



Knowledge and Information Management Skills in the Workplace

Contents Page

Introduction – Page 2

Part 1

Defining Data – Page 2

Key Differences between knowledge, data and information – Page 2

Pyramid of Knowledge, Data and Information – Page 3

Tacit and Explicit Knowledge – Page 4

Five Decisions – Page 4

The impact without pre-existing data – Page 5

Demographic Data – Page 5, 6

Part 2

Cost Leadership – Page 7

Market Differentiation – Page 7

Using Porters Five Forces – Page 8

Porters Five Forces Model – Page 8

Market Share of Sabre – Page 9

Information Systems – Page 9

Computer Based Information Systems – Page 10

CBIS for manager – Page 11

Conclusion – Page 12

References - Page 13

Assignment Part 1

Introduction

The purpose of this report is to analyse and evaluate the importance of knowledge management in terms of an organisation's management and their knowledge assets. The report will also identify the difference between tacit and explicit knowledge as well as an analysis on the difference between knowledge and data. Knowledge Management can help an organisation in a number of ways. According to Murugesan (2011), knowledge management can help an organisation improve organisational effectiveness, create greater value, build competencies, identify opportunities and exploit them too. Murugesan (2011) also states that the process must involve interaction between the organisation's assets and their leadership.

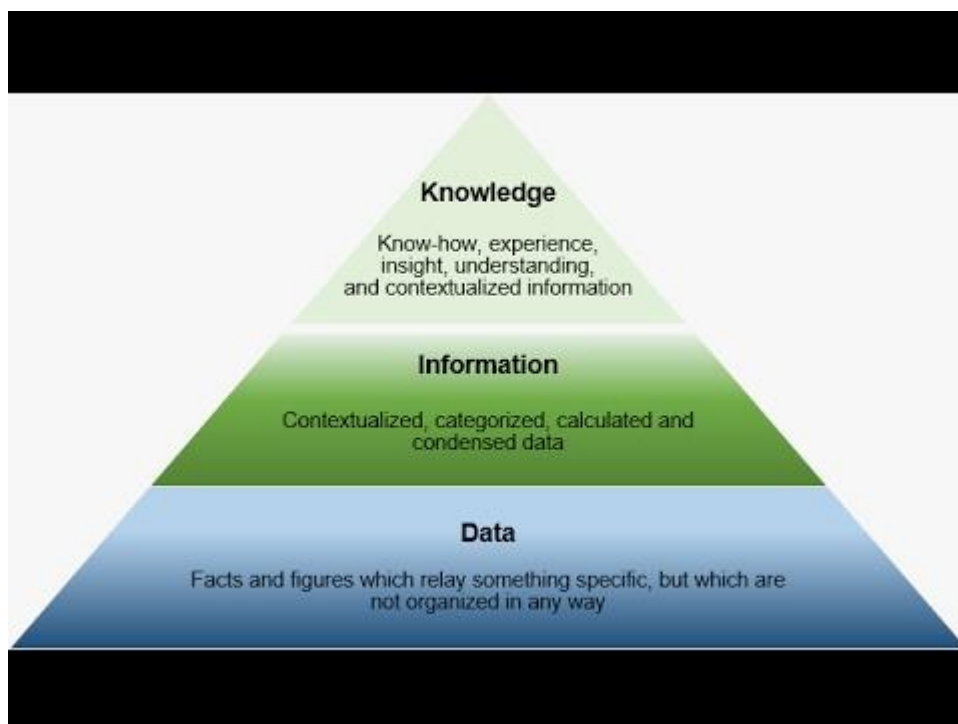
Defining Data

Q1) The Cambridge Dictionary (2019) defines data as information in the form of numbers or facts that is collected and used to help make decisions. Data can also be available in an electronic form which is stored in a computer. The same set of data can be perceived and considered as very useful for some individuals, whereas others may find it useless or irrelevant. This is because data needs to be translated, interpreted or acted upon in order to be useful to an organisation or an individual. An example of why data can be useful for some individuals and useless for others is; data illustrating the weather forecast would be very useful to farmers or those working within the agricultural industry, whereas it would be useless to those working in an office environment. This is because the agricultural industry would utilise data on the weather to predict crop yield and quality. The data could also help a farmer decide what crop they would like to plant. Another example is data from the stock exchange would be very useful to investors, however this data would be useless to a small business, such as a restaurant business. According to Young (2018), if data is not acted upon then it is as useless as not seeing the data at all. A study conducted by Deloitte Digital found that global brands that focus on data, are found to perform much better than those who do not.

Key differences between knowledge, information and data

Q2) There are key differences between data, information and knowledge because data are facts and figures that are not organised in a particular way. Therefore, the data can be viewed as random and useless up until it has been organised. Once the data is processed

and combined into meaningful structures, then the data becomes information, which then in turn becomes knowledge. Information is all about turning data into something that can help inform a business and it can be available in different forms such as patterns, trends, risks and summaries. Knowledge is when information is meaningful and can be used to help make predictions. It is usually gathered from past experiences or studies that have been conducted. Although both words are used interchangeably, there are key differences between data, information and knowledge. The difference between the three is that data is viewed as raw facts in the form of writing, symbols or numbers, information is seen as a message with meaning, whereas knowledge is information that has been processed and is stored in an individual's mind. Knowledge is then used to make decisions as well as improve processes and optimise business performance. Knowledge is also used to manage a business effectively and efficiently. Data, information and knowledge are all crucial to the success of a business and according to Roles (2018), all three are required for improved decision-making strategies. Roles (2018) also describes them as being part of the same continuum, although they all have varied functions, they are all required to work in conjunction in order to undertake effective decision.



Source: Knowledge Management Tools 2018

Tacit and Explicit Knowledge

Q3) There are two types of knowledge central to knowledge management and these are known as tacit and explicit knowledge. According to Murugesan (2011), tacit knowledge can

be shared or exchanged, and it is known as a potential of an individual which can be exploited in a number of ways, such as interviews or face to face discussions. Whereas Murugesan (2011) describes explicit knowledge as formal knowledge and is available in different forms such as reports, audio tapes and books. Explicit knowledge is written down and structured, whilst tacit knowledge is stored within the mind. Therefore, tacit knowledge is harder to define and it involves skills and experience, whereas explicit knowledge is documented therefore it is always available. Another fundamental difference between explicit knowledge and tacit knowledge is that explicit knowledge is when an individual is able to explain things that they know and tacit knowledge is when an individual knows things but is unable to explain how they know.

A card player would use tacit knowledge during a game of poker as they would need to use their intuition and awareness in order to analyse the state of the game as well as be able to develop a strategy in order to try and succeed in the game. The gameplayer would also use tacit knowledge which they will have gained from previous games they have played or observed. Experience, practise and wisdom will enable players to play strategically. Tacit knowledge also plays an integral role in the learning process during a card game. This is because the player is also learning through doing and making decisions. This knowledge also enables the learner to build and broaden their skills. According to Vykhur (2014), researchers suggest that tacit knowledge is a main source of competitive advantage. Therefore, players using this would also be at greater advantage.

Nevertheless, the player also acquires explicit knowledge, whilst they observe their opponents and they also have an opportunity to learn new strategies.

Five Decisions

Q4) This section of the report will take into consideration five decision's that I have made today:

Firstly, when I woke up, I decided on my attire for the day. I made this decision based on my knowledge of the weather and how cold it was outside. I also checked the weather forecast for the day and decided to wear warm clothes and boots as it was raining for the entire day.

Secondly, I decided on what I was going to eat for breakfast. I made the decision of having porridge with fresh bananas and green tea. I opted of these choices because I wanted to eat healthy food and the weather was cold so I knew the warm porridge and tea would help warm me up as well as give me energy for the day.

Thirdly, I then made a decision on how I would commute to university. I decided to drive to university because I had checked the West Midlands Travel App and could see that there was a delay in the public bus service, which would have led to me arriving late to my lecture.

The fourth decision that I made was deciding what to cook for dinner. I utilised tactic knowledge to make this decision as I was aware of what food my family would enjoy and what the best options would be.

The last decision I made today was based on what I was planning to watch on television in the evening. I used the Sky TV planner to have a look at what programs were scheduled to be broadcasted and I used the reminder service in order to remind myself of the time my preferred programs were starting.

The impact without pre-existing data

Q5) This section will now discuss how these decisions would be influenced by the lack of pre-existing data, information or knowledge.

Firstly, if I did not have data and information available on the weather forecast then I would find it difficult to choose what clothing to wear. As the weather forecast predicted rain for the day, this helped me understand that I would need to wear warm clothes and boots for the day, in order to avoid feeling cold and ruining my shoes. If I didn't have the knowledge of what rainy weather is like and how it could affect me whilst outdoors, then I would have been unable to make a judgement on what would be appropriate to wear.

Secondly, the data and information that is available has enhanced my knowledge on what healthy eating choices I should make and what would be best to eat. The information and knowledge has helped me make better choices and maintain a healthy balanced diet. Furthermore, this has helped the information that I have read on healthy and nutritious foods has influenced me to make better lifestyle choices.

Thirdly, without having data and information on the transport services within the city, I would be unaware of the fact that there were bus delays. I would have also had to wait for a long period of time for the bus to arrive which would result in getting late to my lecture. Therefore, the information influenced my decision positively as I understood that it would be better to drive to university. I have knowledge on how to drive a car, due to practise, taking driving lessons and a test. I also have knowledge on the route that I would need to take to university due to information that is available on google maps.

Fourthly, I was able to make the right decision on what to cook for my family due to pre-existing knowledge of what they enjoy eating. The knowledge was acquired from the

information that my family had provided on their food choices. If I did not have this knowledge then I would have been unaware of what they would have preferred to have for dinner. I also had pre-existing knowledge on how to cook the menu I had put together. However, with the lack of this pre-existing knowledge, this could influence my decision negatively as I would have not known what to cook or even how to cook.

The final decision was based on choosing what to watch on television. If I had a lack of information on what programs would be available on the specific channels and how to use the Sky planner then I would have also not known that what channels my favourite programs would be broadcasted on.

Demographic Data

Q6) The product that I have selected for the demographic search is the Muslim headscarf, also known as the Hijab. The hijab is a veil that is worn by Muslim women in the presence of men that are not their intermediate family. According to Killian (2017) many Muslim women believe that hijabs are also a symbol for their religious affiliation and as a sign of modesty. The gender that utilise this product are females.

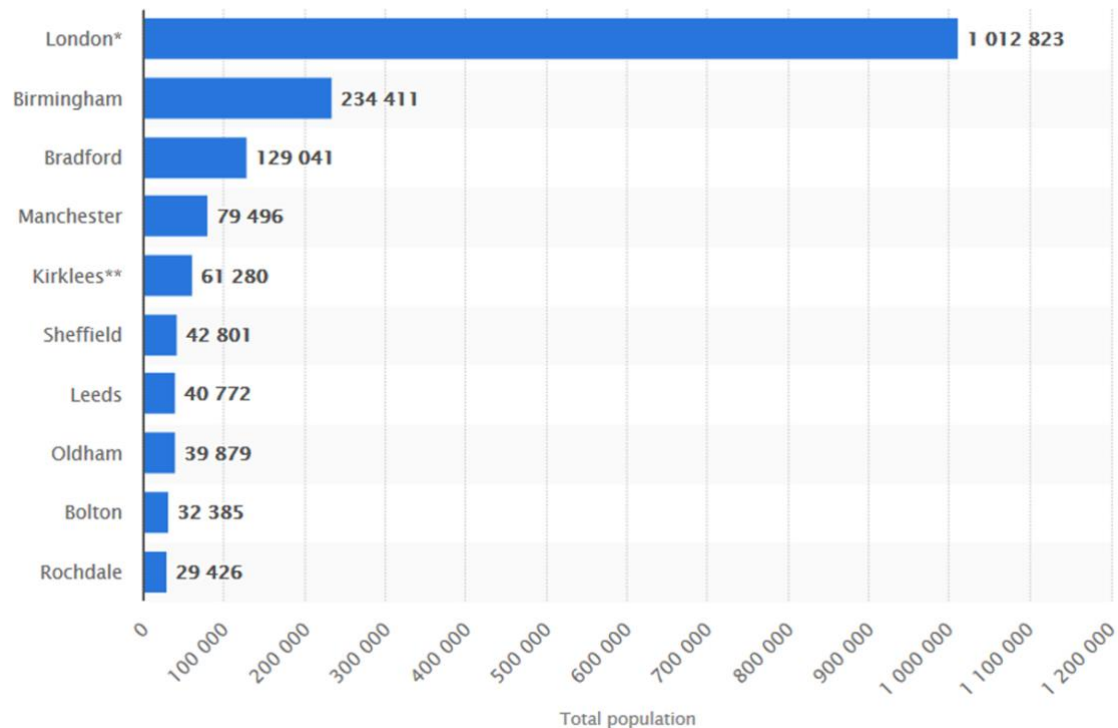
According to the Office of National Statistics, the Muslim population within the United Kingdom was reported as a total of 3,372,966; ONS (2018). Furthermore, data from The Muslim Council of Britain (2011) illustrates that the highest population of Muslims are located in London, Birmingham Bradford and Manchester.

Table 6: Muslim Population Change in Cities with Largest Muslim Population

	All			Muslims			Muslim Population Change	
City	2001	2011	2001	%	2011	%	2001-2011	%
London	7,172,091	8,173,941	607,083	8.46	1,012,823	12.4	405,740	66.8
Birmingham	977,087	1,073,045	140,017	14.3	234,411	21.8	94,394	67.4
Bradford	467,665	522,452	75,188	16.1	129,041	24.7	53,853	71.6
Manchester	392,819	503,127	35,825	9.12	79,496	15.8	43,671	121.9

Source: Census 2011. ONS Table QS208EW.
(Data on cities has been derived from Local Authority District data)

Source: The Muslim Council Of Britain (2012)



Source: Statista (2012)

The knowledge that I would use to promote this product would be ensuring that I focus on advertising and selling the product in the cities that are densely populated with Muslims, such as London, Birmingham and Manchester. As these are the cities with the highest Muslim populations, it would make sense that these would be the target markets. There are already many Islamic fashion shops on the high streets in these areas that can be targeted for wholesaling. A list of them are available on google and Yell.com. these lists can be formulated and given to sales reps. This is an example of data being transformed into information.

It is common for most Mosques to have an on-site shop, where Islamic products such as books, literature, Islamic arts and clothes can be purchased. There are two possibilities here:

1. To directly wholesale to the mosque shops
2. To have a private kiosk where goods are supplied on a sale or return basis

The private kiosk idea is more desirable as it means that you are getting real estate and advertising with out having to make any initial investments into the property or be tied into a lease or rent on any property. This idea is based on the “Starbucks” and “Costa coffee” kiosks that have become very successful in petrol stations up and down the country. The

only downside to this would probably be either making less profit or giving away a portion of the profits in return for the space supplied. A list of mosques is available in the Muslim Directory that could be used for reference targeted market campaigns. This is also an example of transforming data into information.

I would also use Muslim bloggers to promote the product on social media such as Instagram and Facebook. The internet and social media sites are great marketing tools that could make your product go viral over night if you can get the right person and angle to market it from. By using the bloggers to market the products by giving tutorials on how to wear/use the products is an example of data being turned into knowledge.

Assignment Two

Cost Leadership

Business strategy dictates that cost leadership is finding the competitive advantage in having the lowest costs of operations in that particular industry. cost leadership enables an organization to gain the competitive edge by creating a low-cost business model that will produce higher profits. Cost leadership is different to Price leadership as it means that even though a company has the lowest costs of productions, but yet is not offering the lowest prices. Cost leadership is achieved by increasing efficiency and productivity and by eliminating waste and finding cheaper suppliers and materials.

When American airlines and IBM first launched the SABRE system, for its time it was highly innovative and revolutionary which gave them the competitive edge and also helped them to eventually secure cost leadership over their competitors. By automating their booking process, they managed to increase efficiency and productivity. By moving on from the old pen and filing system of the 1950's, the operation became more standardised and streamlined. The new system helped to overcome the old problems of being over and under booked as the sales people and travel agents could search for tickets far more efficiently from a central database.

Market Differentiation

Market differentiation is the strategy to make your product or service unique and exclusive. It should have unique features that make it stand out from its competitors and be more attractive to the perspective buyer or client. To differentiate the product or service, its needs a creative approach which is backed up by market research into the latest trends of the industry and market.

American Airlines needed an innovative way to make itself stand out from the competition, the SABRE system not only helped to increase productivity and reduce costs, the fact that customers could search for seats and cheaper air fares was also an added bonus that helped to draw the crowds. Also, entry barriers to this market were very difficult to cross because of the cost of investment into a project like SABRE. This meant it was not an easy access market and made it difficult for competitors to enter.

Using porters 5 forces

The 5 forces model is a business analysis model that can help to explain how various industries manage to sustain profitability at different levels. It is widely used to analyse the industry structure of a company and helps to put together corporate strategy. Porter (1980) states that there are five undeniable forces that play a role in shaping and moulding every market and industry in the world. The five forces are used to measure market attractiveness and profitability as well as competition intensity.

American Airlines new sabre system was cutting edge technology that was allowing customers to not only book their flights, but also search for hotels and car rentals. This gave rise to other new trends in travel such as the ability to search for “tour operators” and “package holidays”. This was an innovative technique that separated American airlines from its competition.

The five forces model

1. Competition in the industry

The first refers to the number of competitors in the market and their ability to undercut your company. The more competitors there are in the market makes it harder for a company to turn profit especially when competing with larger companies who are selling the products and services at a more discounted rate. If the competitive rivalry is low, then it is possible to charge higher prices and increase profitability.

American Airlines was competing with other heavy weights in the market such as “PAN-AM”, “Delta-Airways” and “BRITISH CALEDONIAN” at the time and were able to make headway on them using their new and improved booking system.

2. Potential of new entrants into the industry

A company’s power is always under threat from new entrants in the markets. Whether it is a big multi-national company or a small retailer, any new entrant should be considered a threat to a company’s future and profits.

In 1976 British Airways introduced Travicom which was based on their old system Videcom. This was a new entrant to the market which connected 49 international airlines to thousands of travel agents across the UK. It offered financial incentives to agents to use their technology and override the SABRE system. By 1987 Travicom was handling 97% of UK airline trade bookings.

3. Power of suppliers

The power of suppliers in an industry is also key to your company's future as this factor could easily drive up or sometimes down the cost of inputs. The lesser the number of suppliers there are in an industry, the more power they hold. The more suppliers there are in an industry can help to find lower prices of inputs.

Being a major player in the airline industry meant that American Airlines had a lot of bargaining power with its suppliers. Although there are only 2 major suppliers of commercial aircraft, there are many other services involved, such as the suppliers of uniforms, transportation for staff, in-flight meals etc etc, that are also a major part of the business.

4. Power of customers

Customers also have the ability to drive the price of a product up or down. A company with a large customer base can often dictate its prices and terms and conditions of its products and services. Whilst a company with a smaller and powerful client base means that each customer has the power to negotiate.

American Airlines has a broad customer base and set scheduled flights that customers cannot possibly interrupt. So, it has the power and ability to dictate on its own terms and conditions of when and how it will operate.

5. Threat of substitute products

Substitutes in a market are also a threat. When substitutes are available and customers have the option to forgo your product or service, can also weaken the power of the company when there are no close substitutes to compete with your product or service, then the company has a higher standing in the market and has the power to decide how much it will charge for them.

Because Air travel is the quickest and possibly cheapest mode of transport. It is going to be very difficult to substitute it for any other means. So, the industry is relatively safe from being taken over by car, train or shipping companies.

Market share of SABRE

Although American airlines was initially very successful with the launch of SABRE, it struggled to maintain its market position due to fierce competition. The first wave came in 1986 when British Airways launched a new and improved booking system that also came with the backing of more than 40 of the biggest airlines in the world. The second wave came when the world wide web became a household product and people were able to search more effectively for a tailored solution to their travel plans. Companies like Lastminute.com, Trivago and TripAdvisor quickly became major players in the industry and have now become household names that everyone recognises.

Information Systems

Q1. Information Systems are crucial to the success of a business as they are required for operations as well as management. According to Bourgeois (2014) an information system is made up of the following components, software, hardware, data, people and processes, that individuals and organisations use to build, gather, create and disseminate valuable data. Furthermore, another purpose of the system is to retrieve and secure data within a safe environment. Information systems are usually available in a computerised form, which enables users to retrieve in a faster and more precise manner. Three of the components; software, hardware and data are described as the core technological aspects of an information system. The software component is intangible, and it is made up of a set of instructions which informs the hardware on what to do. Bourgeois (2014) describes two types of software, which are known as operating-system software, for instance Microsoft Windows and application software, such as Microsoft Excel. The hardware component is a physical component such as a computer, a flash drive or a keyboard. Whereas the data is also an intangible component, which consists of a collection of facts or figures. Data is very powerful for an organisation, once it has been organised into a database.

Belkin (2000) states that users are required to specify what they need from an information system and the information system should also recommend courses of action to the user. Information systems offer a wide variety of benefits to organisations. According to Bagchi (2010), information systems can help enhance internal communication systems, facilitate with routine office tasks, as well as help higher management in the decision-making process. Information systems can also increase the efficiency of operations

Q2. According to Ullah (2018) computer-based information systems play a pivotal role within the digital economy and this is because they offer an exclusive platform which offer tools for communication, marketing and the retention of customers. The computer also plays a very important role within this system. There are four types of computer-based information

systems; which are Transaction Processing Systems (TPS), Management Information Systems (MIS), Executive Support Systems (ESS) and Decision Support Systems (DCS), which will be detailed below. There are a number of other different types of Management Information Systems, these include Business Intelligent Systems (BIS), Customer Relationship Management Systems (CRMS), Marketing Information Systems (MkIS) and Executive Information Systems (EIS).

TPS – These systems facilitate the processing of business transactions and this involves gathering and retrieving transaction data. Examples of these transactions are billing customers or placing orders. Consistency and reliability are essential to the smooth running of this system. Mahajan (2009) states that the transaction is monitored via a database system and it is crucial that the data is left within a consistent state. An example of when a TPS is utilised, is when customers are reserving a train ticket, these tickets can be accessed and booked via multiple platforms and operators, therefore it is important that during the booking and transaction stage the seat for this ticket is locked in order to prevent double bookings. However, if the transaction process is not monitored accurately and effectively then this will create double bookings and cause considerable inconvenience for the business as well as the customer.

MIS – These systems are used to record, store and process data in order to produce valuable and beneficial information and data driven reports. The information is then used for various reasons such as decision-making. MIS' are also useful because they can be used by organisations to communicate internally and externally. An example of an MIS system used within an organisation is when a recruitment company uses the system to text and email their candidates in regard to interview confirmation. According to Cummings (2019) an MIS can help support processes, intelligence and operations. Furthermore, an MIS can produce a number of different types of reports such as scheduled reports, real-time reports and ad hoc reports. According to Rainer (2019), an MIS can provide a number of advantages such as, organisation having ability to identify what is and isn't working for the business which also helps them maximise a return on their investments. In addition to this, the system can facilitate with improving workflow processes, which can better respond to the customer needs.

ESS – These systems can help turn data into a very useful and summarised reports. The reports are generated by various departments and are then usually utilised by top level or executive managers. Furthermore, Chichernea (2019) also states that these systems can offer analytical tools which uses data to forecast performance outcomes. Once again, this

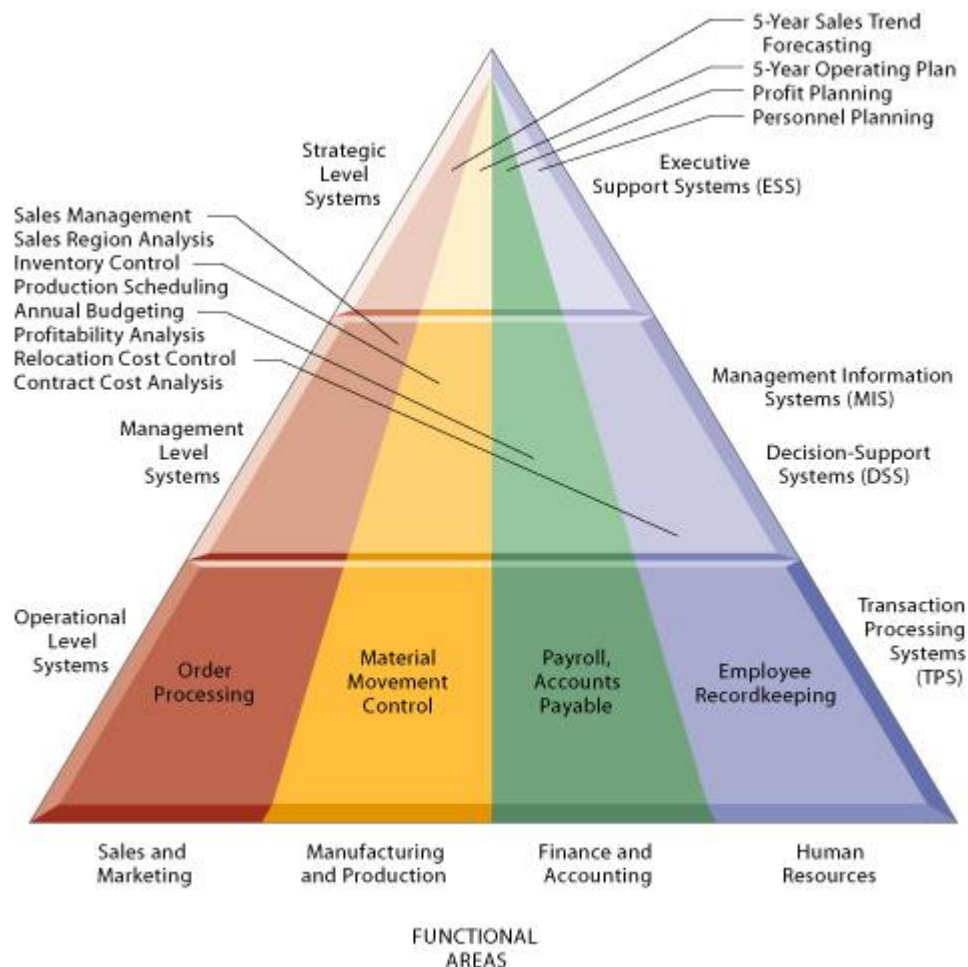
system is also very useful for executive managers to use during the decision-making process. Chichernea (2019) states that this type of system has a very positive impact on the organisations performance.

DSS – Chichernea (2019) describes this as a class of information systems which supports a business through their decision-making activities. The data is presented in such a way that it can help a business make decisions easily. According to Rousse (2010) the types of information that this system can offer are comparative sales figures for certain periods of time, as well as projected sales figures which would be based on sales assumptions. The data can be presented in a graphical format, depending on the user's requirements. The type of organisations that would utilise this type of system would be a retail or sales organisation. Stoltzufus (2010) states that a business could use this system to identify the type of supply chain movement that works best for them. The system can also be used to analyse inventory and how the movement of this can be optimised. Power (2003) describes this system as a chance to help businesses achieve competitive edge.

Q3. Explain how computer-based information systems can support managers at each level of an organisation

Computer based information systems are very useful tools as they enable managers to make decision as well as provide them with greater flexibility to respond to the changes within the market. Bagochi (2010) also states that management information systems can enable managers at different levels to undertake suitable decisions. Ullah (2018) also states that these systems can help provide small-medium sized enterprises a better opportunity in competing with bigger organisation.

The image below illustrates the four different types of support systems; TPS, DSS, MIS, ESS, and how each of these systems supports at each organisational level. The diagram shows that TPS is used at operational level, MIS and DSS systems are required at management level and ESS systems are utilised at strategic level. According to Laudon (2019), the systems are designed to meet the requirements at each level.



Source: Laudon (2019)

According to Rainer (2019), these information systems enable manager to get an entire overview of the entire operation as well as get feedback on their performance. In addition to this, managers are able to compare and contrast their actual results to their planned and expected forecasts. Power (2003) states that the use of these support systems are enabling managers to enter a newer and sophisticated stage whilst making decisions. However, it is essential that the system is designed to meet the needs of the user and the organisation.

Conclusion

In conclusion to this report, we have established that reliable data can be turned into valuable information and if it is used in the correct context becomes a powerful source of knowledge to a company. This can help organizations in every aspect of their business and help them to gain the competitive edge in the market. Data and information are what company leaders and management rely on to make sound business and financial decisions. With advances in technology, it is now becoming easier to gather and store information on consumer trends.

References

- Belkin N. (2000). Helping people find what they don't know. Research Gate.
- Bourgeois D. (2014). Chapter 1: What Is an Information System? Press Books.
- Chichernea V. (2019). THE EXECUTIVE SUPPORT SYSTEMS AS INNOVATIVE TOOLS FOR THE EVALUATION OF FINANCIAL PROJECTS. Romanian-American University.
- Cummings M. (2019). What Is a Management Information System? Management Information Systems: In Business, in Academia, and in The Future.
- Killian C. (2019). Why do Muslim women wear a hijab?. *The Conversation*.
- Laundon . (2019). Management Information Systems. Managing The Digital Firm.
- Mahajan R. (2009). Role of Transaction Processing System. SSRN.
- Murrugesan (2011). *Human Resource Management*. New Delhi: Laxmi Publications.
- ONS. (2018). *Muslim population in the UK*. Available: <https://www.ons.gov.uk/aboutus/transparencyandgovernance/freedomofinformationfoi/muslimpopulationintheuk/>. Last accessed 20th Nov 2019
- Porter, M. (1980). *Competitive strategy*. New York: Free Press
- Power D (2002). *Decision Support Systems: Concepts and Resources for Managers*. USA: Greenwood Publishing Group.
- Roles B. (2018). THE KNOWLEDGE CONTINUUM: HOW DATA, INFORMATION, AND INTELLIGENCE WORK TOGETHER. *Intro Hive*
- Rouse M. (2019). decision support system (DSS). Tech Target.
- Statista. (2012). *Muslim population of the United Kingdom (UK) as of the 2011 Census, by region*. Available: <https://www.statista.com/statistics/868696/muslim-population-of-the-united-kingdom/>. Last accessed 20th Nov 2019.*cquisition during Gameplay*.
- Stoltzofus J. (2010). Learn some specific uses for DSS in business. Learn some specific uses for DSS in business.
- The Cambridge Dictionary. (2019). *Definition*. Available: <https://dictionary.cambridge.org/dictionary/english/data>. Last accessed 20th Nov 2019.
- The Muslim Council of Britain. (2011). A Demographic, Socio-economic and Health profile of Muslims in Britain drawing on the 2011 Census. *British Muslims in Numbers*.

Ullah A. (2017). An Enterprise Computer-Based Information System (CBIS) in the Context of Its Utilization and Customer Satisfaction. *Management of Information Systems*.

Vykthur. (2014). *Do we learn while we play games? A Study on Tacit knowledge*

Young H. (2018). Data That You Don't Act on is as Useless as Data You Never Saw in the First Place. *Sales Force Blog*