

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
AS GCE**

G041/01/IC

**APPLIED INFORMATION AND
COMMUNICATION TECHNOLOGY**

How Organisations Use ICT

INSERT

MONDAY 16 JANUARY 2012: Afternoon

DURATION: 1 hour 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

INSTRUCTIONS TO EXAMS OFFICER/INVIGILATOR

- **Do not send this Insert for marking; it should be retained in the centre or destroyed.**

NOTICE TO CANDIDATES

The work you submit for these pre-release tasks must be your own.

- **If you copy from someone else or allow another candidate to copy from you, or if you cheat in any other way, you may be DISQUALIFIED from at least the subject concerned.**
 - **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.**
-
- **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 beginning on page 8 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 (e.g. 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

Carry out your own research and make notes which:

- **describe the job functions / departments within Pounds Car Hire**
- **describe the roles of the personnel within Pounds Car Hire and how they interact in relation to the company's structure**
- **identify the different types of customers of and suppliers to Pounds Car Hire and describe how they interact with company personnel**
- **describe the main processes carried out by Pounds Car Hire, including the inputs, the processing, the calculations, and the outputs involved**
- **describe the ICT systems used in Pounds Car Hire**
- **explain what Pounds Car Hire must do to comply with legislation relating to ICT and the impact this has on the company, its staff and customers.**

TASK 2

An important process within Pounds Car Hire is taking bookings for chauffeur-driven cars.

Draw a diagram or a set of diagrams to explain how information moves within Pounds Car Hire and with outsiders during the process of taking a chauffeur-driven car booking. The process starts when the customer contacts the company and ends when the car is provided.

Your diagram(s) 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

Pounds Car Hire’s website currently only displays details of the types of cars available and the location and contact details of the car hire outlets. The Sales and Marketing Director wants to offer online booking.

Carry out some research and produce a word-processed report for the Sales and Marketing Director of Pounds Car Hire. Your report must explain the facilities an online booking system could offer and evaluate the impact of this system on Pounds Car Hire and its customers.

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.

The quality of your written communication will be assessed through this task.

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

[15]

POUNDS CAR HIRE (PCH) CASE STUDY

INTRODUCTION

PCH is a company that owns a small chain of car hire outlets in Kent and Sussex. The head office of PCH is situated on an industrial estate near the Dartford Crossing. The company also owns a workshop where the hire cars are serviced and repaired. The workshop is situated on the head office site along with a small warehouse, which is used to store the parts needed to service and repair the cars, and a compound, where cars can be kept. As the company started from a single outlet and has expanded over time, its systems have not kept pace with this expansion and are not as efficient as they could be.

SERVICES SUPPLIED

PCH offers a range of cars for self-drive hire to the general public. These include eco-friendly, mini, economy, compact, standard, large and luxury. A number of each type of car is kept at each outlet, with the actual number of each type depending on its popularity. For example, an outlet that rarely has bookings for luxury cars may only keep one in stock. All self-drive cars are less than two years old. All bookings for self-drive hire are made through an individual outlet.

As well as self-drive hire, PCH offers chauffeur-driven cars for hire. These include standard limousines, stretched limousines and vintage cars. All of these cars are kept at the head office compound. The cars can be booked by individuals for school proms, hen nights and weddings, for example. They can also be booked by organisations, such as film companies or sports clubs, for transporting personnel between locations. Bookings by individuals are made through one of the outlets. Organisations negotiate a contract for the services required with head office.

STAFFING AND JOB FUNCTIONS (SEE APPENDIX 1 ON PAGES 22–23)

PCH is run by a Managing Director, who is responsible for all aspects of the day-to-day running of the business, supported by three assistant directors. These are Operations, Office Services, and Sales and Marketing. Each assistant director is responsible for several departments or job functions within the company. For example, the Operations Director is responsible for car maintenance, warehousing, IT services and chauffeuring.

OPERATIONS

The workshop manager reports to the Operations Director, as do the driver co-ordinator and the IT technicians. In the workshop, a chief mechanic supervises the work of the mechanics who service and repair the cars, while a warehouse manager supervises the work of warehouse assistants who organise and maintain the stock of parts and materials required. Both report to the workshop manager who has an office in the workshop.

The driver co-ordinator supervises the small number of full-time drivers employed by the company. When additional drivers are required, the driver co-ordinator contacts the human resources (HR) department to arrange this.

The IT technicians maintain the computer systems on the head office site and in the car hire outlets. If there is a problem with the computer system in one of the outlets, a technician has to travel to the outlet to fix it.

OFFICE SERVICES

The Office Services Director is responsible for HR, finance and administration. All of these job functions are based in the head office. There is a department for each job function. Each department has a manager.

HR assistants maintain a register of self-employed drivers and their availability. When the driver co-ordinator requires additional drivers, HR staff identify those available and contact them with the offer of work. HR staff draw up a contract for the work. When the job is completed, the driver submits an invoice, which HR staff pass to the finance department for payment. HR staff also carry out standard activities relating to staff recruitment, welfare and training.

The finance department keeps records of all the company's income and expenditure. Income includes the money received for both self-drive and chauffeur-driven car hire and from the sale of self-drive cars that are two years old. Expenditure includes payment for parts and materials for the workshop, replacement cars, driver invoices and staff wages. These payments are made using an online banking facility. The staff use the income and expenditure records to produce monthly and annual accounts for the directors and HM Revenue and Customs. They must also generate VAT (Value Added Tax) returns once a quarter. These show the total value of goods sold on which customers have been charged VAT less any goods purchased where the company has paid VAT. The finance clerks must arrange for the amount due to be paid.

Admin staff are responsible for general office procedures such as producing and sending correspondence and dealing with correspondence received. They produce and send purchase orders to suppliers for any goods required

by the workshop. They then pass the invoices received from suppliers to the finance department for payment. Admin staff also keep track of general office supplies, such as paper and toner, and place orders for more stock when necessary.

SALES AND MARKETING

The Sales and Marketing Director's main responsibility is ensuring that the company profits are both maintained and grown. This director is also responsible for all the advertising and promotion of the company. PCH does not have a marketing department but uses the services of an external advertising agency to advertise and promote the business. The Sales and Marketing Director negotiates a contract with the agency which details the services to be provided and their costs. The Sales and Marketing Director then holds regular meetings with the agency directors to discuss PCH's advertising requirements.

A contract hire manager reports to the Sales and Marketing Director. This manager's role is to negotiate contracts with organisations that require chauffeur-driven car hire. The negotiations will involve the number and type of cars required, when they are needed and for how long. The contract hire manager will then agree a price with the organisation's representative. The manager is assisted by a contract clerk who draws up the contracts and keeps records of chauffeur-driven car hire bookings in a database. This database also includes records of bookings from individuals made via the car hire outlets. The driver co-ordinator can access these records.

Another responsibility of the Sales and Marketing Director is to oversee the car hire outlets. Each outlet has a manager who reports directly to the Sales and Marketing Director. The outlet manager is responsible for overseeing the two areas within the outlet. These are the

office and the yard, each of which has a supervisor. The office supervisor oversees the work of the three job roles within the outlet office. These are receptionists, booking clerks and an admin assistant.

Receptionists greet customers who come in to pick up their self-drive hire car. They check each customer's details, identify the car assigned, complete any paperwork and direct the customer to the car. Booking clerks take bookings from customers and enter the details into a database. The admin assistant carries out standard office procedures, such as sending correspondence and dealing with correspondence received. The admin assistant also maintains a staff rota to ensure that there are sufficient staff on duty, including outside normal office hours, so that customers can pick up or return cars at these times.

The yard supervisor oversees the yard workers, who check returned vehicles for any damage and see if any servicing is required. They also clean and valet the cars ready for the next hire.

ICT SYSTEMS ON THE HEAD OFFICE SITE

Each member of staff in head office has a workstation on their desk that is connected in a local area network (LAN) with a server. A router provides a broadband connection to the internet that can be used from all workstations. There is at least one networked laser printer in each department. Word processing, spreadsheet and database management software is stored on the server, as is all data. This can be accessed from all workstations but access to data is restricted to those staff who are entitled to do so. For example, only HR staff can access personnel records.

There is a second server in the workshop that is linked to the head office server. This server holds a spreadsheet of all the vehicles owned by the company and their service history. It also holds stock control software for the warehouse. There are workstations in the warehouse and on the workshop manager's desk that have a wired connection to the server. Mechanics use laptops that can connect to the server wirelessly. These laptops hold specialist diagnostic software used by the mechanics when servicing the cars.

ICT SYSTEMS IN THE CAR HIRE OUTLETS

Each outlet has its own LAN with a single server. Workstations connected in this network include one each for the outlet manager, office supervisor and admin assistant plus two for use by booking clerks and two on the front desk for use by receptionists. The yard supervisor has a laptop that can connect wirelessly to the server. There is a networked laser printer that can be used from all workstations and a networked dot-matrix printer that is used by receptionists to print on multi-part stationery. A router provides a broadband connection to the internet that can be used from all workstations. The main software on this server is the booking system but it also holds standard office applications. All staff in the outlet can access the booking system but only the booking clerks can enter a new booking. However, receptionists can amend a booking to confirm customer details and that they have picked up the car. The yard supervisor can only update a booking to confirm the car has been returned.

PROCEDURES FOR RENTING A SELF-DRIVE CAR

Customers wanting to hire a car usually contact their nearest outlet by telephone. One of the booking clerks uses a data entry screen (see Fig. 1 on the facing page) to enter the customer details and their requirements. If the customer has hired from that outlet before, the booking clerk can select their name from a drop-down list and the rest of their details will be looked up and displayed. For new customers, the booking clerk must key in their full name, as it appears on their driving licence, their driving licence number, their date of birth, their address and contact number(s).

The booking clerk will ask the customer what type of car they require, the time and date they want to pick the car up and the time and date they will return it. These details are all entered using drop-down lists. The booking clerk then clicks an on-screen button to check the availability of the type of car required. If a suitable car is available, the car's registration number appears on the booking screen.

The customer is asked if they require any extras, such as Sat Nav, a baby seat or a booster seat. The booking clerk uses radio buttons to select these items. For baby seats and booster seats, there is also a box to key in the quantity required. Further radio buttons allows the booking clerk to indicate if the customer wants to buy additional insurance cover and if there will be additional drivers. For the latter, there is also a box to key in the quantity.

Fig. 1 Screen-shot of Booking Input form

The screenshot shows a web browser window titled "Customers" with a "Booking Input" form. The form is divided into two main sections: "Customer Details" and "Car Details Input".

Customer Details:

- Name Look Up: A dropdown menu.
- Surname: A text input field.
- Licence No: A text input field.
- Address: Four stacked text input fields.
- Post Code: A text input field.
- Telephone: A text input field.
- Mobile: A text input field.
- First Name(s): A text input field.
- Date of Birth (DD/MM/YY): A text input field.

Car Details Input:

- Start Date: A dropdown menu.
- End Date: A dropdown menu.
- Car Type: A dropdown menu.
- Start Time: A dropdown menu.
- End Time: A dropdown menu.
- Check Availability: A button.
- Reg No.: A text input field.
- Sat Nav: A text input field with a sub-label "• Baby Seat Qty".
- Additional Insurance: A text input field with a sub-label "• Additional Drivers Qty".
- Booster Seat Qty: A text input field.
- Calculate: A button.

At the bottom of the form, there are two buttons: "New Booking Input" and "Exit Booking Input".

The booking clerk checks through the details entered with the customer and then clicks the 'calculate' button. The system calculates the number of days' hire by subtracting the pickup time and date from the return time and date. The daily rate for the type of vehicle is looked up and multiplied by the number of days it is required to give the hire cost. Charges for extras, additional insurance and additional drivers are each looked up and multiplied by the quantity. All charges are added to the hire cost to give a sub-total. VAT is calculated and added to the sub-total to give the estimated total cost of hiring the car, which is displayed on screen on a separate booking confirmation form. The estimated total cost is told to the customer. If they are happy to go ahead, the customer must supply credit card details that the booking clerk enters into the booking confirmation form before clicking a 'confirm' button. A booking number is generated and displayed. The booking clerk tells this to the customer.

When a customer arrives to pick up their hire car, they tell the receptionist their booking number. The receptionist keys in the booking number to look up the booking details, which are then displayed on-screen. The customer must hand their driving licence and credit card to the receptionist who checks the details and uses a check box on-screen to confirm that this has been done. Any additional drivers must also provide their driving licences and the receptionist enters their name, date of birth and driving licence number. The receptionist prints out a hire agreement on 3-part stationery. The customer signs the agreement. The receptionist keeps the top copy and hands the other two copies to the customer. The receptionist calls the yard supervisor's mobile phone to let them know the customer is ready to pick up the car. The customer is told the location of the car in the yard.

The yard supervisor meets the customer at the car, where the customer hands over both copies of the hire agreement. The yard supervisor writes down the car's current mileage on the hire agreement and also notes any existing damage to the car. The yard supervisor hands the middle copy of the hire agreement back to the customer with the car keys. The yard supervisor keeps the bottom copy.

When the customer returns the car, they hand their copy of the hire agreement and the car keys to a yard worker. The yard worker collects the bottom copy of the hire agreement from the yard supervisor. The yard worker notes the date and time of return and the car's mileage on both copies of the hire agreement and checks for any additional damage. If any is found, this is also noted on both copies of the hire agreement. The yard worker hands the middle copy back to the customer. The bottom copy is handed to the yard supervisor who enters the details into the booking system using their laptop. The yard supervisor also sends an email to the admin assistant to let them know the car has been returned. The admin assistant accesses the booking system and prints out an invoice showing the final total cost of the car hire. This is posted to the customer. The admin assistant requests payment for this amount from the customer's credit card company. At the end of each month, the yard supervisor emails the mileage for each car to the workshop manager.

PROCEDURES FOR BOOKING A CHAUFFEUR-DRIVEN CAR

An individual wanting to book one or more chauffeur-driven cars telephones the admin assistant at their nearest outlet to request an appointment with the outlet manager. The admin assistant tells them the date and time for the appointment. At the meeting, the outlet manager shows the customer a folder with pictures and details of the cars for hire. The customer tells the outlet manager their requirements including which car(s) they want to hire, the purpose, and the date, time and location of the pickup. The outlet manager emails the customer's requirements to the contract clerk, who checks the availability of the required car(s) in the database. Providing they are available, the contract clerk makes the booking by entering the booking details onto the database and emails confirmation of the booking to the outlet manager. The outlet manager telephones the customer to confirm the availability of the car(s). To confirm the booking the customer must post a deposit of 25% of the hire cost to the contract clerk. The driver co-ordinator accesses details of the booking from the database and assigns a driver for each car booked. Shortly before the pickup, the driver co-ordinator hands the driver(s) written instructions for the hire job. Once the job is completed, the finance department sends the customer an invoice for the outstanding cost of the hire.

PROCEDURES FOR CAR MAINTENANCE AND REPLACEMENT

All cars must be serviced at least once a year or when they have been driven 12,000 miles since delivery or last service, whichever is sooner. When new cars are delivered, the workshop manager enters their details, including the delivery mileage, into the spreadsheet on the workshop server. Each month the emails from the yard supervisors at the outlets are used to update the

mileage for each car. The workshop manager then runs a macro on the spreadsheet to identify the cars that will need to be serviced in the coming month. The macro selects all cars where the mileage is more than 10,000, or where the time period is more than 10 months, since the car was delivered or last serviced. These are then sorted, so that cars closest to the service deadline are at the top of the list, and the macro allocates dates for servicing so that no more than six cars are due to be serviced each day. The macro prints out a report showing the selected cars, their location and the date they are to be serviced. The workshop manager emails the relevant details to each yard supervisor.

New cars are usually bought in bulk in March and September when car registrations change, although an individual car may be bought at other times to replace one that is badly damaged. The Operations Director attends motor shows and negotiates with the sales representatives of different car manufacturers to obtain the best price for the replacement cars. The Operations Director signs contracts with the chosen manufacturers for the supply of new cars. The contracts are usually for a year but may be for longer if the Operations Director can negotiate a lower price. Another macro on the spreadsheet selects and displays a list of self-drive hire cars that will be two years old by the next replacement date. The workshop manager emails the list to the Operations Director, so that an order can be placed. The order specifies the models of cars required and the number of each. The workshop manager also telephones the owner of a local car auction company to tell them how many cars are being sold, when they will be available and their details, such as make, model, colour and mileage. The car auction company takes an agreed percentage of the sale price of each car. The owner negotiates this percentage with the Operations Director annually.

Parts and materials needed in the workshop are bought from a wholesale motor factor. The warehouse manager places an order by post once a month, detailing the items and quantities required. The motor factor posts an invoice to the finance department detailing the cost of the items and the payment due.

FUTURE IMPROVEMENTS

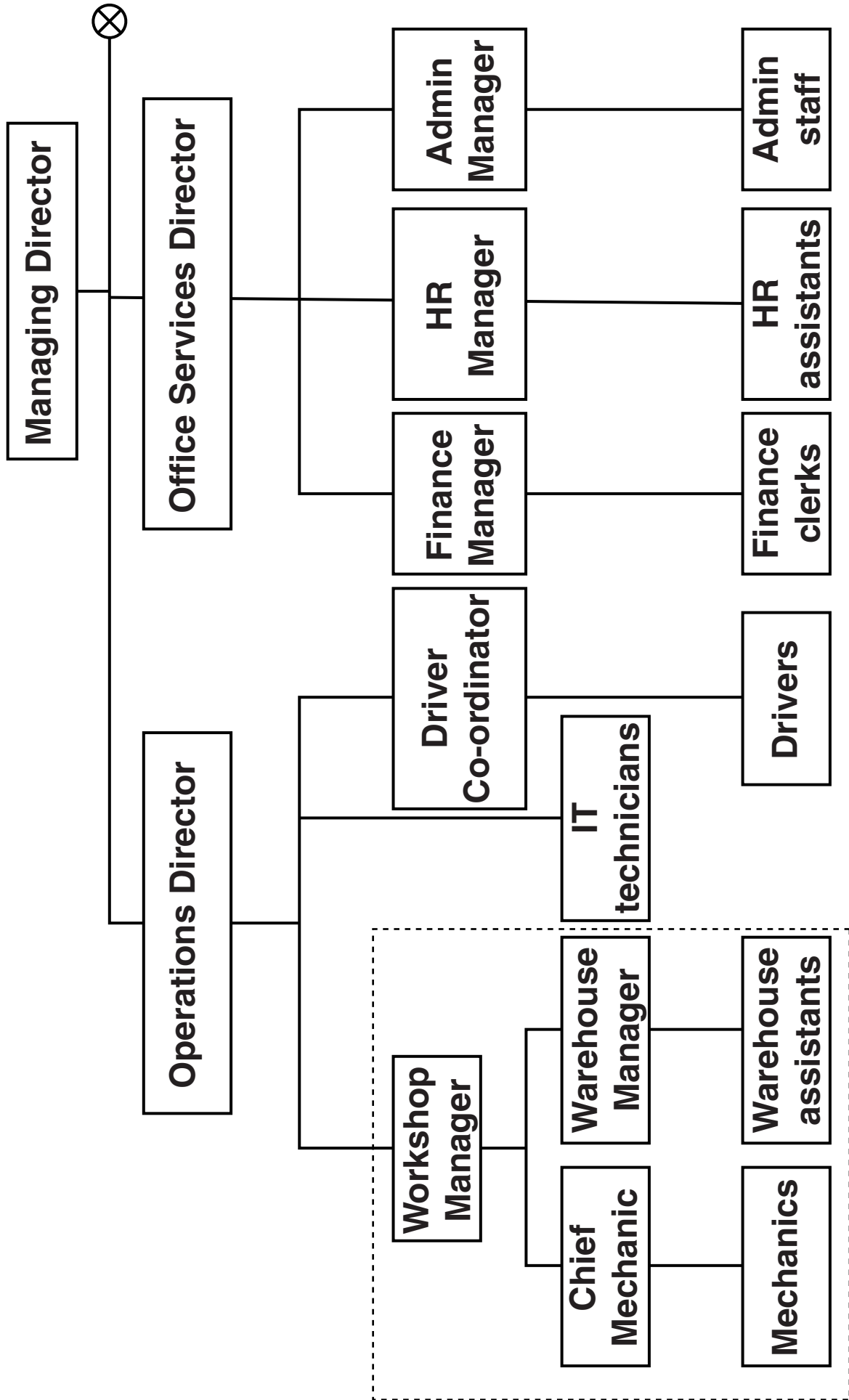
The company has a website but this only displays details of the types of self-drive and chauffeur-driven cars available and the location and contact details of the different car hire outlets. The Sales and Marketing Director is concerned that the company is losing out to other car hire companies that offer online booking and wants to investigate offering this option.

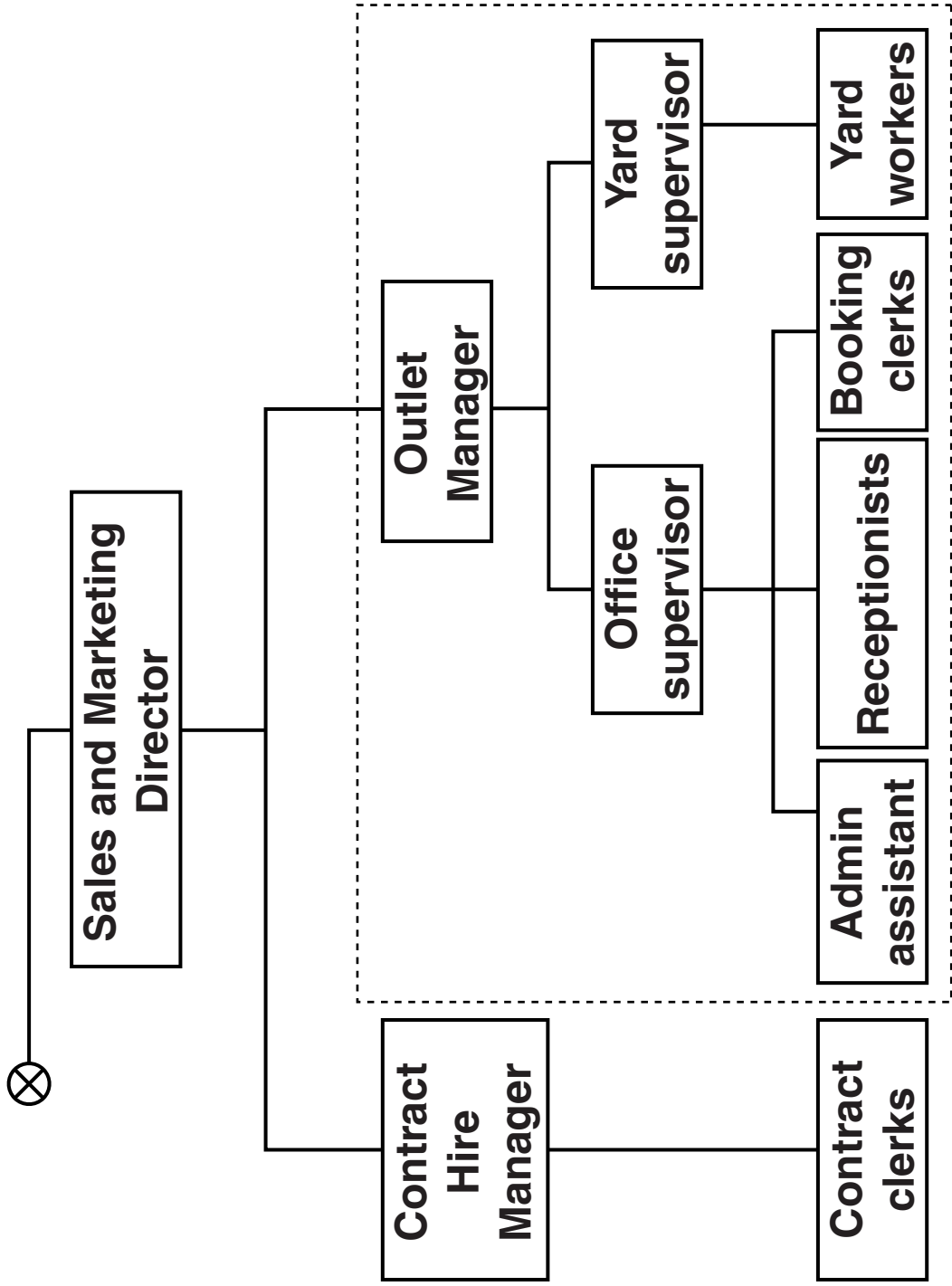
The Managing Director is concerned that, due to the way the company has expanded, there is much duplication and poor communication in the company's ICT systems and that this is affecting their customer service. The Managing Director is looking at ways to streamline the systems and improve communication.

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TURN OVER FOR APPENDIX 1

APPENDIX 1 – ORGANISATIONAL STRUCTURE





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