

Thursday 23 May 2013 – Morning

**AS GCE
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

G041/01/IC How Organisations Use ICT

INSERT

Duration: 1 hour 30 minutes



INFORMATION FOR CANDIDATES

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 - You must always keep your work secure and confidential whilst you are preparing it. **If it is stored on the computer network, keep your password secure. When printing work, collect all copies from the printer and destroy those you don't need.**
 - Any materials (eg books, information from the internet you have used to help complete this work) must be clearly acknowledged in the work itself.
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- All work must be submitted to your teacher once completed. Ensure you include your name, candidate number and centre number on all pages and that each page is hole-punched in the top left hand corner.
 - **You must not submit any materials other than your response to the pre-release tasks.**
 - When you hand in your completed tasks, you will be required to sign that you have understood and followed the regulations.
 - Your work will be returned to you at the start of the exam, in the exam room. At the end of the exam you must attach **all** tasks to your question paper using a treasury tag.

ALWAYS REMEMBER

YOUR WORK MUST BE YOUR OWN

PRE-RELEASE TASKS – INSTRUCTIONS FOR CANDIDATES

Read the attached case study and these instructions carefully, then carry out the tasks detailed below.

In Task 1 you will produce notes that will help you to answer questions in the examination for this unit. There are 30 marks available for Tasks 2 and 3.

You will need your completed tasks when you take the examination for this unit.

The work produced in response to the pre-release tasks must be submitted to your teacher when it is completed. The work must be presented as a hard copy.

It is not acceptable for you to copy large parts of material from other sources as the tasks require you to apply your knowledge to the case study. Any books, information leaflets or other material (eg videos, software packages or information from the internet) which you have used to help you complete this work must be clearly acknowledged in the work itself. To present material copied from books or other sources without acknowledgement will be regarded as deliberate deception.

You **must not** submit any material other than your response to the pre-release tasks.

The work must be collated so that it is presented in task order.

Each page of the work must be marked clearly with your name, centre number and task number.

When you have completed the tasks you must sign and date a Candidate Authentication Statement. You must then ask your teacher to sign to confirm that the work is your own.

Task 1

Do your own research and make notes which:

- describe the job functions / departments in Progress Blinds
- describe the roles of the personnel in Progress Blinds
- identify the different types of customers of, and suppliers to, Progress Blinds and describe how they interact with company personnel
- describe the main processes carried out by Progress Blinds, including the inputs, the processing, the calculations, and the outputs involved
- describe the ICT systems used in Progress Blinds
- explain the future improvements suggested by the directors of Progress Blinds and evaluate their impact
- explain how this increased use of ICT at Progress Blinds will impact on working practices and methods of production.

Task 2

A customer places an order for made-to-measure blinds with Progress Blinds.

Draw a diagram to explain how information moves, within Progress Blinds and with outsiders, during the processing of the order. The process starts when the order and deposit are received in head office and finishes when an invoice is produced.

Your diagram should show:

- who sends the information
- who receives the information
- the types of information communicated
- the method by which it is communicated.

[15]

Task 3

The Health and Safety at Work Act (1974) and subsequent Health and Safety Regulations have an impact on the way that ICT is used in the workplace.

Do some research and produce a word-processed report for the Managing Director of Progress Blinds. Your report must explain the implications to Progress Blinds of complying with this legislation in relation to ICT and must evaluate the effect this may have on the staff using ICT in the head office.

Briefly evaluate the method(s) you used to complete this report.

The work you produce for Task 3 **must not** exceed 500 words, including the evaluation of the methods you used.

You **must** include a word count.

Marks will be awarded for the quality of written communication in your answer.

You **must** acknowledge all information sources you used. This is not included in the 500 words.

[15]

Progress Blinds case study

Introduction

Progress Blinds is a company that supplies and installs made-to-measure window blinds. The company has a head office on an out-of-town business park. The company also has a warehouse where raw materials and finished blinds are stored and a factory where the blinds are made. These are on an industrial estate some distance away from the head office. There are a number of showrooms, in town centres and shopping centres. Potential customers can visit these showrooms to view examples of the window blinds and trims that can be supplied. In addition to selling blinds to the general public, the company also manufactures and installs blinds in commercial premises, such as offices.

Goods supplied

The company supplies many different types of made-to-measure blinds. These include pleated, roller, roman, venetian and vertical blinds. Each type of blind is available in a range of different styles, colours and materials. The blinds are all made in the company's factory. Stocks of mechanisms, fixings and trims for the different types of blind are kept in the warehouse. The company also makes roller and venetian blinds in a range of standard sizes. These ready-made blinds are sold to the public in the showrooms. Soft furnishing companies also buy the ready-made blinds in bulk to sell through their own stores.

Staffing and job functions (see Appendix 1 – Organisational Structure)

The company is run by a Managing Director assisted by three directors. These directors are Operations, Finance and Administration, and Sales and Marketing. Each of these directors is responsible for several departments or job functions within the company. For example, the Operations Director is responsible for production, warehousing and distribution.

Finance and administration

The Finance and Administration Director is responsible for accounts, human resources (HR) and general administration. All of these job functions are based in the head office.

Accounts staff keep records of all financial transactions. The records include income received from sales, payments made for supplies and materials, payments to contractors, and staff wages and commission. The accounts staff arrange for payments to be made using an online banking facility. The accounts staff also carry out activities relating to customer orders. This includes receiving deposits from order-processing clerks, accessing the order details on the sales order processing (SOP) system, entering the amount of the deposit, printing invoices and posting them to customers, and notifying HR when final payments are received.

HR staff carry out a range of activities relating to staff recruitment, welfare and training. Recruitment involves advertising vacancies, sending out and receiving application forms, arranging interviews and drawing up contracts for successful applicants. Staff welfare involves keeping staff records, ensuring members of staff get the correct wages, commission and leave entitlement, and that other benefits such as pension contributions are made and recorded. The training aspect involves keeping records of training courses attended and qualifications obtained. The HR staff also arrange for staff to attend training courses when required.

General administration involves the day-to-day tasks carried out in an office, such as dealing with correspondence and ordering office supplies.

Sales and marketing

The Sales and Marketing Director oversees the marketing and order processing functions in the head office. This director is also responsible for commercial sales. Companies who want made-to-measure blinds for their offices, and soft furnishing companies who want to place bulk orders for ready-made blinds contact this director. The director negotiates a price and liaises with the Operations Director, to ensure the requirements can be met. The Sales and Marketing Director then arranges for a contract to be drawn up detailing the goods to be supplied and the agreed price.

Part of the marketing assistants' role is to advertise the company. They help to produce glossy brochures to display the company's products.

The Sales and Marketing Director is also responsible for all the showrooms. Each showroom is run by a Branch Manager. The Branch Manager is responsible for maintaining the display of sample blinds in the showroom and the stocks of ready-made blinds. When extra stock is needed, the Branch Manager sends an order to the Warehouse Manager.

The Branch Manager is also responsible for managing a team of salespeople and a small number of administration assistants. The salespeople interact with customers in the showroom. They encourage customers to order made-to-measure blinds or buy ready-made ones. They also visit customers' homes to measure the window(s) and finalise the orders. External contractors are hired to install the blinds.

The administration assistants in each showroom keep a diary for all of the salespeople. The administration assistants produce and send out all correspondence from the showroom. They also produce confirmation purchase orders for goods and services, including those for external contractors. They check all invoices received against copies of these purchase orders before passing the invoices to head office for payment.

ICT systems in the head office

All the computers in the head office are connected in a local area network (LAN) with a single server. A router provides a broadband connection to the internet that can be used from all workstations. Each member of the head office staff has a workstation on their desk. There is at least one networked laser printer in each department. All the standard office software is stored on the server, as is the SOP software. All data is also stored on the server and can be accessed from all workstations, but the data can be accessed only by staff who are entitled to do so. For example, only accounts staff can access financial records.

ICT systems in the showrooms

Each salesperson has a tablet computer with an inbuilt camera and 3G connectivity. These have a bespoke graphics package installed on them, which includes images of all the blinds. Each showroom has its own LAN. The administration assistants each have a desktop computer linked to the LAN with broadband internet access. Printing facilities are provided by a networked laser printer. Diary software is used to keep a single diary for all the salespeople in the showroom. Standard office software can also be accessed from the server.

ICT systems in the warehouse

In the warehouse there is a stand-alone computer with a barcode reader and a laser printer attached. The only software on this computer is the database of stock in the warehouse. The software has separate data entry forms for adding and removing stock. This software also allows the Warehouse Manager to produce a number of reports, including purchase orders for more stock.

Procedures for buying made-to-measure blinds

Customers visit one of the company's showrooms. The showroom contains examples of different types of blinds and samples of the different materials and trims available. Salespeople are available to help the customer decide on the type of blind they want.

When the customer has made a provisional decision on the type of blind required, the salesperson writes down the customer's name, contact details and availability for a home visit on a card. Later, this card is handed to one of the administration assistants. The administration assistant accesses the showroom diary, locates a suitable date and time for the salesperson to make the visit, and enters the customer's name and contact details against the salesperson's name for the chosen date and time. The administration assistant then telephones the customer to give them the appointment details. At the end of each day, the diary software sorts the following day's appointments by salesperson and produces a separate list of the next day's appointments for each salesperson. The administration assistant emails each of the appointment lists to the relevant salesperson.

At the appointment, the salesperson uses the inbuilt camera on the tablet computer to take a photograph of the room. They then select the customer's choice of blind on the touch screen and whether the customer wants the blind to hang inside or outside the window recess (see Fig. 1). The software identifies the window area in the photograph based on the light levels and shape of outline. The software resizes the image of the chosen blind to match the window area and superimposes the resized image onto the window area in the photograph. An enhanced image of the room as it would look with the blind installed is then displayed. This can be saved and compared with images showing other choices. The salesperson shows these images and samples of the actual materials and trims available to the customer.

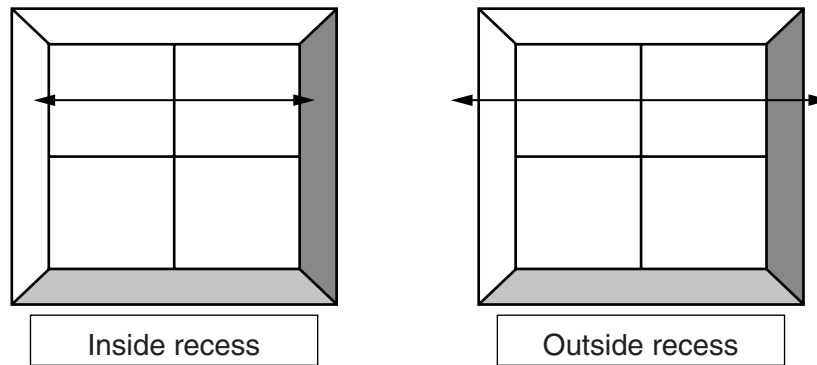


Fig. 1

When the customer has told the salesperson their final decision, the salesperson takes the measurements. If the blind is to hang inside the window recess, the width and depth of each window is measured. If the blind is to hang outside the recess, the exact width and depth of the blind required is measured. All measurements are in centimetres.

The salesperson uses a spreadsheet template on the tablet computer to enter the customer details and the details of the blind(s) to create a quotation. For each blind, this will include the type of blind, the material, any trim, whether it will hang inside or outside the window recess, and the width and depth. Formulas carry out the required calculations to create the quotation that includes an order form. This quotation is shown to the customer.

If the customer is happy to go ahead, the salesperson telephones the Production Manager in the factory with details of the customer's order. The Production Manager gives an estimated time for completion. This information is added to the quotation. The salesperson emails the final quotation to one of the administration assistants who prints two copies of the quotation and posts them to the customer. If the order is placed, the salesperson will receive commission on the order, so the order form includes the salesperson's name. The administration assistant telephones an external contractor with the estimated time for completion. The contractor provides confirmation of their availability to install the blind(s).

To confirm the order, the customer completes the order form on one copy of the quotation. They post it to the company's head office with a deposit of 50% of the total cost. They keep the other copy for their own records.

Order processing procedures

When an order form and deposit are received in the head office, an order-processing clerk uses a data entry form to enter the details of the order into the SOP software (See Fig. 2).

Customer Order Input

Order No: Customer No:

Surname: Initials: Title:

Address:

PostCode:

Telephone: Mobile: E-mail:

Date Booked for Installation: Salesperson:

Product Order Input

Type	Material	Width	Depth	Trim	In/Out	Total Cost
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Sub Total						<input type="text"/>
VAT						<input type="text"/>
Grand Total						<input type="text"/>
Deposit						<input type="text"/>
Balance						<input type="text"/>

Fig. 2

The type of blind, the material to be used, any trim required and whether the blind is to hang inside or outside the window recess are entered using drop-down lists. The width and depth are entered using the keyboard. If inside recess is selected, one centimetre is automatically deducted from each dimension. Both dimensions are divided by 100 to convert them to metres and then multiplied together to find the area of the blind. Each type of blind has a code and each material has a code. These codes are used together to search the stock database to find the price per square metre. The trim also has a code which is used to look up its price. The area of the blind is multiplied by the price of the material per square metre to give the material cost. The labour cost for installing the blind is calculated by multiplying the width in metres by a fixed charge per metre for the type of blind. All costs are added to give the total cost of one blind. If more than one blind is ordered, another entry is made by selecting the Add a Blind button. A new row is added, and the total costs are added together to give a sub-total. VAT is then calculated and added to give the grand total. The amount of the deposit is entered. This is deducted from the grand total to give the balance to be paid.

A printed copy of the order is sent to the Warehouse Manager by internal mail. The Warehouse Manager checks the availability of the material, trim and fixings needed, before handing the order to the Production Manager so that the blind(s) can be made.

The Production Manager telephones the relevant Branch Manager with the date when the blind(s) will be completed. The Branch Manager telephones the external contractor to tell them the installation date. The Branch Manager emails the confirmed installation date to the order-processing clerk, who enters it into the SOP software.

The order-processing clerk passes the deposit to the accounts staff by internal mail. A member of accounts staff accesses the order details and prints an invoice. This is posted to the customer. When the blinds have been installed the customer must pay the outstanding balance. The invoice shows the installation date and the date by which the outstanding balance must be paid. When the final payment is received, the accounts staff notify HR so that the salesperson's commission can be paid.

Procedures in the warehouse

Material used to make blinds is supplied in rolls each holding 100 metres in length. Each roll has a barcode attached. All other stock has a barcode either on the item or on the packaging. When new stock arrives, the barcode is scanned and the product code is used to look up the record for that item in the stock database. The quantity of the item is then entered using the keyboard. For each roll of material received, 100 is added to the quantity_in_stock field for that material in the stock database. For other items, the quantity is added to the quantity_in_stock field for that item. When material is used to make a blind, the barcode on the roll is scanned and the length in metres cut from the roll is entered using the keyboard. This value is subtracted from the quantity_in_stock field for that material. For all other items, the quantity used is entered and subtracted. One roll of material is finished before another one is started. If there is insufficient material left on the roll to make a blind, the length in metres left on the roll is subtracted from the quantity_in_stock field and the roll is removed from stock.

The Warehouse Manager can input the product number of any item to check the stock level. The stock level of the item is displayed on screen. The Warehouse Manager is responsible for re-ordering stock. Once a month, the stock level of all items is checked and purchase orders are posted to approved suppliers. Emergency orders can be made by fax.

Procedures for updating stock

If Progress Blinds is to compete with other companies, they must ensure that the range of blinds they offer is up-to-date with the latest trends and provides what customers want. The Sales and Marketing Director visits trade fairs to find out about the latest trends and materials available. Twice a year, the marketing staff analyse sales for the last six months to find out which blind materials are popular and should be continued, and which are rarely ordered and could be discontinued. The Sales and Marketing Director decides which materials will be discontinued and which new materials will be added and then informs the Operations Director. Sample blinds must then be made and distributed to the showrooms.

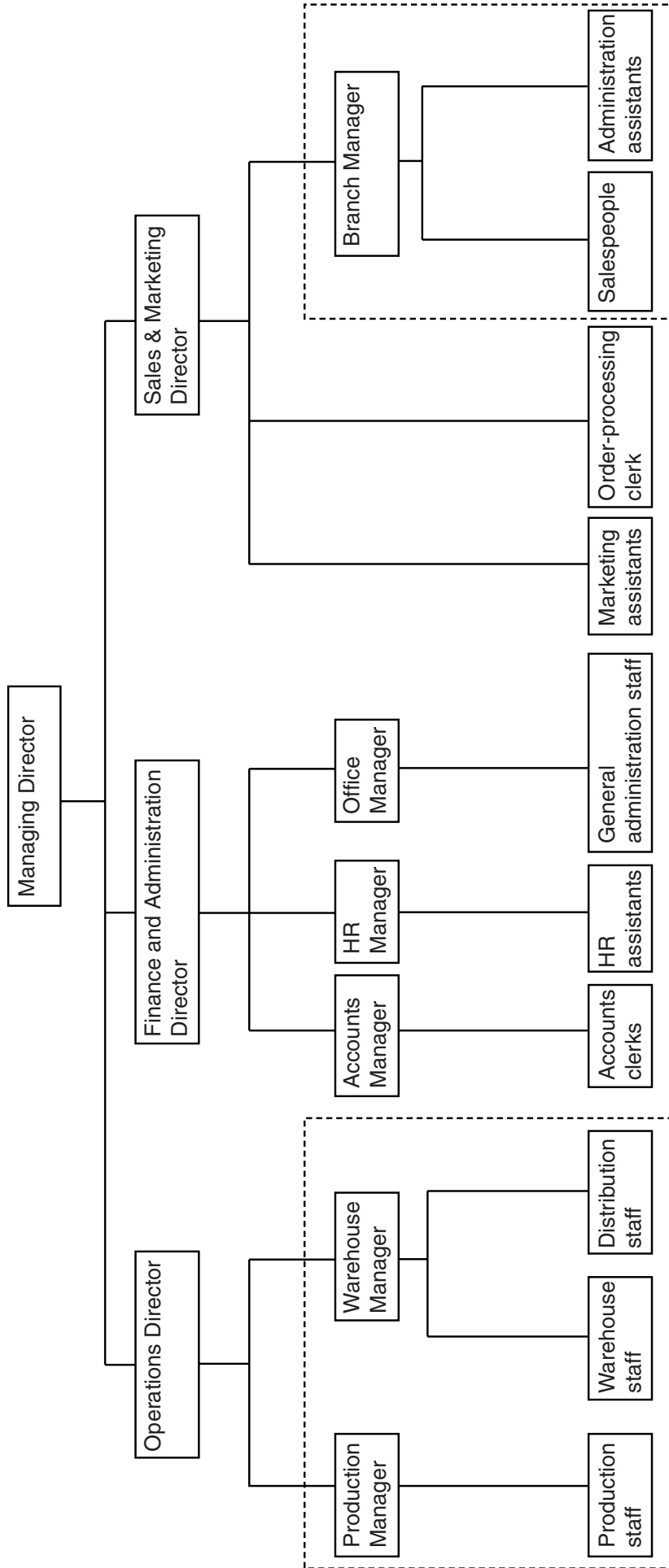
Future improvements

Currently, the production of blinds in the factory is very labour-intensive, involving many manual processes. This is expensive and leads to high levels of wastage. The Operations Director is investigating the introduction of computer-aided manufacturing (CAM).

The Managing Director is concerned that weaknesses in the company's ICT systems are hampering communication between the different sites and personnel. The Managing Director is determined to upgrade the ICT systems to improve communication and offer greater flexibility to staff.

Progress Blinds has a website but this is currently only used to display pictures of example blinds and provide a list of showrooms. The Sales and Marketing Director of Progress Blinds wants to use the company's website to its full potential.

Appendix 1 – Organisational Structure



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