

## Info 200 – Information Systems Analysis Individual Assignment

### Systems analysis and the Dynamic Retail Shopping Environment

#### The Book Chapters

In the course we have covered the following chapter in Kendall and Kendall (the course textbook):

- Chapter Three: Project management.
- Chapter Four: Information gathering: interactive methods.
- Chapter Five: Information gathering: unobtrusive methods.

In this individual assignment your proposed solution will involve all aspects drawn from the above chapters as introduced in this course including the material provided in the lectures and the additional resources we have provided.

#### Introduction and Assignment Scenario

The highly dynamic socio-economic environment has resulted in an existential paradigm shift in the retail environment which has been a feature of the retail market over recent years. However, there have been significant changes in working practices driven by the need to accommodate shopper (customer) preferences (e.g., the trend to on-line shopping using e-commerce and m-commerce).

- The policies adopted to manage the Covid-19 pandemic, which include changes in previously accepted working practices with collaborative working and working from home using Internet technologies becoming accepted as a practical working paradigm. There are resulting changes in cities where for example coffee shops have reduced footfall driven by staff previously working from offices now working from home.
- There is a growing trend towards shopping on-line using e-commerce and m-commerce systems available (assuming an Internet connection) with shopping available *anytime* and *anywhere* with orders delivered to specified address.
- A similar trend towards the delivery of food, both in the form of take-away meals and in the delivery of raw materials by supermarkets, has been identified in the marketing and sales surveys.

These developments have resulted in dramatic and far reaching changes in retail marketing and sales strategies to address the changing retail environment. Research has identified trends in the retail sector which were becoming increasingly important before the Covid-19 pandemic. However, the pandemic has accelerated these trends with the outcomes brought forward by an estimated 5 years.

The changes [in retail markets and shopping] have resulted in retail organisations adopting different sales and marketing strategies which are based on on-line sales platforms such as the Amazon Marketplace, there are similar Chinese platforms. Where retail organisations fail to respond to the changing dynamic retail environment many companies have lost their competitive advantage and, in many cases, have failed to survive. Therefore, it is clear that reacting (ideally adopting a proactive approach anticipating these developments) to the developing and dynamic on-line retailing environment is strategically critically important if companies are to survive and prosper in the retail space.

**Smart Apparel** (this is not a real company) is a clothing retail (not manufacturing) company with multiple physical retail premise located in multiple cities. However, the company has a very limited on-line offering with a website which merely provides information to potential shoppers relating to the products sold in their physical retail premises. You, as a consultant, have been employed by **Smart Apparel** to investigate the companies operations and prepare an analysis addressing the current activities and make recommendations on how they may rapidly create and implement an on-line sales platform for their products with all related services (e.g., on-line payments etc.).

It is common for consulting companies (including project managers and analysts etc.) to be engaged by organisations in many domains. Therefore, consulting companies must initially investigate

organisations to understand the problems the consultant is engaged to address and, following the investigation, make proposals and recommendations in a report with presentations and discussed in the lectures. As we have seen in this course (and previous courses) an essential element in systems analysis is the identification of a comprehensive requirements specification. To identify such requirements a systems analyst must elicit the required data and information from all stakeholders in an organisation and their information systems.

You are the systems analyst employed by the consultant organisation (contracted to *Smart Apparel*) charged with investigating the *Smart Apparel* operations and systems. As the analyst, you are responsible for reporting on all the aspects of the companies operations including the supply chain and all stakeholders.

### The Assignment Task

The company (*Smart Apparel*) does not exist therefore an actual investigation is clearly not possible. Therefore your task will be to prepare a report based on a set of assumptions you must specify in the report (number of retail premises and locations etc.) along with the research methods proposed which are required to complete your report.

The report will set out (but not be limited to) the assumptions, the feasibility of the solution you propose (there may be multiple proposals which you will evaluate and provide a recommended solution), and the positive and negative aspects of all your proposals.

Your report will address (but not be limited to) the research methods to be adopted in the elicitation of the required data and information needed in the preparation of the requirements specification. You will design the process to elicit, analyse, and document the nature and types of data and information from all stakeholders (as discussed in the course textbook and lecture slides). In your investigation you must identify all stakeholders and your proposed research methods will involve all the information gathering methods referred to in Chapters #3, #4, and #5. You will employ both *intrusive* and *unobtrusive* methods along with *qualitative* and *quantitative* methods you propose to adopt to analyse the data collected. The presentation of the data will utilise graphical and narrative methods as discussed in Chapters #3, #4, and #5.

**Note:** Given that *Smart Apparel* is a fictional company interviewing stakeholders is not possible. Therefore, the aim of the assignment is to address:

- The design and implementation of the systems analysis process and operations
- The documentation of the systems analysis
- You will submit a report setting out the methods to be adopted in the analysis, the stakeholders identified, and the process to be adopted to analyse (*qualitative* and *quantitative*) the data which may be collected in a 'real-world' systems analysis. You must provide documentation (including graphical formats) as discussed in the relevant book chapters.

Your tasks include (*but are not limited to*):

- The design and implementation of interviews and questionnaires.
- The approach adopted for the data analysis.
- For interviews you must consider:
  - The population size (using sampling etc.).
  - The analysis of qualitative and quantitative documents.
  - The use of text analytics.
  - Observations for both people and their environment.
  - The application of STROBE.
- For questionnaires you must consider:
  - Preparation, planning, and the use of questionnaires.
  - Writing questions including question types and sequences.

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- Writing the interview report.
- Stories and their motivation.
- JAD.
- Design and administration of questionnaires.

### The Report

The report will be submitted in English and will not exceed 2000 words (you may if needed exceed the word limit by 10%) . In this assignment the report will use the following structure:

- An assignment front page setting out:
  - The course.
  - The assignment title.
  - Student name (English and Chinese).
  - Student ID.
  - Student email address.
- A title page for the report setting out:
  - The report title (you may choose your own interesting (and appropriate) title for the report.
  - An index page listing the sections and sub-sections in your report.
  - A brief executive summary (this will ideally be 1 (maximum 2) page(s) setting out a summary of your report, analysis, and recommendations.
  - Your proposal (investigation(s), analyses, and recommendations).
  - Brief conclusions with your recommendations as set out in your analysis.
  - You may include an appendix where any related additional documentation may be placed.

### Assignment Submission

The assignment report will be submitted in English in **electronic** format as follows:

- The assignment will be issued in Week #6 on Friday 24 March 2023.
- The assignment must be submitted in Week #9 by 12:00 noon (China time) on Friday 14 April 2023. Late submission will result in a grade penalty.
- The submission will be made as follows:
  - The report will be prepared using MS Office 365 (Word) with correct formatting and careful proof checking prior to submission.
  - The report will be submitted as a Word and PDF documents.
  - The report (Word and PDF) will be placed in ONE zip archive file (named using only your student number) and emailed to the teachers (the submission must be sent to both teachers) using the email addresses set out in the course specification document.
  - Failure to comply with the set assignment process will result in a grade penalty.

### Assignment Conditions

This is an *individual* assignment, and all work and submissions must be *all your own work* with no collaboration.

- At all times when working on and submitting your assignment student must comply with all the Lanzhou University Regulations including regulations relating to plagiarism.
- The grading structure is clearly set out in the course specification document provided in Moodle.
- We expect questions relating to this assignment. All questions relating to the assignment and the requirements must be submitted in the 'office-hours' session with an email and by appointment.