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THEME:

"DEVELOPMENT AND IMPLEMENTATION OF THE MODULE PROJECT MANAGEMENT SOFTWARE WITHIN THE SYSTEM OF ENTERPRISE RESOURCE PLANNING SOFTWARE FREE OPENERP FOR THE COMPANY VIRTUALSAMI CIA, LTDA."

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DEVELOPMENT AND IMPLEMENTATION OF THE MODULE PROJECT MANAGEMENT SOFTWARE WITHIN THE SYSTEM OF ENTERPRISE RESOURCE PLANNING SOFTWARE FREE OPENERP FOR THE COMPANY VIRTUALSAMI CIA. LTDA.

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Summary. This project describes the System Management Company OpenERP, which has a basic architecture of client-server licensed under the AGPL (open source), it runs on multiple platforms or operating systems whose development framework is OpenObject, for programming PYTHON uses language modules, manages a model view controller and its manager PostgreSQL database.

Introduction

Projects are often used as a means of directly or indirectly to achieve the objectives outlined in the strategic plan of an organization.

The strategic plan of an organization becomes the primary factor guiding investments in projects. In parallel, projects fed back to the programs and portfolios through status reports, lessons learned and change requests that may help identify potential impacts on other projects, programs or portfolios. The project needs, including resource requirements, are collected and communicated back to the

portfolio level, which in turn guides the planning of the organization.

Generally, projects within the company VIRTUALSAMI CIA. LTDA. They authorized as a result of one or more of the following strategic considerations:

- · Market demand
- Strategic opportunity / business need
- Social need
- Environmental considerations
- Request for a client
- Technological advance
- Legal requirement.

Chapter I

The company VIRTUALSAMI CIA. LTDA. it dedicated to software development is growing so the information from the different areas that make up during software development and can not be administered in

UNIVERSIDAD TÉCNICA DEL NORTE - FICA individual files, because the data are more and require more time to verify to and make timely decisions.

That is why, it becomes essential to have a solution that allows them to efficiently manage their information, so they can organize their data in a standardized way, integrate information from different areas and share, reduce time and optimize resources, including each of the activities carried out within the organization.

Currently, it projects a lot of information, both input and output, which can hardly be beneficial for making short-term decisions is generated.

The term "Project management" can be summed up in its translation into Castilian, as a combination of the terms management (decision-making) and management (organization of available means and correcting deviations). And be specified in terms of time, cost, quality and risk.

The OpenERP system allows planning the allocation of resources on a short term basis and long term. You can schedule automatic communication via email to report the progress of the project. Gantt charts provide graphical representations of projects, as well as the availability of resources and workload.

To achieve compliance with the objectives of the study will be used as a research tool: direct observation to help you see the causes of the problem more visually.

Chapter II

Virtual SAMI in 2008 opens its doors as a consulting, software design and research

In 2012 by decision of the owners Virtual SAMI happens to become what it is today VIRTUALSAMI CIA, LTDA

PRODUCTS AND SERVICES OFFERED:

- Technology Consulting, Accounting and Valuation and Catastros
- Automated System Parking Management and Control Rotary and tariffed VIRTUALSAGA
- Sports Administration System VIRTUALSPORT
- Implementations Odoo (Before OpenERP)
- Implementations Proofs Electronic Systems Integrated with Third Parties

The open source model of OpenERP has allowed us to leverage the thousands of developers and business experts to build hundreds of applications in just a few years in the project module.

Company VIRTUALSAMI CIA. LTDA., Was with multiple connected, connected or unconnected applications, which became difficult to have full control of their projects, having several phases with different tools and human resources at different locations of the country. With the implementation of the OpenERP tool VIRTUALSAMI CIA. LTDA., We have a single application, making automation and centralization of all tasks within projects.

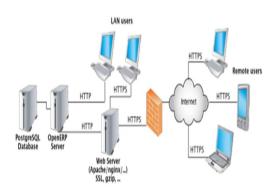
OpenERP

OpenERP (formerly known as TinyERP) developed under OpenObject, it is an open source software integrated with ERP (Enterprise Resource Planning or Enterprise Resource Planning in Spanish) manufactured by OpenERP SA and cross-platform (Linux,

UNIVERSIDAD TÉCNICA DEL NORTE - FICA Windows, Mac-OS), which provides a full suite of business applications in a modular way, which include the following standard modules: sales management, purchasing management, CRM, project management, warehouse management system, Manufacturing, Accounting, Point of sale, asset Management, human resource Management (HR).

ARCHITECTURE OPENERPO

OpenERP handles architecture client-server allowing the client components and server are separated, so the server runs independently of the client and is responsible for the business logic and communication with the database, while the customer interacts with the user by providing information and allowing these to interact or operate with the server.



Chapter III

ANALYSIS SYSTEM

MANAGEMENT REQUIREMENTS

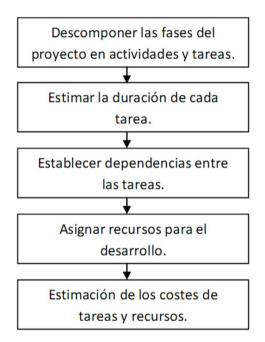
Requirements management the aim is to have a control over the requirements. These requirements should be part of clearly identified, understandable to all stakeholders relevant to the requirements.

Objective resource management: "The requirements are managed, and inconsistencies

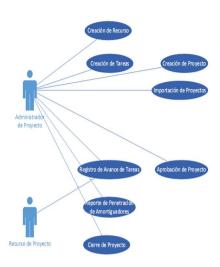
between requirements and plans and other project artifacts are identified".

Despite its temporary nature, projects can contribute to achieving the objectives of the company when they are aligned with your strategy. VIRTUALSAMI sometimes modifies its operations, products or systems by generating strategic business initiatives that are developed and implemented through projects.

FUNCTIONAL REQUIREMENTS



USE CASES



Chapter IV

CONCLUSIONS AND RECOMMENDATIONS

- 1. OpenERP allows managing projects collaboratively and in real time using or allowing different views of the record and progress of projects within the company.
- 2. OpenERP presents reports from the overall situation to the smallest details of software development projects; from the contract with the client until the final bill.
- 3. OpenERP allows proper integration with github repository software, which allows accurate and current information for users of projects.
- 4. Designed to fit their own needs, organizes projects around their own processes. Work with tasks and problems kanban view, program tasks in the Gantt chart and controls the timing and maturities in the calendar view with which

VIRTUALSAMI CIA. LTDA. Achievement optimize their work.

- 5. A company VIRTUALSAMI CIA. LTDA. It allows you to have a solid base of system engineering and its applications, shortening paths without having to write certain implementations.
- 6. It is open source software provides a variety of tools that are easily adapted to your own project management system.
- 7. Easy to use get organized as quickly as images.
- 8. Incoming emails are integrated automatically create tasks and new issues at the moment, allowing you to easily collaborate with customers.
- 9. Teamwork
- 10. Collaborative writing
- 11. Get alerts on projects and tasks that you are following to be up to date on everything that interests you.
- 12. timesheets, contracts and invoices.
- 13. Issue Tracking

Services, technical assistance.

In the process of research (Open ERP) software we have focused on the study of the tool and learn how to run a business in all areas through this common platform. Regarding business objectives, it has proven the feasibility of implementation and deployment of OpenERP. Then, when analyzing the organizational structure and business model VIRTUALSAMI, we can ensure that the implementation and system

UNIVERSIDAD TÉCNICA DEL NORTE - FICA implementation of enterprise resource management OpenERP has been a great success for the company from a point of view, economic (open source) but also so simple and intuitive interface.

One of the parts of the architecture of OpenERP worth highlighting as an advantage is the web server, which allows you to connect to the OpenERP server from multiple computers (clients) without installing any additional software, because with a web browser enough. Developing the project could also check that RUP is still a very efficient process for software development methodology.

BIBLIOGRAFÍA

- Caguana, L. (31 de 10 de 2012).
 - 6tocontabilida.blogspot.com. Obtenido de
 - http://6tocontabilida.blogspot.com/2012/10/v-behaviorurldefaultymlo 31.html
- Contabilidadactual. (10 de 08 de 2013).

 contabilidadactual.com. Obtenido de

 http://www.contabilidadactual.com.mx/2013/08/10/reclutamient
 o-selecci%C3%B3ncontrataci%C3%B3ninducci%C3%B3n-y-
- Definicionabc. (2007). www.definicionabc.com.

 Obtenido de

 http://www.definicionabc.com/derecho/
 contratacion.php

capacitaci%C3%B3n-de-personal/

- Drake, J. D. (2009). *Postgre*. Recuperado el 20 de 01 de 2015, de Postgre: http://www.postgresql.org/
- Eoi.es. (09 de 04 de 2013). *uso de cookies*.

 Obtenido de

 https://www.eoi.es/blogs/mintecon/2013
 /04/09/como-hacer-un-proceso-dereclutamiento-y-de-seleccion-depersonal-efectivo/
- Gallego, M. T. (2013). *Gestión de proyectos Informáticos* . Recuperado el 05 de
 2015, de http://openaccess.uoc.edu/
- Guzdial, M. J., & Ericson, B. (2013).

 Introducción a la computación y programación con Phyton. Pearon Educación.
- Izquierdo, S. (2012). www.openerpweb.es.

 Obtenido de

 http://www.openerpweb.es/recursos-humanos-openerp/

- Jessen, S. A. (2012). *Project Leadership Step by Step Part 1*. bookboon.com.
- Knowlton, J. (2009). *Python*. ANAYA Multimedia.
- Martinez, R. (2009-2013). *PostgreSql-ES*.

 Recuperado el 05 de 2015, de http://www.postgresql.org.es/
- Montalbán, I. L. (2012). *Bases de Datos*. Bogota: Garceta.
- Mountain Goat Software. (2010). *Mountain Goa*.

 Recuperado el 01 de 2015, de Mountain
 Goa:

 http://www.mountaingoatsoftware.com/
 agile/scrum
- Odoo. (15 de 10 de 2000). *Open Source ERP and CRM*. Recuperado el 05 de 2015, de https://www.odoo.com/es_ES/
- Odoo SA. (2010). *Odoo*. Recuperado el 18 de 01 de 2015, de Odoo: http://apps.openerp.com
- Palacio, J. (2014). Gestiónde proyectos Scrum Manager. Scrum Manager®.
- Perez, X. J. (10 de 01 de 2013). es.slideshare.net.

 Obtenido de

 http://es.slideshare.net/jonathanperezxa
 vier/rol-depagos
- Python Software Foundation. (01 de 16 de 2008).

 Python. Recuperado el 05 de 01 de 2015, de Python:

 http://www.python.org/doc/
- Sabana Mendoza, M. (2006). *PhP con postgreSQL 8*. Megabyte.
- Smetoolkit. (2008). mexico.smetoolkit.org.

 Obtenido de

 http://mexico.smetoolkit.org/mexico/es/
 content/es/3616/Contrataci%C3%B3nde-personal-
- Trimarchi, S. (Dirección). (2011). *OpenERP - Employees and Contract (Empleados y Contratos)* [Película]. Obtenido de
 https://www.youtube.com/watch?v=mv
 vinL3yEe4

UNIVERSIDAD TÉCNICA DEL NORTE - FICA VirtualSAMI Cia. Ltda. (19 de 02 de 2016).

VirtualSAMI. Obtenido de

VirtualSAMI: www.virtualsami.com.ec