**ANL 201**

**Data Visualisation For Business**

**Tutorial Mark Assignment**

**January 2021**

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**1A)** Microsoft mission statement is to render assistance to every industry of any size in innovating and succeed by engaging its programme and device through empowerment of every individual and organization to be more productive and achieve beyond their capabilities.

**B)** Microsoft vision for 2020 is to empower tech intensity to its customer. It will help its customers and partners not only to be independent but to become self-digital capable in innovation, business creation and trustworthy. Through its commitment over years of agreement, Microsoft will earn its customers trust through various technology layers through infrastructure, business process flow, artificial intelligence, productivity, and partnership. From these approaches, company can compete and grow by building its own proprietary technology features by embracing Microsoft software and services. From this new era of innovation, computation is vastly present from the cloud to the edge.

With this artificial intelligence and IOT collaboration, human can have a better understanding behaviour of the surroundings and their activities in their daily lives. Through these partnerships, Microsoft is committed to advance more towards enormous cloud bonding and step up in all layers of technology infrastructure from data, digital application, AI and business algorithm.

**C)** Microsoft strategic theme is to empower every individual and organisation to achieve more and to benefit from the technology that was created by them and to realize their customers full capabilities. It helps small businesses to be more productive, competitive, efficient and excel higher.

To help their customer build their own digital capability, the four strategic themes that build the pillar are through innovation, creating new business, trust, and environmental and social responsibility.

**Innovation**

Technology and computing have been implanted in the universe and in our daily lives. The next era of intelligent system is to innovate the customers through intelligent cloud and edge. In this transformation, big data is required in the digital world where customers play an important role in all industry to create value creation. As data volume is tremendously increasing, it is essential to introduce a superscale cloud datacentres where not only store unlimited data but perform analytic function on all areas particularly when every application is moving towards AI. More developers of digital company play an important role in the technology industry and therefore Microsoft is investing in the most advance software programming. Through GitHub, developers can benefit most through its framework, language, and cloud independently. Presently they have the most cloud providers in the region and its keep growing. The introduction of Azure machine learning,

Developers can train and build machine learning tool for decision making.

**Creating New Business**

Data is optimised from one system to the other which transforming business into AI through software intelligence where customers can have an insight of their business. Through digital business process, bridging of digital and physical world would enable customers with the correct information and time through mixed reality cloud. Customers can increase their productivity via digital communication and do analytic judgement and prediction. Through business applications transformation to AI, data conversion to intelligence is done and so enable customers to link physical world to digitize the business algorithm in the cloud. Microsoft introduced LinkedIn, where it managed to scout talents which is rather competitive in the job market and through this application, customer can benefit from its advantage for their recruitment programme. Through Teams application, more devices and Microsoft application can be integrated in one app particularly in healthcare and retail.

**Trust**

There are 3 cores in building and sustaining the trust of the customers which consist of privacy, cybersecurity, and introduction of AI. Firstly, privacy transparency through embracing data protection regulation whereby data storage and process were managed and Microsoft is committed in protecting the privacy of customers data continuously and creating new privacy law. Secondly, input and output signals from servers were monitored and analyse for spam and malware to deter cybersecurity threat. Microsoft is also collaborating with technology sectors and government to fight increasingly cybersecurity threat. With the introduction of AI such, visible approach can be implemented such as facial recognition and biometric technology. Microsoft believed that the customers interest and privacy will be protected with integrity and undoubtedly technology and the people can make changes to improves everyday lives.

**Environmental and Social Responsibility**

Microsoft plays an important role in keeping the environment sustainable and socially responsible. It is vital for future as everyone can benefits and utilised from the technology that was created.

They have move towards carbon free by reducing carbon emission and committed in sustaining their data centre through 100% renewable energy targeting nil waste operation. They have taken steps by training young people in high schools to team up with Microsoft volunteers to teach computer science. Microsoft is working to make broadband possible to all parts of the region and support non-profit organization by donating free and discounted software and services.

**D)** The four stages of data visualisation process are.

1. **Data Collection and Storage**
2. **Data Pre-Processing**
3. **Graphics Engine**
4. **Human Visual and Cognitive Processing**

**Data Collective and Storage**

1. Some of the challenges that may be face such as breach of privacy whereby data of customer may be hacked or intrude if there is a lapse in cybersecurity. All businesses process and trade secret will be hijacked if there is lapsed in security operation.
2. Cost of running a big data is costly as you need hi-technology servers and engaged workers to maintain and periodically upgrading the operating system.

**Data Pre-Processing**

1. When data is inconsistence which turn out into different variables, it will lead to integrity trade off as it is resulting huge problems in executing the process.
2. Inputting the wrong regional format can also cause the process to fail specifically if you are working on the date format.

**Graphics Engine**

1. Through Artificial Intelligence, more data storage is required to run the mobile application and thus upgrading of test run of data is necessary.
2. As some of the graphic application require the user to provide their personnel information for access, there is a risk of security breach of data personnel protection.

**Human Visual and Cognitive Processing**

1. When data was corrupted, chances of wrong interpretation of data can cause wrong decision. A proper storage of data is essential in decision making.
2. Different data will determine its own unique process. Therefore, it is necessary to engage the right person to analyse the data to define the model.

**E)** I would like to highlight 2 interesting point on the revenue and operating income from the Microsoft’s 2019 Annual Report.

1. Base on the report, **LinkedIn** is one of the huge contributors in Microsoft revenue in 2019. There was an increase of 12% or $33.7m across all segment but LinkedIn revenue was $371m or 25% particularly in Productivity and Business Process. In conclusion, LinkedIn is one of the essential applications as far business process is concern. Why is this application giving huge profits to Microsoft?

Firstly, due to the high demand from professional corporation in the digital world, LinkedIn revenue mainly came from Talent Scouting, Learning and Development, Marketing and Sales and Premium Subscribers. Through these bridging, it produced a more successful and fruitful world of professional in the digital technology. This transformation changes the traditional way of professionals recruiting, learning and development and marketing business. As the job market in the digital era is highly demand, this application enables its customer to scout talent through the portfolio available in the data bank and it is one of the utilities that it offers. Subscribers of this apps can access online tutorial and information for development and upgrade their learning skills. Customers can introduce and portray their business profile through advertisement and engage with other professional subscribers on their business process and solution. Premium subscribers have the privileged in creating their identity with other professionals and simultaneously create business network and creating business opportunities to other apps members.

This point is good as there are a lot of benefits we can gain through this application.

Firstly, with one application it served multiple tasks. I take the first point from talent scouting; we can get direct information and profile of talents without having to pay service fee to employment agent in short, no third party. Secondly subscribers can access online tutorial for their development and search for valuable information through the apps such as accounting and statistic data. This application is a good network for professionals as it can link to other members whereby business introduction can be in any industry and subscribers can enhance their sales and proposed business process and solutions. By creating more network, it provides more opportunity in business dealing. I recommend that this application is essential, particularly in this new digital technology era.

1. The other point of interest is we could see that **Intelligent Cloud** is another major contributing segment to Microsoft revenue which shoot out to 18% in 2019 and it is continue increasing. From the report, Azure and digital servers revenue of 91% proves that their infrastructure does not only offer intelligence storage but capable of performing computation and business process. In this modern digital technology, many users prefer mobile on the go where business solution and process can be execute in any part of the region any time through video conference or even playing online gaming. With Azure, customers can do analytic studies and make decisions on their business and as technology is moving towards AI, Microsoft is making its infrastructure accessible to user to integrate and implant to the application. One of the main important reason is Azure can do back up services and recover valuable data due to its flexibility and capability to run on any operating system. Due to its flexibility, Azure is another solution to IOT and hence many devices can be monitored for customers productivity particularly in reducing cost and problem solving in any industry. Due to this capability, today why more industry is engaging Microsoft Azure in the working process and customer can experienced deeper insight of unparallel data trade off.

As we are moving towards digital technology and AI, I think this is a good point as there are so many advantages we can achieve in intelligent cloud and it will not only improve workflow faster but improves our lives. Through this application, it is no longer about data storage but, analytic and decision making is possible. Through this intelligence, users can have a broader cloud analytic from this technology My recommendation is to make this application a must in today’s industry due to its multitasking capabilities and reliability.