

SEMESTER 2 2022/23

GROUP COURSEWORK BRIEF:

Module Code:	MANG6526	Assessment:	Group Coursework	Weighting:	100%
Module Title:	Data Analytics and Organisational Decision Making				
Module Leader:	PK Senyo				
Submission Due Date: @ 16:00		Thursday 23 rd May 2024		Word Count/Duration:	6000
Method of Submission:	Electronic via Blackboard Turnitin ONLY (You are not required to submit a hard copy) (Please ensure that your name does not appear on any part of your work)				

Any work submitted after 16:00 on the deadline date will be subject to the standard University late penalties (see below), unless an extension has been granted, in writing by the Senior Tutor, in advance of the deadline.

University Working Days Late:	Mark:
1	(final agreed mark) * 0.9
2	(final agreed mark) * 0.8
3	(final agreed mark) * 0.7
4	(final agreed mark) * 0.6
5	(final agreed mark) * 0.5
More than 5	0

This assessment relates to the following module learning outcomes:

<i>A. Knowledge and Understanding</i>	A1. The theory and practice of decision support and analysis. A2. The role of knowledge in decision making in organisations. A3. The capabilities and limitations of information systems in supporting decisions.
<i>B. Subject Specific Intellectual and Research Skills</i>	B1. Assess decision support requirements in organisations. B2. Recommend appropriate proposals for digital decision support systems in organisations.
<i>C. Transferable and Generic Skills</i>	C1. Develop detailed reports of appropriate complexity for a given audience. C2. Collaborate in groups to solve data related problems. C3. Effectively use a data analysis tool. C4. Communicate data analysis results in a meaningful way.

Group Coursework Brief:

You should be aware that all members of your group share responsibility for any academic integrity breaches or other issues that may arise from your group's coursework submission.

PLEASE NOTE THAT ONLY ONE MEMBER OF THE GROUP SHOULD SUBMIT THE ASSIGNMENT TO BLACKBOARD TURNITIN.

Description

Your team is required to analyse a range of big data analytics implementation challenges facing a Malaysia Commercial Bank, named Bank X (see case study reference) and to suggest appropriate solutions for their organisational decision support needs. You are also required to use a data analytics tool (details will be provided in the lectures) to conduct specific analyses.

Case Study

Siew, E. G., & Farouk, F. M. (2023). Big data analytics implementation issues: A case study of a large bank in Malaysia. *Journal of Information Technology Teaching Cases*, 0(0). pp. 1—4.

<https://doi.org/10.1177/20438869231176836>

Your task

PART A (50%)

- Critically discuss the challenges facing or is likely to face when implementing data analytics. How will this impact current decision-making practices, if at all? How should the company prioritise addressing the challenges?
(30 marks)
- Why is data quality important in big data analytics? Using appropriate justifications, recommend a set of strategies that Bank X could adopt to help solve its data quality issues.
(20 marks)

Notes for Part A:

In developing your answers, you may find some of the points useful:

- Draw on the literature on organisational theories and decision making in order to gain some insights on the digital strategy management challenges facing the organisation.
- Draw on the literature on IT practices and adoption.
- Describe socio-technical (both the technical and social/organisational) aspects of your suggested solution.
- Take into consideration both the current situation of Bank X and its future ambitions.
- Identify the current problems within the organisation that the system is meant to support and describe how it can assist decision-making in the identified problem domains.
- Analyse the possible business requirements of the system.
- Explain the organisational changes.
- Reflect on the challenges that would face those involved in the change process.

PART B (50%)

(Data files will be provided by the teaching team and made available on Blackboard)

For this part, you are required to use the data provided and conduct independent desk research using credible materials (e.g., books, online articles, and peer-reviewed publications) to answer questions 1 to 3. Note that you might be required to do some data processing before answering the questions.

The data provided is based sales transactions of a fictitious company called Alpha, which has outlets in different regions of the USA. The data comprises order, customer, product, and returns details. You have been provided with Alpha's data with 9994 rows and 21 columns.

1. Using Alpha's data and Microsoft Power BI, produce appropriate charts/graphs for the following questions and provide a brief discussion on the meaning of the results for decision making.
 - a. Visualise the number of products in each category that Alpha sells.
 - b. Visualise the top 10 and bottom 10 products in terms of total sales volume.
 - c. Visualise the sales performance in different regions.
 - d. Which products are in the top 10 and bottom 10 in each region.
 - e. Visualise the total sales and profit for each year in the dataset.

(10 Marks)
2. Using Alpha's data and Microsoft Power BI, create appropriate reports for the following questions and provide a brief discussion on inferences you can make from each report for decision making.

- a. What insight can be drawn regarding the relationship between each product category, sales, and profit?
- b. Add a slicer to filter the total sales by each region and discuss any insightful trends.
- c. Visualise the total sales, profit, and profit rate for each product category and sub-categories.
- d. Compare the overall performance of each product by the customer segment and discuss any insightful trends.
- e. Visualise the overall contribution of each State to the total sales in 2017.
- f. Visualise the contribution of each State to the overall total sales of Alpha.
- g. Compare the total sales of each city between 2014 to 2017.
- h. What insight can be drawn regarding the relationship between each product and quantity sold.
- i. What insight can be drawn regarding the relationship between shipping mode and customer segment.
- j. What insight can be drawn regarding the relationship between product category, sales, and discount.

Note: You may provide more than one slicer/visual to address any of the elements above depending on the visual you selected

(20 Marks)

3. Your team has been contacted by the Alpha to provide critical insights on their performance with the hope of findings actionable intelligence for decision making to improve their future financial performance. Based on your analysis, answer the following questions:

- a. Create a dashboard that provides insights on the historical performance of each Product Category, Region, State, and Customer Segments and justify how these insights might be critical to improving the future sales.
- b. Using appropriate visualisations, discuss any key trends from the returns data and provide appropriate recommendations to reduce product returns.

(20 Marks)

Groups

Your group should consist of **up to six students**. You may select your own groups. Further information will be provided in the first couple of weeks of the semester.

Evaluation Criteria

Please carefully read the Grade Descriptor document, which contains specific criteria for part A and B. You may also find the following suggestions helpful in order to understand and satisfy the grade descriptor criteria:

- Clear focus of the different parts of the report in addressing the problems stated in the questions.
- Creativity in formulating novel solutions to the problems along with convincing justifications for each suggested solution.
- Proper combination of the technical and the social/organisational aspects (sociotechnical approach) in the discussion of the suggested changes.
- Judicious use of the different concepts and theories introduced in the class.
- Proper use of the relevant literature (e.g. drawing from multiple resources, combining ideas in a relatively seamless way, etc.)
- Linking of report discussion with the industry being analysed.
- Ability to use the key functions of data analytics tool and correctly interpret the output.

Nature of Assessment: This is a SUMMATIVE ASSESSMENT. See 'Weighting' section above for the percentage that this assignment counts towards your final module mark.

Word Limit: +/-10% either side of the word count (see above) is deemed to be acceptable. Any text that exceeds an additional 10% will not attract any marks. The relevant word count *includes* items such as cover page, executive summary, title page, table of contents, tables, figures, in-text citations and section headings, if used. The relevant word count *excludes* your list of references and any appendices at the end of your coursework submission.

You should always include the word count (from Microsoft Word, not Turnitin), at the end of your coursework submission, before your list of references.

Title/Cover Page: You must include a title/ cover page that includes: your Student ID, Module Code, Assignment Title, Word Count. This assignment will be marked anonymously, please ensure that your name does not appear on any part of your assignment.

References: You should use the Harvard style to reference your assignment. The library provides guidance on how to reference in the Harvard style and this is available from: <http://library.soton.ac.uk/sash/referencing>

Submission Deadline: Please note that the submission deadline for Southampton Business School is **16.00 for ALL assessments**.

Turnitin Submission: The assignment MUST be submitted electronically via Turnitin, which is accessed via the individual module on Blackboard. Further guidance on submitting assignments is available on the [Blackboard support pages](#).

It is important that you allow enough time prior to the submission deadline to ensure your submission is processed on time as **all** late submissions are subject to a late penalty. We would recommend you allow 30 minutes to upload your work and check the submission has been processed and is correct. Please make sure you submit to the correct assignment link.

Email submission receipts are not currently supported with Turnitin Feedback Studio LTI integrations, however, following a submission, students are presented with a banner within their assignment dashboard that provides a link to download a submission receipt. You can also access your assignment dashboard at any time to download a copy of the submission receipt using the receipt icon. It is vital that you make a note of your **Submission ID (Digital Receipt Number)**. This is a unique receipt number for your submission, and is proof of successful submission. You may be required to provide this number at a later date. We recommend that you take a screenshot of this page, or note the number down on a piece of paper.

The last submission prior to the deadline will be treated as the final submission and will be the copy that is assessed by the marker.

It is your responsibility to ensure that the version received by the deadline is the final version, resubmissions after the deadline will not be accepted in any circumstances.

Important: If you have any problems during the submission process you should contact ServiceLine immediately by email at Serviceline@soton.ac.uk or by phone on +44 (0)23 8059 5656.

Late Penalties: Further information on penalties for work submitted after the deadline can be found [here](#).

Special Considerations: If you believe that illness or other circumstances have adversely affected your academic performance, information regarding the regulations governing Special Considerations can be accessed via the Calendar: <http://www.calendar.soton.ac.uk/sectionIV/special-considerations.html>

Extension Requests: : Extension requests along with supporting evidence should be submitted to the Student Office as soon as possible before the submission date. Information regarding the regulations governing extension requests can be accessed via the Calendar: <http://www.calendar.soton.ac.uk/sectionIV/special-considerations.html>

Academic Integrity Policy: Please note that you can access Academic Integrity Guidance for Students via the Quality Handbook: http://www.southampton.ac.uk/quality/assessment/academic_integrity.page?. Please note any suspected cases of Academic Integrity will be notified to the Academic Integrity Officer for investigation.

Feedback: Southampton Business School is committed to providing feedback within 4 weeks (University working days). Once the marks are released and you have received your feedback, you can meet with your Module Leader / Module Lecturer / Personal Academic Tutor to discuss the feedback within 4 weeks from the release of marks date. Any additional arrangements for feedback are listed in the Module Profile.

Student Support: Study skills and language support for Southampton Business School students is available at: <http://www.sbsaob.soton.ac.uk/study-skills-and-language-support/>.

External Examiner:	
External Examiner Comments:	
Final Approval by External Examiner Date:	
Module Leader Response to External Examiner:	
(Please note these comments are REQUIRED and will be sent to the External Examiner)	