

Specifying and purchasing IT

Buying IT unwisely increases costs and reduces system effectiveness. Aim to acquire a solution which meets your business needs and you feel comfortable managing. IT-related services can be as important as the hardware and software themselves.

This briefing covers:

- Using your requirements to develop a suitable specification.
- Hardware, software and services you need.
- How to source your IT solution.

1 The business solution

You cannot choose the right IT system without knowing what you want it to do for you.

1.1 Focus first on your **business aims**. For example, you might want to improve customer service.

1.2 Use these aims to define what **functionality** the solution must have.

- Look at what your existing (manual or computerised) systems do.
- Ask employees what they would like to be able to do but find difficult or impossible with current systems.

1.3 Consider what existing systems the solution should be **compatible** with.

- This might include connecting new hardware to your existing network or sharing data with existing software applications so you don't have to input the same data twice.

1.4 Reduce costs and disruption by anticipating how **future** needs may change.

2 Performance

Understanding how you want your system to perform will help you (and your supplier) to refine your requirements.

2.1 Estimate the **volume** of work the system will need to handle, both now and over its expected working life. For example:

- How much data you will need to store.
- How many pages you will be printing.
- What size of files you will be transferring over an Internet connection.

2.2 Establish **who** will be using the system.

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Considerations include:

- How many users there will be and where they are located. They may be spread across different offices or need to work from home or while travelling.
- How well connected they need to be. A system which allows effective sharing of information can yield big efficiency gains.

2.3 Consider whether **speed** will be an issue.

- Real-time systems, such as those used in customer-facing activities, often need to respond quickly.
- Will you have any peaks in demand? For example, a relatively slow printer might be adequate for invoices — but not if you need a 100-page report in a hurry.

2.4 The biggest factor affecting system performance can be **ease of use**.

- Consider how computer-literate your employees are and what systems they are already experienced with.
- A system which makes it easy to do the basics well might be preferable to a complex system only experts understand.
- Employees will be unable to make effective use of a complex system without appropriate training.

2.5 **Reliability and security** are of overriding importance for systems without which your business cannot operate. Failures can cause huge disruption and even insolvency.

- It can be difficult or impossible to recover important records if they are lost.
- Some stored information may be commercially sensitive, or you may be legally required to ensure good security.

Buying refurbished

If your budget is tight, you could consider buying refurbished equipment.

- Generally, 'refurbished' means recently discontinued models or equipment that has been repaired by the manufacturer or dealer within the original warranty period. Discounts can be up to 45 per cent of the original recommended price.
- Refurbished PCs are sold by many independent companies as well as major manufacturers. If reliability is a concern, purchase the system from a company that backs its refurbished PCs with the same guarantees as new systems.

- Consider the consequences if a problem temporarily put your system out of action.

3 The specification

3.1 If you are computer-literate, you may be able to draw up **your own requirements**.

- This can be satisfactory if you only require a simple solution.
- Include any services you need (see 5) as well as the basic ingredients (see 4).

3.2 Asking one or more potential suppliers for **recommendations** is almost always better.

- The supplier may be better informed on available technologies and what their strengths and weaknesses are.
- The supplier may raise questions which you had not thought of.
- Dealing with a supplier in this way can boost your contractual position (see 8).

3.3 **Question** suppliers' recommendations.

- Confirm that the solution will meet your requirements.
- Clarify all the costs (see 6).
- Ask why the recommended solution will be better than a cheaper alternative.

3.4 Wherever possible, opt for **simplicity**.

- A solution can usually be made up from standard, off-the-shelf products.
 - Keep the number of different types of hardware and software you use across the business to a minimum so that maintenance, support and training are as simple as possible.
- For example, you might want any new computer you buy to run the same operating system as your existing computers — even if a technically superior operating system is now available.

4 The basic ingredients

4.1 Standard PC-compatible desktop **computers** suit typical tasks such as word-processing.

- Complex tasks, such as the graphic processing for computer-aided design, may require more sophisticated hardware.
- Mobility is becoming an increasingly common requirement as flexible working and homeworking become more widespread. See **Mobile computing**.

- The right printer can be an important element. See **Computer printers**.

4.2 Most solutions can be built from standard **software**.

- Employees are more likely to be familiar with widely used software.
- Where appropriate, look for software packages which can easily share data.
- Be careful about accepting any specialist software. Check there is an established user base, and ask for references.

4.3 Most businesses with more than one or two computers find a **network** worthwhile.

- A simple network can improve file-sharing and data security. See **Networks and communications, Network servers and Security and the Internet**.
- An intranet further improves collaboration.
- Most businesses can benefit from connecting to the Internet.

5 Services

Unless you have in-house expertise, you may need to purchase additional services as part of an effective solution.

5.1 Your solution may need **installation**.

- An unskilled user can usually get a standard computer running. The operating system and standard software is often pre-installed.

Typical specifications

For a business-use PC, typical low- and high-end specifications are:

- Processor speed between 2GHz and 3GHz.
- 256MB to 1GB RAM.
- Hard disk capacity between 20GB and 120GB.
- 52x CD ROM drive, often combined with CD writing ability (CDR/RW).
- 15" to 19" CRT monitor or 15" LCD flat-screen monitor.
- Graphics card with 16MB to 128MB of dedicated memory.
- 56K V90 or V92 modem.

All PCs should offer:

- Windows XP operating system.
- One-year return to base warranty.
- An optional on-site warranty.

- You may need help from the supplier to install more complicated systems. For example, setting up a network might involve both cabling and initial configuration of the network software.

➔ See **Maintaining your IT system, Intranets and Going online**.

5.2 Software may need **customisation** to ensure that it best meets your needs.

- Initial customisation of some packages, such as accounting software and databases, can require expertise.
- Integrating new applications with existing software can be complex.

5.3 Employees often need **training and support**, particularly for new software.

- On-site training can be more convenient and effective, though at a higher cost.
- Standard software packages often include access to a helpdesk, by phone or through the Internet. Check what the charges are, and if possible whether the helpdesk has a good reputation.

5.4 You may want a **maintenance** contract either from your supplier or an independent maintenance company.

- Establish the quality of the service. For example, whether the engineers work to ISO 9000, how qualified they are, and what quality of parts they will use.
- For a critical system, you may want a maintenance contract which guarantees repair or replacement within a short time of any fault developing.

5.5 Your solution may involve **additional services**.

- For example, almost all businesses on the Internet use an Internet service provider. See **Internet service providers**.

6 The lifetime cost

When comparing the costs of different systems, look at the total lifetime costs.

6.1 **Upfront** costs generally include the price of hardware and software and additional costs for installation, configuration and training.

- A flexible lease spreads the cost of acquiring equipment, and may make it easier and cheaper to upgrade equipment as your requirements change. See **Financing equipment**.

- Some software costs include an annual support or subscription charge. For example, anti-virus software updates.
- You may be able to negotiate discounts for bulk purchases.

6.2 Continuing costs will include any maintenance and support services.

- Costs may be fixed or depend on how much you use the service.
- Costs of consumables, such as printer toner, can mount up. Bulk purchases can offer significant savings.

6.3 Skimping on services is a false economy.

- Investing in good training from the outset can pay dividends. Hidden costs of errors and time wasted by untrained employees can easily outweigh training costs.
- An appropriate maintenance contract will minimise downtime. Loss of business if the system fails can be far more expensive.

6.4 Sooner or later you will need to upgrade or replace hardware and software.

- You may need to upgrade computers to handle new, memory-hungry software or increased storage requirements. Many computers can be upgraded by replacing individual components rather than the entire machine.
- Software publishers may release new versions offering better performance or features. After a few years, they may stop supporting old versions of the software.

7 Suppliers

7.1 Most businesses purchase IT from dealers or resellers. These range from nationwide chains to local consultants.

- The quality of initial consultancy and advice varies, as does willingness to provide continuing support.
- A good dealer should be willing to install and configure the system, and to take responsibility for transferring data from any existing system to the new one.
- Some dealers offer equipment they assemble themselves, at a lower cost than branded systems. Check that the dealer uses quality components and that you are satisfied by the warranty.

7.2 Other suppliers can be useful, particularly if you need little or no advice.

- Retailers often keep a wide range of products, and can generally provide stock immediately. Many offer advice, and maintenance and support contracts, but attitudes vary widely.
- Mail order companies generally offer a wide product range at competitive prices. Purchasing with a personal credit card and using suppliers registered with the Mail Order Protection Scheme reduces risks.
- Some manufacturers supply direct and can build equipment to your specification.

7.3 Look for a supplier who places a value on building a relationship with you.

- Where appropriate, ask for references from customers with similar needs to you.
- If you buy from suppliers who treat each purchase as a one-off, you may need a consultant for continuing support.

8 Contracts

8.1 Aim for a contract which makes the supplier responsible for ensuring that the system meets your needs.

- Tell the supplier in writing how you intend to use the system and ask for written confirmation the system is suitable.
- Buying an entire system from one supplier will help ensure that the supplier is responsible for ensuring all the components are compatible.

8.2 Be sure you are satisfied with warranties.

- Standard hardware warranties provide 12 months cover against faulty parts or workmanship on a return-to-base basis. Extended, on-site warranties are usually available at additional cost.
- Software warranties are generally extremely limited. Licences typically exclude liability for damage to your system and limit your recourse to the purchase price of the software.

8.3 Get a written agreement covering services.

- This should include the standard of service you can expect.
- Ensure that the basis on which you will be charged is clearly spelt out.

Further help

There are other Directors' Briefing titles that can help you. These briefings are referred to in the text by name, such as **Network servers**.

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