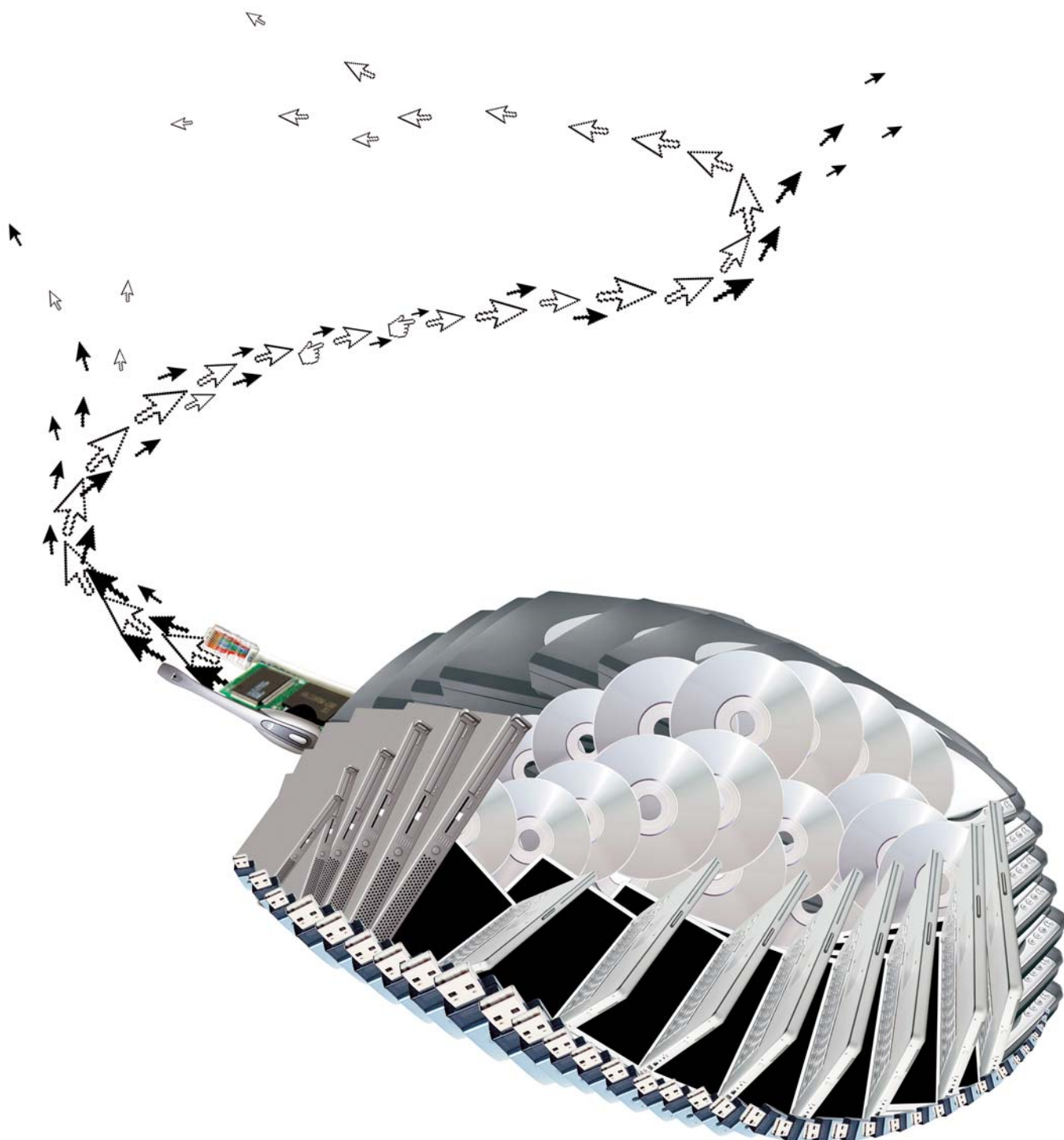


SPECIMEN PRELIMINARY MATERIAL

UNIT 1 - THE POTENTIAL OF TECHNOLOGY





Level 3 Diploma Principal Learning

Information Technology INF3U1/PM

Unit 1 The potential of technology

Specimen Preliminary Material

To be opened and issued to candidates on (date) or as soon as possible thereafter.

INF3U1/PM

What you have to do

Read the following information and complete the **four** Research Tasks before attending the examination. Any notes you make on the Research Tasks must be made without the assistance of another student or anyone else, except your teacher/lecturer for the subject. These notes are expected to be no more than **20 sides of A4**. Make sure your notes show clearly on the front page your centre number, your name and your candidate number.

You **must** take your notes on the Research Tasks into the examination. You must hand in your notes at the end of the examination, attaching them securely to your answer book. You must **not** take the first copy of this Preliminary Material into the examination. You will be issued with a second copy at the start of the examination.

Your teacher/lecturer may teach to this Preliminary Material.

Background

TrailerTech Ltd is a small organisation that imports trailer brakes and axles for sale in the UK. The company has grown quickly and has established a steady market. Mr Bryan Phillips, the Managing Director, wants to look at the company's current new technology systems with a view to improving and upgrading the use of digital technology at *TrailerTech*. He has approached you for advice on how to go about this.

The company has a managing director and eleven employees. These are:

- four sales personnel, one responsible for each of the Northern, Southern, Eastern and Western regions
- two warehouse staff
- an accounts manager
- an accounts clerk
- a company buyer
- a product assistant
- The Managing Director's personal assistant.

TrailerTech uses a national delivery company to distribute ordered goods to customers.

Technology systems at *TrailerTech*

TrailerTech purchases parts from overseas suppliers and receives orders from customers. The company stores details of purchases and sales in a database which they have been using since 1994. The database also provides information on stock levels.

Orders are received by telephone, fax and by post. Current stock levels must always be available to the sales personnel as they take orders from customers.

When a sales order is received, a sales person writes down customer's order onto a standard form. The form which is used to write the order contains a white top copy and three additional copies: one pink, one green and one yellow.

Once the order has been written down:

- the top copy is passed to the product assistant to add the details to the database
- the pink copy is delivered by hand to the accounts department
- the green copy is delivered by hand to the despatch department in the warehouse
- the sales person makes a log of the order on a spreadsheet and then files the yellow copy in a filing cabinet.

This log is used to track and monitor progress and is not linked to the sales and stock database.

The product assistant, warehouse staff, sales personnel, company buyer, accounts manager and the MD's personal assistant each have access to this database so that they can check stock levels and check the status of orders when they need to.

Once the accounts department receives the pink copy of an order, the accounts clerk uses the information to create an invoice using a word-processing program. She prints two copies of the invoice; one is sent to the customer and the other is filed in a filing cabinet. She then updates the spreadsheet log to show that the invoice has been sent out, recording the date it was sent.

Once the warehouse staff receive the green copy of the order, they use this to type up a picking ticket so that the staff in the warehouse know what items they need to pick and pack to send out to the customer.

They also type up a delivery note to be sent with the delivery so that the customer can sign for the goods when they are received. Once the order has been picked and packed, two copies of the delivery note are printed – one is sent with the order to the customer, the other is stored with the picking ticket in a filing cabinet in the warehouse.

The package is weighed and a fax is sent to the delivery company giving details of the customer's address and the weight of the package. The delivery company will collect the package within 24 hours. The warehouse staff then update the spreadsheet log to show that the goods have been sent out, recording the date the goods were collected.

When the delivery company deliver the package, the delivery note is signed and faxed back to *TrailerTech's* warehouse. When they receive the fax, the warehouse staff update the spreadsheet log again to show that the goods have been received.

The MD's personal assistant uses the database to monitor company sales to produce graphs, reports and presentations to provide information to the MD on company sales performance.

All *TrailerTech* staff have broadband access to the internet but at present, *TrailerTech* does not have its own website. The MD's personal assistant developed a simple website for the organisation using a basic web development software package available online. However, when the website was hosted online, several problems were found. The layout of the website was poor and it did not display properly online. It was very difficult to navigate the website as some of the links didn't lead to the correct pages, some didn't work at all and others were not

clearly labelled. In addition to this, the address for the website was www.webforfree.co.uk/TrailerTech. Feedback from customers suggested that this address was difficult to remember and didn't sound very professional. As a result of these problems, the website was eventually taken offline.

The company buyer purchases trailer parts from suppliers in the Far East. He normally uses the telephone to place orders but he uses the Internet to purchase goods online from one of their main suppliers, an organisation based in China called *Macau Industries*.

Macau Industries use extranet technology to enable their customers to:

- check availability and prices of products
- order goods online
- track and monitor the status of their orders and deliveries
- make payments online.

This has enabled *Macau Industries* to advertise, sell and distribute their products globally, rather than just in the domestic market. The use of technology has meant that they have cut office staff numbers by 20 per cent and so are able to offer very competitive prices. Their turnover and market share has increased significantly since they introduced the use of technology into their organisation.

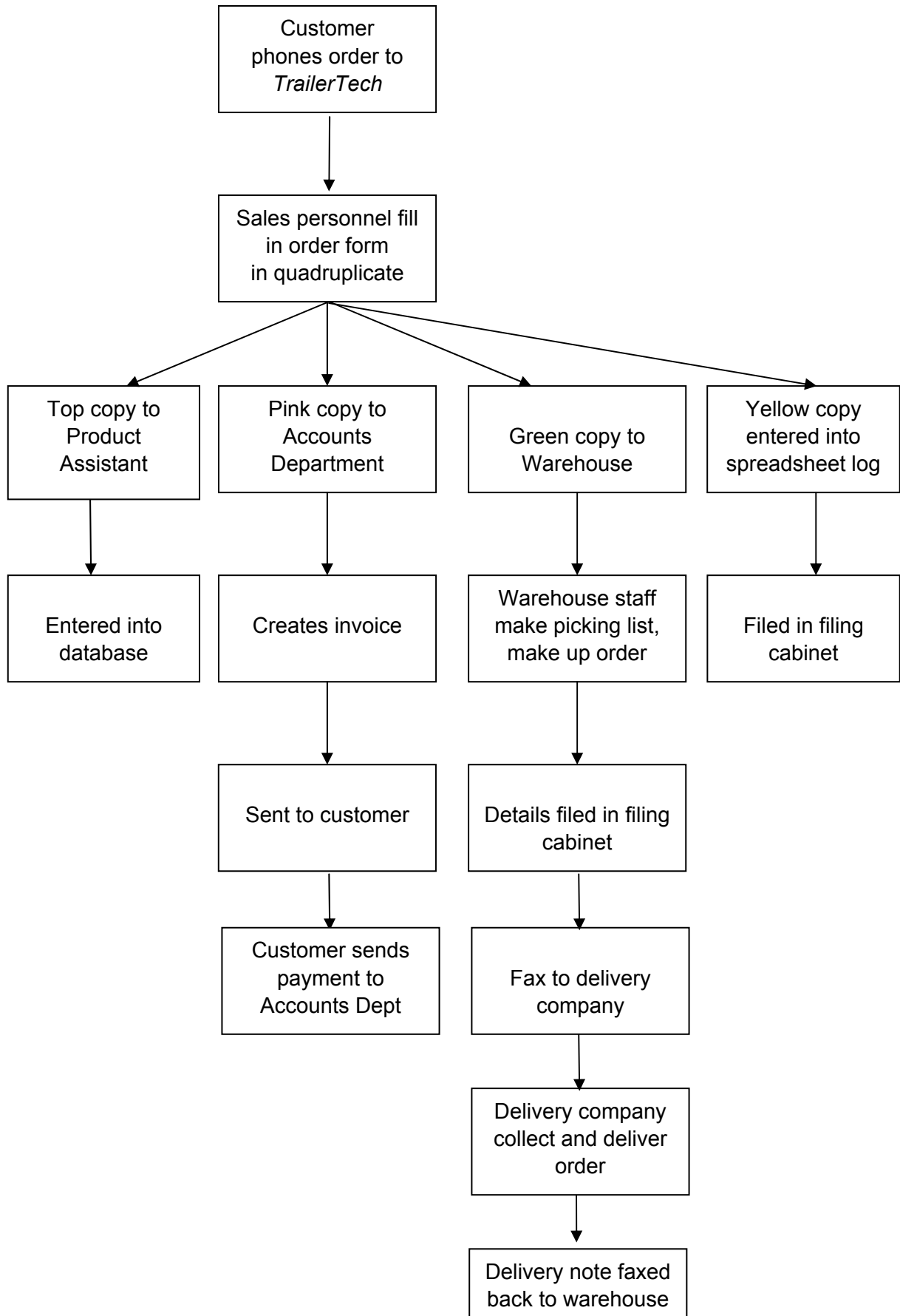
TrailerTech's operating environment

TrailerTech's products are used on industrial trailers, heavy goods vehicles, forklift trucks and other industrial applications such as robotic transport equipment used in factories. There is a steady UK and European market for this type of product and potential growth markets in regions such as Eastern Europe.

At present, *TrailerTech* mainly supply their goods to UK-based organisations. Although they have received orders from customers in Holland and Germany, the language barrier, time zone differences and the perils of dealing in foreign currency have meant that *TrailerTech* has made little penetration in the European, Asian and American markets.

Trailer brakes and axles are part of a fairly specialised, niche market and their share of the domestic market is growing well. There is a potential demand for their products further afield but, at present, *TrailerTech* do not make the necessary use of technology to access these markets.

Although *TrailerTech* do not have any direct competitors in the industrial brake sector within the UK, many larger, more powerful commercial brake and axle manufacturers have now identified opportunities and are considering diversifying into this market. There are also industrial brake manufacturers starting to appear more and more in Eastern Europe, China and India.

Current procedures at TrailerTech

Research Tasks

Carry out the following Research Tasks, preparing notes to take into the examination with you. These notes are expected to be no more than **20 sides of A4**.

All research must be your own work.

Task 1

Make notes on how the Internet and other new technologies are used commercially. Your notes should include:

- the benefits of the use of the Internet for communication
- the benefits and drawbacks of e-commerce
- what is meant by extranet technology and how it is used
- the benefits of extranet technology
- what is meant by *Electronic Data Interchange (EDI)* and how it is used
- the benefits of EDI
- a comparison of how the Internet is used by *TrailerTech* and *Macau Industries*
- comments on the effectiveness of the use of the Internet and new technologies at *TrailerTech* and *Macau Industries*.

Task 2

Make notes on the use of legacy systems in organisations, including cost of replacement, reliability, user support and compatibility. Why do some organisations continue to use technology systems even when they are outdated and better, newer systems exist? Your notes should include:

- the use of legacy systems at *TrailerTech*
- the benefits of legacy systems
- the limitations of legacy systems.

Task 3

Make notes on the reasons for *TrailerTech* to introduce technology systems and replace their existing ones, and the issues that *TrailerTech* need to consider when doing so. Your notes should include:

- reasons why *TrailerTech*'s current operations are inefficient
- ways in which technology systems could improve efficiency at *TrailerTech*
- the costs involved in introducing technology systems
- reasons for replacing and improving technology systems
- reasons why technology systems introduced in organisations often fail
- issues that would need to be considered in order to introduce technology systems successfully at *TrailerTech*
- the benefits to *TrailerTech* of continually replacing and upgrading technology systems.

Task 4

Carry out a PEST and SWOT analysis for *TrailerTech*. You need to examine the business environment that *TrailerTech* are operating in, and use this to help you to apply the PEST and SWOT tools to *TrailerTech*'s scenario.

END OF PRELIMINARY MATERIAL