

Specifying and purchasing IT

Buying IT wisely reduces costs and improves system effectiveness. Aim to acquire a solution which meets your needs and you feel comfortable managing.

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 network or sharing data with existing applications.
- 1.4** Reduce costs and disruption by anticipating how **future** needs may change.
 - Ensure your system fits your business plan.

For example, if you intend to expand into a new market, ensure this is supported.

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 people need to access your customer database at once.
- 2.2** Establish **who** will be using the system. Considerations include:

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- How many users there will be and where they are located.
- How well connected they need to be. Effective information sharing through a network or across the Internet can increase efficiency significantly.

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

- Real-time systems, like 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 need appropriate training.

2.5 **Reliability and security** are of overriding importance for business-critical systems.

Getting online

A You can connect to the Internet using a **broadband service**. The most common type of broadband connection is called ADSL. It uses a standard telephone line to connect your business to the internet.

- ADSL connections start from around £10 a month.
- They are a cost-effective way to get your business online.
- Some ADSL connections limit how much information you can download, so check restrictions carefully.

B If the Internet is crucial to your business, or you have a **large number of employees** who all need access, ADSL may not be suitable.

- Specialist suppliers offer other types of Internet connection.
- These usually cost more than ADSL, but offer greater capacity and a guaranteed level of service.
- Your IT supplier can advise on a suitable connection. Whichever you choose, you can share it through your network, so all staff can get online.

Failures can cause huge disruption and even insolvency.

- It can be difficult or impossible to recover important records if they are lost.
- You may be legally required to ensure good security. For example, you must store and use all personal information in line with the Data Protection Act.
- Consider the consequences if a problem temporarily puts 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**.

- Useful if you 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 generally better.

- The supplier may be an expert on the strengths and weaknesses of available technologies.
- 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.

4 The basic ingredients

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

- Complex tasks like computer-aided design, may require more sophisticated hardware.

“Small businesses can use technology to underpin their business operations, core processes and communications. This means an increased reliance on the IT infrastructure which can be a struggle with limited internal resources. Outsourcing IT is a good way of ensuring that systems are always on and data is secure and means that you receive a predictable monthly bill.”

James Passingham,
technical director,
Foehn

- Mobility is a common requirement as flexible working and homeworking become more widespread.
- You may wish to add printers and scanners, or webcams to take advantage of new communication options.

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 purchasing specialist software. Ensure there is an established user base, and check references.
- You may be able to use software which is accessed over the Internet. This is called software as a service and can reduce the time and money you spend on maintenance.

4.3 Most businesses with more than one computer find a **network** worthwhile.

- A simple network is easy to set up.
- A network makes communication and sharing files easier.
- An intranet is an internal company website which can further improve collaboration.
- You can share your Internet connection through a network.

Typical specifications

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

- Processor speed between single-core 2GHz and 3GHz. Dual and quad-core processors are effectively two or four processors in one. For example, a 2GHz dual-core processor is better than a 3GHz single-core processor.
- 1GB to 4GB RAM.
- Hard disk capacity between 100GB and 1TB.
- 16x DVD-ROM drive, often combined with DVD writing ability.
- 17" to 22" LCD flat-screen monitor.
- Graphics card with 128MB to 512MB of dedicated memory.

B All PCs should offer:

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

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.
- 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.

5.2 Software may need **customisation** to ensure 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.
- Software often includes access to a helpdesk, by phone or through the Internet. Check the costs and 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.

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 upgrades easier and cheaper.

“Investment in appropriate staff training reduces the risk of both expensive user errors and resistance to change, and often helps to motivate and enthuse your staff.”
Bryan Archer,
technical director,
3chillies

- 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.
- Bulk purchases can offer savings on consumables like printer toner.

6.3 Skimping on services is a false economy.

- Investing in training can pay dividends. The cost of errors by untrained employees can be high.
- An appropriate maintenance contract will minimise downtime.

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

- You may need to upgrade to handle new software or provide extra storage. Many computers can be upgraded but it is often more cost-effective to replace them.
- 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, industry-standard 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. Many offer advice, and maintenance and support contracts, but attitudes vary widely.

- Mail order and online companies generally offer a wide product range at competitive prices. Purchasing with a personal credit card and searching online for opinions of the supplier reduces risks.
- Some manufacturers supply direct and build equipment to your specification.

7.3 Another option is to find a reseller/supplier that can host your IT for you.

- A fully managed service gives small firms access to enterprise-class IT that integrates seamlessly with their business, without the headache of hiring IT staff and running it yourself.

7.4 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.

- Specify 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 ensure compatible components.

8.2 Be sure you are satisfied with **warranties**.

- Standard hardware warranties provide 12 months cover against faulty parts or workmanship. However, you will usually be responsible for returning faulty items for repair or replacement. Extended, on-site warranties are 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.

8.3 Get a written agreement covering **services**.

- This should include the standard of service.
- Agree specific measures for the standard of service, so you can hold your supplier accountable.
- Ensure that the basis on which you will be charged is spelt out.

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