Implementación de un repositorio digital para la gestión operativa en empresas PYMES del sector de mantenimiento de computadores

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Abstract

Knowledge on daily practice in performing technical maintenance companies computer is linked to a situational context in which it is generate, therefore associated with different problems arising in the operational area.

Until now this knowledge is being almost entirely on your personal, hard to formalize and communicate. Therefore you want to verbalize and record, create manual and pass through a digital repository. At present the information in the passage of a support process be conducted in these companies to become one of the main resources and therefore to be valued as an asset.

The moment in which the true value of information is recognized, the need to give better treatment protecting against eventualities.

It is vital for companies to protect computer maintenance knowledge, and in that sense a digital repository is a solution that will allow these companies that vital business information will not go with the technicians.

In Pymes, in the field of computer maintenance, software is not considered as a support but it is a primary or major component, without which the business fails. The foregoing is that without it could not provide the services They affer.

Due to the importance of this issue arises the need to design and implement an adequate solution enabling enterprises Pymes are located in the area of computer maintenance software safeguarding information and which are of vital importance for the development of its business . This is meant to mitigate the risk involved in the loss of this information for businesses and allow access to this knowledge from anywhere and anytime.

Keywords: digital repository, procedures, knowledge, protection, primary component, access.

I. INTRODUCTIÓN

The Pymes in computer maintenance deal directly with technology and interact daily with digital repositories of large companies containing manuals and software drivers that allow the operation of products developed, manufactured and sold, sometimes the software and drivers provided in these repositories do not work when installed due to changes in operating systems or incompatibility of references, which makes it necessary to find a solution that takes several days sometimes.

Therefore must generate options to provide support and assistance to small and medium enterprises, presenting a solution that allows you have an organizational knowledge.

There is a sector in Bogotá city in which is concentrated a high percentage of these companies, a sector which in turn has three shopping centers whose main core is the marketing of computer components, these are: Unilago, Center for High Lake and technology center as well as numerous buildings that are around where these also work.

The core business of these companies is maintaining software and hardware for PC 'S, all the activities of these companies and that characterize depend on items such as drivers, software, procedures and information, which currently have no proper management as they are for their size companies do not have a department that manages this knowledge and processes.

As a result of the consultation to managers of companies was established maintenance actually most of them do not have support from various objects or procedures.

Some of the activities of these businesses are outsourced, except those that make up its core business; the basic rule is not to give in outsourcing any functions that are essential in the business. For this reason it must find a solution that allows the same company in a simple but methodical way to store, describe, preserve and provide access to objects from the operation.

As a result of the above the question arises How to manage and protect the knowledge about objects from the operation of enterprises Pymessector computer maintenance?

In order to safeguard the information and knowledge software is the need to implement a digital repository that will further optimize processes carried out in the operating department of these companies, eliminate the shortcomings that are currently handling these and allow immediate and effective response in the provision of their services

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a). Objectives

1). General Purpose.

Implementing a digital repository that lets you store, describe, preserve and provide access to objects from the operation of enterprises SME sector computer maintenance.

2). Specific objectives.

- Identify key components of the business in Pymes in the field of computer maintenance and check what impact they have on the business.

- Implement an application that allows to manage the repository.

- Validate the repository implementing it in at least one (1) Pyme sector computer maintenance.

b). Justification.

The product knowledge is not documented experiences in experts who have extensive experience in their positions as technicians, for that reason you want to start processes to formally transfer part of that experience, due to the rotation of staff in maintenance companies computer , which forces to find solutions to keep the knowledge acquired by them in practice

Based on information provided by various sector managers , including Fabio Humberto Bridges Point Makro manager , Rosa Rojas Inside PC manager , manager Miguel Vargas Optisystem (companies in computer maintenance) and managers from other companies you can set that Pymes companies in the field of maintenance of computers usually do not have tools that allow them to store , describe, preserve and provide access to the objects proper operation , negative aspect to lost unexpected objects (installers, drivers , information and procedures) , operational staff turnover , updated versions of software , high generation of objects by manufacturers could negatively impact the competitiveness and efficiency of these, as these objects are in parent- necessary for the development of economic activity thereof, can affect your financial situation happened , so it is of significant importance to implement digital repository type solutions as a way to recover from unexpected failures lost objects exist or manufactured by the manufacturer and as a knowledge management mechanism for Pymes in this sector.

I. *METHODOLOGY.*

The methodology used for the project is applied research, where knowledge acquired in the program of engineering systems are used to generate results that would evidence in a digital repository
Information sources for research is one (1) business sector Pymes maintenance of computers located in Bogotá

a). Phases of the methodology.

1). Promoting the creation of a repository.

Provides a list of benefits for both researchers, institutions and the global community can use and adapt when you have to submit to the authorities repository projects. To generate this list is necessary to know in detail the processes of the institution through information sources

2). Creating Repositories.

Provides information and tools in all that relates to the initial planning of a repository, its implementation and installation and long term maintenance. Some of the topics covered are:

Technical requirements: Hardware, software and functionality options, formats, and software interoperability features, additional tools, such as software to create pdf, videos, etc..

Metadata: Advice on planning how to define and manage metadata within the repository. Workflows: Information about planning the administrative processes for the repository.

Release Repository: Recommendations for the repository has a prolonged lifetime in addition to to know within the institution for which it was implemented.

Planning Checklist: Lets make sure you have considered all the relevant questions before launching the repository.

3). Resources for sustainability.

It was at this stage to identify the key components that a repository is sustained in the long term, these include:

Instalación y personalización: En esta etapa se define los recursos humanos definiendo las habilidades y conocimiento que se requieren para el mantenimiento de la infraestructura.

Technical Support: For a stable operating repository must meet the maintenance requirements that must be supplied by the assigned human resources.

Mediation contents: To add the data in a repository can be done in two ways, through self-archiving and mediated deposition.

Equipment: Hardware required to implement such repository server where the repository will house.

Planning Checklist: You must perform a series of key questions that enable the proper implementation of a repository.

4). Políticas y asuntos legales.

You should create policies that provide the framework for managing the repository and legal compliance.

Content policies: Creating policies for defining the type of content that is stored in the repository.

Policy presentation: Define policies to get the content in the repository.

Policy reuse of data: Description of how the content is in its repository can be used by others.

Preservation policies: How should define the conservation approach for the repository.

Copyright: Creating policies copyrighted. Planning Checklist: Planning Checklist ensures that takes into account everything about the policies governing the repository.

5). Optimization.

Optimization repository for robots search engines.

6). Success measurement.

This is based on the utility and use of the material contained in the repository, this process should consider obtaining content for the repository, and the variants that arise in the institutional culture.

7). Maintenance.

This phase will modify the system if the user identifies that does not meet all expectations, the delay in changing the system depend on the degree of difficulty having this change.

8). Incorporación de repositorios.

Compare learning and previous work experience in a clear and well-organized tool such as the repository, which is of practical help for staff use

b). Type descriptive study.

"This type of research is responsible for describing fundamental characteristics using various criteria allowing to show the structure or behavior of the phenomena under study.[1]

c). Fuentes de información.

1). Primary sources of information.

Using interviews and surveys aimed at all players in the system.

- Interviews with key stakeholders
- Survey targeting those involved in the process.

[1] Sabino, Carlos.El Proceso de Investigacion .Bogota. Panamericana. 1992 p 2

2). Secondary sources of information

• Books with themes relating to the management of knowledge.
• Files posted online.

II. OUTCOMES

It could be defined as the statistical sample to which he conducted the interview in the value chain of these companies Pymes primary activities are preventive and corrective software and hardware maintenance and these basically depend on resources required such as systems operational software and drivers.

d). Primary activities

- Preventive and corrective maintenance software.
- Preventive and corrective maintenance and hardware.
- Software upgrades and hardware.
- Sale of computers.
- Sale of parts for computer.

TABLE 1 PRIMARY SOURCES TO CONDUCT ACTIVITIES.

SERVICIO	FUENTES	RELACION DE LA FUENTE CON EL SERVICIO
Preventive and corrective maintenance of software	NOT	Maintenance is carried out without sources if problems occur you should seek the solution at the time, must search and download.
Preventive and corrective maintenance and hardware.	NOT	Maintenance is carried out without sources if problems occur you should seek the solution at that time, look for manual download.
Updates of software and hardware.	NOT	Updates are made without sources if problems occur you should seek the solution at the time, must be downloaded manuals.
Sale of computers	not applicable	
Computer parts for sale.	not applicable	

Source author.

e). Objects of the operation.

The information provided by companies to identify the objects from the activity:

- Procedures.
- Drivers: Reference equipment or hardware, driver and procedure.
- Programs: program name, operating system version.
- Operating Systems: Specific topic..
- Antivirus.

f). Resources used for development activities (primary).

- CDS with operating systems and software.
- Software licensing and software operating systems
- Hard drives with operating systems and software.

g). Means, mechanisms or tools to conserve resources

- CDS.
- Hard drives.
- Computer.

h). Customers

- Companies.
- Home.

TABLE 2 SOURCES TO MAKE PRIMARY ACTIVITIES.

SCROLL	TYPE OF PROVISION	
	DEMAND	CONTRACT
IN HOUSE	X	X
IN THE PYME FACILITIES /MAINTENANCE	X	X
FACILITIES IN CLIENT / COMPANY	X	X
FACILITIES CONSUMER / HOUSEHOLD	X	

Source author.

i).Documentation of business processes used in the business.

They have not

j).Difficulties encountered in the ongoing development of the different activities. Loss of drivers

- Lost time caused by searches.
- Repeat process for installing drivers shod.
- Never give a quick hardware repair solution.

k).Impact

- The main source of income is the preventive and corrective maintenance hardware and software, would be affected the profitability of the company due to inefficient processes

l). Requirement that needs to be implemented. Unify and organize drivers

- Accessibility via internet resources and procedures to enable the development of activities.

CONCLUSIONES

This tool allows you to store, describe, and preserve knowledge generated daily practice of technical, to further reduce time in development processes that are alredy documented.

The digital repository is a solution that allows enterprises Pymes maintenance of computers have an organizational knowledge.

Repositories are a solution that allows formally transfer part of that experience is in experts who have extensive experience in their positions as technicians.

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