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Systems Analysis and Design

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**Week 1 Assignment**

**What is information technology and why is it important to society?**

Information Technology, or I.T. is not only the hardware but is also the software and services in which people are able to use in order to manage, communicate, and share information to different companies, organizations, and individuals (Tilley, S. p. 3). In other words, this means that Information Technology is tools physically (hardware) and non-physically (software) used to be able to work with and share information such as different files for work or things such as printers, monitors, keyboards, and mice, cloud-based services for file-storage and many other things.

Information Technology is very important to society today as almost everything has some form of IT usage. Companies are able to use IT in order to boost productivity, manage statistics, automate tasks, and individuals are able to use IT in order to help give entertainment such as games, movies, videos, social media, and tons of other uses such as being able to communicate with friends and family from distance (Tilley, S. p. 3).

**Explain how ride sharing services such as Uber and Lyft are disrupting traditional taxicab business models.**

Ride sharing services such as Uber and Lyft are able to disrupt traditional taxicab business models as they are taking much more advantage of technology allowing them to be able to boost their efficiency beyond what traditional taxicabs offer. As a consumer, or user, of Uber and Lyft I am able to appreciate their much larger scale compared to taxicabs, whereas I never see them anymore, I am able to order an Uber or Lyft at any time anywhere and have a ride to anywhere I need. It also seems that taxicabs are much more localized, their primary target being very large cities such as New York, whereas, I have never seen in-person one in Michigan.

Ride sharing services, such as Uber and Lyft, are also able to easily market to younger people, like myself, as they are widely known and use popular social media services, unlike taxicabs. Ride sharing services like Uber and Lyft also offer a more unique experience for the drivers over taxicab business models as anyone can drive for them and are able to earn extra money.

**What are the seven types of information systems used in business? Briefly discuss each of these types of systems.**

The seven types of important systems used in businesses are as follows: Enterprise Computing Systems, Transaction Processing Systems, Business Support Systems, Knowledge Management Systems, User Productivity Systems, Digital Assistants, and Systems Integration (Tilley, S. p. 11).

Enterprise Computing Systems – Enterprise Computing Systems, ECS, are information systems used in businesses dedicated to work on large scale, company-wide systems and are meant to assist in data management (Tilley, S. p. 11). These systems can be inventory or warehousing systems, restaurant table reservation systems connected to tablets for the people working at the front, and many more systems like Enterprise Resource Planning, ERP systems like SAP, supply chain management, systems running blockchains, security systems, and many more (Tilley, S. p. 11). In essence, these systems are for critical/primary functions of a business and are to provide support for decisions made, efficiency, and reducing costs (Tilley, S. p. 11).

Transaction Processing Systems – Transaction Processing Systems, or TP Systems are systems which are able to process data from normal business operations such as customer orders, reservations and many more (Tilley, S. p. 11). The Transaction Processing System’s job is to complete several different tasks when a specific action occurs such as someone placing a reservation like checking/verifying inputted data or if ordering something to change inventory levels to the correct level like ordering from Amazon (Tilley, S. p. 12). TP Systems are also critical systems to a business as without them the business cannot successfully operate (Tilley, S. p. 12).

Business Support Systems – Business Support Systems are systems used in order to automate simple tasks and to provide extra insight onto customers and can closely work with the TP Systems. An example of a simple task it is able to help is automating payroll processing (Tilley, S. p. 12). When working in combination with a TP System it can gain extra insight such as seeing how fast a product is able to sell, or oppositely how slow a product is selling, and checking inventory levels that need to be adjusted. Business Support Systems could also be considered systems that include using RFID in order to assist in tracking inventory (Tilley, S. p. 13). On top of all of this, Business Support Systems are used in order to help assist someone to look up situations that occur and to figure out what to do.

Knowledge Management Systems – Knowledge Management Systems are typically large databases, however, can be small, specific databases depending on use, which is called a knowledge base (Tilley, S. p. 13). This knowledge base allows people to be able to search for specific terms to be able to find information on something which they do not know which others have come across before, boosting efficiency and allowing newer hires to be able to search for things to be able to assist themselves and customers (Tilley, S. p. 13).

User Productivity Systems – User Productivity Systems are typically basic systems, however, can be more complex systems, which has the end goal of improving productivity such as email, video conferencing like Zoom, other methods of communication such as Slack, Discord, Microsoft Teams, and other tools to help collaborate on work and projects (Tilley, S. p. 14).

Digital Assistants – Digital Assistants are systems which combine knowledge management systems and user productivity systems in order to make a person’s life easier and to automate tasks such as setting up reminders or to look up things on the Internet by voice and get a quick and easy response (Tilley, S. p. 15). However, Digital Assistants can also be used to do other things such as changing the temperature, controlling lights and other tasks which are able to be done remotely (Tilley, S. p. 15). With time, Digital Assistants have progressed large amounts and are only going to continue to develop in complexity to be able to perform a multitude of tasks.

Systems Integration – Systems Integration could be considered one of the most important things to consider when picking out different hardware and software to use. Systems Integration allows you to do one thing on one program and trigger automatic tasks in other systems to be performed instead of manually doing everything (Tilley, S. p. 15). For example, being able to put in a help desk ticket at your work then it checks different systems such as bringing up a knowledge base for the help desk worker, checking inventory levels if a replacement is needed, and bringing up other decision support options for them to be able to assist in fixing the problem.

**What types of information do the four organizational levels common to many businesses need?**

The four organizational levels common to many businesses are: Top Managers, Middle Managers and Knowledge Workers, Supervisors and Team Leaders, and Operational Employees (Tilley, S. p. 16). The types of information each of these four organizational levels need are as follows:

Top Managers – Top Managers need information to be able to form strategic plans for the business and are to look at the overall picture of the business (Tilley, S. p. 16). Top Managers need information from outside the company which show different types of trends like economic trends, computer hardware and software trends, as well as need to be able to look at competitors in the industry to see what they are doing that they can do better (Tilley, S. p. 16).

Middle Managers and Knowledge Workers – Middle Managers and Knowledge Workers need to be able to provide direction and worthwhile feedback (Tilley, S. p. 17). Middle Managers typically need more detailed information in comparison to top managers such as weekly sales summaries for a few different states or regions (Tilley, S. p. 17). Knowledge Workers also need business support systems, and other tools to be able to provide support for functions of the business (Tilley, S. p. 17).

Supervisors and Team Leaders – Supervisors and Team Leaders oversee and perform day-to-day operations, they need decision support information, knowledge management systems, and user productivity systems if they want to be able to perform their tasks successfully and to be able to coordinate operations and people (Tilley, S. p. 17).

Operational Employees – Operational Employees need transaction processing systems so they are able to efficiently perform their tasks, they also need information such as a knowledge base in order to perform their tasks (Tilley, S. p. 17).

References

Tilley, S. (2020). Systems analysis and design (12th ed.). Cengage.

I have neither given nor received unauthorized aid in completing this work, nor have I presented someone else's work as my own.

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