Test 1

IT SERVICE MANAGEMENT

Test 2: oral exam

To be sure you understand, I summarize the exam rules here.
In order to obtain the 6 credits and, therefore, the final grade it is necessary to take 2 different exams:
1. Test 1, written exam: a multiple-choice written test
2. Test 2, orla exam: a small project/report on a concrete case
You have to take both, where the first enables you to take the second exam.

The written test evaluates the student's knowledge of the foundational aspects addressed during the course [Bloom's taxonomy level: 1-2 (Knowledge-Comprehension)]. The second test assesses the student's ability to analyse and evaluate concrete aspects of the methodologies taught and their application in real life cases [Bloom's taxonomy level 3-4 (Application-Analysis)].

Once you have completed this exam (the written one) you have to organize yourself in small groups of 2-3 people and thus obtain the reference scenario on the basis of which to develop the project work. The oral exam will consist in presenting the project work to me.

You will have as much time as you want to prepare for the oral exam and you can use this summer session or the September session, the year-end session or, again, those scheduled for the first half of next year. Passing the written exam does NOT have an expiry date.

Failing this exam means having the opportunity to return it later, as many times as you want. The next written session will be on August 30th.

METHOD OF CONDUCT:
1. Find other students who want to take the exam with you. It is objectively easier if you work in a group.
2. Read the scenario and the topic to work on thoroughly.
3. Decide how to divide the work among yourselves, considering that there is both a part in common and specific parts for each of you.
4. Prepare a dissertation document that includes your considerations regarding the indicated topic.
5. Prepare your speech (maximum 10 minutes per person) that aims to summarize and present what is written in the thesis.
6. Prepare a few (5-6 per student) slides to help you with the presentation.
7. Set a date for the presentation with the teacher.

CASE STUDY BOOKLET

This booklet contains the case study on which your exam is based.

Within the Question Booklet, any questions which state 'Please refer to the case study' are based upon this case study. You are strongly advised to refer to the case study when answering these questions. Otherwise, experienced candidates may give wrong answers.

Questions which state 'This question does NOT use the case study' do not use the case study and may be answered without reference to it.

The case study describes an organizational situation and necessarily only provides a limited amount of information. Where information is not provided (for example the case study may give no information about a particular ITIL role or process), it should not be assumed that the role or process or other aspect is absent in the organization. Nor should it be assumed that it is present in the organization. When such information is important for any examination question, then it will be clearly specified in the question-specific scenario on the question paper. No assumptions should be made based on the absence of information in the case study.

CASE STUDY TO SUPPORT THE EXAM

Background

A bank specializes in banking services for individuals and companies. The bank offers its services through branch offices across the country and also through automated teller machines (ATMs), and telephone and online banking. The bank has operated in its country of origin (HQ country) for many years and has recently expanded its operations into overseas countries.

The bank offers several different types of accounts, including savings, loans, credit cards and cheque accounts. All the accounts can be accessed by visiting a branch, by internet or by telephone. Internet and telephone banking have been increasingly successful in the domestic market and the bank hopes to deliver more innovative online products and service offerings internationally.

Changing world economics have opened up opportunities for the bank, and recent initiatives have included:
- acquisition of banks in other countries, to expand international operations and widen its customer base
- partnerships with other financial institutions such as insurance companies, to widen the range of services to the bank's customers
- extended hours of operation and a broader range of products through its wider international coverage.
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The bank's strategy is to integrate activities and share services and functions with the recently- acquired overseas banks where possible. The bank has already started selling and providing services in these markets.

The partnerships that the bank has established with other financial institutions are strong and the bank works closely with these partners. The bank has a business strategy, undeclared to its partners, to take the lead in these partnerships. In particular, the bank wishes to take the lead in designing and developing new banking services, and in marketing and selling them to the bank's own customers. The bank also sees opportunities in marketing and selling its products to its partners' end-customers. To support this strategy the bank has made a significant financial investment and commitment in terms of professional banking staff and organizational support in these areas.

Banking services

The bank supplies a range of banking service packages to its customers. The following banking services are considered to be critical components of these service packages, critical both to the bank's business operation and to support the bank's customers:
- 24-hour automated teller machine (ATM) service
- 24-hour customer call center (telephone banking and enquiry line)

- 24-hour internet banking (now the most vital for personal (non-business) banking customers)
- 24-hour global payments service (electronic, inter-bank bank payments, usually large amounts)
- Branch service (local branches which customers can visit to access their accounts)
- Third-party sales support service (usually delivered to independent financial advisers on their own laptop computers; without this service they cannot sell directly to their clients)
- Regulatory service (changes to interest rates and other aspects of customer agreements which have to be notified to customers within a set period).

Other, less critical banking services are also provided, including:
- Statement production (provision of account statements on a regular schedule and in response to customer requests)
- Marketing and customer offers (notification and operation of various offers which enhance other services).

Company structure

The high level company organization is set out in the attached organization chart.

There are eight divisions, each with a divisional director reporting to the chief executive officer (CEO). The business executive board comprises the CEO plus the eight divisional directors.

The company's divisions work closely together, with collaboration on specific projects often crossing divisional boundaries. The five banking divisions are:

- Retail banking division - focusing on the banking services
- Customer delivery division - responsible for the interfaces with the bank's customers, including managing the branches and the ATM network
- Industry liaison division - responsible for working with delivery partners such as other ATM providers, foreign exchange, credit card companies
- Financial products division - non-core banking services offered by the bank, including new financial products such as the insurance offerings
- Global banking division - a division into which the recently-acquired overseas banks report until they are integrated into the bank's operations.

Additionally there are three non-banking divisions:

- Marketing division - covering marketing of the generic brand and specific products
- Shared services division - this division consolidates the support services which have evolved over time within each operational division and includes the departments of human resources (HR), finance, IT and facilities

- Security division - covers security, audit, risk and compliance and is responsible for the bank's security policy and for adherence to legislation, data security and physical security requirements and business continuity. It is also responsible for the bank's global risk management policy.

The chief information officer (CIO) used to report to the chief financial officer (CFO), but now they both report to the CEO via the shared services divisional director. This change happened a year ago when the shared services division was formed.

Corporate vision and business strategy

The corporate vision is firmly focused on expansion. Based on this vision, the business executive board has set targets to be achieved by the close of the next financial year. The current financial year will close six months from now so these targets are to be achieved 18 months from now, and will be measured against the current position. Some of the targets are listed below:

- In the bank's HQ country, to have as a customer base 10% of the retail banking market (currently 7%)
- To increase income from internet banking by 70%
- To increase the income from customers living outside the HQ country by 50%
- To achieve a 5% increase in corporate profit.

Part of the business strategy is to integrate and automate business and IT operations within company constraints that include legislation, regulatory, financial and security constraints.

Challenges, issues and risks

The commitment to expansion has created some direct and immediate challenges, including:
- Language and time-zone concerns, as the bank acquires and partners with companies in other countries
- Cultural and organizational issues - this has especially shown itself in the different levels of expectation for IT support between the different countries and acquired companies.

All the banking divisions and the marketing division rely on their ability to monitor current performance and predict future demand. They depend heavily on the accuracy of management information and the underpinning IT services. Recently there have been issues with integration of management information across the business units.

As with all banks, there is a large amount of legislation - both national and international - that has to be complied with. Additionally the bank is committed to conforming to the national banking code of conduct, drafted collectively by the HQ country's major banks.

A company risk register is maintained and recent additions include:

- An operational risk related to an information security breach in the online banking service
- All IT hardware maintenance within the HQ country is outsourced to a single supplier which was not profitable in the last financial year.

IT structure

The IT department is made up of five units, each headed by a manager.

- IT strategy unit, which includes IT strategy, planning and IT finance teams
- Applications unit, which includes teams for application design, procurement, and development, as well as application maintenance and support
- Operations management unit, which includes an operations control centre, responsible for controlling the operation of both applications and IT infrastructure - it also includes the service desk function, incident and problem teams, as well as the technical management team, responsible for developing and supporting the IT infrastructure
- Service implementation unit, which includes the change management team
- Service quality unit, which includes the service improvement manager.

IT infrastructure

The bank has built up a server environment consisting of rack mount and blade servers. Some of these are clustered to provide high availability for critical IT services. Some are configured as virtual machines, but others are not. In an effort to reduce capital expenditure and increase the utilization of hardware, the bank has established a new policy of 'virtual first' meaning all new services will be virtual unless the application requires otherwise.

The bank manages this infrastructure in its own physical data centre with connectivity to branches in the HQ country via dedicated data links provided by a third-party supplier. Connectivity to offices outside the HQ country is provided by a third-party supplier via internet wide area network (WAN) links. The bank has set up a virtual private network (VPN) to ensure appropriate levels of security.

Some direct management of the branch IT infrastructure remains with the customer delivery division. Some direct management of the overseas banks' IT infrastructure remains with the overseas banks within the global banking division.

IT services

The banking services are underpinned by IT services. Some IT services, including the desktop service and the management information (MI) service, support many different banking services. Other IT services, such as the ATM management service, only support a single banking service. The IT services have been developed with a good

level of collaboration between business and IT staff. This has worked well, although it is acknowledged that effectiveness and economy could be further improved by increased involvement of IT staff in developing new and changed banking services.

Some IT development is outsourced and there is a policy that application software is purchased whenever possible rather than developed in-house. For example, accounting applications, stock control applications and desktop applications are all based on commercial, off-the-shelf (COTS) software.

IT service management (ITSM) situation
Due to the nature of the business, ITSM is well integrated into the company. An integrated ITSM toolset is used to support ITSM processes.

Service strategy
The CIO and IT strategy unit work closely with the business with the aim of delivering relevant and up-to-date IT services. There is a well-maintained IT service catalogue, easily accessible to staff, showing the IT services available. The service portfolio, however, is not formally maintained, although relevant information is available via business change request records and development records.
Financial control within the IT department is comprehensive at a high level, but only limited information is known as to the detailed cost of individual IT services and the usage by each customer.

Service design
Banking staff are actively involved in the IT service design activities undertaken by the application unit, and good relationships exist between staff in the applications unit and staff in other divisions.
The applications which support the bank's products are either developed by the applications unit, or purchased from third-party suppliers and customized by the applications unit. The applications unit maintains these systems, in collaboration with third-party suppliers where appropriate.
Approximately 60% of the work of IT service design is delivered by short-term contract staff working in the applications unit.
Service level agreements are in place, with negotiation beginning during the service design stage and extending through the service transition stage.
A remote back-up site is available to deliver continuity of critical IT services in the event of a disaster. There is an IT service continuity policy that requires that all critical IT services be designed to deliver IT service continuity via this route.

Service transition
It is difficult to secure the involvement of internal customers in the implementation of new and changed IT services, although they are willing to be involved in IT service design. Once internal customers have specified what they want, they expect the IT department to deliver the IT service without their further involvement.

Operational changes are well-managed, with strict control over access to the live IT services, but there is no formal change evaluation process to provide support for the evaluation of significant changes, and customer involvement with IT service transition is minimal.

Software testing is well-established, although it is almost totally focused on software functionality. This has caused issues in the past with new IT services being hard to support and requiring further effort to make them work after the IT services are operational.

Service asset and configuration management is focused on detailed data from automated discovery tools. The incident and problem teams do not feel this data helps them to diagnose issues easily.

Knowledge management is mostly carried out informally. There is a formal communication plan to keep staff up-to-date on new policies and requirements. There is awareness that, as the bank expands, the management of data and information will become increasingly important.

Six months ago HQ internal users received the roll-out of two updates to the standard desktop build, which is a major component within the desktop service. One was an important security update and the other was an update to the management information (MI) application that was considered critical for financial end-of-year reporting, and is also a component of the MI service. These two deployments were done at the same time and resulted in significant incidents for HQ staff.

Service operation

The service desk function and the incident management process are well-established and effective. Problem management tends to be reactive rather than proactive.

Business questions (how-to questions) are handled by separate business support teams within each of the main business divisions.

There is a process to manage service requests which is supported by service request software to enable direct ordering of certain service catalogue items by business users.
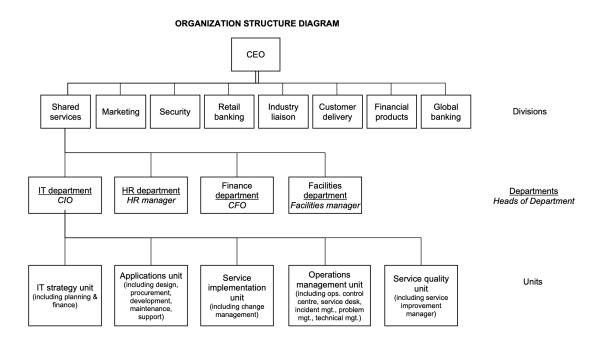
There is a central operations control centre in the HQ country which controls the operations of both applications and IT infrastructure (apart from certain management activities for the branch IT infrastructure, which are carried out locally by the branches themselves).

Traditionally the operations management unit staff have focused on IT service operation stage activities and have not been involved with service design stage or service transition stage activities.

While the plan is to integrate IT from the acquired businesses into the bank wherever possible, there have been difficulties in integrating the staff, IT and the acquired companies with the existing bank staff and structure. This has resulted in management focusing more attention on IT operations.

Continual service improvement

There is a well-established company culture of improvement, demonstrated by availability of investment funding for improvement projects throughout the

bank, including the IT department. Formal IT service improvement is under the supervision of the service improvement manager, a senior member of the service quality unit. The service improvement manager has difficulty getting staff to collaborate in focusing improvements at a service level. Most IT staff members tend to undertake process improvement without considering service measurement.

ORGANIZATION STRUCTURE DIAGRAM

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                                    CEO

Shared     Marketing  Security  Retail    Industry  Customer  Financial  Global          Divisions
services                        banking   liaison   delivery  products   banking


IT department   HR department   Finance       Facilities                          Departments
CIO             HR manager      department     department                         Heads of Department
                                CFO            Facilities manager


IT strategy unit   Applications unit   Service          Operations          Service quality    Units
(including         (including design,  implementation   management unit     unit
planning &         procurement,        unit             (including ops.     (including service
finance)           development,        (including       control centre,     improvement
                   maintenance,        change           service desk,       manager)
                   support)            management)       incident mgt.,
                                                         problem mgt.,
                                                         technical mgt.)
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TOPIC OF THE DISSERTATION DOCUMENT

Please refer to the case study

SLA breach

An end user has reported to the Service Desk that his desktop monitor has a crack. The Service Desk agent informs the user that it will take 5 business days to replace his monitor. The user thinks he can manage to work with the broken screen for a couple more days, but indicates that he really needs a new one within this timeframe because every now and then the screen switches off.

The Service Desk Agent captures all necessary details in the Service Management tool and assigns the ticket to the appropriate Support Group for further handling. The assignee of the Support Group places an order to the external provider who is responsible for managing the supply for all desktop services. After two days the external provider informs the Support Group that the monitors have run out of stock and that it will take a week and a half before they can deliver a new one.

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Your company wants to make sure that things like this can't happen again. For this reason, the CIO has instructed you to produce an evolutionary plan that allows you to correct and improve your processes.
Develop this plan starting with the analysis of what went wrong and, therefore, which processes need to be reviewed. Next, design these new processes, define the responsibilities using a RACI table for the functions below, create the implementation (rollout) plan of the new processes.

Function list:
- Business Relationship Manager
- Capacity Manager
- Chief Financial Officer (CFO)
- End User
- External provider
- Incident Manager
- IT Financial Manager
- Service Desk Manager
- Service Level Manager
- Service Request Manager
- Service Owner
- Supplier Manager
- Other (define who)