

Unit 3

The Knowledge Worker

Unit 3

- Unit 3 is an examined Unit.
- You will complete a 2 1/2 hour exam using a spreadsheet model and other information that you have been given before the exam.
- You will be allowed to interrogate the data, correct any errors and make assumptions before the exam.
- You will only be given the problem that you are facing on the day of the exam.

Exam Questions

- Activity 1 – Understanding the situation 3.1-3.3
- Activity 2 – Sources of Information 3.4-3.5
- Activity 3 – Computer modelling 3.6-3.8 and 3.12
- Activity 4 – Recommendations 3.9-3.10
- Activity 5 – Evaluation 3.11

WYNTL 3.2

- Decision making process
 - Make sure that you fully understand the situation
 - Search for info related to the problem
 - Establish sources of info
 - Identify gaps of knowledge
 - Find out if any other factors need to be considered including constraints
 - Select information you will use
 - Analyse the info
 - Identify alternatives
 - Make the decision
 - Justify the decision explain it to others

WYNTL 3.3

- Understanding the situation
 - What needs deciding?
 - Are there different view points
 - How does this decision compare with similar decisions already made?
 - Are there variations from time to time or place to place
 - How long have you got to decide?
 - What resources are at your disposal?

Understanding the situation

WYNTL 3.3

Understanding the situation

- We shall now look in more detail at the first point on our decision making process.
- To arrive at the right decision you need to follow a methodical process. There are certain things you will have to think through in order to gain a better understanding of the situation.

Understanding the situation

- To help arrive at an informed decision we need to address the following to understand the problem fully:
 - What exactly do you have to decide?
 - Are there different Viewpoints?
 - How does the decision compare with similar ones you may have made?
 - Are there variations from time or place?
 - How long have you got to decide?
 - What resources are at your disposal?

What exactly do you have to decide?

- There are different types of decisions:
- A recurring decision- a decision made repeatedly at fixed intervals e.g. The Chancellor making decisions about taxation in his budget.
- A non-recurring decision- a one off decision- you will need a new model, new data and new information each time you make this type of decision.

The Decision Making Process Activity

Task 1

Using the text book label the diagram overleaf into the correct order of decision making.

Task 2

Scenario

You have been asked by your parents to organise a weekend away in the UK. They have given you this task as you always run about their chosen destination and sulk throughout the trip.

Using the decision making stages produce a table addressing each of the points. Be prepared to present your answers especially your destination choice, activities and accommodation

- 1. Find out how much a three month season ticket costs between Cambridge and London. Use any of the booking services that are available on the Web.**
- 2. What additional information did you need to provide apart from the time period, the start and the destination stations.**
- 3. How long did it take you?**
- 4. What do you know now that you didn't know before (apart from the season ticket cost)**

What exactly do you have to decide?

- The first step of understanding a situation is to write down exactly the problem as you see it, using a series of bullet points

The situation
Wants to travel from Cambridge to London
Needs this for a 3 month period
<i>By train</i>



?

Fixed

Need to purchase a 3 monthly pass to London

?

?

Variable

?

Fixed or variable?

We need to define not only the problem but the sub-problems.

What exactly do you have to decide?

- To help your understanding of the problem you should consider writing down questions about the scenario you have been given.

Questions	Possible Answers
What time will he be travelling?	Can find out from him- info was not clear
Does he have a railcard	Not stated
Is there more than 1 station to consider	Yes as there are several in London so will need to clarify

Are their different view points

- When looking at a problem there may be different ways of looking at a problem.
- Personal Opinions may differ on how to use or improve things.
- Different levels within a firm may view things differently.
- We will come back to this for homework.

How does the decision compare with similar ones made already?

- Most of you have created a “what if “ spreadsheet so you will have some knowledge of the questions you asked it and the outcomes you required.
- You may prefer to use a specific search engine to find answers.
- Ultimately familiarity and experience is important as it will give you confidence.

Are there variations in time or place?

- Decisions can be affected by time or place and these need to be considered in your decision making process.
- If our train traveller had to be in London for 8.30am and wished to arrive at London Kings Cross this may affect your decision....

The decision making process

Factors we need to consider:

Sources of information
Selecting appropriate information
Reliability of data
Justify decision
Inform others
Alternatives

Calthorpe Game Balls PLC

The context

The problem $Outgoings > income$

The solution currently being presented

Make redundant.

Are there alternatives? Lower wages / pay freeze
Raise cost of product, Move location?

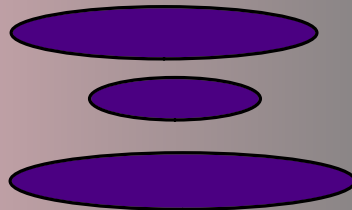
How can we analyse the problem? Cheaper resources?

look for patterns
outsource depts.
import data
graphs + charts.

page 241

Factors this case study illustrates:

Use info. given
Analyse info
ALL



The need to think "outside the box"

Hidden agendas

The non-measurable impact of change eg anger of employees

Looking at a model

How long have you got to decide?

- Most decisions are time-constrained.
- The time you have affects the decisions making process as time decreases you will have less opportunity to explore alternatives and basing your decisions on a reduced set of information.
- However many people try to collect too much information which can lead to a number of problems:
 - Decisions may be delayed due to the time taken to obtain the information
 - Information overload could occur and it is impossible to process it all in time.
 - Too much information can't be held in a persons memory and may be forgotten.

What resources are at your disposal?

- To make a decision you will have a number of resources at your disposal. It is important to list them and then jot down how you might use them.
- In curriculum resources (ICT /Y12/13/ new applied/ single award) is a folder called Livewire. Have a look at the information and list in your opinion what resources you think you have and how you may be able to use them!

Livewires

The context

The problem

The solution currently being presented

Are there alternatives?

What resources do we have to analyse the problem?

WYNTL 3.4

- Sources of Information
 - What do I need to know?
 - What relevant knowledge do I already have?
 - What are the gaps in my knowledge and can they be filled
 - What info do I already have access to?
 - Where will additional info come from?
 - How will I evaluate sources of information to ensure they are reliable?

Sales
more effort / more money
less jobs - more surveys

Engineer:
Environmental?
Spend more time on site

CEO
More money!
Costs may go down?

Livewires

1. Sell & install cables
2. Charge by the socket.
3. Fixed cost.

Understanding a situation

Gathering information

How do we make decisions?

Points of view.

Dearest Fred,

Thank you for remembering that today is my Birthday. I am looking forward to the present you are sending in the post.

For my part, I want to give you some money. You can choose whether to have :

A £100 now, £90 next year, £80 the year after, and so on

B £10 now, £20 next year, £30 the year after that and so on

C £10 now, one and a half times that next year, one and a half times that the year after and so on

D £1 now, £2 next year, £4 the year after and so on.

Of course, the scheme will only run while I am alive.

Lots of love

Aunty Audrey

What is the problem?

What extra info would be helpful?

How could we look at possible scenarios?

Another scenario

WYNTL 3.6

- Making a decision
 - All info gained, so need to analyse it and test possible solutions.
 - Good way to do this spreadsheet modelling

WYNTL 3.7

- Computer Modelling
 - Practice making decisions using the models but bear in mind the answers are only as good as the model they are based upon. Be aware of:
 - Is the model logically correct?
 - Are the data formats appropriate?
 - Is the syntax of the formulas correct?
 - Are the cell references correct?
- As well as making your own model you will need to consider existing models and evaluate:
 - The process being modelled
 - What it does
 - How well it does it
 - Whether it could be improved
 - Which variables can be input?
 - What the output tells you
 - The decisions you could make using it

WYNTL 3.8

- Using a model to consider alternatives
Once the model is correctly functioning you can interrogate it:
 - Which decision produces the best results?
 - The alternatives
 - Factors that differentiate between them
 - Anything that the model does not take into account
 - What the impact of these might be

WYNTL 3.9

- Justifying the decision
 - Make sure your progress is recorded and explained at every stage

WTNTL 3.10

- Reporting it to others
 - A summary of the current situation
 - Sources of information and alternatives you considered
 - Other factors you took into consideration
 - The methods you used to reach your decision
 - Your decision
 - Justification of decision supported by evidence of the decisions making process.

WYNTL 3.11

- Evaluating a model
 - How well has the model performed?
 - To what extent has the model helped you to make a decision
 - What else would you like to do?
 - Does the model need extending, if so how

WYNTL 3.12

- ICT skills
- Spreadsheet modelling tasks such as:
 - Entering editing data including absolute and relative cell refs
 - Formatting data; adding colour, headings, borders etc
 - Using formulae and functions
 - Analysing and interpreting data; subtotals and filters
 - Presenting information e.g. graphs
 - Modifying spreadsheet models
- Word processing documents
 - Importing data from other applications
 - Formatting documents
 - Checking document layouts
 - Creating document layouts such as tables or columns
 - Checking documents
- Presentations
 - Creating and editing presentations
 - Formatting slides
 - Inserting text etc
 - Importing data from other applications

Attachments

decision making proces worksheet.doc