

**ANL201**

**DATA VISUALIZATIONS**

# **Tutor-Marked Assignment**

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* 1. Microsoft’s Mission Statement is to empower every person and every organization on the planet to achieve more. Microsoft aims to help everyone with the technology they created. With their advancement in technological breakthrough they hope to create tools and platform capable of transforming enterprises to function in a more efficient and productive ways. By doing so, they wish to amplify the benefits to the society and environment.
  2. In my opinion Microsoft Vision statement is to maximize the potential of every people and enterprise with the use of technology. The shareholder letter repeatedly emphasises on the how Microsoft aims to create new technology, platform, and tools to benefit the society and environment. It states how Microsoft helps improve organizations from different industries, education, healthcare with examples. It also states how Microsoft are committed to create these technologies to aid the society and organization develop rather than as a means for profit. From these information in the shareholder letter, it tells us that the vision of Microsoft is to maximize the potential of every people and enterprise with the use of technology rather than one that is financially oriented.
  3. Microsoft employs various strategic themes.

Firstly, they employed strategy to ensure technology breakthroughs and process. They used many methods to ensure technology breakthroughs and process, one of them being Data and AI. When combining the use of Azure cloud with Power BI, Microsoft brought limitless data and analytics capabilities into analytics. They created a platform where large volume of data could be stored and analysis all together. These simplify the analytics process for the users across the globe.

Secondly, they employed strategy to ensure trust between Microsoft and its consumers. Microsoft believe that trust is essential for progression and hence they tackle potential trust issues such as privacy. Microsoft define clear and transparent policies on privacy policies and even allow consumers to have decisions on certain privacy options. By responsibly and ethically governing the privacy of consumer’s data, they hope that consumer’s rights are protected, and partnership would be sustainable.

Thirdly, they employed strategy to ensure the organisation environmental and cooperate social responsibility. Microsoft aims to create a sustainable future and one of the methods employ is by going green through zero-waste operations. They continue to power their data centre with even more renewable energy by building advance infrastructures with the aim of powering their data centres with 100% renewable energy to attain zero-waste operations.

Lastly, they employed strategy to ensure a strong culture within the organisation. Humans are the fundamental of the organisation. Microsoft acknowledge the importance of human resources and hence spend resources to take care of the well-being of their employee. For example, employee can apply for paid leaves for ad-hoc life situations such as taking care of a family member who is critically sick.

* 1. The 4 stages of data visualizations process are 1. Data collection and storage, 2. Data Pre-processing, 3. Graphics Engine and 4. Human Visual and Cognitive Processing. As a tech firm which deals with visualizations programs such as Power BI, it is important that they are aware of the potential issues faced at each phase of the data visualization process.

In the data collection and storage phase, Microsoft need to ensure that there is sufficient storage space for its client to store the data collected. Furthermore, it is essential for them to ensure the privacy of the data stored and at the same time ensuring the security of the data by ensuring that the none of the data stored would be lost. This could be challenging as large clouds are required to host these storage spaces.

In the Data Pre-processing phase, Microsoft need to ensure the ease of processing data with their existing applications. Data processing is one of the most tedious process in data analytics. As a tech firm, Microsoft needs to come out with ways to ensure that data processing could be made user friendly and more streamline to increase the efficiency of the process. For example, more pre-set formulas or shortcut keys could be inserted to streamline certain process.

In the Graphics Engine phase, Microsoft needs to ensure the accuracy of its algorithms in each of the many use case. This is exceptionally hard due to the large consumer base who uses their applications for many different scenarios. They need to ensure that the needs of every single consumers are catered for and that the contents in their applications are sufficient in facilitating the work of their consumers.

In the Human Visual and Cognitive Processing phase, Microsoft needs to ensure that the display of their products is appealing to the eyes. To do so, they are required to engage experts to research on effects of colour combinations on the brain. However, this could be challenging as the research results in France might not be like the research results in China due to the difference in culture and society environment. For example, red symbolises prosperity in China but danger in France.

* 1. One of the interesting points is the significant reduction in effective tax rate. Microsoft manage to reduce their effective tax rate from 55% in 2018 to 10% in 2019. This 45% is extremely significant to the profit margin of the company. One of the reasons that made this possible is the producing and distributing of products and services through foreign regional operations centres in Ireland, Singapore, and Puerto Rico. This is an interesting point as Microsoft increases their profit margin simply by producing and distributing via foreign regional operations centres instead. This is good to the company as they can increase their profit margin without violating any laws. Furthermore, producing and distributing via foreign regional operations centres would be more efficient in the aspect of transportation cost. Hence, I recommend that Microsoft continue this practice and explore even more suitable countries to set up more centres.

The second interesting points is the significant increase in research and development. Microsoft increase their research and development(R&D) expenses by 15% which is mainly driven by the investments in cloud, AI engineering, Gaming, LinkedIn, and GitHub. These increase in investment of R&D is a big step even for a tech firm. However, they are rewarded for these investments as LinkedIn revenue increased by 28%, Gaming revenue increase by 10% etc. This is an interesting point as it tells us that tech firm ought to identify and invest heavily in R&D to achieve breakthroughs. Hence, I feel that the decision to increase R&D expenses is good to the company. The company should continue to invest more in appropriate R&D fields. They should also venture and explore more potential opportunities in the market to carry out R&D.