

CIMA

Final Level

Management Accounting –
Information Strategy

14

FLIS

27 May 2004

Thursday morning

INSTRUCTIONS TO CANDIDATES

Read this page before you look at the questions

You are allowed three hours to answer this question paper.

Answer the ONE question in Section A.

Answer TWO questions ONLY from Section B.

SECTION A – 50 MARKS

ANSWER THIS QUESTION

Question One

Background to Erehwon – country and people

Erehwon is an island in the Caribbean with a population of approximately 1.25 million people and a land area of 50,000 square kilometres. It has four major towns, including the capital Carterville, all located on the coast, with a large number of smaller villages inland.

The majority of the citizens of Erehwon are employed in manual jobs, although most have cars and basic consumer goods such as television sets and video players. The main medium of exchange is cash. Credit cards are advertised widely on radio and television as being fun and easy-to-use, but relatively few people have applied for them and even fewer use them as a means of payment. There is an inherent mistrust of credit card technology.

The economy is split fairly equally between industrial production in the main towns and farming inland. Industry within Erehwon includes soft drink manufacture and bottling, textile and clothing manufacture and provision of specialist financial services to other islands in the Caribbean. Farming concentrates on two main crops of bananas and coffee. A wide variety of holiday hotels and other resort-based holiday attractions are also available. However, most people on vacation do not travel extensively within Erehwon as the country does not have many holiday attractions outside of the resorts.

Background to Erehwon – transport infrastructure

The transport infrastructure is extremely limited. There are no railways and only one public bus service operates along one route in the capital. Personal transport is almost exclusively by car. Unfortunately, roads within Erehwon are not well maintained with most government expenditure being allocated to maintaining the runway on the island's international airport.

While roads may be poorly maintained, the citizens of Erehwon have no choice but to use their cars for transport. Traffic congestion is increasing to the extent that government statistics show that, on average, each individual spends over an hour each day sitting in his/her car.

The government recognises that personal transport does have distinct benefits for individuals but it is not necessarily economically or environmentally efficient. The government of Erehwon is particularly concerned about environmental damage from motor vehicle exhausts and the island's dependence on Venezuela for oil. Alternative transport solutions have been investigated in the past, and are likely to be considered again in the future.

Proposed amendments to transport infrastructure

Within the government of Erehwon, the Strategic Government Communications Committee (SGCC) develops and implements government policy regarding transport alternatives.

Recently, the SGCC has been considering the implementation of a tram system (that is buses running on railway tracks). This would link the four towns and provide links in the rural economy. Passengers will be expected to pay a flat fee to travel on the trams, which will be collected using credit or debit cards at the entrance to the tram. Passengers will simply swipe their card through a reader allowing access gates to open to provide entry to the tram. Potential passengers without a debit or credit card will be able to purchase "tram cards" from many major stores. The tram card will be swiped in the same way to credit cards, and will be purchased with a specific number of tram journeys credited to the card.

The system would necessitate building of tram lines (similar to railway lines) throughout Erehwon for the trams to run on. Similar systems have been implemented successfully in other major cities in the world. However, Erehwon would need to import all the infrastructure and the trams due to lack of appropriate industry on the island.

While the capital expenditure would be significant, the system would provide specific benefits in terms of:

- decreased pollution as the trams would run on electricity;
- decreased congestion on roads as there would be fewer journeys in private cars;
- decreased dependence on oil as electricity can be generated from many different sources including wave power (a pilot project is being run near Carterville).

The system is also thought to be a vote-winner because it will start to address the issue of traffic congestion, one of the key factors politicians are attempting to remedy at this time. Elections for the national government will be held in five months time.

Required:

- (a) Advise the SGCC what sources of information are relevant to determining the costs and benefits of the proposed tram system, explaining what type of information can be derived from each source.

(16 marks)

- (b) Identify and explain two Critical Success Factors and their associated Performance Indicators, which can be used to evaluate the success or otherwise of the tram system after implementation.

Discuss where information will be obtained for each of the Performance Indicators.

(14 marks)

- (c) Evaluate the different communication systems which can be used to inform the general public on Erehwon of the benefits of the tram system, and recommend which system is most suitable for the island.

(10 marks)

- (d) Discuss the potential benefits and problems of using credit card technology to pay for tram fees.

(10 marks)

(Total = 50 marks)

End of Section A

SECTION B – 50 MARKS

ANSWER TWO QUESTIONS ONLY

Question Two

Company background

DJ plc is a chain of 36 electrical stores within one country. Each store sells a range of products including washing machines, television sets, video recorders, DVD players and DVD recorders to the general public. The stores have been trading for 18 years, making an acceptable amount of profit for the shareholders and Board of Directors.

There is currently very little to differentiate DJ plc from its four main competitors. All five companies sell the same goods, have approximately the same number of stores and charge about the same prices for goods being sold. The Board of DJ plc would like to obtain some competitive advantage to substantially increase its market share. With this aim in mind, it has been considering a new IT based system.

New product monitoring system

All goods for resale will be delivered to a central warehouse where each product will have a small computer chip attached. The chip contains a unique identification number as well as product information and date of manufacture, which can be read by specialised scanning equipment. Scanners will be placed in the central warehouse and in all DJ plc stores. This means that any product can be accurately traced from the warehouse to any store and finally to purchase by a specific customer – scanners will also be located at all checkouts.

One further enhancement is to use the technology to provide a quick payment method in each store. Many customers have a DJ Smart Credit Card which incorporates a computer chip into the card. Scanners, which will be placed just before the exit to each store, can read not only the product chip but also the DJ Smart Credit Card chip. Customers only have to take a product through the scanners to "buy". They will receive an invoice on exiting the store and the sale amount will be added to their Credit Card. The system is relatively expensive, but the Board is looking for other applications to try and justify the cost.

Some suppliers are using similar technology to maintain diagnostic information on individual products. The chip will provide information on the operational status of the product at the time of failure. The chips being used are compatible with DJ plc's product monitoring system.

Required:

Discuss the ways in which the new IT system in DJ plc can be used to provide competitive advantage.

(25 marks)

Question Three

Required:

- (a) Compare and contrast explicit and tacit knowledge, explaining any problems in sharing each type of knowledge.

You should provide examples to illustrate your answer.

(10 marks)

- (b) JN is an international banking organisation with 2,583 branches located across 128 countries. A separate information system is maintained in each country. Each system includes:

- corporate accounting and credit control;
- publishing research (within Extranet access for specific clients);
- ordering IT equipment;
- customer profiling;
- informing staff of regulatory changes.

This has given JN a distinct advantage over its competitors as the bank has been able to focus on the requirements of the national rather than international markets. However, the international Board of JN has started to notice some weaknesses in this method of development, particularly regarding system incompatibility and comparative weaknesses in information provision in some countries compared to others. The Board has noted that some countries have implemented particularly useful systems or have personnel highly skilled in some areas, but these systems and skills are not shared for the benefit of JN as a whole.

The Director of Information Systems has recommended to the Board that standardised information systems based on a Groupware product are implemented throughout JN. These will allow distinct benefits of sharing information on a global basis and enable the Board to obtain organisation-wide information on a more timely basis.

Required:

Evaluate whether the use of Groupware will assist information transfer and sharing within JN.

(15 marks)

(Total = 25 marks)

Question Four

The GH Company designs and manufactures signalling control systems for railways. The company is over 100 years old and produced the first railway signal, which had to be moved by hand and was located by the side of the railway track, for one of the last major railways to be built in England in the 19th century. Since then, signalling systems have become more complex, with the latest signals being controlled by computers run by the railway company.

The latest prototype system being developed by the GH Company is able to determine the precise location of railway engines on a railway using sensors built into the track. An onboard display in the railway engine informs the driver of the estimated safe speed, removing the need for any form of signals beside or over the track completely.

A contracting company building a new railway in the USA has expressed interest in this system as it would significantly reduce construction costs for the railway. Part of the proposal is to monitor the location of trains from a branch of the GH Company in the USA, issuing instructions on recommended speed direct to trains using GH computer systems.

The GH Company entered into an outsourcing agreement with DF plc six years ago. Under the terms of the agreement, DF plc was to provide maintenance and upgrades to all hardware and software on a timely basis. The contract has worked well, with the Board of GH in particular being pleased not to have to monitor internal IT expenditure. The contract is for a fixed price every year.

The outsourcing contract with DF plc is due for renewal in six months time.

Required:

Advise the Board of GH, with justification, whether or not to renew the outsourcing agreement with DF plc.

(25 marks)

Question Five

Required:

(a) Explain the role of an information centre and evaluate its suitability as a means of integrating technical and business staff.

(15 marks)

(b) Explain the ways in which an information centre might contribute to the development and modification of Information Systems, Information Technology and Information Management strategies.

(10 marks)

(Total = 25 marks)

End of paper