4th Year, 1st Semester

IT4120

KM Mini Project Report-2021

Dynaro Engineering PVT (Ltd)

Group Report

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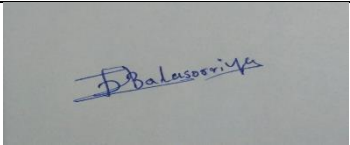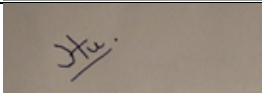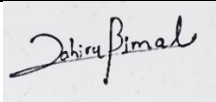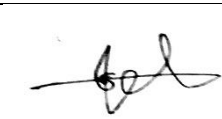
Sri Lanka

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ABSTRACT

In the modern world, people have to deal with business organizations and institutions to do and manage their day-to-day tasks well. As an example, a person needs to get an immediate loan to buy a new vehicle or build a new house, so he/she needs to build a relationship with financial institutions. Eg:-Bank. So, in order to do and manage their work in a successful and effective manner, they have to deal with information systems, different technologies, software, databases etc. And need to have good computer literacy to do that. And they must have some knowledge resources to improve their knowledge and gain some new knowledge about business organizations or particular domain in their organization that they deal. According to the previous example when the person needs to apply for an immediate, they must get a proper understanding about what are the loan types and interest rates and much more information regarding the loan. According to the bank, it must be easy for the person to get knowledge about those things by the document management system.

ACKNOWLEDGEMENT

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1. INTRODUCTION

1.1 Background details of the company, vision and their business

Dynaro Engineering PVT (LTD)is an innovative solution-based startup company that seeks to expand its emerging business. Dynaro Engineering specialized in providing product development services and automation solutions to enhance manufacturing and assembly processes and improve productivity in a wide variety of industries. Also, we focused our activities on software development, web development, electrical systems, and IoT solutions to give the best satisfaction for clients.

Vision - Our strategies and actions are in line with our commitment to sustainable development and energy saving built on economic progress, social development and environmental improvement.

1.2 Objectives of doing this project

The main objective of the project is to identify a suitable KM framework for the Dynaro Engineering PVT (Ltd) company. Because of a newly startup company we need to find out a suitable business strategy and KM strategy for this company. And develop a reliable document management system for the company to manage department-wise documents. Because it is easy to manage documents digitally.

2. EXISTING INFASTRUCTURE FACILITIES

Dynaro Engineering (Pvt) Ltd. Company Managed by a graduate person who has more than 5 years' experience related to IT, Computer Science and Electrical Engineering. The staff is a total combination of BSC graduates and MSC graduates and also undergraduate students work as an interns/trainee of that company.

Dynaro Engineering (Pvt) Ltd company provide these services to the clients

- ❖ IOT (INTERNET OF THINGS) Solutions
- ❖ Web Development
- ❖ Mobile App Development
- ❖ Software Solutions
- ❖ Electronic and Electrical Systems.

Customers can get a 24x7 support service by providing an inquiry to the contact page of the website providing customer details. And Dynaro company develops tailor made software products and IoT (INTERNET OF THINGS) based solutions, Electrical circuits as hardware products in order to decrease the complexity of the projects.

2.1 Computers, Software, Networks etc.

Computers – Apple MacBook, computers Acer desktop and personalized laptops, Dell Server computers.

A company official website and Dynaro Official Facebook page and other social media accounts are the main resources which provide important information of the company and website helps to build a trustworthiness between client and staff. But rather than the website of the company clients can find more information and knowledge by accessing the social media accounts of the company.

This is the official website of the company

Facebook Page :-
https://www.facebook.com/Dynaroengineering/?ref=page_internal

Instagram :-
https://www.instagram.com/dynaro_eng/?utm_medium=copy_link

2.2 Current systems including KMS (if any) and process

1. Software development

Software development process divide into two components.

- Web Development – Microsoft visual studio, visual studio code, Eclipse for java development

- Mobile Development – Android and IOS mobile standalone or API (Application Programming Interface) based apps development. When this comes to IOS development they use Apple computers and macbooks.

❖ Collaboration Communication System

1. Microsoft Teams

Staff members can collaborate make meetings, video conferencing and share files, documents among members that related to their services.

❖ Cisco WebEx
❖ Microsoft Outlook
❖ Project Management Tools

Trello, GITLAB, Microsoft office 365 Planner are the main project management tool that dynaro(Pvt) Ltd staff members use to manage their comprehensive projects. **GitHub use** for software collaboration

- Web portal of the dynaro(Pvt) Ltd.

Especially for staff members they learn new things and concepts and different problems related to products and services during their work. So, they can review and update new things, concepts and problems in the web portal. Customers also can use this web portal for update comments and review about products and services they use.

Storage Facilities.

The company use cloud storage for store their important files/documents **One drive** and **Google drive** are the main cloud storage systems they use for official purposes.

3. Needed KM infrastructure

3.1 Explicit knowledge, tacit knowledge, technologies

Explicit Knowledge

Our company needs a document management system than the web portal of the company. Because sometimes web portals are unavailable to respond to the client (Process of the client request failed). Because of these reasons staff member's knowledge and clients review and compliments about the services and products get delay to update in the system. So, staff members who face difficult problems might get delayed to solve their problems. But our proposed document management system 24*7 available to the staff members and clients and do their necessary tasks and our system will response fast and accurate level.

Tacit Knowledge

Our Company CEO has 5 years of experience in IT, Computer science and Engineering. So, in that case we need to improve that by organizing different training sessions.

Technologies

Technologies used for web and mobile development

- ❖ Java
- ❖ PHP
- ❖ Angular
- ❖ Laravel

- ❖ Kotlin
- ❖ Swift

IOT Technologies

Raspberry Pi

Arduino

3.2 Gap

As Dynaro Engineering is new to industry they are inspiring young talented engineers and consultants in order to increase their productivity as well as customer experience. We firstly interact with Dynaro HR members, and they really supported us to gather all the information that we need.

When we were talk with them, we've found some gaps in their current document management system. According to the information we have found below gaps in their business.

1. Use Network Drives and Email to manage their documents
2. Useability issues
3. Lack of integration
4. Audit problems
5. Information redundancy

These are the main gaps they need to consider which Knowledge management System.

4. KM Infrastructure

Knowledge management infrastructure capability refers to model products and organizational plans that encourage the knowledge management of an organization. KM Infrastructure can be classified into two main capabilities: technical and social infrastructure. Technological infrastructure includes physical, IT infrastructure, tools and equipment. Social infrastructure, on the other hand, includes culture, structure, and human resources. As such, it can be noted that KM Infrastructure provides an IT and non-IT infrastructure environment that supports knowledge management activities. Furthermore, organizations should strive to develop infrastructure capabilities not only in terms of hardware and software, but also in terms of culture, structure, people and technology. Knowledge management projects

4.1 Organizational Culture

Organizational culture is defined as the collection of specific values and standards shared by individuals and groups in an organization that governs how they interact with each other and with stakeholders outside the organization. Corporate culture not only defines the value and advantage of knowledge in organizations, but also influences the ability of employees to share knowledge. Corporate culture has been reported to be crucial for knowledge sharing and teamwork. This is because corporate culture is so important in encouraging interaction and collaboration between individuals who want knowledge to flow. It also gives individuals the ability to self-organize their personal knowledge to facilitate problem solving and knowledge sharing. In addition, researchers report that trust is an important part of culture for exchanging knowledge. High levels of trust reduce people's reluctance to share knowledge and reduce the risk of losing competitiveness. Therefore, the creation of a culture in which knowledge is easily accessible in the process of knowledge management should be at the top of the management agenda. However, aligning the culture of the organization with the objectives of knowledge management is considered a complex process, especially in organizations characterized by hierarchical structures and bureaucratic controls.

4.2 Organizational Structure

The relationship between the organizational structure and the exchange of knowledge stems from the social aspects of the organization, including hierarchy, density and affiliation, which facilitate the exchange of knowledge. The authors here suggest that two aspects of the organizational structure influence the flow of knowledge: Formalization and centralization. Centralization refers to the degree to which the right to make decisions and evaluate activities is concentrated at the top of the corporate hierarchy. Formalization refers to "formal laws and regulations governing corporate activities and managing employment relations". Therefore, the organizational structure is an important factor in facilitating the flow of knowledge within organizations through the acquisition of knowledge through corporate policies, processes and reward and incentive systems and then determining how it flows throughout the organization.

4.3 Information Technology

Technology infrastructure plays an important role in the knowledge management system of an organization in the creation and application of new knowledge and the exchange of existing knowledge by incorporating various technological platforms. While the hardware, networking and bandwidth aspects of technology are important, they are not sufficient to

carry out KM activities such as knowledge sharing, storage, distribution and maintenance. This requires other tools such as social media, content repositories and dynamic websites. Although the technology of knowledge management activities enhances the organization's capabilities, it is not sufficient as a single construction. Therefore, technology needs the support of other KM activators such as corporate culture, structure and business strategy to ensure accurate knowledge management in the right way.
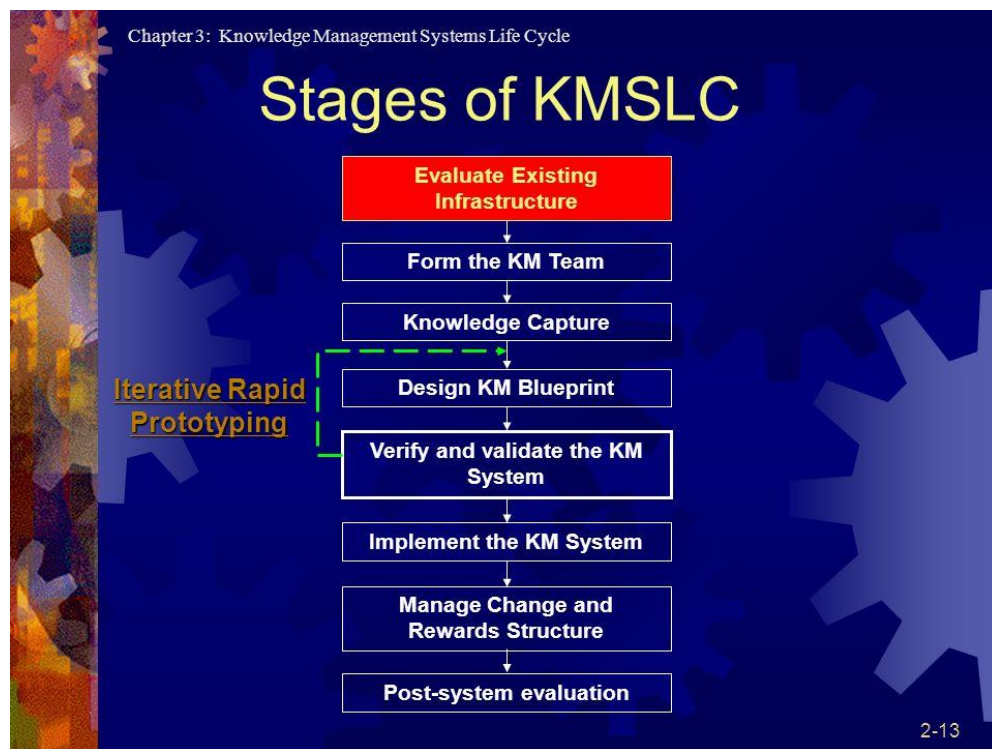
5. KM Framework

A knowledge management framework is a structure designed to help to map, create, distribute, scale and optimize a company's knowledge and knowledge resources. The framework supports information can be found in the employee manual and step-by-step instructions on how to use different software for market research needed to answer customers' frequently asked questions and make different decisions.

A knowledge management framework generally consists of four main components:

- People

- Process
- System (Technology)
- Strategy
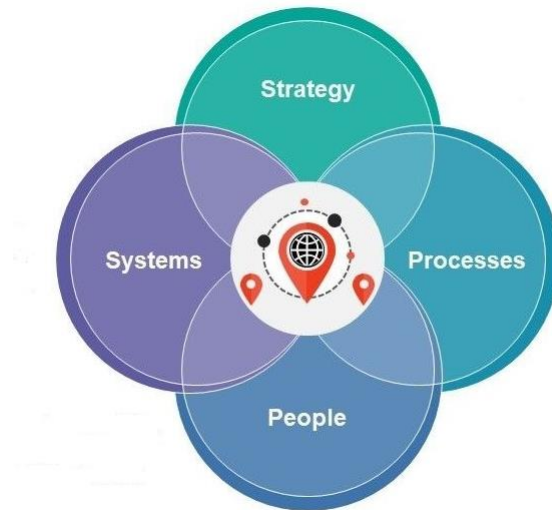
People

There is no doubt that the most important aspect of knowledge management is human resources. Therefore, humans are the foundation for building a successful organization. Moreover, knowledge requires thinking, planning and implementation. They cannot be achieved without people. Therefore, these things can be realized only with the intervention of people. The ultimate owners of knowledge are the people, and they have a responsibility to enhance knowledge management. Therefore, the plan is to increase people's efforts, involve them in internal processes, and provide sharing benefits. Therefore, an organization must motivate people because motivation is the key to achieving its purpose.

Process

Knowledge does not flow continuously; It's like a tap that only flows when someone activates the pipes. The knowledge management process makes it possible to gain an efficient understanding. The purpose of the knowledge management process is to acquire, create, collect and share knowledge. Without these objectives the knowledge process is incomplete. Getting needs and creating new awareness is an ongoing process. After that, critical knowledge is identified from the pool of accumulated knowledge. It will share this knowledge with relevant agencies to make decisions based on it. The knowledge management process enhances human-to-human interactions and promotes a healthy relationship between them.

System (Technology)

Technology advances efforts and accelerates the transfer of knowledge. Not only technology but also its content plays an important role. Content is any documented or oral information exchanged between members. It can be well organized or have some quick tips and suggestions. It acts as a helping hand in processing and gathering valuable knowledge and information that can be easily utilized by the people. Technology makes it an extra effort and a waste of time for people to gain extra knowledge for any subject. As a result, they can apply and share the best knowledge they want, anywhere, anytime without any problem.

Strategy

Every program or plan requires strategies. Without proper strategy, no one can achieve success in life. The strategy of any program determines its future and whether it goes in the right direction. It does not matter if you have the best IT tools; If the program is not strategic, they all count as zero. Achieving success requires understanding the needs and demands of the organization. An organization can only be successful if it meets the needs and demands of its customers. Various strategies have been devised to help people understand the needs and demands and gain proper knowledge. If an organization is able to formulate a strategy through the above rule, it will inevitably move forward day by day. It is also able to surpass its competitors and establish its value.

6. Conclusion

The main idea of this project is to gather information, store documents, and provide a suitable platform to save documents and update documents and delete them. This system helps to save time and efficiency as well as productivity of the business. Becoming a paperless office environment is one of the most important actions that they can take. Our suggested Document management system is reliable, easy to use for the company in order to up lift their customer base and manage users conveniently.

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8. Appendices

workflow

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