

**School of Science and Technology**

**BIS3214**

**Data Warehousing and Business Intelligence**

**Autumn/Winter term**

**2014/2015**

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| **Date:** 23rd January 2015 |
| **Supervisor:** Dr.Saed Murad (confirm spelling) |
| **Campus:** Hendon |
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# Introduction

* The Company name and type of business
* The Company objective, vision and scope
* The department (or sub-section) to be considered.

## Middlesex University

A University in England with roots back to 1878 who has since build up a reputation in London and international as a providing a high level of higher education from its wealth of experience and strategic operational capabilities. Through strengthening our efficiency by employing highly qualified academics, attracting the best ambitious students and strengthening our research reputation we can capitalise internationally on becoming an excellent international tertiary education establishment.

## Objectives, Values and Mission

Our Objectives are to attract students that are determined to succeed and support these students with the correct support and insure student satisfaction by developing policies to maximise their performance. We strive to enhance graduate level employability in an effort to improve our university rankings. We have strategies and policy to organise our schools to enhance excellence.

“Our vision is to become a leading University of choice, recognised internationally for excellence in all that we do.”

## Marketing Department

Middlesex University Marketing department is based at the Middlesex University London campus and from there advertisements are launched and managed. We specialise and focus on each of our five schools across the three different campuses universally. We receive investments for our advertising projects internally as well as from external sources.

* Try to get an updated version of the files below:
* [University Regulations for the Academic Year 2004/2005](http://www.web.mdx.ac.uk/regulations/archive/regs0405/STS.HTM)
* [Equality and Diversity at Middlesex University](https://www.mdx.ac.uk/__data/assets/pdf_file/0009/58707/Equality-and-Diversity-Strategy-2013.pdf)
* [Click here](http://www.bbc.co.uk/bitesize/higher/business_management/business_enterprise/decision_making_business/revision/1/) for more information about the pyramid below.



# Analysis of Operational Systems and Data Sources (20 marks)

* A discussion of the organisations current operational system
* The data sources used by the systems discussed in 2.1.
* An ERD(s) for the business
* A discussion of the advantages/disadvantages that a data mart would have for your organisation.

**Veeraj and Van:**

* What operational system they have in place? A discussion of the organisations current operational system
* What data is stored?
* What are the tables?
* How are they connected?

**Kateryna:**

* What are the advantages and disadvantages of the current operational system?
* What are the advantages and disadvantages of a data warehouse? (Slide week 4)

**Cristiano:**

* Design an ER diagram from the Marketing department.

## Advantages and Disadvantages to Using a Data Warehouse

Data Warehouse is computerised system for storing information. This information helps organisation to analyse historical patterns and make important business decisions. The advantage of having large repository of information that it helps to solve number of problems, increase company profitability while and reduce cost to access this historical data within external sources. Furthermore, the data is consistent, relevant, structured and combined from various locations into one centralised location. This data centralisation helps to find multiple solutions than where data analysed separately. Data Warehouse allows storing already retrieved data within operational level that improves turn around time of data reporting and analysis (Power).

The advantage of having data warehouse in marketing is that the data is static and provides a "single version" of the truth about enterprise activities. To understand better its customers – students, future prospects on the marketplace and event’s opportunities to attract more students – customers, researchers and funds.

However there are a number of disadvantages that need to be addressed. Firstly, data warehouse is very expensive to maintain, as data itself must be normalised, loaded and extracted. Moreover, company have to train their users, otherwise it could lead to the security problems while conducting any queries via online access. Secondly, there is always a chance that new transaction system may not be compatible with the currently used systems. There are also a numerous ways of storing information in the data warehouse and applying one set of rules might not be beneficial if in the future company decides to change the way it conducts business (Exforsys).

# Data mark design

* The identification of two subject areas, identified during 2, which would be of benefit to the managers your organisation.
* The design of the star schemas associated with both subjects area identified in 3.1
* A discussion of the granularity of dimension and fact tables
* The extension of one of the star schemas into a snowflake schema.

Two subject areas, within the section of the business

Snowflake is normalised! Star schema is not

Add content here

# ETL process

How extract data from operational system?

What do you do with it before storing on the data warehouse?

Implement the prototype of one of the star schema

# OLAP

How to query it?

What would managers be interested at?

# Conclusion

What challenges do we have to keep it up and running?

Performance? Amount of data stored. Flexibility to adapt/include/remove different columns.

# References

Exforsys, Advantages and Disadvantages to Using a Data Warehouse | IT Training and Consulting – Exforsys. Available at: http://www.exforsys.com/tutorials/data-warehousing/advantages-and-disadvantages-to-using-a-data-warehouse.html [Accessed November 14, 2014].

Power, D., Ask Dan! about DSS - What are advantages and disadvantages of data warehouses? Available at: http://dssresources.com/faq/index.php?action=artikel&id=180 [Accessed November 14, 2014].