9 Using spreadsheets for management tasks

- **The basics of spreadsheet design**
- **Using spreadsheeets for different tasks**
- **Presenting results**
- **Practice with spreadsheets**

Introduction

In this chapter we will see how using spreadsheets can help you with many of the control tasks that we have discussed in the different chapters. We'll also see how you can use graphs and charts (hand-drawn and by spreadsheet) to help in decision-making and presenting results.

We will look at some of the simple techniques that can make spreadsheets easier to use on a frequent basis and at some of the shortcuts you can take. Incorporating some basic design features can help with ongoing usage, and with enabling others to use spreadsheets that you have designed. The use of charts and how they can help with presenting complex information in a simpler way will also be considered.

It's assumed that you have a basic knowledge of spreadsheets. If some of this is boring because you're at a higher level of competence, then please move on. There's a refresher exercise to revise skills and perhaps practise some new ones, and some suggestions about using spreadsheets for personal tasks.

By the end of this chapter, therefore, you should be able to:

- Comprehend the basic principles of spreadsheet design
- Practise a range of techniques to improve speed and efficiency
- Comprehend the variety of areas where spreadsheets can be used
- Draw a chart to scale by hand
- Create a chart using a spreadsheet.

The basics of spreadsheet design

The following basic principles are adapted from Peter Harris's book *Profit Planning* – see the reading list for further details. They are:

☐ Design on paper first
☐ Use separate Input and Output worksheets
☐ And maybe another for 'workings out' (or add this at the end of the Input area)
☐ Test your results.

Designing on paper

The temptation with doing a spreadsheet is just to sit at the computer and do it, without planning. This works for some people, but can waste a lot of time.

If you take a piece of rough paper and write down all the things you need to do for that particular spreadsheet, you'll have a better idea of how much space it's going to take.

Ask yourself the following questions:

☐ What's the purpose of this spreadsheet? Is it very complex?

☐ Who is going to use it – just you or lots of other people? If it's others will they need instructions about how to use it?

☐ Do you trust their skills?

☐ Will the spreadsheet need to be significantly amended at a future date, or just updated?

☐ How many reports need to be generated from one batch of input data?

☐ Do you need several different worksheets within the same file?

☐ Are you going to have to link this spreadsheet file to another?

☐ Is there a requirement for the report/s to fit in a specific space, such as an A4 piece of paper?

☐ Do you need colour and different fonts?

☐ What about charts?

☐ Are you going to have to copy a chart into another file (e.g. Word)?

☐ If you're really skilled, what about (for instance) macros, hyperlinks to other documents, spreadsheets or websites?

And so on...

Once you've done this then you can make a design – still on paper, though. You can roughly sketch out what will go where on the different worksheets. Some older textbooks suggest working out the formulas although there normally isn't a need to do this, unless you are designing something very complex.

Try and make it as easy to use as possible with columnar formats (working in parallel with the same columns as you move down) and using the top left-hand corner of the screen first, then paging down rather than across.

Tip   If you can, work out the results by hand first – then you can check these against the output from the spreadsheet.

Input and Output areas

Using separate Input and Output worksheets, and maybe another for 'workings out', means that:

☐ You keep all your raw data *(input – your original numbers – those that you key in)* separate from

☐ All the *output* which is the results – Output areas are all formulas – no actual figures are keyed in there.

Ideally you have a separate worksheet within the file for the input, and then several for output depending on what type of reports you need. For instance, for a P&L, the input would be the trial balance (all the source data you need) and the output the departmental reports, possibly each on a separate worksheet. The front page would then be a total of all the departmental reports. This means that the source data (trial balance – please read up about this if you need to) only gets entered once and, when updated each month, immediately changes all the reports – much easier than moving around lots of different worksheets.

Here's an example for a very small P&L statement:

Input

This is your source data – it's all raw numbers – on one worksheet (could be actually called 'Input' if you wish, or perhaps 'source data'):

Input worksheet:

(Note: italics are used just to differentiate here between input and output data – they're not really necessary.)

Cell	A	B
1	*Sales including VAT*	*28800*
2	*Payroll*	*6800*
3	*Expenses*	*2400*
4	*Customers*	*5000*
5	*Capacity*	*6000*
6	*VAT rate*	*0.20*

Workings out

These are any intermediate calculations you need to do (for instance, extract VAT). This could be a separate worksheet or just entered further down the input column. Here you type in the formula to extract the VAT from the sales.

Cell	A	B	Formula in cell B10
10	Sales less VAT	24000	=B1/(1+B6)

(Don't worry about the formula – the '(1+B6)' will be explained later.)

Now you have the net figures that you need, ready to do the P&L.