

Knowledge and Information Management of Amazon.com

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BMSW5106

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Knowledge and Information
Management Skills for the
Workplace

Task 1&2

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Md Kalam

Executive Summary

The coronavirus epidemic has not only killed countless individuals around the world, but it has also wreaked havoc on the global economy, bringing industries to a halt, causing huge layoffs, and has expedited the slow death of already failing department store chains in the retail sector. One of the few exceptions is Amazon. With its seemingly unlimited selection and drive to provide convenience and low prices, the e-commerce behemoth became the default store and an important service for many consumers during the coronavirus crisis. Amazon set sales records in the second quarter thanks to a surge in online orders. It then invested billions on coronavirus-related initiatives like as worker safety equipment and Project Ultraviolet, an internal testing project. Amazon continued to hire despite widespread unemployment and economic uncertainty. Between March and mid-April 2020, the company hired over 175,000 new warehouse and delivery personnel to help fulfil consumer orders. Amazon set sales records in the second quarter thanks to a surge in online orders. It then invested billions on coronavirus-related initiatives like as worker safety equipment and Project Ultraviolet, an internal testing project. Amazon continued to hire despite widespread unemployment and economic uncertainty. Between March and mid-April 2020, the company hired over 175,000 new warehouse and delivery personnel to help fulfil consumer orders. Along with Walmart and Exxon, it would be one of the few American companies to ever cross that threshold. But how does Amazon.com connect "zillions" of customers with "gigabytes" of product information so effortlessly? Part of the answer is to employ advanced knowledge management strategies.

Amazon has always emphasised the importance of the user experience—the ability of its consumers to discover what they want, when they want it, swiftly and effortlessly. That, however, was not enough. It would add even more value to the experience if the system could assist clients in achieving their goals in an intuitive and personalised manner. That is when knowledge management comes in handy.

Just as Amazons customer behaviour research team in the early days use data to predict customer future needs, Amazon is imagining a world where Alexa may be able to do it even better. In 2014, the company was granted a patent for targeted advertising using sniffer algorithms to identify trigger words used in conversations in people's homes. This conversation, according to the patent can be recorded and analysed by the device. And it can be used to immediately turn those key words into adverts. **Jeff Bezos built a retail empire based on what he knows about the customer.** That empire is expanding into artificial intelligence. Alexa embedded in people's lives. Learning even more is key. Artificial intelligence revolution is being powered by an explosion in the amount of data that is being created. Amazon has been collecting this data since 1996 on hundreds of millions of people.

According to CEO Andy Jassy in an interview with CNBC television (April 2022), the Covid 19 pandemic is quite an interesting time because the company grew three times faster than expected in 15 months. It had a fulfilment centre network that was built over 25 years that had to be doubled in 24 months. However, extraordinary growth comes with challenges. Amazon.com hired about 300,000 people in 2021 alone. Even though a lot of people were hired, still they could not be hired in all the places that they were needed. And so that created all sorts of challenges in placing inventory close to the customers as typically done by Amazon. And when the customer places an order further away it means longer transportation cost to get there. All the rate of transportation is going up over the last year and there are outstanding supply chain issues because of the pandemic.

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Section 1: Introduction

The main purpose of writing this report is to ascertain how amazon .com effortlessly connect zillions of people with gigabytes of product information using advanced knowledge management techniques resulting in the rise of Amazon and its huge, obsessive data-gathering operation.

Amazon.com is a multinational corporation based in the United States that specialises in e-commerce, cloud computing, digital streaming, and artificial intelligence. Founded by Jeff Bezos in 1994, Amazon.com has become a household name starting the revolution in e-commerce, their whole mission was to make the customer happy. To bring about customer ecstasy, they would pull out a single customer and try to understand who she was. It is about getting to know the customer in minute detail. From the beginning, Amazon determined that the user experience, which is the ability of its customers to find what they want, when they want it, fast and easy was the key to success. Furthermore, if the system could help customers accomplish their goals in an intuitive and personalised way, that should add even more value to the experience. This is where knowledge management is an advantage. Amazon uses knowledge management principles and practises to add significant value to their customer experiences in many ways.

In this report, the theory of knowledge management will be examined with evaluation of the SECI model and WIIG models of Knowledge Management. It will also explain why knowledge management is important for any organization including Amazon.com and how it helps the organizations in satisfying customers and achieving competitive advantage. Furthermore, the report will look at how knowledge is generally embedded in products and the service concept in the tacit knowledge of individuals, employees, and customers. It will also look at how Management Information Systems systematic approach help organisations in sharing and exchanging its knowledge base across the organisation.

In addition, the report will investigate Knowledge Management techniques used by Amazon.com by examining how knowledge has become increasingly important in Amazon's standard operating procedures. Also, the report will examine the main outcomes that Amazon has been achieving with the use of these procedures and where Amazon.com can still improve in the future to overcome the challenges presented by the current Knowledge management techniques.

The outcome of this report is to conclude on findings of the knowledge management techniques currently being used by Amazon.com and proposed areas where Amazon.com can improve to overcome challenges in the future.

Section 2: Knowledge and Information Management

Background of Amazon

In a BBC Panorama documentary titled '*Amazon and what they know about us*' (Feb. 2020), Panorama investigates the rise of Amazon and its customer data-gathering operation. The report investigates how Amazon extends ever deeper into people's lives, and what its spectacular rise means for everyone? They have amassed so much knowledge about people with artificial intelligence devices like Alexa that answer questions about anything from boiling an egg to space travel, get the news, weather, create To Do List, turn the lights off, plays music from your paly list. Alexa talks to people through eco smart speakers at home. The last five years people bought millions of them.

Alexa is listening, recording, and transmitting what people say to her when the blue light is on. Dave Limp, senior vice president at Amazon Devices and Services is boldly taking the world to a future where computers can fully converse with humans. Alexa is much smarter than the average human being when it comes to information recall and longer memory. It turns out not only is Alexa listening to people, but humans are too. Amazon workers are listening to what people tell Alexa in conversations and being monitored around the world. A lot of this listening is going on in Romania. Amazon acknowledged to BBC Panorama that some of these conversations are being transcribed by staff to

check how Alexa understands the information it collects and that customers can opt out of being recorded by Alexa if they want to.

Amazon has the technology to know a lot about people. According to Roger McNamee, a Silicon Valley investor the notion that the machine listens is a threat that people should take very seriously. Yet, evidence of sales figures shows Alexa is a hit. People have been kept ignorant of these systems and have no idea of the background operations and their consequences.

In the documentary, Professor Shoshana Zuboff of Harvard Business School, studies tech companies. In the documentary she says Amazon is now at the forefront of a big change in the way customers are viewed. They have amassed so much knowledge about customers. What customers know is a pittance compared to what they can know about the customer. Customers are sources of data raw material. Amazon want to take the minimum amount of data to deliver the most pleasurable customer experience possible. Customer data is not collected for deficit. Data is collected on behalf of customers when the company think they can invent something new or build a feature or service that benefits them in positive ways.

How it all started

It was 1994 in a garage in Seattle. Jeff Bezos had a background in computer science (knowledge of algorithms), had been a trader on wall street, and had a big idea about books. Jeff had spotted that Web use was growing at 2300% per year. Jeff Bezos took these insights, and his plans for an online bookstore to investors in Silicon Valley. He had a strategy that was different than everyone else. He followed the strategy of getting big fast and that was an important thing to do. According to John Rossman (Amazon Merchant Integration director, (2002-04), this was truly the very early days of Internet retailing, and the company that built infrastructure and that acquired customers early might have an instrumental lead relative to competition.

Amazon.com went live in 1995, Jeff Bezos had started an online land grab. The key to dominating this new territory was customer obsession. Want to be Earth's most customer centric company. Know this abstract notion of starting with the customer and working backwards. There was a focus on the customer. Customer ecstasy is also a steppingstone to extracting as much money out of the customer as possible. By 1997, Amazon was a hit with its vast choice and cheap prices, and more than a million customers were now buying books online. This was a retail revolution.

In January 1997, Jeff Bezos wanted to make his website as enticing as possible. He realised studying his customers may help achieve this. This was the start of Amazon's focus on data. It was made clear from the beginning that data collection was also one of Amazon's businesses. All customer behaviour that flowed through the site was recorded and tracked. That knowing exactly how they behaved is itself a valuable commodity. Within two years, Amazon diversified out of books, more customers meant more data. This means every time a customer visits the Amazon website, the company learn more about them. That is the data that allows Amazon to predict or try to predict for example what books and videos and music that the customer like that they do not have or that they have not discovered yet.

The big profits of Amazons future were still years away as Jeff Bezos poured hundreds of millions of dollars into technology. The company basically runs on computer science, one of the most fascinating kind of tools at their disposal is the ability to do active experiments. It is like a huge laboratory with literally 30 million visitors a month. Amazon in some ways did seem like the biggest science project of all time, executed by the biggest and smartest nerd of all time. All that data information about the likes and dislikes of millions of customers is stored on well-guarded ultra-secret, dust free and very expensive computers. The data warehouse that was created called Helix, set up to analyse customers over the entirety of their life. Amazon would try to characterise a person's shopping behaviour on 500 dimensions just to know more about them. The team began using customers digital DNA that clicks to create virtual profiles of them. Everything that a customer had done from their purchases to everything they clicked on. They tracked things that the customer did not click on at times, what offers were made to them to understand what makes people tick.

What is Knowledge Management?

A key part of knowledge management involves gathering tacit knowledge and converting it into explicit knowledge. Knowledge management is the process of collecting (eliciting) and converting (codifying) knowledge into a form that allows it to be shared across different parts of an organisation.

Bergeron (2003), defines Knowledge Management (KM) as a deliberate, systematic business optimisation strategy that selects, distils, stores, organises, packages, and communicates information essential to the business of a company in a manner that improves employee performance and corporate competitiveness.

Why is knowledge management so important for any organisation including Amazon?

Knowledge management is important for any organisation because it is what guarantees sustainability of the business and provides the platform for strategic planning and future growth.

Effective knowledge management also improves employee satisfaction and productivity. They can quickly find the information they require and cause minimal disruption to their co-workers.

Furthermore, a greater dissemination of knowledge leads to more effective decision-making at all levels of the company.

Customer satisfaction and experience can be improved using knowledge management. It gathers essential data, allows for in-depth analysis, and establishes a framework for better strategizing and outcomes, making data more accessible both internally and outside. Profits are higher when knowledge management systems are used.

For Amazon a customer-centric company, the importance of knowledge management is illustrated in the benefits which include:

- more organisational flexibility.
- decision-making that is better and faster
- solving problems faster
- increased innovation rate
- Employee development and progress were encouraged.
- sharing of specialised knowledge
- improved communication
- enhanced business procedures

How KM helps the organisations in satisfying customers and achieving competitive advantage

Companies may improve their relationships with their valuable customers through knowledge management, resulting in loyal customers and a competitive advantage. Organizations can use knowledge management to generate new ideas and give improved and new services. Thus, putting the organisation at a position of advantage over their competitors.

Increased consumer knowledge is closely tied to the use of knowledge management, which has a beneficial impact on customer satisfaction. Companies can improve their relationships with their customers through knowledge management, resulting in loyal customers and a competitive advantage in the market. Knowledge management allows organisations to generate new ideas and provide improved and new services. Customer knowledge is an important component of customer relationships because it can help businesses customise their products and services, to improve customer satisfaction and profitability.

There is a direct correlation between customer satisfaction and knowledge of the customer which translates to increased market share, profitability, and advantage over competitors.

Section 3: Evaluation of Knowledge and Information Management Models/theories.

Tacit knowledge is the intelligence we possess because of our personal and professional experiences gathered in both the current and prior positions. It is usually the information that is hardest to express, write down, or transmit in a concrete way. Perceptions, beliefs, values, intuition, and experience are all examples of tacit knowledge. It is difficult to elicit, define, or document tacit information because so much of it is retained implicitly.

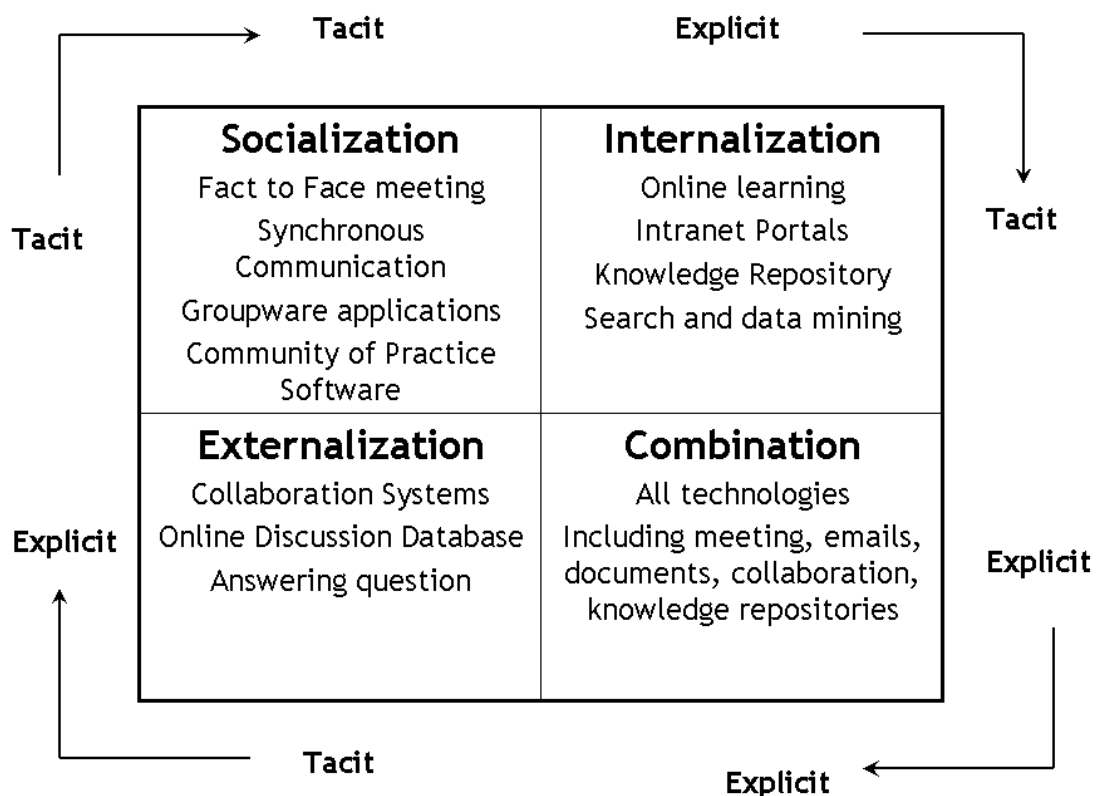
When knowledge is spread from one person to another, it is called knowledge diffusion. Socialization, education, and learning can all help to transfer knowledge. Knowledge can be intentionally shared or acquired because of other activities. (Gupta et al. 2000)

The SECI model consists of four modes of knowledge conversion: socialization (tacit to tacit), externalization (tacit to explicit), combination (explicit to explicit), and internalization (explicit to tacit). (Nonaka& Takeuchi). When knowledge is spread from one person to another, it is called knowledge diffusion. Socialization, education, and learning can all help to transfer knowledge. Knowledge can be intentionally shared or acquired because of other activities.

Documents and other media can easily collect and store explicit knowledge. This information is usually very thorough, formal, and systematic. Manuals, documents, procedures, and database files are common storage formats. This is the knowledge base that organisations use to train colleagues, share amongst teams across the organisation. It is also used to translate a vision into a mission statement, organise, systemise, transfer of knowledge via products, services, and documented processes.

The SECI model (Nonaka, 1994; Nonaka and Takeuchi, 1995) views knowledge generation as a dynamic process in which a constant dialogue between tacit and explicit knowledge develops new information and amplifies it at several ontological levels (individual, organisational, and inter-organizational)

Kujiro Nonaka & Hirotaka Takeuchi : Theory Of Knowledge Creation



The KM model of Karl Wiig (1993) is a systematic approach that helps organisations in sharing and exchanging its knowledge base across the organisation by emphasising the following principle: To be useful and valuable, knowledge must be organised. The knowledge should be organised in accordance with how it will be used. The Wiig KM model has certain useful dimensions:

completeness, connectedness, congruency, perspective and purpose (Dalkir, 2011, pp.76-77).

Completeness refers to the amount of relevant information available from a specific source. Sources include human minds and knowledge bases. (i.e, tacit or explicit knowledge).

We must first prove that knowledge exists; knowledge can be comprehensive if all relevant material on a topic is available, but no one can profit from it if no one is aware of its existence. (Dalkir, 2011, p.77).

Connectedness refers to the well-understood and well-defined relationships between diverse knowledge objects. Most knowledge objects are interconnected; the more interconnected a knowledge base is, the more cohesive the material is and the higher its value. (Dalkir, 2011, p.77).

The knowledge base is considered to be congruent when all of the facts, concepts, opinions, values, judgments, and relational relationships between the objects are consistent. The vast majority of knowledge will fall short of such aspirations. (Dalkir, 2011, p.77).

The phenomena of knowing something from a specific point of view for a specific cause is referred to as perspective and purpose. A lot of our data is organised using the two dimensions of viewpoint and purpose. (Dalkir, 2011, p.77).

Section 4: Investigating of KM techniques used by Amazon.com

By the early 2000s, former insiders say Amazon's mission was to monetise customer eyeballs. To monetise eyeballs is simply to get the most money out of every visitor, out of every time someone views an Amazon page, some revenue should accrue from that by increasing the probability that something will add an item to their shopping basket. Amazon began using customer data to sell products that they might like based on previous purchases. This was the beginning of personalization by tailoring the website for each individual customer. This process is about creating an entire experience that is highly personal and that the customer has come to depend on. By 2007, Amazon was even able to predict what the customer might want in the future based on the shopping habits of people with similar characteristics. For example, take a 35-year-old male living in an urban location; Amazon has many other customers who are just like that. But maybe three months or six months ahead of where the customer are today, Amazon has all their purchase data and all their search data. Think they can anticipate what the customer is likely going to need next. Amazon knows their customer, and they present them with things that they like. Things that are inherently going to meet demands that they may not even realise that they have. (*Amazon and what they know about us* 2020)

Marketplace, which was launched in 2000, made Amazon both host and competitor. The marketplace business allowed Amazon to expand into categories very rapidly without knowing those categories well, and so the company was able to leverage the expertise, the merchandising, the customer, and product knowledge of third-party sellers to expand into those categories. (*Amazon and what they know about us* 2020)

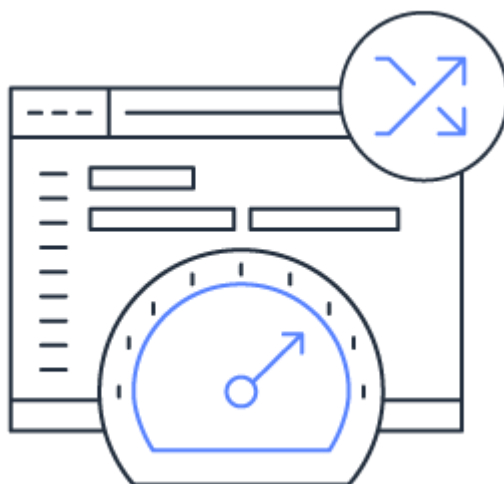
Marketplace transformed Amazon from online retailer to online shopping centre. Now giving customers access to 250 million products already had 100,000 sellers that was joining the platform. The customers belong to Amazon and stay with Amazon. Sellers cannot communicate directly with

their customers. The sellers are basically renting the Amazon customer and paying Amazon a fee to access the Amazon customer. (*Amazon and what they know about us 2020*)

AWS (Amazon Web Services) is the world's most comprehensive and widely used cloud platform, with over 200 fully featured services available from data centres across the world. AWS is used by millions of clients, including the fastest-growing start-ups, largest corporations, and leading government agencies, to reduce costs, improve agility, and accelerate innovation (Amazon web Services Inc. 2022)

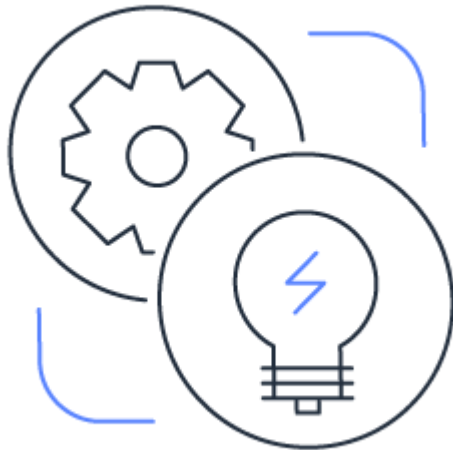
Use cases

Advanced analytics



Get more out of your data and gain deeper insights using machine learning, complex event processing, and sentiment analysis.

Data governance



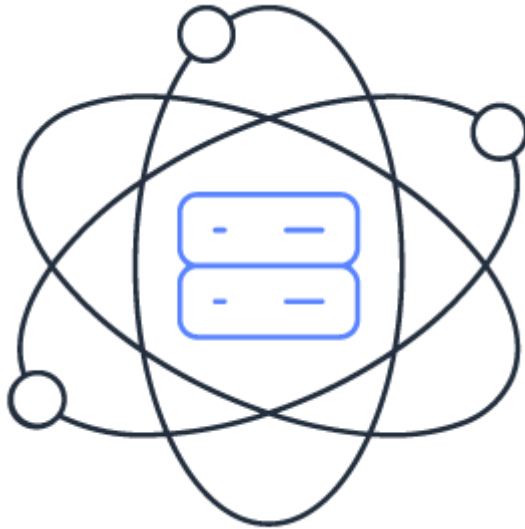
Establish the proper processes and responsibilities to ensure the quality and security of data across your organization.

Data integration and pipelines



Prepare and combine data for use in application development, machine learning algorithms, and advanced analytics.

Data sets



Leverage large data sets to enhance visualization, improve analytics, and build machine learning models.

Data visualization



Visually track trends and key performance indicators to obtain a holistic view of your monitored systems.

Data warehouses and data lakes



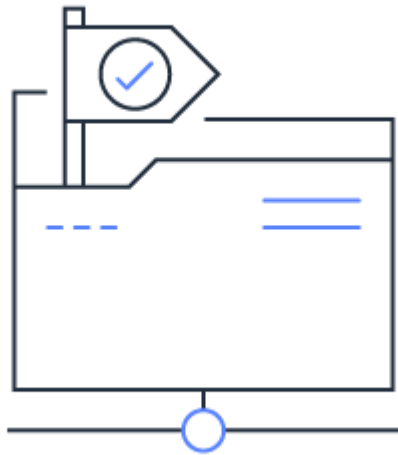
Eliminate data silos in your organization and leverage data to drive business decisions.

Predictive analytics



Predict future outcomes, identify cybersecurity anomalies, and detect fraud using machine learning algorithms on historical data.

Purpose-built databases



Build and manage databases intended for specific applications or use cases.

From the time data is collected until the time actionable insights are delivered to users, enterprises are increasingly demanding. AWS Marketplace offers comprehensive, secure, scalable, and cost-effective solutions. Customers may manage their data in the cloud, provide effective data governance, and extract actionable business insights with these services.

Amazon's top hurdles include maintaining AWS' cloud dominance, navigating antitrust probes, and resolving issues with its core marketplace. However, according to reports, an investigation into Amazon might go beyond its marketplace, which has been condemned by certain lawmakers and authorities as unfair due to its dual role as marketplace manager and competitor with third-party vendors.

Conclusion

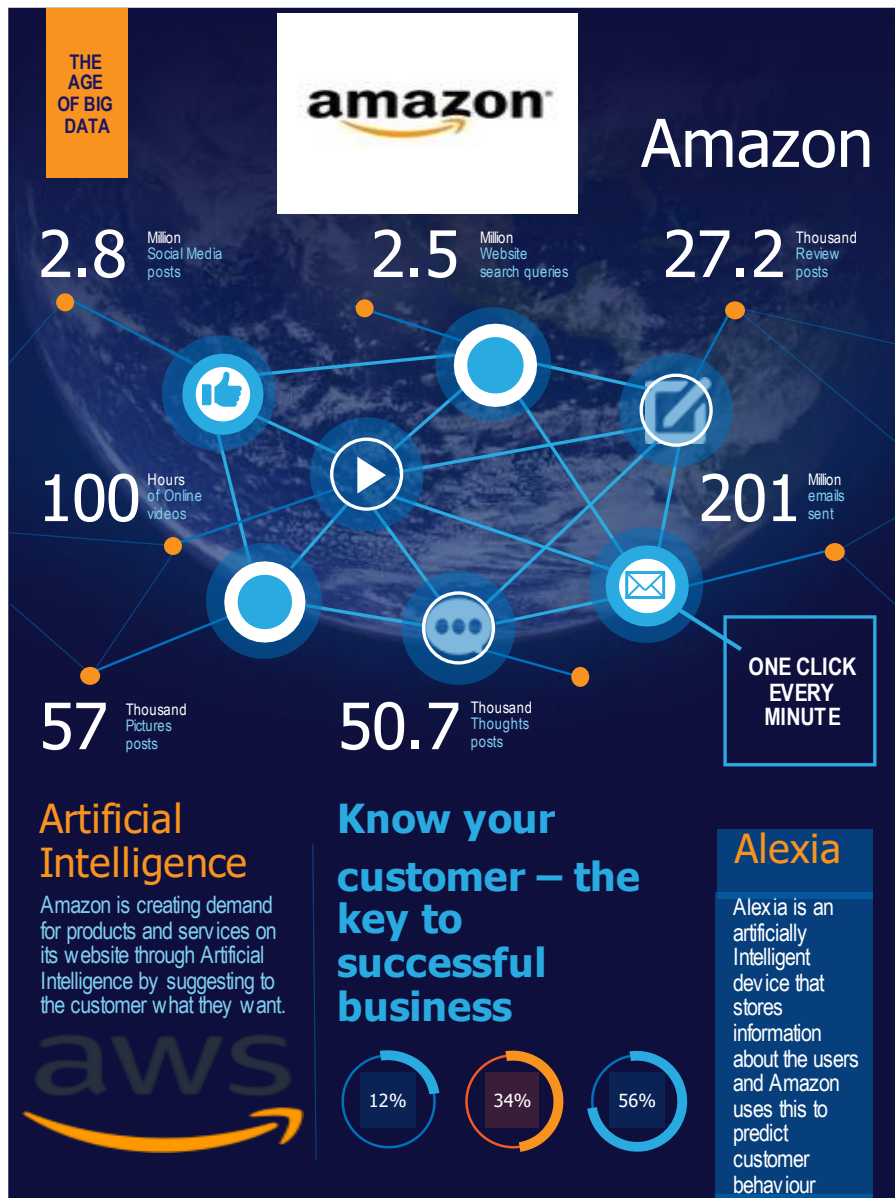
It is evident from the foregoing that Amazon engages both tacit and explicit knowledge with customer experience and organisational KM strategies.

Amazon is going big on the data collection because they must leverage everything, they must make up from being a virtual business. Everything that physical stores have that they do not have must turn to their advantage. The Amazon subscription service, Prime, offering fast delivery puts Amazon online retailing at an advantage over physical shops.

The promise of improved organisational performance has aided the growth of many areas of knowledge management. Limited success in implementing strategic KM solutions, as well as some annoying practises, have been frequently reported. A multidimensional KM method to promote decision performance as the cornerstone for overall organisational performance is suggested. This

strategy is based on technical tools that are tailored to the scenario, as well as processes and activities connected to decision situations, organisational structure, and culture that empower decision makers and value knowledge. To achieve their goals, Amazon need to link KM initiatives with business process goals based on the KM dimensions.

TASK 2



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