12 Information and communication technology

Web users ultimately want to get at data quickly and easily. They don't care as much about attractive sites and pretty design.

Sir Tim Berners-Lee (1955-) British inventor of the World Wide Web

Management issues

The basic issues in information technology (IT) management are:

- a) increasing the stability of the system to reduce down-time
- b) ensuring that information is secure and backed-up (use of encryption, firewalls to keep out hackers, viruses, spyware, etc)

Beyond that, the following may be important issues at different times:

- Tension between the IT department and other business units. How are business requirements translated into an IT solution? How is the efficiency of IT spending measured? Do the business people understand the technology?
- Should the software be a commercial off-the-shelf (COTS) package or a tailor-made solution? If the latter, then what degree of customization is needed?
- How well does the new IT integrate with the old (= legacy) systems?
- How good is the documentation? Is training necessary?
- What level of integration is appropriate? Should the organization use just one standard of software (eg SAP/Oracle) and/or hardware (eg IBM/HP)?

Trends

Predicting the future of information and communication technology (ICT) is notoriously difficult, but several trends appear to be happening:

- Computing power is moving away from the local PC to the network (delivered where and when it is needed).
- Software is also moving to the network: companies are leasing it online for a monthly fee instead of buying it.
- Wireless connectivity is becoming possible between more and more devices.
- Bandwidth is increasing.
- Processing power and storage capacity keep increasing, while prices keep going down.
- Open-source platforms (designed and improved by users, owned by no-one) are becoming more common.
- Profitability is becoming an issue for vendors as IT becomes widespread and standardized.
- Integrating and managing IT systems is becoming more important than selling new products.
- Back-office functions (eg payroll) and software development are being outsourced to low-cost countries.

- There is the development of an 'Internet of things' –
 pervasive computing where everyday objects have
 embedded processing power with a connection to the Net.
- There is a convergence between traditionally separate media.

E-business

A business with no online presence is a 'bricks-and-mortar' organization. At the opposite extreme, a few 'virtual' businesses exist only online. But most businesses are 'clicks-and-mortar' – they have some part of their business on the web, but also physical premises.

The phrase 'e-commerce' refers to the part of e-business related to buying and selling. Retailers set up an electronic storefront (BrE shop front) and shoppers place items they want to buy in an electronic cart (BrE trolley). When the shopper is ready, they go to the 'checkout' where their payment is processed.

For customers, key issues include:

- Fraud (the safety of online payment systems).
- Merchandise delivery and returns.
- The difficulty of speaking directly to a customer services representative rather than getting an automated response.

For companies, key issues include:

- The protection of intellectual property (piracy).
- Website costs and maintenance.
- Measuring the effectiveness of the website (click-through rates for ads, traffic counts, conversion rates to show percentage of visitors who make a purchase).

In terms of the technology involved, e-commerce is a good example of the role of dedicated (reserved for a specific use) servers:

- 1 A database server stores customer data and product information in tables. J.
- 2 An application server is responsible for calculations and program logic; it retrieves data from the database server and feeds it to the web server.
- 3 A web server is responsible for the interface and graphics; it presents the web page to the user.
- 4 A browser on the user's computer allows the customer to interact with the company's web server.

Transaction processing: constant updating of mission-critical data such as orders, invoices, payments, payrolls, inventory, etc

Marketing: CRM (customer relationship management)

Production / Operations: MRP (material requirements planning), CIM (computer integrated manufacturing)

Finance: financial planning and budgeting

Human resources: payroll and employees' records

ERP (enterprise resource planning): manages all stages in the supply chain

1. Raw operational data is kept in databases, eg sales info, inventory info, customer info

2. All the databases and documents from across the organization are collected together in a 'data warehouse'

3. Information from the data warehouse is retrieved by management information system (MIS) software using 'datamining'. MIS software supports decision making, identifies patterns and trends, etc

Susiness software

INFORMATION TECHNOLOGY

Technology

Wireless LAN provides service within a hotspot

GPS (global positioning system) to determine location of device

Bluetooth to enable short-range connection between wireless devices

LAN (local area network) allows single-user workstations to share data, eg inside a company building

WAN (wide area network): a geographically dispersed LAN Intranet (company network)

Extranet (part of intranet with limited access for certain people outside the company)

Collaboration tools (= groupware) that allow users at different workstations to work on the same project (screen sharing, webconferencing, etc)

Teleworking (employee can work at home, from a customer's premises, from a hotel, from the beach)

Applications

Personal services (content including news and entertainment is aggregated in a mobile portal)

M-commerce = mobile-commerce): shopping and payments from your phone, person-to-person payments, advertising based on your location

Intrabusiness (support for mobile workers, job dispatch, access to intranet for sales staff to get customer/product info, etc)

busines

Zetwork computing

computing

and

Data and knowledge managemen

B2B

`Electronic exchange`: a marketplace for a specific industry

Supply chain management

Extranet to work more closely with suppliers and partners

B₂C

Online marketing

Virtual store with online transaction processing and electronic funds transfer

Online customer service

Major areas include financial services, reservations for travel and holidays, sale of real estate, etc

12 Information and communication technology: Exercises

12.1 Fill in the missing letters.	3 n	needs
1 Old IT systems (hardware or software) ware called 'lcy systems'.	/hich are still in use 4 fir	ind something that is stored in order to use it again
2 The written instructions for using IT soft are called 'docion'.	tware / hardware 5 m	nake possible; often used as a past participle (an Internet ed device is one that can use the Internet)
3 A piece of equipment intended for a pa called a 'dee'. The word usually sup portable and electronic.	ggests something –	sk someone to pay an amount of money for a service aking information from a network and putting it onto
4 The rate at which data can pass through channel is called its 'bath'.		our own computer (or other device)out together
5 A type of hardware and / or software or programs run is called a 'plrm'.	n which application 9 a	website that gives/access to a wide range of services uch as news and information, email, online shopping,
6 If a chip or wireless device is incorporate an object it is described as being 'em	ed physically into lir	nks to other sites
7 A software application used to locate an pages is called a 'brer'.	172	4 Complete the text with the words in the box. encryption firewall intranet LAN
8 In knowledge management, a key function waouse' – the place where all the	ACCUPACION BUILD NOT AND DESCRIPTION OF THE PROPERTY OF THE PR	servers stand-alone PC WAN workstations
collected together. 12.2 Complete the sentences using the		used to be common to see a ¹ sitting on a desk. No more. Now, individual ²
in the box.	ins	side a company are connected via a ³
accessibility / intranet aggregate / portal ensure / secure measure / efficiency stability / downtime translate /	retrieve / trends cor	data communication system inside a building) to the ompany's ⁴ (= high-capacity omputers that store data and manage all the network sources). Large, multi-site organizations (eg a national
1 Perhaps the most important task for an increase the of the syst	IT manager is to heatem to reduce cor	ealth service) will require a ⁵ (= omputer network that covers a large geographical area).
2 IT managers also have to is and backed-up.	that information by	How is all the internal company information accessed users? Easily, via an ⁶ This is an ernal network that acts just like a website, but is
	siness requirements acc	cessible only with a password and is protected by a
4 It can also be difficult to of IT spending.	the by	(= transforming data into a code to otect its confidentiality) and, for large organizations,
5 Managers across the company use data ———————————————————————————————————	mining' to house, and turn	busing the servers inside a bunker to provide physical curity in case of fire, etc.
6 An extranet provides outsiders with vari	ous levels of colu	5 Make collocations by matching a word from each umn.
7 Bluetooth is a way to sconnection between wireless	hort-range 1 of 2 w	off-the-shelf capacity vireless connectivity
8 Mobile phone companies charge for do which they on their ow	wnloading content 4 st yn 5 ba	processing functions torage package pack-office page
12.3 Look at the completed sentences and find a word that means:	7 cl	ntellectual power lick-through property veb rate
1 make certain that something happens _ 2 copied (in case the original is lost)		reb Tate

12.6 Use the words in the box to make pairs of collocations with a similar meaning.

application customized defective -designdevelop environment the latest faulty old fashioned platform out-of-date package provide supplier supply tailor-made run vendor up-to-date USE

Verb + noun collocation

1	to	design	/	develop	software
2	to		/		software
3	to		/		software

Noun + noun collocation

4	software	application	/	
5	software		_/	
6	software		/	

Adjective + noun collocation

7 _	old-fashioned	_ /	software
8 _		_ /	software
9 _		_ /	software
10 _		_ /	software

12.7 Underline the correct (or best) words.

- 1 We have IBM machines running / running on SAP.
- 2 We have SAP running / running on IBM machines.
- 3 All your software / softwares can run on our servers.
- 4 Sometimes we have to write a / some special software.
- 5 We need a more powerful and effective system. It needs to be *updated / upgraded*.
- 6 We need the latest version of the system. It needs to be updated / upgraded.
- 7 The database *updates / upgrades* automatically when new information is entered.

12.8 Read the text about ERP then answer the questions below.

mall companies tend to use separate off-the-shelf software packages to so specific tasks, such as preparing accounts. But larger companies need a solution that provides software on a modular basis – with the possibility of customization—and then integrates all the parts. This solution is called ERP (enterprise resource planning), and the main vendors are SAP and Oracle.

ERP has its origins in manufacturing, where it is used to manage all the stages in the company's internal supply chain. So, using sales data the software can forecast demand, order materials, schedule production, project financial results, etc.

But to this basic package it is possible to add many further modules. For example, to include the upstream end of the supply chain (= suppliers of components and raw materials) the company can add a procurement module. And to include the downstream end of the chain (= customers) there is a customer relations management module (CRM).

CRM – which other vendors sell as a stand-alone package – includes:

- for sales staff: contact management, quote management, customer preferences and buying habits, etc.
- for customer services staff: order fulfilment, complaints, returns, etc.

By keeping all the information on individual customers in one place, a company aims (i) to make cost savings through efficiency and (ii) to present a unified face to the customer, regardless of the communication channel that they use.

Another common ERP application is a management information system (MIS). This is a decision-making tool that allows managers to extract useful knowledge (specific details, key indicators, trends) and present it as graphs, reports, alerts, forecasts, etc.

Find a word from the text that means:

- 1 available in a standard form, not designed for a particular customer
- 2 personalization
- 3 predict (word #1)
- 4 predict (word #2)
- 5 the combined activities of sourcing (= finding what you want) + purchasing (= buying it)
- 6 able to be used on its own (ie without buying other components)
- 7 the price that a supplier says they will charge
- 8 delivering goods in the way that is promised and expected
- 9 on-screen warnings

Discussion topics

- 1 Business people don't understand IT, and IT people don't understand business.
 - / Agree /
- Disagree
- 2 E-commerce is a wonderful thing ... until you want to speak to anyone about anything.
- 3 In five years' time, the biggest change in our lives from ICT will be ...
- 4 Teleworking is the way to go. Who needs an office when everyone is networked?
 - Agree
- Disagree



Managing a discussion

Read this dialogue in a real estate agency and then study the points below.

- A: Can you help me? I'd be interested to know something about property prices in this area.
- B: Yes, of course. But first, **could you tell me a little more about** your present situation?
- A: I've been living in rented accommodation for several years. Now I'm wondering whether it's a good time to buy somewhere for myself.
- B: Okay. What sort of price were you thinking of?
- A: Oh, you know, nothing too expensive.
- B: Could you be a little more specific? We have some small one-bedroom apartments that start at around € 120,000. Was that the kind of thing you had in mind?
- A: Possibly. But I'm not ready to think about individual properties just yet. I wanted to know more about the market in general. There are a lot of stories in the newspapers about house prices, and they worry me.
- B: Okay. **If I understand you correctly,** your worries are probably these: you don't want to buy at the top of the market and see your house fall in value, but equally you don't want to miss the chance if prices are going to continue to rise.
- A: Yes, exactly.
- B: This is of course a concern for all our clients, but you know it's very difficult to time the housing market. Newspaper stories can make forecasts, but no-one really knows.
- A: I see what you're saying, but you must have some idea. I read one article that said that house prices are going to crash.
- B: I don't think that's true. Prices have stabilized recently, but they're not going to crash.
- A: **Really? Do you think so?** My friend bought an apartment near here last year for €165,000, and now other apartments in the same block are going for less than €150,000.
- B: Well, of course, it all depends. There are many factors that can cause these short-term changes. But there is another way of looking at this. If prices have dropped temporarily, then now is a good time to buy.
- A: But **going back to what you said earlier**, have prices stabilized, or are they actually falling? I **disagree with you about** now being a good time to buy if they are still falling.
- B: In certain areas they are still falling. But I think we're losing sight of the main point. You're living in rented accommodation, and the rent you pay could be going to repay a mortgage. And you would have your own home
- A: That makes sense. But it's a difficult issue.
- B: You're absolutely right. But while you're here, why don't I give you an idea of what's available in your price range?
- A: Okay.

 B: Right. I'd like to start by writing down one or two personal details, and then we can move on to looking at some of the properties we have on the market.

- Look at the words in bold above. Underline:
 - five phrases asking for more information.
 - one phrase showing the speaker is going to check using their own words.
 - three phrases for full agreement.
 - one phrase using Yes, but ... for half agreement.
 - one phrase using two open questions to show polite disagreement.
 - two phrases for simple disagreement.

How many of these can you find in the mind map opposite?

• At lines 7 and 10 you will see the phrases: What sort of price were you thinking of? and Was that the kind of thing you had in mind?

These questions are interesting for two reasons:

first, they use 'vague' language: sort of, kind of.

second, they use past tenses (were | was | had),
even though the time reference is present.

The past forms create an indirect, distant feeling. They combine with the vague language so that the client feels that he / she is under no pressure.

- Look back at lines 30–42. There is a battle for control of the topic:
 - at line 31 B tries to change the focus: ... there is another way of looking at this.
 - but at line 34 A resists: ... going back to what you said earlier, ...
 - at line 37 B deals briefly with this resistance: In certain areas ... but then tries to block further discussion with: I think we're losing sight of the main point.
 - at line 42 B manages the conversation so that they move on from the opening to begin a sales conversation about specific properties. For B, this is the main topic.

Now look at the 'Topic management' branch of the mind map.

Other language for discussions

In discussions you are likely to use a lot of linking words and phrases. (See units 20–22.)

Full agreement

That makes sense. You're absolutely right. Yes, I would agree with that.

Half agreement

I see what you're saying, but ...
I agree with you up to a point, but ...

Polite disagreement

Well, of course, it all depends.
I'm not sure I agree with that.
I've got mixed feelings about that.
Really? Do you think so?
Don't you think that ...?

Simple disagreement

I don't think that's true.
I disagree with you about ...
That's not how I see it.

Beginning the main toxic

Right, let's get down to business. Why don't I give you an idea of

Moving from point to point

So that's decided, then Shall we move on? Okay, let's go on to the next point.

Changing the focus

There is another way of looking at this. Perhaps we should also consider ...

Returning

Going back to what I / you said earlier ...

Interrupting

loud / just interrupt for a moment?

Blocking

think we're losing sight of the main point. sorry, if I can just finish, I was saying that ...

Buying time

It's a difficult issue.
I'll have to think about it.
Could I get back to you on that?
Why don't we come back to that later

t's not how I see it.

a distance Charification

Asking for more information

I'd be interested to know something about ... Could you tell me a little more about ...?

Could you be a little more specific?

What (exactly) do you mean by ...?

What sort of price were you thinking of?

Was that the kind of thing you had in mind?

Asking for repetition

Could you go over that again, please?

Checking by using your own words

So, if I understand you correctly, ... So basically what you're saying is ...

Checking the other person's understanding

Does that answer your question? Does that make sense?

Responding

Yes, exactly.
Yes, that's right.
Not exactly.
Well, let me put it another way.
No, that's not what I meant.
No, what I'm trying to say is ...



16 Discussions: Exercises

16.1 Without looking back at the mind map, think of just one word to fill each gap.	16.4 Find a phrasal verb (eg t to) in exercise 16.3 that means		
a) There is another of at this.	1.73		
b) Right, let's get down to	1 start doing something seriously 2 stop doing one thing and begin doing another		
c) back to what you said earlier.	2 stop downg one trining and begin	Janes Her	
d) I think we're losing of the main	3 return to a subject		
e) Could I interrupt for a ?	4 speak to someone at a later tir	me	
	5 repeat something in order to c	\ \	
f) Could you be a little more ?	5 repeat something in older to the	allacistatia it	
g) What exactly do you mean 'more expensive'?			
h) Sorry, if I can finish, I was saying that	16.5 Match the beginning with	th the end of each phrase	
i) Could I back to you that?	a) You're absolutely	a point, but	
j) Was that the of thing you had in ?	b) Yes, I'm in favour	I see it.	
k) Does that make ?	c) That might be worth	right.	
l) Well, let me it another way.	d) I agree with you up to	agree to that.	
16.2 Match each phrase in exercise 16.1 with one of	e) I can see one or two	so?	
the uses 1–12.	f) I'm sorry, T can't	of that.	
	g) Really? Do you think	problems with that.	
1 You want to change the focus.	h) That's not how	trying.	
2 You want to block the other person's change of focus	16.6 Write each phrase letter	from exercise 16.5 in the	
and return to the main issue.	grid below.	Hom exercise 10.5 m the	
3 You want to interrupt.	with some	one about something	
4 You want to block an interruption and continue.	100 Maria (100 Maria (
5 You want to begin the discussion.			
6 You want to return to an earlier point.	Half agreement 2	5 15 3	
7 You want to buy time after a question.	Polite disagreement 3		
8 You want more detailed information because the other	Disagreement 4	8	
person is being vague and general.	16.7 Complete each mini-diale	oque using the phrases in	
9 You want to clarify one particular word or concept.	the box.	- gg p	
10 You want to clarify what you just said by saying it again			
more simply and clearly.	Can I get back to you on		
11 You want to clarify what the other person wants, using	I think we're losing sight Shall we move on? Let r		
vague language to avoid putting them under pressure.	Shall We move on: Let I	The pat it another way.	
12 You want to check the information you gave was clear.	1 A: Yes, I think that would worl B: So that's decided, then.		
16.3 Cover exercise 16.1 with a piece of paper. Then fill in the gaps using the prepositions in the box.	2 A: Are we going to have a hot launch or just finger food?	buffet at the product	
about at back back down in of of	B:	,	
of of on on over to to to to	issues are still unresolved – campaign.	like the advertising	
1 Right, let's get business.	3 A: The price is okay, but what	about shipping times? Can	
2 Okay, let's move the next point.	you deliver by the end of A		
3 There is another way looking this.	B: I don't know right now		
4 Going what you said earlier.	4 A: So are you saying you want	: me to transfer to the	
5 I think we're losing sight the main point.	Madrid office?		
6 Could get you that?	The state of the s	It would be a great	
7 Could you tell me a little more it?	opportunity for you.		
8 What sort price were you thinking ?	5 A: So are you saying I have to t		
9) What exactly did you have mind?	B: Well.		
10 Could you are that are in places?	have to, but it would be a d	great opportunity for you.	

	.8 The words offer, sugge en misused. Match each v	the same of the sa
1		or plan, perhaps quite
75	tentative and vague	
2		or plan, more formal and
3	definite, and usually one tha	ment saying you will give
	something to someone (used	
	.9 Match each item on that has a similar meaning.	e left with one on the right
1	put forward —	take up (a suggestion)
2	accept	think of (a suggestion)
3	reject	make (a suggestion)
4	come up with	dismiss (a suggestion)
5	take part in	tackle (an issue)
6	come to	bring up (an issue)
7	raise deal with	be involved in (a discussion) open it up for (discussion)
8	reconsider	reach (a decision)
10	throw it open for	reassess (a decision)
11	a sensible	feasible (suggestion)
12	a sensitive	reasonable (suggestion)
13	a realistic	ridiculous (suggestion)
14	a minor	difficult (issue)
15	an absurd	side (issue)
16	a constructive	in-depth (discussion)
17 18	a hard a detailed	fruitful (discussion) initial (discussion)
19	an easy	tough (decision)
20	an exploratory	straightforward (decision)
16	10 Cover exercise 16.9 w	rith a piece of paper. Then
	in the missing letters.	ruir a piece of paper. Then
	She was the only person to	cu_wa
	feale suggestion.	
2	I think we should ta u_	his suggestion – it sounds
2	very reale to me.	
3	going to the CFO and askir	ous suggestion about
4	I need to b g u_ a ra	
5	_	Thave to t le it one day.
6		explry discussions,
U	and now we're ready to ca	
7	I thought the conference w	
	time, but in fact t_ k p_	
	fr discussions.	•
8	You've all read my summar	y, so now I think we can
	o_	in-d h discussion. ision, but it was a tgh one
9		ision, but it was a tgh one
16	to make/ It should be a relatively str	rd decision.

16.11 Put a tick (/) if the sentence is grammatically	` /
correct. Put a cross (X) if it is not.	<u> </u>
1 I suggested a different idea.	
2 I suggested him a different idea.	
3 I suggested a different idea to him	
4 I suggested using another approach.	
5 I suggested to use another approach.	
6 I suggested we should look at alternatives.	
7 I suggested it we should look at alternatives.	
(Note: propose and recommend have the same	
patterns)	
16.12 One item in each group does not collocate w	ith
the verb. Cross it out.	
1 hold a meeting / all the cards / an opinion /	
a proposal/sb responsible for sth	
2 take part in a discussion / an effort to do sth /	
a decision / up a suggestion / another appr	oach
3 reach an agreement / a compromise / a dead-end	/
a decision / a demand	
4 raise awareness of the issue / a difficult challeng	e/
the matter later / an important objection / an interesting question	
5 meet a challenge / a deadline / an issue / a need	,
an objective	,
Speaking / Writing practice	
Work in small groups. Have a discussion on one of the	ıe
topics below.	
 Computer games and children 	
Fast foodGenetic engineering	
Clean energy	
Working from home	
 The future of Russia (or China) 	
– Euthanasia	
Transport issues in my city	
My favourite leisure technologyUFOs	
Destruction of the environment	
- Immigration	
Global warming	
 Emotional intelligence 	

The uses of location-based (satellite) technologySave the tiger! Save the panda! Why? We manage

Or Any current general / business news item
When you finish, write the script for a part of the discussion that was interesting. Feel free to add other points – it is a language exercise, not a memory

OK without the dinosaur.

exercise.

9 Interview with an HR director

Exercises

1 Line managers and HR managers both play a role in the recruitment and appraisal processes. Write 'LM' or 'HR' next to the responsibilities.

th	e responsibilities.
Re	ecruitment
1	Prepare a job description
2	Make sure legal and ethical requirements are met
3	Look at the general personal qualities of the individual
4	Look at the functional skills of the individual
Δr	ppraisal
5	Develop the appraisal tools
6	Make sure that the process is identifying future leaders
7	Rate functional performance
8	Monitor that appraisals are carried out
	Now listen to an interview with Jurgen, an HR director,
ar	nd check your answers.
	Listen again. What does Jurgen say about the following pics? Complete his sentences.
1	
	important inside the company and
-	it's important to within the organization.'
2	The interview 'In the HR interview we are looking for a positive
	personality, a flexible attitude, good team-working skills, and other qualities like and the ability to
	did the ability to
3	Performance-related pay 'HR is here to help the business
	Bonuses are acceptable if they're
	seen to be'
4	Motivation 'Apart from the tangible there are what I would call motivators.'
	Read the listening script (page 118) and make notes on
	hat Jurgen says about the following topics (maximum ten ords each). When you finish, discuss the general issues with
	ome colleagues.
0	assessing personal qualities in an interview
	performance-related pay
0	the appraisal process
G	lossary
á	appraisal formally assessing an employee's job performance
9	demoralizing making you feel less confident and hopeful
	fast-tracking accelerating the progress of a person's career fit in integrate successfully
	iob rotation movement/through a variety of roles in the
1,57	organization
	matrix organization where people work in a variety of cross-
	functional teams rather than under one line manager

10 Interview with an IT consultant

Exercises

1 What do these acronyms stand	for?	How much	do	you
know about them? Make notes.			_ `	>

- 1 ERP
- 2 CRM
- 3 VPN

2 Now listen to an interview with Jana, an IT consultant, and check your answers.

3 Listen again. What does ana say about the following topics? Complete her sentences

1	IT consultancy 'We offer IT	solutions – software, hardware,
	system,	maintenance and
	consulting - everything.'	^
	- / / / /	/

- 2 The paperless office 'A document like an email or a letter or a legal contract or a report is purely in ______ form and with document management you can _____ and store it '
- store it.'

 3 Industry trends everything is moving to the network all kinds of data and all kinds of software. At the end of the day all are the same just a screen, a of input like a keyboard, and a connection to the petwork.'
- 4 Read the listening script (page 119) and make notes on what Jana says about the following topics (maximum ten words each). When you finish, discuss the general issues with some colleagues.
- the benefits and risks of CRM
- using a document management system
- the difference between information and knowledge
- 'The Matrix'

Glossary

applications software computer programmes designed for a specific task, eg word processing, accounting

cold call a telephone call to a potential customer that they were not expecting

downside disadvantage

encryption protecting information by putting it into a special code that only some people can read

flagged up highlighted

IP (address) the IP (Internet Protocol) address is the address of every machine connected to the Internet – it takes the form of numbers separated by dots

log make a record of something

operating system programme that controls all the components of a computer system

print-outs printed information from a computer

stand-alone (package) package that works well on its own **template** pre-defined model

track follow the progress of something

mindset attitude and way of thinking

track record things you have done in your career underperforming less successful than expected

rounds similar stages