Summer Examinations 2016

STRM05816NA

Module Title: Strategic Management of Information Systems
Level: Seven
Time Allowed: Three hours

Instructions to students:

• Enter your student number **not** your name on all answer books.
• Answer **three** out of **four** questions.
• All questions are equally weighted. Where a question has more than one part the division of marks is stated.
• This is a seen paper. Questions have been distributed to students four weeks prior to the examination.
• The seen paper distributed prior to the examination is **not** permitted in the examination room. A new copy will be provided.

<table>
<thead>
<tr>
<th>No. of Pages</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Questions</td>
<td>4</td>
</tr>
</tbody>
</table>
Challenges to providing high quality services in evolving times.

The theme of the module this year has focussed on IT Strategic Management Principles, IT and Business Governance and IT Service Management Practices (principally the IT Infrastructure Library; ITIL®)

The general principles of this exam relate to:

- Understanding the core concepts of each scenario, the role of the IT department and their approach to strategic planning in any given situational context;
- The maintenance of a stable IT environment in rapidly evolving business circumstances;
- The maintenance of effective and efficient IT services which have to respond to government or regulatory constraints;
- Creating opportunities for the better use of choices and options open to IT in a particular environment;
- The blended use of IT Standards and toolkits such as International Standards (ISOs) and ITIL® respectively in a situational context.
Answer three out of four questions.

1. The so-called “Internet of Things” (IoT) is a new phenomena which is progressively affecting people and businesses. It’s implementation is based on sophisticated use of web-based technologies and data, it is increasingly being heralded as the new opportunity and often stated as being part of the next industrial revolution. However, some authorities argue that it provides some unique challenges to individuals and businesses.

In answering this question, you should consider the key aspects of IoT as they relate to businesses and their relationships with their customers and especially with regards to running IT as-a-Service. Students can outline examples from contemporary organisations in support of their answers.

a. Describe in detail what comprises IoT and how it is currently used.  
   *(20% of mark)*

b. Critically discuss the positive and negative effects it can have on business and individuals.  
   *(10% of mark)*

c. Discuss in detail the influence IoT will likely have on an ITIL conformant IT environment so that it is better able to organise itself effectively.  
   *(40% of mark)*

d. Critically analyse the role of internet governance as a mechanism to add controls and provide user confidence.  
   *(30% of mark)*
2. Not for profit organisations* have distinctive challenges when designing their IT strategies. World-wide it is generally accepted that these types of organisations typically make up a third of an economy. Many of the IT management frameworks are designed for profit-seeking organisations where competition is fierce, whereas in not-for-profit organisations competition is either limited or non-existent.

This scenario will consider a U.K. police authority which includes business units as part of its organisational structure. Operating with strict committee structures it has to respond to government requirements especially the Home Office. The underlying principles by which it operates include operational excellence, high quality information to solve crimes using diverse yet complex IT systems built mainly on legacy structures. These main principles have to apply against the background of key business objectives of reducing costs (dictated by Government), better access to information (Open Data Interchange), embracing cultural diversity and streamlining processes to avoid duplication of effort throughout the divisions. An Information Management Steering Group, chaired by the Deputy Police Commissioner is responsible for spearheading IT governance policies and overseeing the development of IT projects. Within this structure those sponsoring new projects are held accountable for “benefits realisation” for their area of work. Despite their best efforts staff in local departments who are involved in business change projects can find that their work has a negative effect on larger business projects. To manage IT effectively requires that the Police Force should endeavour to create and maintain value in order to prove to a critical public that it is looking after their interests. This includes the way it manages and stores data.

a. Describe the effects on IT strategy where there is a need to show how value can be created and maintained in an IT organisation which has to support a not-for-profit organisation such as a Police Force.  

b. Compare and contrast the differences between “return on investment” and “value of investment” when making strategic choices for IT within a Police environment.

c. Describe in detail the issues around diversity of customer and stakeholder groups within a Police environment and how this is likely to impact the development of their IT strategy.

d. Discuss the issues around IT governance where there are likely to be tensions in relation to the way the Police Force is organised and how it forms part of a national law enforcement community.

*It should be noted that the term not for profit does not mean that the organisation cannot generate surplus revenues. Typically though these revenues will be ploughed back into the organisation; in other words they do not have shareholders who require dividends.
3. “Demand Management is the process that seeks to understand, anticipate and influence customer demand for services and the provision of capacity to meet these demands. Demand management is a critical aspect of service management. Poorly managed demand is a source of risk for service providers because of uncertainty in demand. Excess capacity generates cost without creating value that provides a basis for cost recovery. Customers are reluctant to pay for idle capacity unless it has value for them” (from Service Strategy, TSO 2011).

The basic tenants of demand management are all well and good, but how can an IT organisation best apply it to their organisation? You are asked to critically evaluate the role of demand management in a contemporary IT organisation. In answering this question you should outline the key aspects of ITIL-conformant demand management and its relationship with the other “capabilities” within Service Strategy. You should also consider the tension between demand and capacity in service systems, such as those found in ITIL, especially as it relates to the given scenario (See below).

In doing so you are asked to consider the scenario of a major department store which operates nationally in the UK with both physical and on-line trading such as John Lewis or Marks and Spencer (in other words high-end retail). In this kind of environment the company will have seasonal aspects to its business where demand can fluctuate. The company is likely to be investing in multiple retail channels using technology as an enabler to transform the business to try to keep competitive.

You should also consider the theoretical aspects of “demand forecasting” and then describe the relationship between patterns of business activity relevant for a range of user profiles for a major high-end retail organisation.

a. Analyse the main theoretical aspects of demand management in service-systems relevant to the effective management of IT. (50% of mark)

b. Describe the likely application of demand management in relation to the given scenario. (30% of mark)

c. Describe in detail the relationship between patterns of business activity for three (likely) user profiles for the given scenario in an ITIL conformant IT organisation. (20% of mark)
4. IT Service Management Practices (ITSM) highlights the need for the maintenance of Utility and Warranty of Services (Service Strategy; TSO 2011). This concept in theory helps to distinguish between the service offerings of one provider or another.

Consider the mobile phone industry which is highly competitive where cut-price deals on a range of products and services often distinguishes one company from another. They offer their customers a wide range of products and purchase options on different tariffs which is highly dependent on technology “in-use”. Typically, the different tariffs offered by different providers are similar to their competitors and it is difficult for the customer to note any discernible differences between companies. Therefore, it could be argued, that the differences must lie in the way the underlying technologies of those companies are set up and managed created from designs which are a result of different strategic positions.

The design of their underlying Information Technologies means that they have to be responsive, efficient (to provide 24/7 support) and be agile. In order to design responsive IT services consideration has to be given as to the balance between Utility and Warranty identified in strategy which then creates a meaningful Value Proposition, to better distinguish one service provider from another.

**Discuss in detail the key aspects with regards to Utility and Warranty in this type of scenario.**

a. Outline the key elements of Utility and Warranty and their inter-relatedness.  
   
   *(10% of mark)*

b. Describe the relationship between service strategy and service design especially as it relates to Warranty of service.  
   
   *(20% of mark)*

c. Compare and contrast the combined effects of Utility and Warranty on customer assets and associated risks.  
   
   *(20% of mark)*

d. Describe in detail how aspects of the entire ITIL lifecycle are useful in helping substantiate the value proposition.  
   
   *(50% of mark)*

---

End of Paper