

University of Wales Trinity Saint David

Knowledge and Information Management Skills for the Workplace

Student name: Nikola Jancova

Student ID:1912272

Module Code: BMSW 5106

Lectures Name: Seyed Nasirpourosgoei

Table of Contents

Executive summary	3
Introduction.....	3
1. Information system and data collected	4-5
2. Customer relationship management	5-6
3. Porter's five forces	7-9
4. Big data analytics and Internet of Things	9-10
5. Recommendations	11
Conclusion	12
Reference	13-14

Executive Summary

Knowledge and information management skills for the workplace is important because it helps in completing work on time. When employees will have knowledge about how to work in an organisation then they can work efficiently. In the report, information system which is implemented by the company and range of typical data collected to generate knowledge form use of sensors in machinery. Importance of customer relationship management, advantages and challenges while implementing a CRM system is discussed. Porter's five forces is described and how it is implemented in John Deere company. Some recommendations are given to survive during pandemic.

Introduction

In an organisation it is essential that employees should have knowledge and skills which is required at the workplace. When workers will have knowledge and skills they can work efficiently and there will be no issue (Binsaeed, Unnisa and Rizvi, 2017). John Deere is a multinational company which manufactures agricultural machinery and has been pioneering in increasing efficiency of crop production. The report examines, information system which is implemented within John Deere company. Customer relationship management (CRM) system is discussed which is beneficial for company. Advantages and challenges of CRM is described.

Big data analytics and internet of things which is helpful in managing knowledge of organisation. Porter's five forces is discussed which help in accomplishing goals and objectives of company. Information system is described which helps in managing knowledge. Pros and cons of use of technologies is discussed. Further, recommendations are given to John Deere company strengthened their knowledge management practices.

1. Information system and data collected

In John Deere company information system is implemented and range of typical details collected to gain knowledge with the help of sensors in their machinery. John Deere company manufactures agriculture machinery and has been pioneering in increasing efficiency of crop production. In the organisation big data- enabled services is implemented which let farmers benefit from crowdsourced, evaluation of information which is collected from many users (Nitsenko and et.al., 2019). This will help in gathering information and better products can be delivered to customers. John Deere company is providing services which allow everything like, preparation to seed the land, fertilise it and do harvesting.

It is important to apply information system so that organisations can collect, filter, process, create and store data. This is beneficial for an organisation as all the data can be stored in networks of hardware and software. Main components of information system are, task and people. It can be defined as a mixture of components for collection, store data and processing is done so that information which is collected can be used. There is an online portal of John Deere company, Myjohndeere.com which is useful for farmers in collecting details which will help in making good quality products. They work in the fields and aggregated data from other users around the world. It is essential to implement information system so that details can be collected and it will help in accomplishing goals and objectives (Zhu and et.al., 2018). Information system helps farmers in gathering details and results can be analysed.

In John Deere company, managers apply some information system which help in analysing details which is being gathered from farmers. In the organisation, for optimum level of production fine tune operations is applied. It is important for managers to gather information so that products can be made accordingly and it will help in accomplishing goals & objectives. It is beneficial for company to collect information and analyse data from many farms. This will help in attracting customers and better plans can be made for success of company (Ergasheva, 2020). It also helps farmers in taking better decisions which is beneficial for growth and development of company.

Information system help in gathering all details which is shared with engineers. They will supply new parts and good services so that work can be done properly. It will help in accomplishing targets and better products will be made which satisfy need of people. The system also helps in minimising downtime with the help of predicting, based on crowdsourced

data. It helps in identifying that when equipment will fail. Information system help in reducing waste and resources can be use efficiently. It is essential to implement some system which is beneficial in growth and development of company.

In the given case study, it is mentioned that some systems are being implemented so that work can be done in systematic manner and goals can be achieved. John Deere company is applying online portal that allows farmers to access data (Manogaran and et.al., 2020). This helps in making better plans than others and targets can be accomplished. When information is analysed then better strategies can be made and perform well. So, for growth and development of an organisation, it is important to make plans and analyse all details which is collected.

2. Customer relationship management

CRM refers to a process in which an organisation interacts with customers. Data analysis is done to study large amount of information, it is important to identify needs of customers and according to that products should be made. This will help in satisfying need of consumers and more people will be attracted. CRM system combine details from various sources such as, website of organisation, email marketing, etc. (Souri and et.al., 2019). These are some ways which will help in attracting customers and better plans can be made to increase sales of company. Customer relationship management helps in identifying target audience and make plans to retain consumers.

Customer relationship management can be used with past, present or potential customers. The concepts, procedures and rules that an organisation follows when interacting with customers. It is important to maintain good relation with customers so that company can earn more profit (Anshari and et.al., 2019). It will help in analysing need of customers so that better products can be made. When an organisation maintains good relation with people then it helps in increasing sales of company and more revenue can be generated.

CRM system provides data to an organisation which help in making strategies and attract customers. This will increase sales of company and help in creating good image in market. John Deere company should use customer relationship management system so that it can be beneficial in achieving goals and objectives of organisation. CRM system is useful as it helps in gathering information about market situation and needs of customers can be

identified (Bin-Nashwan and Hassan, 2017). They can make plans or strategies according to the situation and handle all problems. If managers of John Deere company will use customer relationship management system, then it will be beneficial in efficient operation of organisation. This system helps in increasing sales and revenue of firm, build positive image in minds of customers. This lead to accomplishing targets of company and better plans can be made for future.

Advantages of CRM system

There are some advantages of implementing CRM system in John Deere company such as, it helps in enhancing customer loyalty, attract new customers, helps in increasing sales of company and work can be done in systematic way. It facilitates optimized marketing, builds up effective internal communication. CRM system makes call centres more efficient, simplifies process of sales and marketing because when an organisation makes good relationship with customers then it becomes easy to influence or convince them to buy product. Managers of John Deere company should try to retain customers by giving them some offers or discount (Juanamasta and et.al., 2019). This will help in increasing sales of company and more revenue will be generated. There are many advantages of customer relationship management system which help an organisation to attract more people and build good image in market. CRM system provides data for management decisions, improve accuracy of sales forecast. This system provides access to customer data for salespeople, manage contact information of customer. It also improves handling of leads and prospects, boost confidence of workers to work efficiently. Customer relationship management helps in retaining more customers and more revenue can be generated.

Challenges of implementing a CRM system

When implementing a CRM system there are many challenges which an organisation has to face are, technological barriers, not able to adapt current needs of the organisation, process is not skill. There is lack of communication among workers and due to that problems are being faced while implementing a CRM system. Due to lack of organisation wide use, issues can be face in implementing customer relationship management. This system is based on technology so there may be problem in technology at the time of implementation (Fedyaeva and et.al., 2021). Customer relationship system requires huge investment and before implementing CRM system goals and objectives should be set clearly. Training must be given to employees to run CRM system so that there will be no issue and organisation can accomplish targets by attracting more people. To gain competitive advantage or to earn more revenue, managers of John Deere company should face challenges while implementing customer relationship management system.

3. Porter's five forces

Porter's five forces refers to a model which helps organisation in gaining competitive advantage and it is used to measure competition in market. There are five forces which can be applied by John Deere to identify strategy that is used by competitors to attract customers and earn more profit. It is important to determine porter's five forces so that company can make good plans to satisfy needs of customers. It is a tool which helps in understanding forces that shape competition in market. This is useful in improving performance of company because better plans can be made than competitors.

Five forces of Porter are:

Rivalry among existing competitors

There are number of competitors who are selling similar type of product. So, it is difficult for an organisation to attract people. With the help of porter's model, it can be identifying that what strategy is being applied by competitors (Grebenshchikova and Yakushev, 2017). John Deere company is operating in a market where there are less competitors. Five main competitors of company are, Kubota corp. Japan, AGCO corporation, The Toro company, CNH global N.V. and caterpillar. The company is planning to expand its business in other countries but before that they have to identify competitors. This will help in earning more revenue and goals can be accomplished.

Bargaining power of buyers

Bargaining power of buyers means to determine that how much consumers can spend to buy a product. Due to increasing competition, buyers want good quality product at low price. The industry in which John Deere operates is having low competition, so buyers have limited choice and they are not having any option. Customers are not having many choices so prices vary at large because buyers are having single option. This is beneficial for John Deere company as there are limited substitutes and they can charge prices according to them. It is important to determine choice of customer and their buying habit so that products can be made accordingly.

Bargaining power of suppliers

Bargaining power of suppliers means at what rate raw material is being purchased by an organisation. If raw material is rarely available, then managers of company should make good relationship with supplier so that products can be made on time. Information should be gathered and after that products must be made (Pham and Stack, 2018). John Deere company is an agriculture firm so they buy raw material from different suppliers. Material is readily available and managers of John Deere is having many choices because raw material is easily available. So, bargaining power of supplier is low in John Deere as there are many suppliers of raw material.

Threats of new entrants

According to Porter, threats of new entrants means when new firms enter into market. All firms want to earn profit and they make new and innovative products to attract customers. This will help in earning more profit. Threat of new entrant to industrial equipment is low because agriculture industry has high production cost. In this field if manufacturing is done in bulk then it is beneficial for an organisation. To enter into new market, a company has to follow many rules and regulations. There are some government policies which restrict new entrants to enter the market (Juliana and Nyoman, 2019). To run business in new market is not easy, it requires lot of investment and better plans should be made to face challenges.

Threats of substitute products or services

Threat of substitute product or service refers to identify industries which are making similar type of product. When there are many companies making same type of product then customers have many choices and this leads to increase in competition. John Deere has low threat of substitutes and they can sell their products easily. In the market there are no close substitutes available so buyers are not having any choice and they have to buy it whatever price it is available in market.

These are Porter's five forces which can be applied by John Deere company so that they can gain competitive advantage in market and attract more people. It is essential to identify plans or strategies used by competitors so that better plans can be made and it helps in accomplishing goals and objectives. Information system will help in gathering information which is useful in making plans and focus on increasing sales of company (Pádraig, 2017). Good quality products should be provided to customers so that their needs can be satisfied and it will be beneficial in growth of company. According to Porter, these five forces will help in determining all the points which can affect business.

4. Big data analytics and Internet of Things

Yes, agree with statement that to manage knowledge in a company big data analytics and IoT is helpful. The organisation will be expanding their business through online platform which allows farmer to access large amount of data from sensors attached to their own machinery. Usually, it has been established a strong connection with external data sets, including financial and weather information.

Big data analytics can help farmers to make important decision about using their essential equipment, where it will get the best result or outcome. For Example- it is combined to fuel usage which help to monitor or track the overall productivity of enterprise in different level. Data Analytics can help farmers monitor actual health condition of crops, in real time. it would create predictive analytics related to future yields (Hariri, Fredericks and Bowers, 2019). It make better decision in regards of resource management and prove as latest trends. Big data analytics are also helping to reduce waste and improve profitable level.

On the other hand, Internet of Things (IoT), is one of the best technology solution which provide a built for monitoring the crop field by using sensors such as light, temperature, soil moisture, crop health. These are consider as an essential components used in the John Deer Company. That's why, it is important to gather or collect large amount of information, to generate a proper knowledge from use of sensors in their machinery. In John Deer Company, IoT allows farmer to use device across a farm, help to measure all kind of data or information remotely (Hariri, Fredericks and Bowers, 2019). This is the best way to provide accurate information to farmer in real time. Internet of things device can easily find relevant information such as dam level, livestock, chemical application and soil moisture. Therefore, it has become easier for managing and controlling different business activities in step by step manner.

Pros and cons of Big Data analytics

Pros-

- To increase the agility: it is one of the important advantage of big data analytics in the farming business. This can help John Deer company to increase business or IT

agility. Enterprise is mainly focused to use big data analytics for better aligned their IT, business efforts. It is always supporting enterprise to increase the business process and more frequently changing the entire business innovation.

- Greater Innovation: it is another advantage of big data Analytics that help to provide benefit of John Deer enterprise. It is investing in analytics primarily as means to innovative or disrupt their markets (Zhu and et.al., 2018). The primary reason for selecting Big data analytics technology by John Deer Company is they can glean insight that their competitors. It may able to get out the ahead of market with implementing innovation in farming activities.

Cons-

- Data quality: The advantage of Big data analytics is quality issues which may arise at the time of data collection, before, it can be used the big data for analytics efforts, analysts need to ensure that information or data they are using John Deer company. But at some point, it will be representing slow process which means that difficult to address data quality issue or problem.
- Cultural change: this is another disadvantage of big data analytics where it is difficult for John deer enterprise to utilise large amount of data. if in case, it uses analytics to create data driven culture throughout the enterprise.
-

Pros and Cons of Internet of things (IoT)

Pros-

- Automation- it leads to uniformity in John Deer Company. The company is always maintained quality of service and control day to day activities without any human intervention. In John Deer Company, each and every farmers can use Internet of Things devices that help to establish a machine to machine communication (Singh, Javaid and Suman, 2020). Therefore, it helps maintain transparency through farming process.
- Cost saving- Internet of Thing has become cost saver for John Deer company because each and every staff members can use IoT to utilise energy and resource. If any kind of problem arise with easily eliminate or break-down in different ways.

Cons-

- Privacy and security- In John Deer Company, farmers are using different appliances, machine and service which has become connected to the internet. It is much needed to find availability of essential resources. Sometimes, it is very hard to keep protect or secure confidential information.
- Compatibility- Currently, there is no such standards, norms in regards of compatibility for IoT. That's why, it makes hard for device from different manufacturer to communicate with others regarding farming innovation.

5. Recommendations

During Covid-19 crisis, it is difficult for farmer's preparation of next (kharif) season. However, Covid -19 inducted disruption have minimised the production capacity for farm inputs, have increased to price, making all essential resources in-accessible.

Here are offering the Recommendation to John Deer Company strengthened their knowledge management practices at the time of covid-19 pandemic.

- Understand John Deer company Culture- since, it governs how farmers behave and perform their tasks, it is very important to assess enterprise culture before using knowledge management system (Elijah and et.al., 2018). As per consideration of machinery innovation, the company can realise the driving force behind success which is not expensive or overpriced system, rather it is the farmer who operate them. The overall capabilities of John Deer company's personnel which plays important role to identify specific need or requirement for business.
- Motivate Staff member through modern technologies- this is reason why organisation cannot be used the knowledge management for long term development. Nowadays, it has been rapidly increasingly demand of big data technologies, internet of things. These are majorly influence people to use themselves (Hariri, Fredericks and Bowers, 2019). Therefore, it is also changing the behaviour, attitude of individual people towards modern technologies. With the help of big data technology like Adopt. This is helping to maintain John Deer Company and motive the farmer to be diligent in adhering to standard or norms. It is providing well organised, credible and accurate information.

Conlusion

From the above discussion it can be concluded that, knowledge and information management skills for the workplace so that better plans can be made. Competition is increasing so it is important for John Deere company to identify strategy which is applied by competitors and make better plans so that they can gain competitive advantage. There is some information system such as, big data enabled services, online portal to access data gathered. This helps in collecting data to generate knowledge from use of sensors in their machinery. Customer relationship management, its advantages such as, enhances better customer service, facilitates discovery of new customers etc. and challenges like, technological barrier, lack of communication, set clear objectives has been discussed. Further, big data analytics and IoT has been discussed. Pros and cons of big data analytics has been discussed like, increase agility, greater innovation.

Reference

Book and journals

- Anshari, M., Et.al., 2019, Customer relationship manegment and big sata enabled: Personalization & customization of services. Applied Computing and Informatics, 15(2), pp.94-101
- Bin*Nashwan, S. A. and Hassan, H., 2017, Impact of customer relationship manegement (CRM) on customer satisfaction and loyalty: A systematic review. Journal of Advanced Reseach in Business and Manegement Studies, 6(1), pp.86-107
- Binsaeed, R. H., Unnisa, S. T. and Rizvi, L. J., 2017, The big impact of soft skills in agagriculture: Benefits and challenges. IEEE Internet of Things Journal, 5(5), pp.3758-3773
- Ergasheva. S. T., 2020, Development of Digital Systems of Enterprises of Agriculture and Water Manegment. Asian Journal of Technology & Management Reseach,10(01), ISSN: 249-0892
- Fedyaeva, A., and et.al., 2021, Evaluating the effectiveness of integrated marketing communications while implementing a CRM system in the agricultural industry. In E3S Web of Conferences (Vol. 258, p.06061), EDP Sciences
- Grebenshchikova, L.S. and Yakushev, N. M., 2017, Definition of Competitiveness of the Enterprise Using the Five Forces of M. Porter, Vestnik IzGTU imeni MT Kalasnikova, 20(3), pp.51-53
- Hariri, R. H., Fredericks, E. M. and Bowers, K. M., 2019, Uncertainty in big data analytics: survey opportunities, and challenges. Journal of Big Data, 6(1), pp. 1-16
- Juanamasta, I. G., and et.al., 2019. The role of customer service through customer eltionship management (CRM) to increase customer loyalty and good image. International Journal of Scientific and Technology Research, 8(10), pp.2004-2007
- Juliana, J. P. E. and N yoman, Y. N., 2019, Factors influencing competitiveness of small and medium industry of Bali: Porter's five forces analysis. Russian Journal of Agicultural and Socio-Economic Sciences, 89(5)
- Manogaran, G., and et.al., 2020, ISOF: information scheduling and optimization framework for improving the performance of agriculture system aided by Industry 4.0 IEEE Internet of Things Journal, 8(5), pp.3120-3129

- Nitsenko, V., and et.al., 2019, Automatic Information system of risk assessment for agricultural enterprises of Ukraine. Montenegrin Journal of Economics, pp.139-152
- Pádraig, B., 2017, An Analysis of Michael E. Porter's Competitive Strategy: Techniques for Analyzing Industries and Competitors. Macat Library
- Pham, X. and Stack, M., 2018, How data analytics is transforming agriculture. Bussines horizons, 61(1), pp. 125-133
- Singh, R.P., Javaid, M. and Suman, R., 2020, Internet of things (IoT) applications to fight against COVID-19 pandemic. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 14(4), pp. 521-524
- Sourì, A., and et.al., 2019, Formal modeling and veification of service composition approach in the social customer relationship mnegament system. Information Technology & People
- Zhu, J. and et.al., 2018, A critical review of the integration of geigraphic information system and building information modeling at the data level. ISPRS International Journal of Geo-Information, 7(2), p.66
- Zhu, L. et.al., 2018, Big data analytics in intelilgent transportation systems: A survey. IEEE Transactions on Intelligent Transportation System, 20(1), pp.283-398