

**Assignment #3 (BI)**

**INFOSYS330 and BUSAN302**

**(Marked out of  100 points and**

**weighted to 20% of the final grade.)**

**Due on 29/05/2019 at 11:59pm**

The Case Study - NZ Merino Apparel

***(Please note: you may expand this case study as required)***



*NZ Merino Apparel* (NZMA) was first set up as a family business four generations ago. The business headquarters is based in Auckland and the main manufacturing plant in Napier. Some of the challenges faced by the company included deregulation, high labour costs, cheap import substitutes, and a small domestic market. As a result, although the company started small, it is now in the process of becoming a global enterprise, bound to face many challenges. These new challenges, amongst many others, include attracting appropriate staff, transporting goods on time, saving by keeping just enough stocks in overseas markets, creating and maintaining partnerships with overseas customers, creating designs suitable to different cultures and tastes, developing international supply chains, utilising flexible decision support systems to augment decisions made in the organisation etc.

Within this context, following is a description of the business, starting with the management structure (Figure 1).

Figure 1: The management structure of NZ Merino Apparel

The management structure of *NZ Merino Apparel* comprises of a Chief Executive Officer, Local Operations Director, Overseas Operations Director, Finance Director, Human Resources Director, Marketing Director (2 Associate Marketing Directors; 12 Assistant Marketing Managers from all parts of the world), Inventory Director, Chief Engineer (6 Assistant Engineers who manage as many technical staff as needed in the business; the number of staff varies), Accountant (with 5 Assistant Accountants), a Stock Manager in each continent, a Shop Manager in every shop (with two Assistant Shop Managers each), as well as a Research and Development Director with staff as required under him/her.

NZ Merino Apparel Vision:

*The vision of NZ Merino Apparel (NZMA) covers the full supply chain spectrum. The NZMA vision from the customers’ point of view is to increase the demand for New Zealand Merino wool globally by not only researching current fashion trends (and fads) but also new and innovative ways that NZMA can use Merino Wool, and to champion the unique attributes of the fibre. Significant research & development will be undertaken by NZMA to enhance all aspects of Merino, not only in garment production but also in “on-farm practices”. NZMA will also act as brokers for Merino growers (suppliers) to ensure the best possible sustainable price to keep the Merino tradition passing from generation to generation of farming families.*

As the Managing Director and Chief Executive Officer, Carol De Mello looks after all strategic and key task roles as well as all general management responsibilities. As the owner of the business she has a keen interest in all its operations. A graduate of the Business School of the University of Auckland, and having taken a treble major, she has an extremely good grasp of information systems management as well as accounting and marketing. At a recent Board of Directors’ meetings she said, “Having taken the decision to move forward as a global company let us think about the following: Let us first discuss, decide and build our business strategies. Then let us look at the enablers such as information systems that must be in place to support our business and make things happen.” A summary of concepts she put forward to the organisation’s Board of Directors, in building the business strategy of the global enterprise is as given below.

Business Strategy of NZ Merino Apparel – in Summary

***Please click on the arrow bullet on your left, to expand each section...***

### ****On Markets and Marketing:****

* + First conquer the Asia-pacific and USA markets.
  + Move into the European markets only when we are ready to compete with woollen products supplied by other European markets – Know when we are ready!
  + Identify potential European customer base (some listed below)
  + Carry out our own market research and promotions continuously.
  + Invest 7% of the profits on advertising and promotional research

### ****On Customer Service:****

* + Study the needs of the potential customers (potential customers are listed below – please note this is a hypothetical case, but actual organisations have been listed to allow you to get an idea of the business requirements in a real life setting)
  + Ensure that current IT infrastructure can efficiently cater for current services and be accommodative of future demands.
  + Allow current and potential customers to access the SCM as required, with privacy and security considerations in place.
  + NZ Merino Apparel acts as a facilitator to create and maintain the links in what has been described as the 'High Country to High Fashion' market. Attract leading international fabric manufacturers and knitwear companies and facilitate them committing to use New Zealand Merino fibre.
  + Establish brand partnerships with leading design houses and established brands.

**A few potential European customers:**

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| spacer | |
| Holland & Sherry  Holland & Sherry is known to tailors around the world as a sign of quality and good design...  <http://www.hollandandsherry.com/> | spacer |
| spacer | |
|  | |

Smartwool

Smartwool <http://www.smartwool.com/>

|  |  |  |  |  |
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| Ede and Ravenscroft  Established in 1689, Ede and Ravenscroft are London's oldest robemakers and tailors...  <http://www.edeandravenscroft.co.uk/> |  | | | |
| spacer | | | | |
| William Halstead & Co  William Halstead & Co are specialist producers of niche market cloths...  <http://www.williamhalstead.co.uk/> |  |
| .spacer | | | | |
| DAKS  Founded in 1894, DAKS is one of the United Kingdom's most respected clothing manufacturers...  <http://www.daks.com> | | spacer |
| .spacer | | | | |
| Oxxford Clothes | | |
| Oxford Clothes is America's pre-eminent manufacturer of fine tailored handcrafted clothing...  <http://www.oxxfordclothes.com/> | | | spacer |

### ****On Finances:****

* In order to expand globally, it will be necessary to raise additional capital. As a family owned business it is unlikely that the present owners will be able to supply all the required new capital
* What different methods can be used to raise capital externally, either as debt or equity and what are the advantages and disadvantages of these methods
* How can we ensure that raising the capital does not result in the control of the business moving outside the family?
* Up to now, only around 2% of the turnover has been spent on research and none on diversification. As an entity that will be expanding globally how much should we be spending on research and development? Should we be thinking of diversifying and if so into which industry?
* Around 90% of the annual profits have been distributed as dividends each year. Should we reconsider our dividend policy and why?
* Suggestion: Invest profits in a sustainable manner to weather times of recession and maximise profits at other times. Divert 50% of the profits to financial investments outside of NZ Merino Apparel.
* Suggestion: Invest 40% of the profits back in the business. 7% in promotional activities and market research and 3% on building personal relationships with individuals important to the business is a broad idea of the direction given to budgeting.

### ****On Suppliers:****

NZ Merino Apparel is committed to leading the development of the internet within the Merino industry for the benefit of grower suppliers and market partners. The SCM must allow growers 24 hour access to information, including:

* + Wool details
  + Latest market information
  + News and data relevant to the merino business etc.
  + Growers will have a direct supply link to supply agreed quantities of fibre meeting agreed specifications for a particular manufacturing process.
  + Implement measures that will ensure quality suppliers.

### ****On Manufacturing, Storing and Delivering Goods:****

* + In order to become a global enterprise, production capacity has to be expanded. The current manufacturing facilities were built several decades ago and have very little spare production capacity.
  + Should we modernise the current factory or build a new one?
  + If a new factory is to be built should this be located in New Zealand or overseas. Can we learn from the experience of Fisher & Paykel who appear to be in financial difficulty after relocating manufacturing facilities overseas?
  + How can we improve the efficiency of manufacturing, storing and delivery of goods by managing information more effectively?
  + How can we adopt a just in time manufacturing and delivery system?
  + How can we ensure excellent product quality?

### ****On Research & Development:****

* Current fashions
* Setting fashion trends
* New products that include Merino wool in its structure
* New markets
* On-farm practices…

### ****On Staffing:****

* What type of remuneration packages can be offered to retain skilled staff and to reward high-performing staff across all departments?
* What measures are in place to ensure hiring of quality staff?
* What measures are currently in place to reward employees of exceptional work done through the year?

**The Proposal:**

Write a comprehensive and concise report to the CEO of *NZ Merino Apparel* (NZMA) on designing and implementing a Decision Support System incorporating machine intelligence, for the organisation. A comprehensive solution must be detailed. The overall system concept must be explained in the executive summary of the report, whilst selling your idea to the Board of Directors of NZMA. Structure your report, using Simon’s (1977) decision making process model of four stages – Identify, Design, Choice and Implementation, which will form the main chapters of your report.

### ****Section One: (250 words)****

Section one should be an Introduction of your proposal. The introduction should be an extremely brief setting (One paragraph of 250 words or less) of the scope and boundary of the system *identified* for a selected stakeholder of the organisation. You may expand the case study (and give it in Appendix 1) if you wish.

### ****Section Two: (1 - 3 pages maximum)****

First describe your selected stakeholder and their role in the organisation, including the key decisions they have to make. Please extend the case to suit if needed (and give it in Appendix 1). Describe the KPIs that the stakeholder must keep a tab on. You may get started on this process by “looking at a day in the life of the stakeholder selected” and highlighting the decisions they make and information they need to make those decisions. Then, identify the problem you will be finding a solution for and document a detailed requirements analysis of the identified problem, from the perspective of the stakeholder.

### ****Section Three: (2 – 5 pages maximum)****

Section three should document how you arrived at a solution to assist the stakeholder and augment the decisions that person had to make. The solution choices you had and the reasons behind your selection of the solution must be explained by considering the advantages and disadvantages of possible solution choices. Feel free to use any diagramming technique to help the reader understand this process.

### ****Section Four: (1 – 3 pages maximum)****

Section four should describe the conceptual diagram of the systems and its implementation specifications. The theoretical design should be thoroughly and systematically specified. The implementation can be brief but concise. A sample visualisation / dashboard for each section must be provided for the identified stakeholder.

### ****Section Five: (1 page)****

Section five should be the conclusion. Conclusion should summarise what you have done and sell the system to the Board of Directors especially to the Assistant CEO Mr. Chris Tawa.

### ****Appendix One:****

A copy of the working case study with any extensions made to the case study must be supplied. Amendments must be highlighted and should take the form of extensions. Amendments to reduce the scope of the study must not be done without special written permission from one of the lecturer.

The main objective of this assignment is to apply knowledge gained on the concepts of Decision Support Systems, Data Warehousing, and Data Mining covered in lectures and in the labs, in an actual “Real-World” practical situation.

instructions

1. The emphasis should be on a detailed description to identify, design, select and describe (with diagrams) the implementation of a DSS/BI system for an identified stakeholder.
2. The prototype should be designed to demonstrate your understanding of DSS/BI concepts and convey clearly what you propose to implement.
3. The following is expected, as you are to treat this assignment as an opportunity to present an Information Systems Strategy and Design to a future employer.
   * Draw your diagrams neatly using an appropriate tool.
   * Give your final hand-in, a professional look.
   * Type all written answers.
   * Although presentation does not carry any marks, 10% of marks will be taken off, for badly presented work.

**Submission:**

* Post a **single soft copy** either a .docx file or a .pdf on Canvas.

**Assignment #3 (BI) Marking Rubric**

| **Criteria** | **Ratings** | **Pts** |
| --- | --- | --- |
| Identify a business problem:  Give a detailed requirements specification, for which a BI solution is sort. Identify the stakeholders involved and the specific decisions they have to make. Make sure you clarify how the BI solution will benefit the key stakeholder (and other stakeholders if applicable)  **Sections 1, Section 2** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **30.0 Pts**  **Excellent** | **25.0 Pts**  **Good** | **20.0 Pts**  **Fair** | **10.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 30.0 pts |
| Firstly, decompose the larger problem in to smallest possible part so that it becomes more linear and easier to solve… Think about the granularity of the problem.  **Section 3** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **10.0 Pts**  **Excellent** | **8.0 Pts**  **Good** | **7.0 Pts**  **Fair** | **5.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 10.0 pts |
| Discuss the most feasible BI application (or combination of applications) selected for the BI solution suggested by you for each decomposed part.  **Section 3** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **20.0 Pts**  **Excellent** | **15.0 Pts**  **Good** | **10.0 Pts**  **Fair** | **5.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 20.0 pts |
| Explain with reasons why one (or more) BI applications would best fit (over other possible solutions) the needs of AT for each decomposed part of the problem and how they syphon data/ intelligence throughout the suggested system.  **Section 3** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **10.0 Pts**  **Excellent** | **5.0 Pts**  **Good** | **3.0 Pts**  **Fair** | **1.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 10.0 pts |
| Give a conceptual framework (diagram) to describe the combined system. Explain what inputs and outputs each decomposed part must have.  **Section 4** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **10.0 Pts**  **Excellent** | **5.0 Pts**  **Good** | **3.0 Pts**  **Fair** | **1.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 10.0 pts |
| Give detailed instructions to the system development team, to enable them to get started on the implementation of the system. Sample visualisations can help.  **Section 4** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **10.0 Pts**  **Excellent** | **5.0 Pts**  **Good** | **3.0 Pts**  **Fair** | **1.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 10.0 pts |
| Critique the solution you have finally selected.  **Section 5** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **10.0 Pts**  **Excellent** | **10.0 Pts**  **Good** | **7.0 Pts**  **Fair** | **4.0 Pts**  **Poor** | **0.0 Pts**  **V. Poor** | | 10.0 pts |
| **Marked out of 100 points and weighted to 20% of the grade.** | | |