

**IT Service Management
Service Delivery (based on ITIL®)
edition August 2007**

content

- 2 introduction
- 3 CMJ case scenario
- 4 sample exam
- 8 answer key

appendix

appendix A588.1

EXIN International B.V.

Examination Institute for Information Science

Janssoenborch, Hoog Catharijne

Godebaldkwartier 365, 3511 DT Utrecht

P.O. Box 19147, 3501 DC Utrecht

The Netherlands

Telephone +31 30 234 48 25

Fax +31 30 231 59 86

E-mail info@exin.nl

Internet www.exin-exams.com



Introduction

This is the sample exam IT Service Management Service Delivery (based on ITIL®).

Exam results

The maximum number of points that can be obtained for this exam is 100. The maximum number of points that can be awarded for each question is indicated after the question number. If you obtain 50 points or more you will pass.

The time allowed for this exam is 180 minutes.

Answering the questions

If the question requires you to give a number of examples or alternatives, you must provide the exact number of examples or alternatives requested.

The answers will be evaluated in the order in which they are given. If you are asked to give **three** examples and you give **five**, only the first **three** examples will be evaluated.

Please note that you will only receive the maximum number of points for your answer if it is given in the exact form requested.

At the beginning of this exam you will find a case scenario that provides extra information related to the company. You may need this case scenario, as well as the appendix which accompanies this exam, when answering the questions.

Some questions add new information about the company. Please note that such statements may also apply to later parts of the question.

The pages are numbered. Please make sure that you have all of the pages.

No rights may be derived from this information.

Good luck!

Copyright © 2007 EXIN

All rights reserved. No part of this publication may be published, reproduced, copied or stored in a data processing system or circulated in any form by print, photo print, microfilm or any other means without written permission by EXIN.

ITIL® is a Registered Community Trade Mark of OGC (Office of Government Commerce, London, UK), and is Registered in the U.S. Patent and Trademark Office.

CMJ case scenario

CMJ has recently made an acquisition of a company (FashionX) with 15 retail outlets in Eastern Europe. The head office of FashionX is located in Warsaw, Poland. One of the main reasons for this acquisition is the synergy between the two companies. FashionX has a very similar organization and operation to CMJ. Its size, the number of stores, and the timing of its sale just fitted perfectly into CMJ's corporate objective.

The Board of Directors of CMJ has decided that both companies must use the same financial system, in order to enable the required consolidation and proper management of finances. FashionX has its own financial information management system, named FX-FINANCE, which is drastically different from FIMS in terms of design and functionality.

FIMS (Financial Information Management System) has been installed at the head office of FashionX. An interface has been developed to link FIMS and FX-FINANCE together to upload the financial data every night. FIMS has also been enhanced to be in compliance with the local tax regulations for each European country.

The next step was to leverage the application development resources and its management. The Application Development Group of FashionX was immediately merged with the Mainframe Application Development Group of CMJ. Any support and further enhancement requirements of FashionX's currently used applications will be performed by the Mainframe Development Group of CMJ. The medium term objective is for both companies to use the same application systems.

To address the shareholders' concerns on cost control and reduction, the Board of Directors has made the following decisions:

1. Each Division and department will be responsible for its own operating budget in both CMJ and FashionX.
2. The new interactive website will be the responsibility of the Marketing and Advertising Department in the Administration Division in terms of specifications and budget (capital and operational).

Sample exam

1 of 5 (20marks) Service Level Management

1A. (4m)

It has been decided that a project will be started up to implement Service Level Management within CMJ. Two of the important steps involved are to determine what the Service Level Requirements are, and to ensure that the necessary Operational Level Agreements are set up.

Explain the following Service Level Management terms:

1. Service Level Requirements - SLR
2. Operational Level Agreement - OLA

1B. (8m)

One item which needs to be included in the Service Level Requirements (SLRs) for the Point of Sale In Stores System (POSISS) is the Incident response-time targets. Identify **two** other items which need to be included in the SLRs for the POSISS system.

For **each** of the SLRs provided in your answer, describe briefly **two** items which need to be agreed in Operational Level Agreements (OLAs) and/ or Underpinning Contracts (UCs), in order to support these requirements.

1C. (8m)

You have been appointed Project Manager to implement Service Level Management within CMJ. As part of your responsibilities, you start up an awareness program. You recognize that the success of this project depends on the involvement of the Senior Management.

Describe **four** activities you expect Senior Management to be involved in during each of the following two phases of the project:

- The planning phase
- Performance of daily activities

2 of 5 (20marks) Financial Management for IT Services

2A. (11m)

CMJ has hired you as an external consultant to complete the details for its Financial Management process.

Write a memo to the CIO of CMJ naming and explaining the **three** main activities of Financial Management and explaining why each one is important for CMJ.

2B. (6m)

Name **three** examples of expected costs resulting from the implementation of the Financial Management process within CMJ.

2C. (3m)

CMJ wants to charge the costs of reports for the [Store Inventory Management System – SIMS] per customer. Name **three** possible calculation units (recognizable by the customer) for this purpose.

3 of 5 (20marks) Availability Management

3A. (12m)

During the implementation of Availability Management, a project is started with the intention of improving the Availability of the [Production Inventory Management System – PIMS] application. It is decided to create a Technical Observation Post (TOP).

Describe what a TOP is and its purpose.

Explain the contribution of the following three groups to the TOP:

1. Network Support
2. Mainframe Application Development
3. Mainframe Support

3B. (8m)

Describe **four** interfaces or relationships between Availability Management (AM) and each of the following processes:

1. Capacity Management (CapM)
2. IT Service Continuity Management (ITSCM)

4 of 5 (20marks) IT Service Continuity Management

4A. (8m)

To guarantee the continuity of the primary business processes, CMJ has asked you, as an external consultant, to complete a detailed plan of the IT-related part of the ‘Business Continuity Lifecycle’.

Provide a description of each of the following stages in the ‘Business Continuity Lifecycle’:

1. Initiation
2. Requirements and strategy
3. Implementation
4. Operation management

4B. (12m)

CMJ Management has heard that companies can improve their bank rating by providing evidence that they are actively managing their risks. You have been asked to carry out a Risk Analysis for the Point of Sale In Stores System (POSISS) systems.

Using the table format below, provide **two** examples of potential risks to the POSISS systems. For **each** risk, describe the following:

- Threat related to the risk
- Vulnerability related to the risk
- Likelihood of the risk occurring
- Impact if the risk were to occur

For **each** example, provide a measure that can be taken to counteract the risk.

	Threat	Vulnerability	Risk	How likely	Impact
1				High Medium Low	High Medium Low
2				High Medium Low	High Medium Low

5 of 5 (20marks) **General**

5A. (10m)

An audit system is planned for CMJ's Service Delivery processes. Name **two** topics (specific to each process) that should be audited for **each** of the five Service Delivery processes.

Note: You should not name the same topic for more than one process in your answer.

5B. (10m)

The corporate objectives for CMJ are:

- "Set-up 2 new manufacturing plants..."
- "Replace all current point-of-sale equipment..."
- "Set up 20 new retail outlets..."
- "A marketing and advertising campaign..."
- "Redesign and upgrade the company's website..."
- "Make use of local third party vendors..."

For **each** of the five Service Delivery processes, explain how the process is important in helping CMJ achieve **one** of its corporate objectives.

Answer key

1 of 5 (20marks) Service Level Management

1A. (4m)

It has been decided that a project will be started up to implement Service Level Management within CMJ. Two of the important steps involved are to determine what the Service Level Requirements are, and to ensure that the necessary Operational Level Agreements are set up.

Explain the following Service Level Management terms:

1. Service Level Requirements - SLR
2. Operational Level Agreement - OLA

1A. M.G.

Explanations should include the following key ideas:

Service Level Requirements – SLR

- They form a part of the service design criteria for new services being developed or procured
- They should form part of the testing criteria for the take-on of the new service

Operational Level Agreement - OLA

- It is an agreement between internal support groups
- It needs to define targets for each of the elements in the support chain (as opposed to the overall SLA target time)

1A. Mark distribution

1m for each of the above points covered in the explanation (per term max. **2m**)

4m maximum

1B. (8m)

One item which needs to be included in the Service Level Requirements (SLRs) for the Point of Sale in Stores System (POSISS) is the Incident response-time targets. Identify **two** other items which need to be included in the SLRs for the POSISS system.

For **each** of the SLRs provided in your answer, describe briefly **two** items which need to be agreed in Operational Level Agreements (OLAs) and/ or Underpinning Contracts (UCs), in order to support these requirements.

1B. M.G.

Possible Service Level Requirements

1. Availability of the POSISS system
2. Security of the POSISS system
3. Service hours of the POSISS system
4. Number of POSISS system transactions handled per second

Items to be agreed in OLAs/ UCs

1. Availability of the POSISS system:
 - Availability of the WAN network
 - Availability of the LAN network
 - Availability of the POSISS server systems
2. Security requirements of the POSISS system:
 - requirements to secure the data transmission on the WAN
 - the physical security requirements given for the POSISS systems in the shops
 - the backup requirements for data stored on the system
 - the redundancy for the system required in each shop
3. The Service hours of the POSISS system:
 - the opening hours of the Service Desk
 - the time span of the second level teams ((Point of Sale (POS), Network, Server) for the POSISS system have to be available to fix Incidents
 - the times during which Changes cannot take place, because the Business requires the system to be available
4. Number of POSISS system transactions handled per second:
 - the speed with which data processing has to be carried out
 - the speed with which the databases have to operate
 - the type of hardware to be used in the shops for the POSISS system
 - the bandwidth required to transfer the data through the LAN and WAN

Note: Other SLRs and OLAs/ UCs are possible, if related to the POSISS system and matching to each other.

1B. Mark distribution

- 2m** for each SLR (max. **4m**)
2m for each OLA and/or UC (max. **4m**)
8m maximum

1C. (8m)

You have been appointed Project Manager to implement Service Level Management within CMJ. As part of your responsibilities, you start up an awareness program. You recognize that the success of this project depends on the involvement of the Senior Management.

Describe **four** activities you expect Senior Management to be involved in during each of the following two phases of the project:

- The planning phase
- Performance of daily activities

1C. M.G.

Activities of Senior Management:

Planning

- Supplying the resources (money, people);
- Being actively involved in, and showing public support for, the awareness campaign;
- Convincing the organization's customers of the usefulness of participating in Service Level Management;
- Intervening in the event of opposition from Middle Management;
- Approving the implementation plan.

Daily activities

- Supplying the resources (money, people);
- Respecting the rules, procedures and plans devised for Service Level Management when planning other initiatives in the organization;
- Where necessary, supporting the Service Level Manager in contacts with clients;
- Requesting reports on the progress of the daily activities and discussing these during staff meetings;
- Approving the Service Level Agreements.

Note: Other involvements from Senior Management are acceptable.

1C. Mark distribution

1m for each activity (per phase max. **4m**)

8m maximum

2 of 5 (20marks) **Financial Management for IT Services**

2A. (11m)

CMJ has hired you as an external consultant to complete the details for its Financial Management process.

Write a memo to the CIO of CMJ naming and explaining the **three** main activities of Financial Management and explaining why each one is important for CMJ.

2A. M.G.

Sample MEMO

To: CIO

From: External Consultant

Date: today

Re: Motivation for Financial Management for IT Services

Members of the Board of Directors,

With reference to your policy plan, I would request your attention for the following. The policy plan includes a number of matters that are extremely important for the planning of IT Services. In order to achieve the planned policy, sizeable investments must be made in the various divisions.

The three main activities of Financial management for IT Services are:

1. Budgeting
2. IT Accounting
3. Charging

Budgeting is the process of predicting and controlling the spending of money within the enterprise and consists of a periodic negotiation cycle to set budgets (usually annual) and the day-to-day monitoring of the current budgets.

IT Accounting

This is the set of processes that enable the IT organization to fully account for the way its money is spent (particularly the ability to identify costs by customer, by service, by activity). It usually involves ledgers and is overseen by someone trained in standard accounting practices.

Charging

Charging is the set of processes required to bill customers for the services supplied to them. To achieve this requires sound IT accounting, to a level of detail determined by the requirements of the analysis, billing and reporting processes.

Naturally your head office has devoted considerable attention to the financial aspects of the IT Services for a number of years. However, this attention was focused on identifying the costs incurred, and was therefore reactive in particular. Considering aspects including the investments required for achieving the policy, I recommend that the process Financial Management for IT Services be implemented in order to arrive at a more pro-active approach. The motivation behind this is briefly explained below:

2A. M.G. continued

One of your objectives that you indicated is to “Replace all current Point-of-Sale equipment, registers, in-store servers and communication equipment with new ones to allow for real-time sales reporting.”

Not only will IT have to plan for the implementation of this new technology but also support it once it is in place. Financial Management for IT Services will enable IT to budget and account for both aspects.

If you agree with me that financial control of the IT Services is important and want to implement such by means of the process as discussed, please let me know. Within one month I could then give a presentation regarding the possible implementation of this process.

In anticipation of your response I remain, yours sincerely,

Service Manager

See section 5.1 of the Service Delivery book.

2A. Mark distribution

2m for a memo with the proper tone for the target audience

1m per correctly named activity and **2m** for the importance of the activity for CMJ, with a total of **3m** per activity (max. **9m**)

11m maximum

2B. (6m)

Name **three** examples of expected costs resulting from the implementation of the Financial Management process within CMJ.

2B. M.G.

- People costs – staff involved
- Transfer costs – awareness campaign, other Charges from internal cost centers
- External services costs – consultant
- Hardware costs – possible if a server is needed for the financial application package
- Software costs – if a financial application package is purchased
- Accommodation costs – office space, utilities, supplies, etc.

Note: Other costs are acceptable as long as they are relevant to the implementation or ongoing operation of Financial Management.

See section 5.3 of the Service Delivery book.

2B. Mark distribution

2m for a properly described example (max. **6m**)

6m maximum

2C. (3m)

CMJ wants to charge the costs of reports for the Store Inventory Management System (SIMS) per customer. Name **three** possible calculation units (recognizable by the customer) for this purpose.

2C. M.G.

A charging unit should be simple to define, well understood by the users and easy to measure.

Calculation units could be:

- the **number of reports generated**
- the **number of reported items** which are managed with a store inventory management system
- the **number of users** that have the access right to generate reports
- the **number of pages** a report has
- the **frequency with which a report is generated** e.g. once a year a report is free of charge, a report every day costs a basic charge, and a report every hour costs a surcharge
- The **output quality a report has** e.g. standard printout, hard covered report, special paper ...

Note: Other calculations are acceptable. IT based units such as bits, bytes, gigabytes, CPU cycles, times, etc. are not acceptable because they are not recognizable to the customer.

2C. Mark distribution

1m for each unit provided that it is recognizable by the customer

3m maximum

3 of 5 (20marks) **Availability Management**

3A. (12m)

During the implementation of Availability Management, a project is started with the intention of improving the Availability of the [Production Inventory Management System – PIMS] application. It is decided to create a Technical Observation Post (TOP).

Describe what a TOP is and its purpose.

Explain the contribution of the following three groups to the TOP:

1. Network Support
2. Mainframe Application Development
3. Mainframe Support

3A. M.G.

A Technical Observation Post is:

- A gathering of specialist technical support staff from within the IT organization, brought together to focus on specific aspects of Availability.
- Its purpose is to monitor events, real-time as they occur, to identify improvement opportunities or bottlenecks.
- It is focused on looking at end-to-end Availability, which is why technical support staff from various groups need to be involved.

Participants to the TOP

- Network Support
This group provides design, deployment and support of the Local Area Networks (LANs) within the manufacturing plants and at the head office. They can therefore advise on the extent to which network availability is affecting the Availability of the PIMS application, and suggest solutions to help improve the Availability of the network over which the PIMS application is accessed.
- Mainframe Application Development
This group develops either new mainframe applications or enhancements to existing mainframe applications. They can therefore advise on the extent to which any Changes to the PIMS application are affecting the Availability of the application, and suggest solutions to minimize the Impact of these Changes.
- Mainframe Support
This group is also involved in the testing of new mainframe applications and enhancements to ensure there are no conflicts between other various mainframe applications; and batch jobs for update, print and back-up. They can therefore advise on the extent to which conflicts between applications are affecting the Availability of the PIMS application, and suggest solutions as to how these conflict issues can best be resolved.

See section 8.9 of the Service Delivery book.

3A. Mark distribution

1m for each of the points covered in the description of the TOP (max. **3m**)

3m for a relevant contribution to the TOP for each group (max. **9m**)

12m maximum

3B. (8m)

Describe **four** interfaces or relationships between Availability Management (AM) and each of the following processes:

1. Capacity Management (CapM)
2. IT Service Continuity Management (ITSCM)

3B. M.G.

1. Capacity Management

- AM provides the Availability plan to CapM for alignment to the Capacity plan
- AM provides the Availability requirements to assist CapM in ensuring the right performance to avoid conflicts
- CapM provides the Capacity plan to AM for alignment to the Availability plan
- CapM provides demand management initiatives to AM to avoid competing efforts and initiatives

2. IT Service Continuity Management

- ITSCM provides the Business Impact Analysis (BIA) to AM so that the right Availability will be provided during a crisis
- ITSCM provides the ITSCM plan to AM for alignment to the Availability plan
- ITSCM provides a proposed test schedule to AM to assist AM in reporting Availability correctly
- AM provides the Availability plan to ITSCM for alignment to the ITSCM plan
- AM provides the CRAMM to ITSCM to assist ITSCM in doing a risk analysis

Note: Other relevant relationships are acceptable.

See section 8.3 of the Service Delivery book.

3B. Mark distribution

1m per item per process (per process max. **4m**)

8m maximum

4 of 5 (20marks) IT Service Continuity Management

4A. (8m)

To guarantee the continuity of the primary process, CMJ has asked you, as an external consultant, to complete a detailed plan of the IT-related part of the 'Business Continuity Lifecycle'.

Provide a description of each of the following stages in the 'Business Continuity Lifecycle':

1. Initiation
2. Requirements and strategy
3. Implementation
4. Operation management

4A. M.G.

1. Stage 1 - Initiation

The initiation process covers the whole of the organization and consists of the following activities:

- Policy setting
- Specify terms of reference and scope
- Allocate Resources
- Define the project organization and control structure
- Agree project and quality plans

2. Stage 2 - Requirements Analysis and Strategy Definition

It provides the foundation for ITSCM and is a critical component in order to determine how well an organization will survive a business interruption or disaster and the costs that will be incurred. This stage includes analysis of the requirements via a Business Impact Analysis and risk assessment, and definition of the strategy (determining and agreeing risk reduction measures and recovery options to support the requirements).

3. Stage 3 – Implementation

Once the strategy has been agreed the Business Continuity lifecycle moves into the implementation stage involving IT at a detailed level. The implementation stage consists of the following processes:

- Establish the organization and develop implementation plans
- Implement stand-by arrangements
- Implement risk reduction measures
- Develop IT recovery plans
- Develop procedures
- Undertake initial tests

4. Stage 4 - Operational Management

Once the implementation and planning have been completed there is a need to ensure that the process is maintained as part of business as usual. This is achieved through operational management and includes:

- Education/ training and awareness
- Review
- Testing
- Change control
- Assurance

See section 7.3 of the Service Delivery book.

4A. Mark distribution continued

2m per stage with description

8m maximum

4B. (12m)

CMJ Management has heard that companies can improve their bank rating by providing evidence that they are actively managing their risks. You have been asked to carry out a Risk Analysis for the Point of Sale In Stores System (POSISS) systems.

Using the table format below, provide **two** examples of potential risks to the POSISS systems. For **each** risk, describe the following:

- Threat related to the risk
- Vulnerability related to the risk
- Likelihood of the risk occurring
- Impact if the risk were to occur

For **each** example, provide a measure that can be taken to counteract the risk.

	Threat	Vulnerability	Risk	How likely	Impact
1				High Medium Low	High Medium Low
2				High Medium Low	High Medium Low

4B. M.G.

Risk Analysis

	Threat	Vulnerability	Risk	How likely	Impact
1	Loss of POSISS system	<ul style="list-style-type: none"> • Hardware Failure • Software Failure 	Shop cannot sell goods any longer	Medium	High
2	Loss of LAN	<ul style="list-style-type: none"> • Hardware Failure • Damage to Network due to maintenance works in the shop 	Shop can work with a limited functionality of the POSISS System	Medium	High
3	Loss of WAN	<ul style="list-style-type: none"> • Link is lost • Local WAN Hardware is damaged • Logical Error in WAN configuration 	Shop can work, but central Data processing will no longer be possible	Medium	Low

4B. M.G. continued

Risk Management

Example:

Looking at the loss of POSISS System Risk (1), a countermeasure could be to have at least two POSISS systems in each shop, in order to have a minimal redundancy in case one system has a hardware failure.

A major source of software failures is when Changes are carried out to the software. Therefore a countermeasure is to ensure that strict Change Management is in place for the POSISS software, to reduce the probability of a POSISS system failing due to a software error.

Note: Other risks, threats, vulnerabilities, likelihoods, impacts and countermeasures are possible. “Likelihoods” and “Impacts” should be reasonable with respect to the risk.

See section 7.2 of the Service Delivery book.

4B. Mark distribution

1m for each of the requested items (risk, threats, vulnerabilities, likelihood, impact and countermeasure) (per example max. **6m**)

12m maximum

5 of 5 (20marks) **General**

5A. (10m)

An audit system is planned for CMJ's Service Delivery processes. Name **two** topics (specific to each process) that should be audited for **each** of the five Service Delivery processes.

Note: You should not name the same topic for more than one process in your answer.

5A. M.G.

Service Level Management:

- Service Level Agreements (SLA)
- Procedures and instructions for the process
- Underpinning Contracts (UCs)
- Reporting on the Service Levels

Availability Management:

- Reporting deviations in the agreed level of service
- Forecasting the Availability of services
- Availability reports
- Procedures and instructions for the process
- Availability plan

Capacity Management:

- Capacity plan
- Procedures and instructions for the process
- Capacity reports
- Reports on the integrity of the CDB
- Reports regarding 'monitoring'
- Reports regarding 'application sizing'
- Workload catalog and forecasts

Financial Management for IT Services:

- Procedures and instructions for the process
- Reporting on costs and charging of costs
- Invoices
- Estimates on earning back costs
- Allocation of income

IT Service Continuity Management:

- Procedures and instructions for the process
- Risk analysis reports
- Contingency plan
- Reports on testing the ITSCM plan

Note: Other relevant items are acceptable.

5A. Mark distribution

1m per topic (per process max. **2m**)

10m maximum

5B. (10m)

The corporate objectives for CMJ are:

- “Set-up 2 new manufacturing plants...”
- “Replace all current point-of-sale equipment...”
- “Set up 20 new retail outlets...”
- “A marketing and advertising campaign...”
- “Redesign and upgrade the company’s website...”
- “Make use of local third party vendors...”

For **each** of the five Service Delivery processes, explain how the process is important in helping CMJ achieve **one** of its corporate objectives.

5B. M.G.

Service Level Management

Defining services, SLAs, OLAs and especially UCs, as CMJ has realized it cannot do this alone and therefore will “make use of local third party vendors...”. Via effective Service Level Management, CMJ will be able to align the capabilities of the 3rd party vendors with the Service Levels to be agreed to with internal customers.

IT Service Continuity Management

Planning to prevent, cope with and recover from an IT crisis will be important considering that CMJ wants to “Redesign and upgrade the company’s website...” as this website is now becoming a critical business element, and therefore countermeasures must be developed for this new service.

Availability Management

Optimizing the IT Infrastructure, ensuring reliability and resilience will be important considering that CMJ wants to “Set up 20 new retail outlets...” as it will be important to plan for these additional sites to ensure that the current infrastructure, services and support organization are reliable and resilient enough to sustain this initiative.

Capacity Management

Ensuring the current and future capacity and performance aspects of the IT Infrastructure cost effectively will be important considering that CMJ will “Set up 20 new retail outlets...” as it will be important to plan for these additional sites to ensure that the current infrastructure has sufficient future capacity to ensure that future performance meets all agreed levels for this initiative.

Financial Management for IT Services

Providing cost effective stewardship of IT finances will be important as CMJ will “Replace all current point-of-sale equipment...”. Financial Management for IT Services will ensure proper budgeting is done for not only the project but for the continued operation and support of this new technology.

Security Management

Organize the collection, storage, handling, processing and management of data and services in such a way that the integrity, confidentiality and availability business conditions are satisfied in the light that CMJ will develop “A marketing and advertising campaign...”. This will ensure that individual customers only have access to their own account and therefore prevent unauthorized access.

5B. M.G. continued

Note: Other relevant examples are acceptable.

5B. Mark distribution

2m per process for an answer explaining how the process contributes to one of CMJ's corporate objectives

10m maximum

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

IT Service Management (based on ITIL®)

content
appendix A588.1

At the end of the exam all papers should be handed in. It is not allowed to take home exam materials.



EXIN International B.V.
Examination Institute for Information Science
Janssoenborch, Hoog Catharijne
Godebaldkwartier 365, 3511 DT Utrecht
P.O. Box 19147, 3501 DC Utrecht
The Netherlands
Telephone +31 30 234 48 25
Fax +31 30 231 59 86
E-mail info@exin.nl
Internet www.exin-exams.com

Appendix A588.1

Exam
Copyright

IT Service Management (based on ITIL®)
EXIN

CMJ Ltd.

Background:

CMJ Apparels was founded in the early 1960's as a family owned and operated clothing manufacturer specializing in clothing for construction and manufacturing workers. Thanks to some investments involving mergers and acquisitions, and some careful, but aggressive, growth plans in the 1970's and 1980's, CMJ Apparels branched out into the retail world in 1997. Their low-end lines of clothing are still sold wholesale to major high street retailers, while their newer lines of high-end sporting apparel are sold in their own retail outlets all over the world.

Business situation:

CMJ went public in 1996 with the family retaining seventy-five percent of all voting shares. The decision to establish manufacturing plants in emerging economies such as China, India, Mexico etc. was well received from the business community. This same decision was not well received from the labor union at the head office in the Province of Québec, Canada. Labor relation difficulties and the threat of plant closure by has been a constant challenge to the current management of CMJ.

CMJ's retail division is under pressure to control its costs and the organization is under pressure from other major retailers to accommodate them via "Just-in-Time" production. CMJ has always been slow to adopt new technologies, but once adopted, it makes full use of them to get the maximum possible return on investment. The company's finances have been under greater scrutiny from investors of the company since launching its retail operations in 1997. For CMJ it appears that a re-organization needs to take place in the near future to reduce costs.

CMJ is aggressively promoting its own brand and logo through various means.

Although the company went public in 1996, CMJ is still a family owned organization. There was a change in management style from an autocratic, dictatorial approach by the original founder, to a more industry best practices approach. The sons and daughters of the founder, a self-made, unschooled entrepreneur, manage the organization and have done so since his death in 1998. Their approach to managing the organization is quite different from their father's dictatorial ways.

The founder of CMJ Apparels' approach to business was "the end justifies the means." The organization used to reward and recognize such behavior from its staff. However, after achieving ISO 900x certification in early 1999, the focus is now on procedures and processes. The ISO 900x certification is assessed yearly. The exception to this process approach seems to be in the Store Operations Department of the Retail Division where the old mentality of "the end justifies the means" still prevails.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Computerization of the office tasks has been in place since the early 1980's. Two major events forced the organization to create a more structured IT department; year 2000 (Y2K) and the establishment of the Retail Division. Until the launch of its Retail Division the IT functions reported to the Finance Department and consisted primarily of a mainframe with terminals only for managers and supervisors.

Organizational structure:

There are three main divisions within CMJ Apparels: Manufacturing, Administration, and Retail. The Head Office is located in Montréal (province of Québec), Canada.

The Board of Directors

The Board of Directors is made up of a Chief Executive Officer (CEO) and the head of each division. The Finance and Accounting functions report directly to the Board of Directors.

Chief Financial Officer (CFO):	Head of Finance and Accounting Department
Chief Operating Officer (COO):	Head of the Manufacturing Division
Chief Information Officer (CIO):	Head of the Retail Division
Chief Administrator (CA):	Head of the Administration Division

Recently the Chief Information Officer (CIO) has communicated his vision for IT in a memo to all IT staff (see the end of this case study).

The Manufacturing division

All regional manufacturing plants report to the Manufacturing Division and are organized in the same manner. Each regional manufacturing plant has the following departments: Management Team, Administration, Personnel Department, Plant Maintenance, and Plant Production.

The Administration Division

The Administration Division handles the Human Resources, Marketing and Sales, and the legal aspects of the organization. All administrative functions performed in each region report to this division.

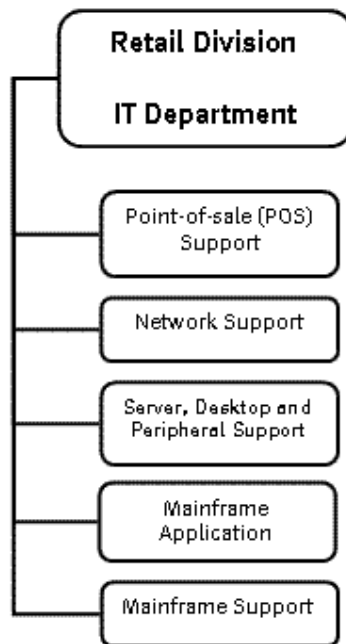
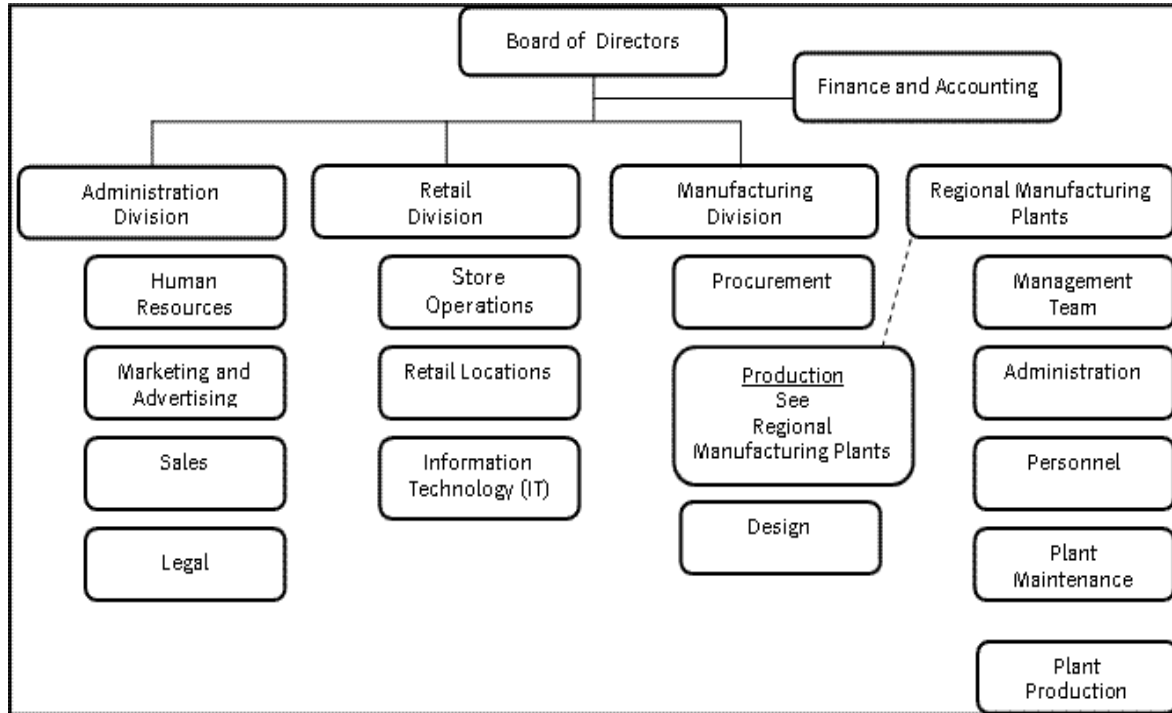
The Retail Division

The Retail Division handles all store operations (retail) activities and all IT functions. All IT functions are grouped into one IT Department. Because it is still relatively new, this department is not as structured or as disciplined as the others. While documentation for the retail operations has greatly improved, the same can not be said for the IT operations.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Company Organizational Chart



Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Staffing:

There are nearly 1300 employees working for CMJ Apparels, broken down as follows:

	Total staff	Staff with access to a desktop/laptop
Manufacturing		
Montréal	75	15
Mexico City	90	15
Mumbai	135	20
Shanghai	126	20
Head Office	169	169
Retail locations	705	235

Not all employees have or require access to computer systems. There are some terminal systems that are used on a shared basis for many employees.

Departmental information:

Most departments, within each division, are small by nature. There is just enough staff to perform the activities but not enough to achieve all business objectives. Therefore it will be difficult to manage both the ongoing operations and also provide staffing for the various projects without calling upon external resources. The heads of the different departments are included in the total number of personnel for each department.

Finance and Accounting Department: 10 employees

This department is headed by the CFO, and reports directly to the Board of Directors. It handles all financial control functions for the organization. Three employees handle the accounting for the Manufacturing Division, while four handle the accounting for the Retail Division. The remaining two employees handle the consolidation of all financial matters for all regions and divisions.

The Administration Division:

The Administration Division is made up of four departments.

Human Resources: 4 employees

This department handles all of the functions of human resource such as recruiting, hiring and compensation. They work closely with their counterparts in each regional manufacturing plant to ensure strategy implementation and consistency.

Marketing and Advertising Department: 10 employees

This department handles all of the marketing and advertising for the company. It focuses on the business-to-business marketing for the lines of clothing sold wholesale to the major retailers as well as the marketing and advertising for the retail outlets.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Sales Department: 15 employees

This department handles all sales to the various major retailers. It interfaces primarily with the Production and Design Departments in the Manufacturing Division. It is heavily involved with the development of the business to business (B2B) model. The wholesale manufactured goods are picked up from the manufacturing plants directly by the major retailers. The distribution of manufactured goods to CMJ's own outlets is contracted out to various transport organizations depending on the geographic location of the region.

Legal Department: 6 employees

This department handles all of the legal aspects including regional local labor laws and legislation, labor contracts, international trade barriers, tariffs and permits. It also handles all of the public relations (PR).

Retail Division:

The Retail Division is made up of 3 major departments.

Store Operations: 15 employees

This department handles all of the retail functions. This includes among others: store layout, selecting new locations, retail procedures, sales techniques, events calendar and customer service.

Retail locations: 47 locations

There are 47 retail locations. Each retail location employs 15 people, 5 of whom are full time.

The number in parentheses indicates the number of retail locations in that country/city.

- Canada (18): Sherbrooke, Montreal (4), Toronto (4), Calgary, Edmonton, Vancouver (2), Ottawa, Winnipeg, Quebec City (3)
- USA (10): Denver, Los Angeles, San Francisco, Boston, New York, Miami, Chicago, Seattle, Philadelphia, Orlando
- Mexico (1): Mexico City
- Europe (9): London, Paris, Frankfurt, Madrid, Milan, Rome, Amsterdam, Dublin, Marseille
- Asia (6): Shanghai, Hong Kong, Tokyo, Kyoto, Singapore, Kuala Lumpur
- Australia (3): Perth, Sydney, Melbourne

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Manufacturing Division:

The Manufacturing Division is made up of three departments.

Procurement Department: 20 employees

The Procurement Department handles the purchasing of various fabrics from around the world. There are 12 buyers, 3 based at each site, who work for the Procurement Department around the world. This Procurement Department has nothing to do with procuring equipment and/or office supplies. Its only focus is fabrics, threads, buttons and all other related clothing supplies. However, as a measure to cut travel costs, there is a lot more negotiating and ordering via the WEB and there is a greater use of both “telephone” and “web” conferencing. This group has negotiated all of their conferencing needs themselves, including technical support.

Production Department: 426 employees

The Production Department produces various clothes. There are 4 major plants: Montréal (Canada - 75 people), Mumbai (India – 135 people), Mexico City (Mexico – 90 people) and Shanghai (China – 120 people). The low-end lines of clothing are produced in Mumbai and Mexico City while the high-end lines of clothing are produced in Montréal and Shanghai.

Design Department: 35 employees

The primary function of the Design Department is to design new clothes to adapt to the various markets and latest fashion trends. This department recently purchased high-end desktops and color laser printers for their graphics design, and deployed these themselves.

Information Technology (IT) Department:

This department handles all of the IT functions. The Manager of the IT Department reports to the CIO, the Division Head of the Retail Division. Currently there are 5 groups in the IT Department, namely Point-of-Sale Support (POS), Network Support, Desktop and Peripheral Support, Mainframe Application Development, and Mainframe Support. The CIO’s vision for IT within CMJ is outlined in a memo to all IT staff at the end of this Case Study. See below for more information.

General

All manufacturing equipment is maintained by trained internal staff at each regional manufacturing plant. A third party supplier provides additional support and training. Since they are not IT related, there is no interface to the IT Department. All manufacturing equipment is outside the scope of responsibilities of IT.

In 1999, CMJ upgraded all of its servers, desktops and printers. Three separate vendors were selected; one for the servers, one for the desktops and a third for the printers. All non Y2K compliant hardware, software, applications and operating systems were replaced to ensure Y2K compliance. A complete inventory of all IT components was taken at the end of 1999 but has since fallen into disuse. Since then, some newer hardware and the latest versions of applications and software were installed. Hardware from many different manufacturers was selected.

Appendix A588.1

Exam
Copyright

IT Service Management (based on ITIL®)
EXIN

Information systems used at CMJ

Hardware

Head Office

The Head Office uses an IBM OS/390 series computer as its central computer. The mainframe has approximately 4 terabytes of disk storage. In addition to the production mainframe there is also a test mainframe for software suppliers and IT personnel. The test mainframe is the same as the production mainframe but with only 2 terabytes of data storage.

There are also 2 tape silos for data storage. Over the last six months there have been many failures on the robotic arm on one of them. This has, so far, not impacted the business directly.

The mainframe has a proven and regularly tested disaster recovery plan by using third party facilities and sites.

Manufacturing plants:

Montréal

Montréal has 4 application servers, 3 file servers and 2 print servers. Each server has 1 GB of RAM and 1.5 terabyte of storage capacity.

Shanghai

Shanghai has 3 application servers, 2 file servers and a print server. Each server has 1 GB of RAM and 1.5 terabyte of storage capacity.

Mexico City

Like Shanghai, Mexico City has 3 application servers, 2 file servers and a print server. Each server has 1 GB of RAM and 1.5 terabyte of storage capacity.

Mumbai

Mumbai has 2 application servers, one file server and no print server. Each server has 1GB of RAM but only 650 GB of storage capacity. This plant is scheduled to undergo a major expansion and renovation in the next quarter to double its capacity.

Retail locations

All retail locations are set up identically. Each has 3 Point-of-Sale registers connected to a store server. The back office has one desktop and one inkjet printer. The sales data in the Point of Sale in Stores System (POSISS) on each of the in-store servers is polled nightly via the mainframe before being sent to the Financial Information Management System (FIMS) and Store Inventory Management System (SIMS) at Head Office for processing. A sales report is then manually e-mailed to all relevant department heads. All retail locations are configured the same way in terms of the Point-of-Sale equipment; they all have the same number and type of hardware, software and documentation.

Appendix A588.1

Exam
Copyright

IT Service Management (based on ITIL®)
EXIN

Wide Area Network

The four manufacturing plants are connected to one another and to the Head Office by dedicated leased lines provided by local telephone suppliers. There are many instances of loss of communication between the various regions and the Head Office.

Web sites

All hosting activities regarding CMJ's web sites (internet and intranet) have been contracted out to a third party. All hardware and software is hosted at the vendor's site where it is only one of many web sites hosted by this vendor. The design, maintenance, and support of web pages are the responsibility of the owners of each page.

The main IT Services

Production Inventory Management System - PIMS

PIMS is an inventory system used mainly by members of the Manufacturing Division to support logistics and stock control of raw materials. It was written in-house and runs on the mainframe. It is available and supported 24 hours per day and is considered to be a critical part of the manufacturing process. The system frequently fails and requires support.

Point of Sale In Stores System - POSISS

This is a business critical IT Service. It is UNIX based and uses client / server architecture, with POS Terminals (cash registers, tills), scanners, and a Token Ring Network Topology to link and connect all POS equipment within each retail location.

The local servers link up each night over the Wide Area Network (WAN) connections to the main Data Center for an upload of sales and stock figures and a download of revised prices and special offers.

Distribution and Transport - DATMS

This is another business critical service that runs on the mainframe and controls all aspects of automated stacking, picking, loading and distribution of CMJ goods from the manufacturing plants.

Store Inventory Management System - SIMS

SIMS is an inventory system used mainly by members of the Retail Division to support logistics and stock control of retail locations. It is based on PIMS, was written in-house, and runs on the mainframe. It is available and supported 24 hours per day and is considered to be a critical part of the retail process. The SIMS system frequently fails and requires a lot of support.

Point of Sale Price Management System - POSPMS

This is an in-house developed system running on the mainframe. It is used by the marketing and sales departments to input new sales prices for the retail locations. Nightly price update files are downloaded to all retail locations for price adjustments, sale events and special promotions. Each retail location receives its own dedicated file every day.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Financial Information Management System - FIMS

FIMS is a corporate finance and accounting system which was purchased from a third party vendor in the mid 1990's. It runs on mainframe in the Head Office and servers (located at all retail locations and plants around the world) and is used for budgeting, management accounting, purchase ledger, sales ledger, ordering, invoicing, and payment. It interfaces closely with the PIMS and SIMS. FIMS is used by both the Finance Department and managers across the company. The system is available around the clock.

Human Resources Management System - HRMS

HRMS is a corporate human resources management system which was purchased from a third party vendor in the mid 1990's. It runs on servers (located in all offices and plants around the world) and is used by all human resources employees.

Office Systems

CMJ introduced a standard office system based on a [Desktop Office Suite] a few years ago. This has proven to simplify support and enable better communication across the company. This system is available in all languages: English, French, Spanish, Chinese, Hindi, etc.

For second level support CMJ has contracts with many hardware support companies around the world for its server, desktop and peripheral support. Second line network and telecommunications support is provided via a contract with many global telecommunications service providers.

Additional Desktop Applications

A number of additional packages and in-house developed systems are used throughout the business. These have been developed on all sorts of PC software applications including many individual and shared database systems. The variety and diversity of these systems has caused support issues in the past.

The IT Organization

The IT organization used to report to the Finance and Accounting Department until the creation of the Retail Division. The move was unpopular with most of the existing IT staff. The mainframe environment had been working smoothly for nearly two decades without any major outages. Since the advent of the Retail Division, there has been an uneasy tension between the "old guard" and the staff in the newer Point-of-Sale (POS) group. Whereas the mainframe environment is stable and all procedures well documented, the same can not be said of the POS group where chaos reigns supreme and long hours are the norm.

Appendix A588.1

Exam **IT Service Management (based on ITIL®)**
Copyright EXIN

Point-of-Sale (POS) Support: 10 employees

This group supports all of the in-store IT related equipment, including Point-of-Sale, desktops, printers, and communications. They work very closely and in harmony with Store Operations. However, there is often duplication of effort and tension between this group and all other groups within the IT department. Three POS analysts are dedicated to answering all calls from the various outlets. A second level on-call support analyst is available during off-hours (based on Head Office time zone). This group performs testing of all new software versions and equipment as well as working closely with the various vendors during deployments. Many issues that should be handled by other IT groups are actually addressed first by the POS group as they consider everything that is store related to be within their scope. This is a “loose cannon” group. They try to do everything. They are undisciplined, thrive on chaos and overtime, and they firmly believe that what they do and how they do it is the best way.

The vendor of the POS system is responsible for providing second level hardware support and maintenance to the equipment at all retail locations as well as software development and maintenance.

Network Support: 6 employees

This group provides design, deployment and support of the Local Area Networks (LANs) within the manufacturing plants and at Head Office. It also coordinates all activities with the communication providers, from proposal to contract negotiation to escalation in support of the Wide Area Network (WAN). The support is provided around the clock. A second level on-call support analyst is available during off-hours (based on Head Office time zone). First level is handled by the mainframe support group during evenings and week-ends. They work and collaborate closely with the mainframe group.

Server, Desktop and Peripheral Support: 12 employees

This group handles the deployment and support of all servers, desktops, laptops and peripherals, including mobiles, personal digital assistants (PDAs) and printers. A shift rotation allows this group to provide 24 x 7 support for the entire organization, with the exception of the retail outlets. They deal with everything the other groups don't handle. A third party vendor provides second level support for computer equipment in the manufacturing plants.

Mainframe Application Development: 6 employees

This group develops either new mainframe applications or enhancements to existing mainframe applications. The requests are received directly, as they have been for the last two decades, from the various business groups. Requests are implemented whenever required by the requestor. Testing is performed diligently by both the users and Mainframe Support. Regular project meetings are held to address issues and identify potential conflicts between various requests. This group is a bit of an outsider as they do what they need to do when they need to do it.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Mainframe Support: 20 employees

This group provides mainframe support as well as acting as first line network support during off-hours. This group is responsible for scheduling all batch, print and back-up jobs, and for resolving any problems. This group is also involved in the testing of new mainframe applications and enhancements to ensure there are no conflicts between other various mainframe applications and batch jobs for update, print and back-up. This group is on-site 24 x 7 including holidays. This group has a lot of good procedures and documentation but since they have been around for a long time with no major issues arising they have become complacent. There is also resentment that they are relegated to the retail division.

Summary of present issues

The Board of Directors at CMJ has realized that it needs to increase CMJ's presence in the United States and in Europe. The major retailers are pressuring CMJ to modify its service provision and to adopt a "Just-in-Time" approach.

The current Point-of-Sale equipment at the retail outlets can only handle dial-up for credit and debit transactions. In today's competitive retail environment, retailers have to provide many various means of payment and the ability to collect points in a chosen loyalty program. In addition, there is a resurgence of smart cards making a come back. The Board of Directors, in keeping with the idea of "Just-in-Time", would like the ability to view "real time" sales figures from all over the world. A request for proposals (RFP) has recently been initiated.

The success of most retail locations in the United States and in Europe also means that more outlets will be open in those regions. In the United States brand new outlets will be open, while in Europe, a joint venture with an existing organization is likely to be considered. CMJ also wants to increase the visibility of its high-end clothing line logo by promoting various high visibility events such as car racing, movie festivals and music concerts.

A recent customer market research has shown that most of CMJ's retail shoppers are between the ages of 12 – 30 and that over 85% of them have high speed Internet access. CMJ wants to capitalize on this finding. Although CMJ has a website already, it is quite static. Customers want more functionalities and a dynamic and fun on-line shopping experience.

A recent employee satisfaction survey among IT staff has revealed that the objectives, which were set two years ago for the newly formed IT Department, have not been met (see memo).

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

Corporate Objectives

- Set up two new manufacturing plants, one in the United States (US) and one in Eastern Europe. Analysis has shown that setting up these two manufacturing plants would help offset the current high distribution costs in those areas and help in meeting the “Just-in-Time” requirements of the major retailers.
- Replace all current Point-of-Sale equipment, registers, in-store servers and communication equipment with new ones to allow for real-time sales reporting.
- Set up 20 new retail outlets in the United States and 15 new retail outlets in Eastern Europe.
- A marketing and advertising campaign to promote higher brand visibility was secretly started a few months back. The launch date is fast approaching. All agreements with the external organizations are in place. The communication of this project to the internal staff (Head Office and retail outlet staff) must include a strict confidentiality clause. There is still a lot of secrecy around this project. Information will be provided on a per need basis only.
- Redesign and upgrade the company’s website to allow for a more interactive shopping catalogue, on-line sale transactions, streaming videos for fashion shows, and to allow the customers the ability to sign-up for a virtual fashion advisor.
- Make use of local third party vendors and partners to assist in the realization of its ambitious objectives because of its geographical dispersion; CMJ has realized that it will need to call upon many third party vendors, both global and local.

Appendix A588.1

Exam
Copyright

IT Service Management (based on ITIL®)
EXIN

Memo

To: All IT Staff
From: Head of the Retail Division – Chief Information Officer (CIO)
Subject: My vision for IT

For internal use only – **NOT** to be distributed or communicated outside

Ladies and Gentlemen,

I would like to take this opportunity to introduce my vision for IT for the next few years and to re-explain the Board decision to consolidate all IT functions within CMJ to the Retail Division.

Since my arrival here two years ago, in the dual role of Head of the Retail Division and CIO, many changes have happened within our company. The most significant change affecting you has been the consolidation of all IT operations within one department. Although this move was not very well received by many of you, it was necessary for the good of CMJ as a whole. Here are some of the reasons:

- Synergy and greater cooperation required among all IT functions
- Increased communication required among all IT functions
- Increased understanding of business requirements needed by all IT staff

Up until now, I have concentrated mostly on ensuring that the retail side of the division was under good control and direction. Measures have been put in place in this regard. All retail job functions were evaluated and were redesigned where necessary, including pay scales. Authority and empowerment were delegated where required. Since there were few issues to be addressed, this transition was relatively smooth. I would like to express my thanks to the HR Department and to all employees affected.

I can now focus my energies on the IT group. When I arrived two years ago, there were two IT groups; one reporting to the CFO and one to the previous Vice-President of Retail. The situation was chaotic to say the least. There was no communication between the groups, and an elitist attitude and the blame game were the norm. I thought that bringing all of you under the same roof would bring an end to this.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

What a shock for the Board when the report from the recent employee satisfaction survey came back to inform that this was not the case. Essentially the report brings to the forefront the following issues:

- There are too many delays in bringing new applications to production
- There are major cost overruns in the deployment of new hardware or in the opening of new stores
- Calls to the various support teams are left unanswered
- End-users are being referred to the wrong support teams
- Support teams blame each other in front of end-users
- Reports produced are meaningless if they are produced at all
- Maintenance and upgrades are being done on production systems during business hours

The Board views this as unacceptable and will be implementing changes to ensure this does not continue.

On the direction of the Board of Directors, I have been tasked to bring cohesion within IT. As you know, all of our corporate objectives have been communicated and explained to all of you over the last few months. In order to achieve them to ensure the continued success and viability of our company, it has been decided to use a process-oriented approach that will remove the silo culture currently in place within IT.

Over the next few weeks, many of you will take part in an assessment by an external IT consulting firm to determine the current situation within IT. This assessment is NOT to determine what we do wrong nor is it a finger pointing exercise. It is to determine what we are doing right and how to leverage it across the IT organization. The report will provide us with recommendations on how to proceed in improving our IT processes.

An e-mail explaining how the assessment will take place and what is expected from the participants will be sent to you soon.

We are all busy and CMJ has an aggressive plan for the upcoming few years. IT has to step up to the forefront. We (IT) have to improve our ability to deliver quality products and services or someone else will do it.

I would also like to inform you that a Request for Information (RFI) has been sent to the major vendors of Enterprise Resource Planning (ERP). This new exciting project is scheduled to start within the next six months. It will be a long and complex project involving many of you for quite a long period.

Although some of you may think that implementing a technical solution will resolve everything, technology is not the solution nor is it the cause of our problem. Our way of doing business is our problem. IT does not think like a business unit nor are we talking in a language that the business understands.

Appendix A588.1

Exam IT Service Management (based on ITIL®)
Copyright EXIN

My approach is simple and only contains four items; Process, People, Technology and Discipline.

- We are going to use processes that meet business requirements.
- We are going to align the people with the right skills and knowledge to the right job to execute the processes.
- We are going to deploy the right technology to help support our processes and our people.
- We are going to be disciplined in following the processes and make sure that we develop and nurture a service culture within IT.

Further information on this endeavor will be communicated to you shortly.

Thank you for your time,

CIO