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“SISTEMA DE GESTIÓN DE RECURSOS EMPRESARIALES - ERP

MÓDULO DE CONTABILIDAD GERENCIAL – UTN”

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Sistema de Gestión de Recursos Empresariales - ERP

Módulo de Contabilidad Gerencial – UTN

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Abstract.

This project has six chapters, they detail the implementation process of the degree work: "MANAGEMENT SYSTEM FOR CORPORATE RESOURCES – ERP, MANAGEMENT ACCOUNTING MODULE – UTN", where the RUP methodology was used for its development.

Chapter one describes the Background, the Posed Problem, Objectives, Purpose and extent, RUP development methodology, Development Oracle 11G Tools, Chapter two covers the Theoretical Framework, it was taken as support because this made the project feasible with topics such as: Accounting, Characteristics, Types, Important Concepts of General Accounting, Financial Account, Kinds of Accounts, Periods, Accounting Cycles, Account Books, Financial Statements and Subsidiary Books. In Chapter three, the development of the System in the Beginning Stage is established with the Vision Document and the Software Development Plan. Chapter IV explains the Elaboration stage, it has the Cases of Use and Specifications of the Cases of Use. Finally, Chapter five with the Construction and Transition Stages respectively, Chapter VI determines the Conclusions and Recommendations, with its respective glossary, Bibliography and Annexes.

Keywords: Management Accounting, Accounting Assistant, Oracle Tools, Web Application.

1. Introduction

Technology determines the level of services, development and prestige of an Academic Unit, this is why the Technical del Norte University by means of the Technological and Information Development Direction DDTI constantly promotes new technological progresses, new processes, education practices and management methods among others, these being the reasons to launch the proposition of a System for Corporate Resources ERP that includes the main processes of UTN University such as: Purchases, Fixed Assets, Inventory, Accounts payable, Liquid Assets, Accounting, with the management Accounting Module as a component of the ERP System. Due to problems given during the implementation of the ERP System, including the dropping out of several members of the project, some of the components were not completed or developed, I particularly was part of this group of students with the project in the beginning called Management Accounting Module that was in its development stage but due to personal problems it was not carried out.

Nevertheless, this year, based on the Fifth Transition Regulation of the Academic System, the project was resumed, although it was necessary to perform several changes in the problem and in the original range of the Graduation Work named MANAGEMENT ACCOUNTING MODULE, changes that are focused specifically on the Accounts payable and the Automatic

Generation of Accounting Assets of the Technical del Norte University since the prior range was mainly developed by a new thesis author with the project named “ Management Accounting analysis Module”

The Management Accounting Analysis Module does not include the accounting processes of the modules automatically belonging to the Management System of Corporate Resources – ERP as a manual register of the transactions is performed. Also, there is no administration of suppliers which is necessary for a good control of the repayments of the university.

2. OBJETIVES

GENERAL OBJECTIVE

To implement a high quality IT solution for the Technical del Norte University that automates the processes related to the Management Accounting, complying with the institutional lineaments in the administration of suppliers and repayments, generating decentralized results including a module that satisfies the requirements of the final users.

SPECIFIC OBJETIVES

- To determine the flow of the necessary activities to analyze its incorporation to the process with a joint analysis.
- To perform a study of the software and standard tools that will be used in the construction process of the Project.
- To perform the design of the Cases of Use, Logical View, Implementation view that will be the basis and structure to perform a high quality application that accomplishes the current requirements and those that might appear in the future.
- To perform the implementation of: data basis, forms, reports, integration to the Management System of Corporate Resources – ERP.
- To perform the necessary proofs for the processes and their results in order to guarantee an efficient and transactional system.
- To perform the training of the users on integration, administration, functionality, capacities and results of the application for the system to be integrated to the financial area without causing any negative effects on the Accounting processes.

3. RANGE

The following processes will be systematized:

Generation of automatic accounting vouchers from the necessary modules that make up the ERP, parameterization of suppliers, administration of accounts payable, register of repayments (invoicing of suppliers, debit notes, etc.), it will be capable to generate and group specific information in different areas such as: Cost Centers, Departments, Management, Teaching, Research, University links, Activities.

Accounting results will be processed and delivered to the users involved in the accounting process of the UTN as a supporting tool for the correct decision making and to make the necessary corrections at the appropriate time.

Approach to the current range of the management Accounting module and the ERP Modules:

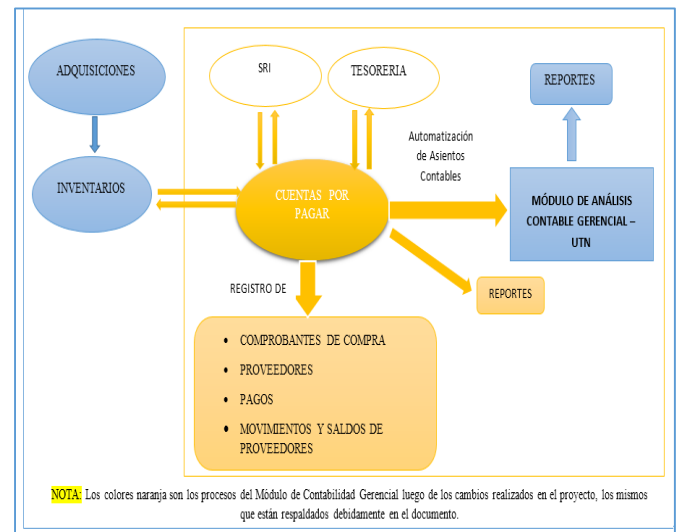


Figura 1: Procesos del Módulo de Contabilidad Gerencial (color amarillo y naranja).

Fuente: Propia

3.1 Range of the Solution

In the beginning, the range was focused on the manual and automatic register of the financial activities of the UTN with the corresponding reports and financial results.

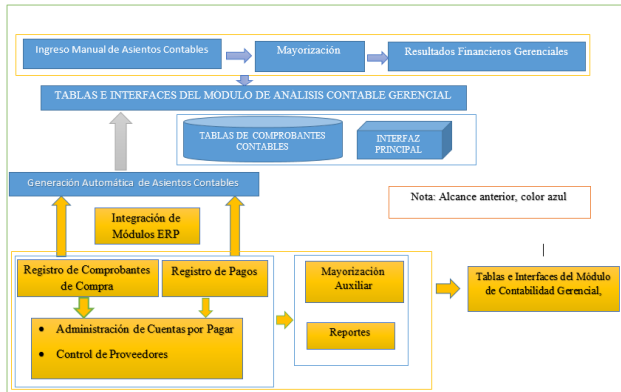


Figura 2: Alcance Anterior del Proyecto, (color azul).

Fuente: Propia

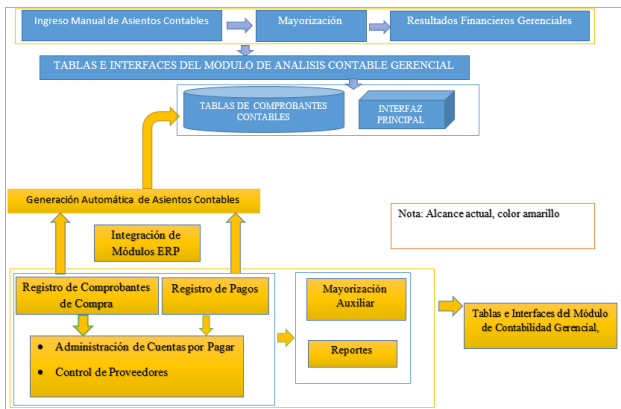


Figura 3: Alcance Actual del Proyecto (color amarillo).

Fuente Propia

4. Tools and Study Methodology

4.1 Development Tools

The Management Accounting Module has been developed with the Oracle 11g tools, such as Oracle Forms and Reports for the design of the interfaces and reports, Oracle Designer for the entity relationship design, the physical design, etc, Oracle DataBase for the data basis, JDeveloper with its tools UML for the design of Cases of Use and Oracle WebLogic Server.

“Oracle offers the most complete and integrated range of tools for the development of applications, development of data bases and business intelligence, compatible with any approach to development, technological platforms or operative systems” (Oracle, n.d.).

4.2 Development Methodology

The Project has been developed with the RUP methodology that has been used for the rest of the components of the System ERP – UTN that is made up of certain phases:

Beginning: It defines the range of the Project and determines what will be constructed.

Elaboration: an executable version of the application is constructed that permits to know how it will be constructed.

Development: It completes the architecture of the application with functionality where a beta version can be obtained.

Transition: The application is available of the final users.

The RUP methodology is used for the development of high quality applications, although it is often a little tedious due to the size of the documents each of its phases is made up of, but it is worth it as it helps the developer understand the background of the project in question and it encourages the team work related to each phase what permits to guarantee a high quality application.

5. Impact Analysis

The impact analysis permits to determine the benefits and the acceptance obtained by the proposition implemented in the Institution. To determine these

parameters, the financial, social, environmental and technological aspects were taken as a basis.

Impact	Benefit
Financial	Improvement of processes, to save time, fast and accurate information for a better decision making of the financial activities of the Institution.
Social	Increase the prestige of the Técnica del Norte University.
Technological	Improvement of the software, reuse of the processes.
Environmental	To save paper for printing.

Tabla 1: Análisis de Impactos Modulo de Contabilidad Gerencial.

Fuente Propia

It can be said that the solution presented to the proposition of the Project named Management System for Corporate Resources – ERP Management Accounting Module – UTN is satisfactory because it provides accurate results with friendly interfaces in all the processes such as the generation of results through the reports that can be obtained so that the users at the Accounting Department and the interested employees can make use of the information to make accurate decisions of the financial activities at the UTN.

An organized and systematic work process was achieved with the help of the RUP Methodology. Although the documentation and the process were tedious, it was worth it as the project could be understood in detail in each of its stages and a final high quality solution was achieved.

6. Conclusions

- The initial requirements were synthesized in the administration of the suppliers, Accounts Payable, and the Automation of the Accounting Vouchers with their corresponding reports integrating the modules Inventory, Liquid Assets and Banks, Purchases, Internal Revenue Service with the application called Management Accounting

Module aimed to those processes due to the posterior changes in the project. Also, to conclude that currently, the administration of the accounts payable is not viable at the moment as the Technical del Norte University does not sell anything and if it does, these are isolated activities, so no priority was given to this implementation. Taking into account these parameters, the established requirements were achieved during the development of the project and the quality of the system is guaranteed with the use of the RUP tools.

- The Management System of Corporate Resources _ERP Management Accounting Module – UTN was developed in the application scheme of the UTN, therefore its architecture is conserved, which is necessary for the interaction of the modules corresponding to ERP-UTN with the developed application, components of Data bases, processes, interfaces related to the existing ones were added and reused.
- The application was developed using the tools Oracle 11 g for the parameterization and administration of the processes and oracle Application Express to complement them and to make easier the access and the use of the application by the users.
- The subsidiary accounting is a very important complement of the Financial accounting for the organization of the information, to obtain punctual results and for the decision making in all the ambits what makes it in a very useful tool in the Management Administration of a financial entity, mainly if the accounting process is automatized with the help of the IT tools such as Omega 11 g.
- The knowledge and the interpretation of the accounting processes and the needs of the users were indispensable for the development of the Application so that the users will be satisfied.

7. Recommendations

- We recommend the performance of a follow-up of the existing modules to implement necessary new improvements and make the most of the advantages of the ERP-UTN system for being modular, integral, configurable, scalable, and reliable for the benefit of the **Technical** del Norte University.
- To maintain the use of the Oracle tools as they are powerful tools, appropriate for the development of applications for corporations as those needed by the UTN.



- To perform the necessary actions for the applications developed at the UTN to be used efficiently by the employees to fight the resistance against the changes that come up when using the new application.
- To maintain the facilities for the new students to carry out their Graduation Work in the Technical and IT Development Department (DDTI) obtaining the necessary advice and up-dated tools.

Sobre los Autores...

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