Knowledge Portal to foment the relation between the University and the Company in the electrical sector "UNEM"

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Abstract:

In this paper is described the development process of the project "Knowledge Portal to foment the relation between University and Factory in the electrical sector" which seeks to solve the problematic detected because of the lack of communication between University and Factory. The portal is an technological alternative to enable the cycle of knowledge within these organizations be achieved successfully implemented the theories of knowledge management and technological tools that facilitate communication between users of the portal and information management projects, articles, books, researchers curriculum vitae and other utilities of the portal in order to strengthen the process of learning and innovation within these organization. In an attempt to make an organization that learns to learn.

Key words: Knowledge Management, Web 2, university-company, knowledge management models.

1 Introduction

This paper presents the implementation of a knowledge Portal in the University and the Factory in the electrical sector, based on the different concepts about knowledge management and knowledge portals as a helpers in the knowledge-life-cycle.

To develop this project we follow some steps, the first one was the study of the state of the art of knowledge management inside university, one of the projects with huge diffusion is the implementation of “capital intellectual” (Bueno, 2000) (Intelect), that propose not only the model but also the knowledge creation process and the organizational learning. The Study that was developed by the “Dirección General de Investigación” in Madrid, Spain, was another interesting point of view to developed this knowledge portal, focus on reduce the problematic that was detected because of the lack of communication between university and company, not only in the electrical sector but in a general way talking about organizations.

Other important reference used to developed the portal was the implementation of the project, known as SICAP [2], that implements a technological platform to create a global system, that optimize the knowledge-life-cycle inside public administrations and universities, focus on create the Society of Information.

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Based on the previous topic, we got the principal items to develop in the knowledge portal, taking into account the organizational roll of University and Company.

Because of the constant economical changes around the world, companies must began by applying innovative models inside them, it is important for them star to search organizational knowledge to made easy the creation of new organizational process, Focus on made organizations competitive, profitable and preserve their lives compare with the others.

It means that, the intangible capital is an effective tool to made it possible, knowledge that people have helps organizations learn to learn, So that they do not expend time doing things that they already did in a certain time in the past [3].

This research project was developed because of the problematic that we found because of the lack of communication between University and company, in the specific electrical sector and Universidad Distrital Francisco Jose de Caldas.

Among the opposing problems it is outlined; the few information of the research projects elaborated inside of the research groups on the part of the companies, this leads that the majority of the projects are not implemented of an ideal way and turn out to be obsolete, for another side the companies look for processes of innovation inside themselves and the most effective form is to be updated with the new technological advances that they can find inside the universities, specifically inside the research groups. The innovation goes hand in hand with the development (Bueno, 200) I+D+i.

On the other hand the Public University needs resources to develop new technologies that contribute to the society development and to improve the competitiveness of the students when they apply to a job, is for it that the relation between the University and the Company, can take to the financing of new projects that could be applied inside the organizations, to improve the productive processes and with it to improve the quality of life.

Due to the opposing problematic, a link was established between the University and the Company Know as "Knowledge Portal to foment the relation between the University and the Company in the electrical sector ", in order to give solution to the opposing problematic, for it there was defined a Knowledge Management Model that integrates the University and the Company, then to be able to implement the portal that offers the necessary tools in order that, so much the members of University like those of the Company know the whole intellectual potential inside the same ones, as well as the research projects and in general way the scientific production of the students and in turn, the students have the possibility of linking itself to new projects subsidized by companies, as well as also of knowing the offers to apply a job inside the associate companies, but the most valuable of the portal are the tools that allow to the portal users, to be in contact at any time thanks with the implementation of the Web 2 (Forum, Chat, Wiki, WebLog), among other systems that complement the portal as that of communities.

The principal task of “Knowledge Portal to foment the relation between the University and the Company in the electrical sector "UNEM"” is identify, catch and filter knowledge that every single person owns and then transfer it to another people inside the organization. To solve problems effectively, quickly and create strategies for further complications, because of that organizations spend more time doing more important things and creating innovative process, instead of waste time by solving problems that were already solved in the past.
In few words, this knowledge portal helps organizations to learn how to create new strategies based on the knowledge present in the organization.

2 Knowledge Management

2.1 Knowledge Management. History

The management of knowledge is used from unmemorable times, even in the migration of the people, the different cultures and knowledge they were shared and then different cultures arose, also we see it in the debates, meetings of the people, meetings, workshops, conferences, all these are ways of manage the knowledge, the idea of this one is to do that the knowledge that the persons possess will be transferred to others by the intention of creating new knowledge.

Though the term of management of Knowledge is relatively new already different sources of information exist where we can find information of this one. The management of knowledge has been present in the organization during already a lot of time ago, but it was known as the analysis organizations, the difference is that the knowledge management allows us to know the company, gives us the basic points to take the knowledge that the organization has to turn into new knowledge and of this form to achieve that strategies appear to future.

The Knowledge Management is so a useful term for the organizations and nowadays all with different modalities, to be able to capture and carry out all the processes of the knowledge inside the organizations, inside these we find the Knowledge Portals, without leaving behind other technologies that are implemented at present as well as mobile applications applying Knowledge Management and the production of knowledge maps for each of the users of the portal, already there exist users who alone wish specifies information, for this the knowledge maps are useful to identify that a person possesses some kind of knowledge and since this one can be transferred to another person who needs it.

2.2 Knowledge Management Concept

Knowledge management is defined ace all activities taking place inside an organization to uses, audience share, and develop the possessed knowledge by individuals within the same order that they ploughs geared towards obtaining the best aims of the organization. To implement the knowledge models we uses different tools to develop Web portals such ace the site of which we speak in this paper whose name is UNEM.

To knowledge portal is that one that establishes to relationship between people who access the knowledge and the knowledge that have been established at to steal when in the Web for the benefit of an organization.

To foster this relationship between users and portal, this latter count with the help of forums, chat, and definition, sometimes virtual communities interested in sharing and feedback to obtain a new knowledge based on knowledge already possessed.

A knowledge portal structure must support the life cycle of the organization allowing it to be able to continue with the cycle of knowledge and finally the publication of knowledge. Therefore, a knowledge portal is an influx of information, knowledge and applications through Web.
The portals are an essential component of a knowledge management model and knowledge itself, since it is one of the means used for the transmission of knowledge that is captured through the processes in each of the models.

They come with the aim of ensuring that knowledge comes in a timely and clear to the user ones they require it in certain moment. The portals allow the user access and allow for the exchange of information.

A knowledge portal specializes itself in a topic, so that this should be dealt in depth, thus providing full coverage and led to a community of users.

In the current world of set up of new virtual companies the representation of knowledge portals is something fundamental in this step, providing a point of personalized access to optimize the power supply decisions. Not only virtual enterprises enjoy the benefits of a knowledge portal in general all organizations can deploy using them to improve productivity by innovating organizational processes.

ICT (Information and Communication Technologies), make this kind of technology very broad allowing them to be implemented with a number of tools; this concept is too wide because the knowledge management philosophy are not even institutionalized. Now with the help of ICT is not necessary that the exchange of knowledge is in person or to obtain necessary information by going to the office branch of the organization, these new technologies enable the digitization of information by making it easily accessible and allowing a easy communication through chat rooms, forums, blogs and wikis.

### 2.3 Importance

The knowledge management is useful for all and each one of the organizations, because according to the knowledge management model which is defined the innovation of the processes is guaranteed inside the organization that will meet reflected in the increase of utilities of the organization, thanks to the optimization of the processes of knowledge.

For the implementation of the knowledge management model technology puts to our scope the tools that facilitate this process in an Web environment doing that the users of the portal could know all knowledge process, doing that it contribution to the company is every time better in terms of profit. It is necessary that the persons know the organization.

### 3 Description of the solution

To select the develop platform there was necessary analyze about knowledge management was necessary, we detected the nodes and knowledge flows that made easy to build the knowledge map. The knowledge map helps identify who inside the organization have the knowledge and how is the flow of these. Next, you can find the list of nodes and flows of knowledge that were present in the knowledge map and the element that Bueno (2000) presents in his model (Intellect), Human Capital, Relational capital and structural capital.
The knowledge portal is mounted on a technological platform that was studied and considered to be like adapted for its implementation. At the part of programming We employed the standard J2EE because it gives us an environment business and an application handles multilevel to give more safety to the application; this sort of standard handles the persistence cap, the logical cap and the cap of presentation of an independent way but each one connected with the previous one.

To handle the persistence of information we rely on the help of the Engine of Database Postgresql-8.1.3 that facilitates the managing of the information of the users, the portal as well as the information of the groups and the companies associated with the portal.

And finally as applications server we used Jboss-4.0.2 which supports the functioning of the application in the Web. The server is mounted on Operating system Linux.

## 4 Methodology

In this section we will explain the methodology used for the elaboration and afterwards putting in action the Knowledge Portal to foment the relation between the University and the Company in the Electrical Sector.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>Analysis of the organization</td>
<td>Inside this stage the organization is known, and there are identified the sources of knowledge and the nodes of the organization.</td>
</tr>
<tr>
<td>knowledge Management</td>
<td>There is guaranteed that there are fulfilled the processes of knowledge management. Inside the processes of knowledge that we find; apprehension, organization, to share, to learn, to apply, to evaluate. The necessary thing is to guarantee that is learned and the knowledge is applied for the approach of strategies.</td>
</tr>
<tr>
<td>Functional scheme - knowledge management model</td>
<td>In this stage the model of km appears. That must satisfy the needs of the company and allow that the processes of knowledge should be fulfilled totally. In</td>
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order that the platform will be as ideal as possible.

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<tr>
<th><strong>Technological platform</strong></th>
<th>This stage is the Model implementation of KM in a Knowledge Portal working in the Web and fulfilling the knowledge processes, doing of the organization an entity that learns constant.</th>
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</thead>
<tbody>
<tr>
<td><strong>Implementation</strong></td>
<td>After the developing of the portal it is necessary to do the assembly in the Web, in order that it is used and evaluated by the direct users. In order to improve it constant.</td>
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For the develop of the Knowledge Management Model an analysis of the organization was realized in order to guarantees to know all the sources of knowledge inside this one, as well as the selection of the knowledge, it is necessary because there exists knowledge that odd is useful to the organization. This model is a general scheme of what must form of the application Web.

**Figure 1 Modelo de KM Universidad-Empresa UNEM**

![Figure 1 Modelo de KM Universidad-Empresa UNEM](image)

5 **Results**

The results of this project are the implementation of the Portal in the Web, which contains the information of the associate companies and the research groups of the university, besides different systems that give solution to the problems found by the lack of communication between the companies and the University.

The portal allows that the processes of knowledge should be fulfilled in a suitable way and that the creation and transference of knowledge will be in a cyclical way, guaranteeing that the processes implemented in the organizations are innovative in all the aspects. In the Figure 2 we can observe the results of the different subsystems of the portal.
6 Conclusions

The knowledge portals are indispensable in the organizations that want to improve the internal processes.

In fact, do not exist a unique knowledge management model, because the companies internally are different, so it is necessary to realize an analysis the organization in order to know the functioning of the organization.

The most important resource of the organizations they are the persons and with them knowledge, it is for it that must look for the way of implementing systems that allow that the persons should interact in order to guarantee that the processes of the knowledge are implemented satisfactorily.

The elaboration of the knowledge management model allows identify which are the nodes that will be born in mind in the portal of knowledge.

The wikis and the blogs are very simple but very powerful tools that managed well, they can manage to be fundamental engines in the knowledge management talking about the organizations.

References:


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