

# THE USE OF CORPORATE PORTAL AS A TOOL TO DISSEMINATE KNOWLEDGE

**Paper ID: 260**

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## ABSTRACT

Organizations have been expanding their business strategies to operate online. This movement started with webmasters updating web pages without any database mechanism in the background. After a while, it evolves to more elaborate intranet using good quality web pages, some database mechanism and integration but still with poor content. Nowadays, companies are trying to increase efficiency through corporate portals.

With the advent of corporate portals, businesses have gained tools that improve the knowledge dissemination and help employees to aggregate, access and navigate through information from internal databases, internal document repositories and web sites. As the technology has evolved, navigation has become more sophisticated, content more relevant, and interfaces more user-friendly and intuitive.

To succeed in a corporate portal implementation requires an elucidation of an organization's short and long-term goals and also an understanding of how the key elements of knowledge management, such as information flows and content management, will fit into it.

This paper will present a study about the importance of corporate portals and how *Embrapa Recursos Genéticos e Biotecnologia*, a Research Centers of the Brazilian Company of Farming Research, tied with the *Ministry of Agriculture*, could use a corporate portal to disseminate knowledge into the organization.

**Keywords:** knowledge management, corporate portal, enterprise portal, KM.

## INTRODUCTION

In 1973, the U.S. Defense Advanced Research Projects Agency (DARPA) initiated a research program to investigate techniques and technologies for interlinking packet networks of various kinds. The objective of DARPA (together with other research centers) was to develop communication protocols which would allow networked computers to communicate transparently across multiple, linked packet networks. This was called the Internetting project and the system of networks which emerged from the research was known as "The Internet." (Barry, 2003)

During the late 1980's, the population of Internet users and network constituents expanded internationally and began to include commercial facilities. Indeed, the bulk of the system today is made up of private networking facilities in educational and research institutions, businesses and in government organizations across the globe. (Barry, 2003)

The Internet has revolutionized the computer and the world. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. (Barry, 2003)

Years later emerges the Intranet, which uses the same Internet technology with the same capability of showing documents and images. Intranets revolutionizes the companies' communication allowing information exchange and services integration. The first generation of Intranets was very simple compared with the ones that exist today. They used HTML, updates were made by the webmaster (centralized) and technical support was poor. (Http\_1)

With the Information Technology evolution, the Intranet started to advance into the second generation. In this state was possible to use some companies' systems on the Intranet, but the excess of links and information made it inefficient. (Http\_1)

At the beginning of the new millennium, the Intranet suffered another evolution, starting the third generation, and known as Corporate Portals or Knowledge Corporate Portals. Figure 1 shows the Intranet evolution. The new generation of Intranets have brought advantages such as:

- Personalization – each user can personalize the Intranet
- Organization/Standardization of content
- Integration with other web systems

- Advanced search

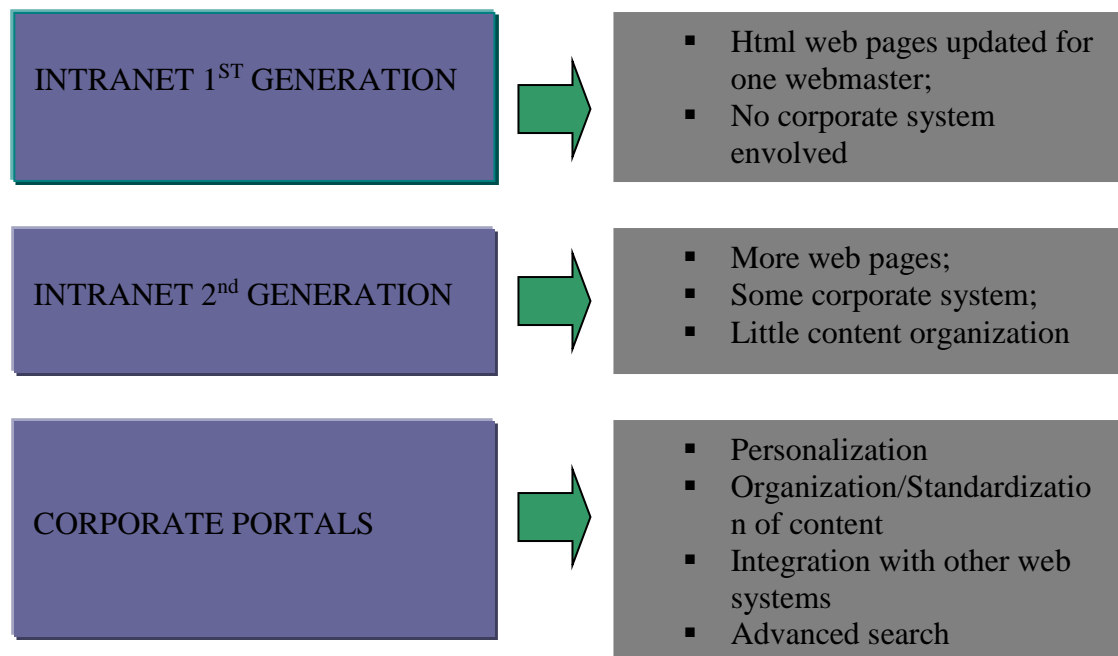


Figure 1: Intranet evolution. (Http\_4)

Corporate Portals represent an important advance in the software that collaborates in the development and implementation of initiatives of Knowledge Management. They are changing the way that information and responsibility are shared in the organizations. The corporate portals integrate many characteristics that are very specific of KM, like personalization and search; access of information in a network environment; internal and external information; communication and collaboration; easy access of an enormous quantity of data, information and knowledge. (Terra 2002)

## EMBRAPA RECURSOS GENÉTICOS E BIOTECNOLOGIA

The Brazilian Company of Agribusiness Research (EMBRAPA), created on April 26th, 1973 is connected to the Ministry of Agriculture, Cattle and Supplying. Embrapa acts through 37 research centers, being present in almost all the states of the country. (Http\_2)

*Embrapa Recursos Genéticos e Biotecnologia* is one of the Embrapa's Research Centers. It was created on November 22<sup>nd</sup>, 1974 under the name of *Centro Nacional de Recursos Genéticos*. In the 1980's, the company started to act in farming biotechnology and in biological control of

plagues, changing its name to *Centro Nacional de Recursos Genéticos e Biotecnologia*. In the 1990's, the company incorporated, in its agenda, activities of structural and functional genomes sequencing, in search for strategic importance genes for agricultural species, as well as techniques of transgenic in plants and cloning in the bovine race. (EMBRAPA, 1998)

Its mission is: To make viable technological solutions for the sustainable development of the Brazilian agribusiness, assuring the conservation, valuation and use of the genetic resources, generating, adopting and transferring knowledge and technologies, in benefit of society. (EMBRAPA, 1998)

Its business is to generate knowledge and technologies in genetic resources, processes and products of the biotechnology, to take care of institutional objectives and demands of the Brazilian agribusiness. (EMBRAPA, 1998)

*Embrapa Recursos Genéticos e Biotecnologia* as a center of research, development and innovation has as its main characteristic the development of products and services based on knowledge. So, it is very important to find a way to disseminate the information in a short time to maintain its competitive aspect in the world market.

Nowadays, *Embrapa Recursos Genéticos e Biotecnologia* has a computer network divided in two basic and functionally linked structures:

- External Net: corresponds to the network servers and computers that are directly connected to the Internet;
- Internal Net: composed of mainly PC and Macintosh equipment spread by the company with a reserved Internet address, and eventual network servers who do not need to be directly connected to the Internet.

There are multi-way fiber optic links in the external net as well as in the internal net. The operational systems used are Red Hat Linux and the Windows NT for the network servers and Windows 98, XP and 2000 and Mac/OS for the work stations. Oracle and Ingress are used as data base.

## **EMBRAPA RECURSOS GENÉTICOS E BIOTECNOLOGIA'S INTRANET**

The first Intranet of *Embrapa Recursos Genéticos e Biotecnologia* was developed in 1994. Since its creation, it has been improved periodically. The last significant modification happened in 2004. The main objective of this modification was to improve internal communication, decrease the processing time and make up to date information available to its employees. Now, through the Intranet it is possible to access information about norms and internal committees, search phone lists, read about news, download files of researchers' lectures and request internal works.

The layout was the first big change (see figure 2). Some pages of the old Intranet were improved and other new ones created. The objective, in a near future, is that each sector will have its own page in the Intranet that offers information and services for employees. On the main page, some links that already existed were kept, such as: Headquarters Intranet, Human Resources Department, Goals of the Unit and Forms for Download. Other links were added, like: News, Institutional, Corporative Library, Lectures and Workshops, Committees and Commissions, Trips Services, and Corporative Systems. The scroller - a window with sliding messages - that functions as a mural where news, warnings, advises, etc. are placed, is the big hit of this new version.



Figure 2: Main Intranet web page of Embrapa Recursos Genéticos e Biotecnologia

The new Human Resources Department page has the information grouped in subjects such as Personal, Training, Period of training, SAAD, Welfare and Security of Work and one link for the DGP in the Headquarters, facilitating the localization and access to information for the employees. As an example, in the item Training it is possible to find all the forms and information about short-term training and post-graduation in this country or abroad.

Another prominent factor was the creation of pages for the internal committees to place their information, such as acts, reports, etc., for the entire unit. On the Library page norms of loan and examples of bibliographical references for publications of works in the vehicles of Embrapa are available.

The IT department did not originally have a page in the Intranet, but now it is available with information, tips, tutorials for most software used by the employees, and a list of Internet sites with free Computer Science courses.

The first access page, featuring internal news, is called *Hoje*, bringing daily news from inside and outside the Unit, as well as lectures, visits, seminaries, workshops, fairs and expositions.

The web team is composed by one Web Designer, one Webmaster and one Collaborator that work for an integral period on the site unit and Intranet maintenance. The demand for information inclusion in the Intranet is big, but the content update is made manually still, which overloads the team and, a lot of time, makes new implementations impractical.

Based on the Intranet generations described in the Introduction, *Embrapa Recursos Genéticos e Biotecnologia* is part of second generation, which means that some corporate systems can be access through the Intranet and presents some organization. The technological scenario of the company is favorable for an implementation of a Knowledge Corporate Portal, the third generation of Intranet, because practically, there is no digital exclusion.

## **CORPORATE PORTALS**

It is a matter of fact that a “single static Intranet site does not meet the diverse needs of different departments within an organization”. Portals create centrally-managed default starting points for each department. Furthermore, employees are allowed to personalize their start pages. Individual needs and requirements can be included by changing the look and by selecting specific tools. (Scheucher, 2000)

A corporate portal integrates internal applications such as database access, document management, and e-mail with external applications (Internet). It is a Web-based interface that gives users access to all those applications through one screen on their PC. (Http\_3)

According to leading technology analyst firm The Delphi Group Inc., there are several key features required for a successful portal platform (see figure 3). (Http\_3)

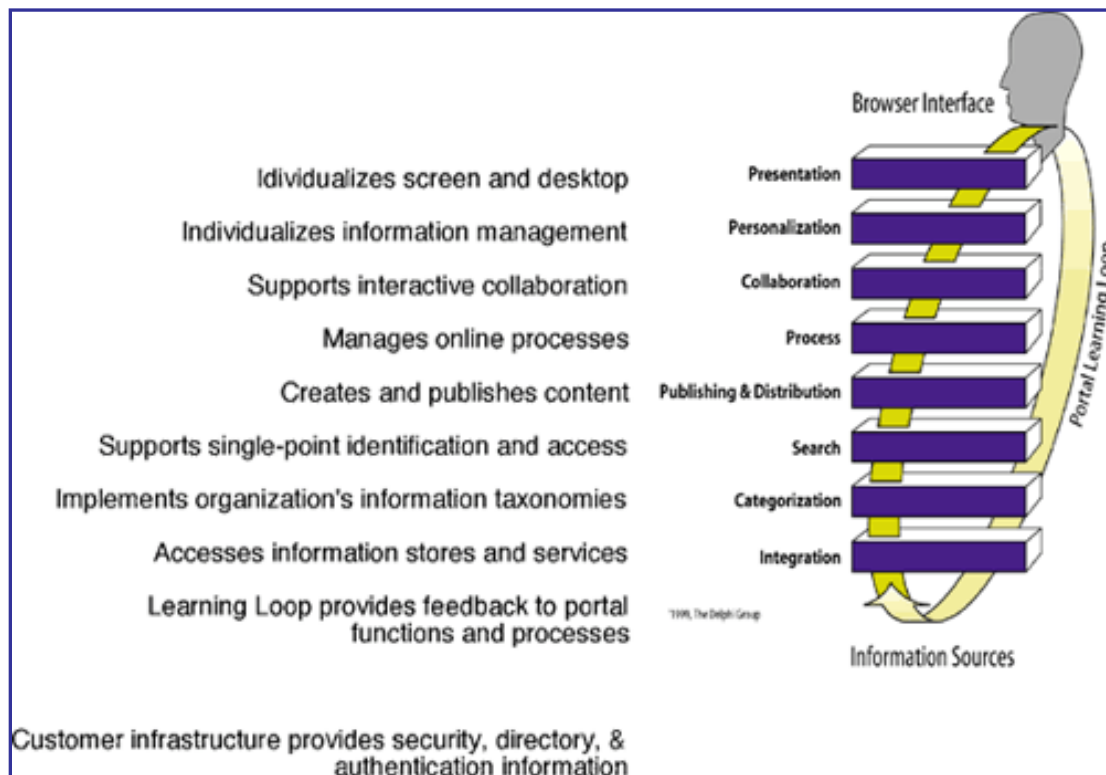


Figure 3 - Successful portal platform. (Http\_5)

**PRESENTATION:** Standard Web display technologies such as HTML, JavaScript and applets or Cascading Style Sheets plus data visualization technologies like Web OLAP that run applications like an e-mail viewer within the browser.

**PERSONALIZATION:** Agents that filter information for individual users. They might suggest what users would be interested in and can learn from what users do.

**COLLABORATION:** Groupware technologies such as discussions, chat sessions and project libraries.

**PROCESS:** Technology such as online transactions that are the engines of various business or workflow processes.

**PUBLISHING & DISTRIBUTION:** Storehouses of documents in portable formats like Portable Document Format as well as publish/subscribe engines or other means of "pushing" information.



**SEARCH:** Both full-text search engines and ones that search descriptions of documents and other content.

**CATEGORIZATION:** Tools to create and maintain categories. Categories must be varied for different audiences that look at the same documents and data in different ways.

**INTEGRATION:** Tools to access disparate back-end data sources such as relational databases and ERP packages. In addition, tools that brings in data feeds from the outside, such as news or stocks. Indexes structured and unstructured data from file systems, Web servers and e-mail.

To be succeeded, the implementation of a corporate portal needs to align with the corporate business strategy. The company's CEO needs to inform the portal's strategic importance openly to all organization levels. (Terra, 2002)

Other factors are also very important in a portal implementation, such as:

- Be clear about the business case
- Knowledge Management and Corporate Portal needs innovated strategic
- Communication is very important
- New responsibilities and roles needs to be designed
- Concentrate in the users needs
- Plan, infra-structure and continuous support
- Content quality is more important than content quantity
- Reduce information overload and improve the information access
- The IT applications integration needs to be well planned
- Develop a due diligence to select the right environment. (Terra, 2002)

## CONCLUSION

The use of corporate portals has been generated positive impact in the businesses of some organizations, contributing in many ways for the most efficient strategies execution. (Terra, 2002)

As a research organization, *Embrapa Recursos Genéticos e Biotecnologia* creates lots of information and knowledge, so it is necessary to manage them, to generate innovations in a short

time and to remain competitive guaranteeing its market position. Its main line of research and development is the internal integration, aiming the construction of a sharing environment and cooperation, and external, with the other Embrapa's research centers.

The specific characteristics offered by the corporate portals, described in this paper, will facilitate the day-by-day work in *Embrapa Recursos Genéticos e Biotecnologia*. With the personalization feature, the employees will be able to customize their portal access, which will speed up the work delivery, since they will only visualize the information related to its activities.

The advanced search, another essential portals' characteristic, would be a powerful tool for employess to find relevant information, mainly because today, in the company's Intranet, there is no mechanism of search.

The use of a corporate portals will make possible, the decentralization of information inclusion and update, which will turn the content updates faster and less dependent of the web team.

These and other characteristics of a corporate portals, such as contribution, categorization, and integration will improve the way as the employees use the available information and as they work in team, improving its productivity. All these improvements will provide to *Embrapa Recursos Genéticos e Biotecnologia* a work environment favorable to the development of innovations, assisting it in the accomplishment of its strategies and making possible to increase its capacity of institucional improvement.

Finally, the use of the corporate potals will bring a new way to work for the technician and the researchers of *Embrapa Recursos Genéticos e Biotecnologia*. Activities, such as create, handle, and publish knowledge would deeply be facilitated and more productive, speeding up the processes of integration, learning and innovation, necessary to reach the future results of works and researches.

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