct information gathering workshops and interviews, review reports and other data sources for relevant business information, confirm business critical factors, and analyse group and individual responses to define business priorities.

Objectives

At the successful completion of this topic you will be able to:

- use a wide range of information gathering techniques
- review reports and other data sources for business information
- understand the critical factors relating to current and future directions of the organisation.



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Information gathering techniques

Gathering business requirements is a step in the problem resolution that occurs after a potential problem has been identified but before a solution is developed. Its purpose is to collect, summarise, and communicate facts about existing conditions. These facts are then used to further define, quantify, and project the consequences.

There are many forms of information gathering techniques. Whatever the techniques are, the main goal is to identify the customers/stakeholders' needs so that a strong relationship can be established.

The most effective way to establish this is by:

- conducting interviews with stakeholders performing the process
- analysing quantified measures of the process such as volume, cycle times, cost, quality.

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Brainstorming

This is used to gather a large number of ideas from a group of people who identify all possible solutions to problems, regardless of practicality.

Interview

This is a planned meeting during which you obtain information from another person. We have covered this in detail in the previous topic.

Questionnaires

A questionnaire or survey is a document containing a number of standard questions that can be sent to many individuals. It is mainly used to obtain information about workloads, reports received, volumes of transactions handled, job duties, difficulties, and opinions of how the job could be performed better or more efficiently.

Observation

Observation is about seeing the system in action that will give you a better perspective and understanding of system procedures. It also allows you to verify statements made in interviews and determine whether procedures really operate as they are described. With observation, you can confirm whether the system documentation or the statements during the interview are accurate.

Analysing business documents

The main objective of analysing business documents is to help you understand how the current system is supposed to work. Sometimes the system documentation is out of date, forms can change or be discontinued so always ask for the current versions of the actual forms and operating documents.

Prototyping

A prototype is an early, rapidly constructed semi-working version of the system. It helps users to understand the new system, especially when users can test-drive the model and they either approve it or request changes. The main goal of prototyping is to validate user requirements.

The benefits of prototyping are:

- users and developers can avoid misunderstandings
- developers can create accurate specifications
- managers can evaluate a working model
    - analysts can use a prototype to develop testing and training procedures
    - reduces the risk that occurs when a finished system fails.

Research

Research is another fact-finding technique which can include reviewing forums, journals, periodicals, books, and the internet to obtain background information, technical material, and news about industry trends and developments.

Research can also involve site visits, where the objective is to observe a system in use at another location.

Research

Preparing for observation

Ask enough questions to ensure that you have a complete understanding of the present system operation. A primary goal is to identify the methods of handling situations that are not covered by the standard operating procedures. For example, what happens in a payroll system if an employee loses a time card? What is the procedure if an employee starts a shift 5 minutes late but then works 10 minutes overtime? Often the rules for exception such as these are not written or formalised. Therefore, you must try to document any procedures for handling exceptions.

Observe all the steps in a transaction and note the documents required, inputs, output, and process involved.

Examine each form and record. Determine the purpose each item of information serves.

Consider each user who works with the system and ask the following questions:

- What information does that person receive from other people?
- What information does this person generate?
- How is the information communicated?
- How often do interruptions occur?
- How much downtime occurs?
- How much support does the user require and who provides it?

Talk to the people who receive current reports and see whether the reports are complete, timely, accurate, and in a useful form. Check whether the information in the reports can be eliminated or improved and whether people would like to receive additional information.

Copied Under s113P Shelly, Cashman, Rosenblatt Systems Analysis and Design, 2006, pgs. 59-60

Business information reports

Once enough information has been gathered, it should be sorted together into one big document/report.

Generating a report with MS Access

Open MS Access

Select File/New

In the dialog box that will pop out:

Select General to create a blank database

Or

Select Databases to choose from other database template wizards.

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Tip

You can create several tables as you need. Apart from creating tables, MS Access also enables the generation of forms, queries, macros and reports.

Between tables you can set up relationships such as:

- One-to-One (1:1)
- One-to-Many (1:N)
- Many-to-Many (M:N)

After setting up different tables in your Microsoft Access database, the first step is to define relationships between your tables. After you've done that, you can create queries, forms, and reports to display information from several tables as required.

Weblink

Read the following articles to see the step-by-step process demonstrating this concept:

MS Access Lab 3: Relationships in ER Diagram and relationship in MS Access[4]

MS Access Lab 4: Introduction to forms and reports[5]

[4] http://goldberg.berkeley.edu/courses/msa-labs/lab3.pdf

[5] http://goldberg.berkeley.edu/courses/msa-labs/lab4.pdf

Security and data backup

Backup, storage, and handling of data is necessary for any business/organisation to achieve its objectives competently. Backups must be scheduled according to the availability requirements of the information that is being backed up or has already been backed up and the schedule should be well documented and maintained for all systems in the organisation. The backup requirements for information systems and data must be documented and communicated to authorised personnel.

Tip

An MS Access database can be secured regarding:

- access control of the database object
- the types of activities users can perform with the objects including viewing, modifying or deleting database objects or information.

Select the following link for tips on user level security: What happened to user security?[6]

Important

Entity Relationship Diagrams (ERD)

An ERD shows the relationships of entity sets stored in a database. An entity in this context is a component of data. In other words, ERDs illustrate the logical structure of databases.

At first glance an entity relationship diagram looks very much like a flowchart. It is the specialised symbols, and the meanings of those symbols, that make it unique.

[6] https://support.office.com/en-us/article/What-happened-to-user-level-security-69b362cd-503f-4e8a-a735-fb923ffb9fa3?ui=en-US&rs=en-001&ad=US

Weblink

Read the following article from Creately to learn more about ER diagrams and access the second link to see some examples:

Ultimate guide to ER Diagrams (Entity Relationship Diagrams)[7]

Entity Relationship Diagram examples / templates[8]

Video

MS Access: Sample Project Database Overview[9]

[7] http://creately.com/blog/diagrams/er-diagrams-tutorial/

[8] https://creately.com/diagram-community/popular/t/erd

[9] http://www.youtube.com/embed/9uhgPZlSkpk?rel=0

Future directions of an organisation

For the future direction in any organisation, these are the fundamental questions that need to be asked:

- At what level is future direction defined?
- Who is responsible for defining future direction?
- How is future direction expressed? Where can it be seen?

Before that, we need to produce the organisational chart and a sample has been provided below. This shows the responsibility of the positions they held.

178654676 / mariakraynova / shutterstock.com Modified by TAFE Queensland

The Future Direction Documents (FDD) holds the following information for the company / organisation:

Mission

The mission statement provides:

- the current purpose of the organisation
- what it is, what it does, and what it does not do.

Vision

The vision statement describes an ideal, desirable future state that the organisation will work actively to create for itself.

Values

The value statement provides:

- guidelines for employee behaviour on the job
- beliefs and attitudes of all organisation members.

Objectives

The strategic objective is based on measurable attributes and provides:

- the specific unit of measurement for each attribute
- the specific attribute level to be achieved
- time deadline for reaching the level
- the person delegated responsibility for reaching the level by the deadline.

Communication tools

If you are to work as a business analyst (BA), it is important that you possess good written and oral communication skills to perform your job effectively. Remember the major objective of communication which is to make sure that your communication answers the questions why, who, what, when, and how.

Example

Why are you communicating?

What do you want to accomplish?

What specific results are you are seeking and are they necessary?

Who are your targets? Consider the organisation, knowledge levels and information needs of the audience.

What will be your overall communication strategy?

What feedback will you be getting from the audience?

What is expected of you?

When should you go into detail?

How do you communicate effectively?

356597360 / stoatphoto / shutterstock.com

Important

You must know your subject. Think about what others will expect you to know and what questions they will ask. Sometimes, we don't have the answers to everything and it is better to say "I don't know, but I'll find out" rather than to guess.

The two forms of communication you will be using are written and oral (verbal) and both are equally important for getting your message across.

Written

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Good writing is an essential skill as others often judge us by our writing. The main objective in written communication is to avoid grammatical, typographical, and spelling errors. Written errors exist long after spoken words are forgotten. If you have not taken a writing course, you should consider doing so and select one that focuses on business or technical writing. Bookstores, libraries, and the internet have many excellent resources on communicating effectively.

When preparing written documents:

- Know your audience - use terms that non-technical readers understand.
- Use active rather than passive voice, for example, "John developed the system" rather than "The system was developed by John".
- Use a conversational tone in informal documents and a business tone in formal documents.
- When you must enumerate a number of subtopics related to the same topic, lists or bullet points are an organised way to present them.
- Try not to impress your audience with the size of your vocabulary but instead use short and easy-to-understand words.
- Proofread your documents correcting any grammatical and typographical errors. Try to avoid repeating the same word but instead look for synonyms for frequently repeated words.

Most companies use email as the standard form of written correspondence. Although email is less formal, it is still important that you follow the rules of good grammar, spelling, and clear writing.

Oral

In any systems development, oral presentation might be necessary particularly at the end of the preliminary investigation or at the conclusion of the system analysis stage. As with all communication your presentation must meet the needs of the audience. Senior managers, for example, would require a strategic overview with less detail.

Introduce yourself and define the objectives of your presentation including the status of the current system and a description of the problems you found.

Outline your solutions to the problems and include an estimate of the time and cost. Discuss the topics in a logical order and be specific with your facts as the listeners are interested in hearing your views about what is wrong, how it can be fixed, and how much it will cost.

Finally, deliver a conclusion that summarises the main points and asks for questions.

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Tip

Avoid technical jargon whenever possible and explain any terms that might be unfamiliar to the audience.

Use visual aids in the form of slide shows, overhead transparencies, whiteboards, films or video to help the audience follow the logic of the presentation and hold their attention and to also help you to stay on track.

Control the presentation and sell yourself and your credibility.

Answer the questions appropriately and speak clearly and confidently.

Rehearse several times prior to the presentation to ensure that it flows smoothly and the timing is correct. Do not write a script but instead prepare an outline of your presentation and practice from the outline. Practice ways to control your nervousness.

Finally, try to connect with the audience and establish good rapport.

In this topic you have learnt about information gathering techniques, producing a business information report with MS Access, some tips on security and an introduction to ERDs. Finally, you have learnt about Future Direction Documents (FDDs) and the importance of good communication.

Self-check - Gather data

Which information gathering technique would you use if you needed to get details of the job duties and how the job could be performed more efficiently from all workers in a large organisation?

- ☐ Brainstorm
- ☐ Interview
- ☐ Questionnaire
- ☐ Observation
- ☐ Analyse business documents
- ☐ Prototyping
- ☐ Research.

Which information gathering technique would you use if you wanted to gather a large number of ideas in a relatively short space of time.

- ☐ Interview
- ☐ Observation
- ☐ Brainstorm
- ☐ Research
- ☐ Questionnaire.

Which two (2) techniques work together to help you determine whether procedures really operate as they are described?

- ☐ Interview
- ☐ Brainstorm
- ☐ Questionnaire
- ☐ Observation
- ☐ Research.

What does ERD stand for?

- ☐ Effective Reporting Document
- ☐ Entity Relationship Document
- ☐ Entity Relationship Diagram.

What information do Future Direction Documents contain?

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Check your answers at the end of this Learner Guide.

Prepare data analysis

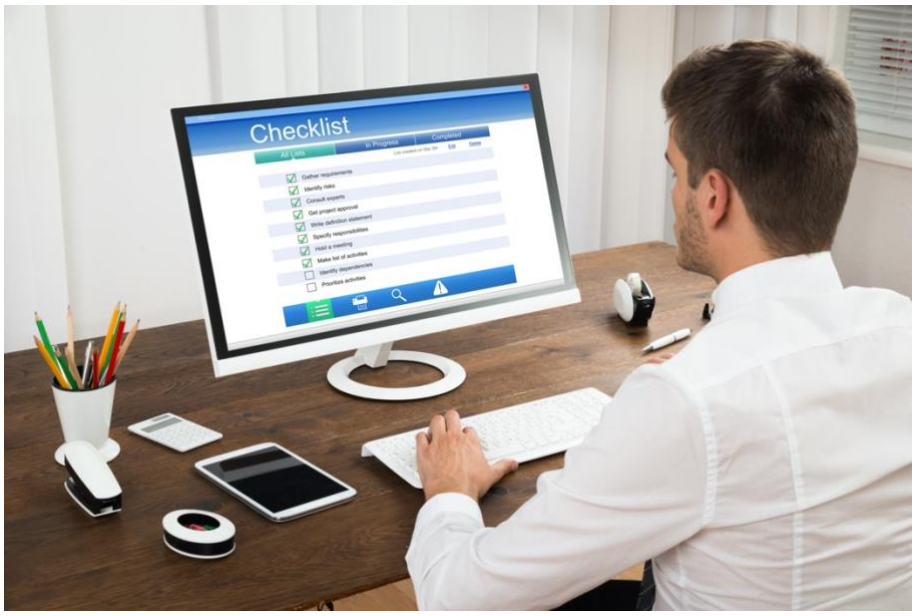
Introduction

In this topic, you will learn how to analyse and evaluate all information gathered for accuracy and consistency, and how to document and resolve conflicts with stakeholders. You will also learn how to prepare a report according to organisational documentation standards so that the gathered data can be communicated leading to consensus and agreement on business requirements.

Objectives

At the successful completion of this topic, you will be able to:

- analyse group and individual responses to clearly define business priorities
- document data analysis for review.



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Analyse feedback

To analyse the priorities of the business, define exactly what the business needs to do by analysing the feedback from the stakeholders.

Questions that could be asked of the stakeholders to help define the business process or policy problem may include the following:

- Who collected what, when, and from where?
- What was the main tool used to collect the data?
- Was the data mostly quantitative or qualitative?
- Were the results or end reports clearly presented?
- Which stakeholders' needs, interests and expectations should be given priority attention?

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Document data analysis

To retain the organisational standards, four types of useful documents are recommended for analysing the data:

- Written work procedures - these describe how a task is performed and include the data and information used and created in the process of performing the task.
- Business forms - these explicitly define how the data flows in or out of a system.
- Report - this enables the analyst to work back from the report to the data that generated it.
- Description of the current information system.

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To validate this documentation, compare the current analysis with the organisational requirements analysis documentation and reflect on the following:

- Does the requirements documentation outline the functional characteristics of the business solution effectively?
- Are the functional requirements well-formed and do they describe the capabilities of the solution?
- Are the requirements specifications within the scope of the project along with the feasibility study?

The last step in the project is to summarise the different stages into a final report.

Note

A well written document/report is more detailed and likely to be reviewed frequently. The tasks can be demonstrated by using one or a combination of the following:

Scenarios - these are informal narrative stories of users and are the most natural way to explain.

Use cases - these show the interaction with a system and also demonstrate in detail the interaction between the objects.

Writing a good document involves a good structure. It is very important that the final report contains all the necessary information regarding your project. Formally, a well-written document should have the following criteria:

The introduction

This describes and identifies the company's organisational structure, business culture and stakeholders.

General description

- an executive summary/project overview
- the scope of the project
- details of any ongoing support
- the project schedules
- project costs
- the project acceptance and payment terms.

Specific requirements

Document any new system problems and requirements.

Appendices

Describe any source documents such as interviews and scenarios, transcripts of user interviews etc.

Glossary

Explain any unusual terms, acronyms, or abbreviations.

References

List references and source documents, if any.

Index

Alphabetical list of names, subjects, etc. with reference to the pages on which they are mentioned.

Weblink

Read the following article to learn more about business analysis documents:

9 important documents created by every business analyst[10]

The following link provides examples of three project reports.

Select the headings under Project examples: Stat W111 Statistics Project[11]

[10] http://thebusinessanalystjobdescription.com/documents-created-by-a-business-analyst/

[11] http://www.columbia.edu/itc/statistics/w1111/

The preliminary investigation reports

Introduction

An overview of the report that also contains a brief description of the system and the name of the person or group who performed the investigation.

Systems Request Summary

This describes the basis of the system's request.

Findings

This contains the results of your preliminary investigation, including a description of the project's scope, constraints, and feasibility.

Recommendations

These are recommendations for further action with specific reasons and justifications.

Time and Cost Estimates

This describes the cost of acquiring and installing the system and the total cost of ownership during the system's useful life.

Expected Benefits

These are the anticipated tangible and intangible benefits.

Appendix

Use this if you need to attach supporting documents or information.

In this section, you have learnt how to analyse information gathered for accuracy and consistency, and how to prepare a report for the purpose of communicating data gathered and gain consensus and agreement on business requirements.

Self-check - Prepare data analysis

What types of work documents include the data that needs to be analysed when gathering business requirements? More than one is correct.

- ☐ Business forms
- ☐ Timesheets
- ☐ Data report
- ☐ Written work procedures
- ☐ HR documents
- ☐ Description of current information system.

What sections are typically included in a preliminary investigation report?

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Check your answers at the end of this Learner Guide.

Self-check answers

Self-check - Key information sources

What do you understand by the term business requirements in the context of ICT?

In the context of ICT, a requirement is a statement of 'must have' system characteristics and comes from the need expressed by the business users or stakeholders during the analysis phase of the system development lifecycle.
There are two types - the functional requirement, which refers to the information the system must contain, and the non-functional requirements, which focus on the behavioural properties of the system.

Along with primary and secondary stakeholders, what are the three (3) other types of stakeholders as characterised by their relationship to a project?

- ☐ Tertiary stakeholders
- ☑ Key stakeholders
- ☑ Internal stakeholders
- ☐ Binary stakeholders
- ☑ External stakeholders.

What type of questions often start with What, Who, Why, Where, How?

- ☑ Open-ended questions
- ☐ Closed questions
- ☐ Both Open-ended and Close questions.

Which of the following should you NOT do in an interview?

- ☐ Listen actively
- ☑ Assume the interviewee knows what to do
- ☐ Establish a time-frame for the interview
- ☐ Conclude positively.

Self-check - Gather data

Which information gathering technique would you use if you needed to get details of the job duties and how the job could be performed more efficiently from all workers in a large organisation?

- ☐ Brainstorm
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- ☑ Questionnaire
- ☐ Observation
- ☐ Analyse business documents
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Which information gathering technique would you use if you wanted to gather a large number of ideas in a relatively short space of time.

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- ☐ Research.

What does ERD stand for?

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What information do Future Direction Documents contain?

- Mission statement with the current purpose of the organisation, what it is, what it does and does not do.
- Vision statement describing an ideal future state that the organisation will work actively to create for itself.
- Values statement with guidelines for employee behaviour on the job and the beliefs and attitudes of all organisation members.
- Strategic objectives based on measurable attributes and providing the unit of measurement for each attribute, the level to be achieved, the deadline for reaching that level and the person delegated with the responsibility for reaching that level.

Self-check - Prepare data analysis

What types of work documents include the data that needs to be analysed when gathering business requirements? More than one is correct.

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What sections are typically included in a preliminary investigation report?

- Introduction - overview of the report that also contains a brief description of the system and the name of the person or group who performed the investigation.
- Systems request summary - describes the basis of the systems request.

- Findings - contains the results of your preliminary investigation, including a description of the project's scope, constraints, and feasibility.
- Recommendations - for further action with specific reasons and justifications.
- Time and cost estimates - describes the cost of acquiring and installing the system, and the total cost of ownership during the system's useful life.
- Expected benefits - the anticipated tangible and intangible benefits.
- Appendix - for attaching supporting documents or information.

APPENDIX A

Interview Outline

Person of Interest	<Name of the person being interviewed>			
Interviewer	<Name of the person taking interview>			
Location	<Office Locations>			
Appointment date/time:	Start date/time:		End date/ time:	
Objectives				
What to collect Topic Agreement				
Reminder				
Topics to be covered Topic 1 Topic 2				
Agenda				**Time Taken**
Introduction Background Overview of the interview Permission to record the interview Summary Feedback Closing remark				
General Observations				
Body language Posture Eye contact Length of answers				
Questions	**Notes**			

