

ACTIONS TO IMPROVE ORGANIZATIONAL PROCESSES OF PANGEA BUSINESS
SOLUTION- BOGOTA IN THE LIGHT OF ISO 9001 OR BPR

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PROGRAMA DE LENGUAS MODERNAS

BOGOTÁ D.C 2016

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Thesis to qualify for the title of:

PROFESIONAL EN LENGUAS MODERNAS

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Abstract

Pangea Business Solution is an American company of technological solutions. The Project Manager of the branch in Bogotá has evidenced that, the organizational processes are presenting some failures are affecting the development of the projects for this reason, the present research proposes actions to improve the organizational processes of the company Pangea Business Solution-Bogotá in the light of ISO 9001 or BPR.

Key Words: Technological Solution, Organizational processes, ISO 9001, BPR.

Resumen

Pangea Business Solution es una compañía Americana de Soluciones Tecnológicas. La Gerente de Proyectos de la sede de Bogotá ha evidenciado que algunos procesos organizacionales están presentando falencias que afectan el desarrollo de los proyectos, por esta razón la presente investigación propone acciones para mejorar los procesos organizacionales de la compañía a la luz de las ISO 9001 ó BPR.

Palabras Claves: Soluciones Tecnológicas, Procesos Organizacionales, ISO 900, BPR.

1. Introduction

Pangea Business Solution is an American company of technological solutions. Pangea is recognized as a consulting company specialized in business software in the countries United States and Colombia. It has strategic allies as Microsoft. Pangea is the first supplier of SIESA Enterprise Integrations.

The Project Manager of the branch in Bogotá has evidenced that the organizational processes are presenting some failures and needs that are affecting processes of the company and the appropriate development of the projects.

For this reason, the present research proposes actions to improve the organizational processes of the company Pangea Business Solution-Bogotá in the light of ISO 9001 or Business Process Re-engineering.

The present analytical research has mixed approach and exposes the theoretical framework that is divided into two points of view: the ISO 9001 standard which is defined as the process of continuous improvement and the second point is Business Process Re-engineering which is defined as total redesign.

In the end, the result of this research is evidenced in the data analysis, the matrix SWOT and the conclusions through a chart that exposes the initial problems, the corrective actions to improve the failures found in the analysis according to ISO 9001 or BPR, exposes the tools of control, estimated time and the person responsible of each action proposed to improve the organizational processes of the company Pangea Business Solution.

2. Project Background

The following text presents some projects which are the guide of the project background of this research. It aims to know about the analysis of the organizational processes in different companies of technological solutions in the light of ISO 9001 standards or Business Process Re-engineering.

The first field antecedent is taken from the project carried out by Farias (2012) called "Guía práctica para el administrador de empresas para la evaluación y selección de soluciones tecnológicas para la gestión". It aims to recognize the process to implement an enterprise resource planning (ERP). The methodology of this research is based on the selection of a technology solution in order to provide the appropriate management in an organization through four phases: zero, initial, intermediate and final where each defines its inputs and outputs. As a result, they have found the suitable implementation of an accounting software. It supports the processes considered in the scope of each project and is compatible with the management system of Geofrut Company at the moment to make an integration (Farias, 2012). The contribution to my research is to guide the administrative part related to the organizational analysis focused on the technological solution offered by Pangea Group Company.

The second field precedent is taken from the project carried out by Illescas and Sanchez (2010), it exposes the "Diseño e implementación de mejora en los procesos

relacionados a la prestación de servicios en una empresa proveedora de soluciones tecnológicas". This research is focused on a method of analysis of each area involved in a service of technology solution. The key of this project is to find the critical points that affect the efficacy of technical and administrative activities in different departments to solve possible problems. The reengineering is used as the guide of this research and is defined as a radical redesign of business process to obtain a dramatic improvement in a company (Zigiaris, 2000). This precedent allows me to analyze the processes involved in the organizational structure from the point of view of the reengineering in the Pangea Group company.

The third antecedent is theoretical and is based on the thesis carried out by Lozano and Rincón (2009) called "Documentación Del Sistema de Gestión de la Calidad de acuerdo a los requisitos de la NTC ISO 9001:2000". In this research the needs of the organization are evident according to the documentation ISO standards. It aims to establish the structure of documents to guide the suitable actions from a perspective of quality. As a result, the manual of quality was created according to the needs of the organization based on the requirements of ISO 9001: 2000. The contribution to my research is the applicability and documentation of ISO 9001 standards as a focus for the analysis in the company Pangea Group.

The fourth and final precedent is taken from the project carried out by Ruiz (2006) entitled "La Factibilidad para la constitución de la empresa Consultorías Tecnológicas". It aims to know the possibility to implement a platform of technology in a consulting company with solutions in small and medium enterprises. The processes are focused on the role of each

person, activity, or decision into the company in order to optimize the resources and to improve the processes of the company. Reengineering is applied in this antecedent as redesign of previous systems with new technologies. Thus, this precedent shows the steps for an organizational analysis in the administrative processes of the company Pangea Group through reengineering.

The above project background is the guide to propose the actions to improve the organizational processes of the company Pangea Business Solution –Bogota in the light of ISO 9001 or business process re-engineering (BPR).

3. Context of the Company

Pangea Business Solution (business name) or Pangea Group (trade name) is an American company of technological solutions. Pangea is the Greek name that was given to the "Supercontinent" that was divided more than 200 million years ago to form the continents that we know today. This name was adopted based on the mission and goals of the company which focuses on providing integral solutions that allow the growth of companies.

Pangea is recognized as a consulting company specialized in software since 16 years ago in the countries United States and 7 years in Colombia. It has offices in Miami, Bogotá and Cali. It provides a personalized approach with a team of consultants and engineers. They are trained and certified in multiple disciplines as integration and development services. It has strategic allies as Microsoft. Pangea Group is the first supplier of SIESA Enterprise Integrations.

The products of the company are categorized in CRM, sales automation, integration of applications and vertical developments, which are offered to companies that can become potential customers such as the International Airport, IQ Electronics, Centro Colombo Americano, among others. Currently, Bogota branch of Pangea Group Company, it is located in Modelia neighborhood and is managed by the Country Manager and a team of 18 workers including engineers, consultants, team of business intelligence and the project team that is formed by the Country Manager, the Project Manager and the Administrative Assistant.

4. Description of the Problem

The problem evidenced for carry out the present research began with an initial process of observation in a subjective way when the Project Manager of the company Pangea Business Solution -Bogotá was evidencing some failures presented in the organizational processes of the company to meet the development of projects. This is evidenced by complaints from customers in emails and calls that expose the failures of each project and the times of delay to conclude each project which prevents that continue the billing processes of the company. Because of this subjective observation, the team of projects performed an initial committee to propose a way to show these observations in a more objective way and to know whether these observations would become or not a problem for the company.

Thus, it is decided that the Project Manager would make an initial observation which would be conducted in an informal way through some personal notes evidencing weaknesses in organizational processes, this informal monitoring lasted three months. After a time of three months with repeated problems, is decided to formalize a research to propose corrective actions to improve organizational processes of the company Pangea.

To support the initial observation and the personal notes is decided to perform a brief initial interview by the Country Manager who knows the totally structure and the organizational processes of the company. He confirms the previous information of the initial observation and he exposes that currently are presenting some failures and needs such as the

absence of some areas in the company, the incomplete management of different organizational processes, the insufficiently knowledge of the responsibilities of different positions and the disorder of the projects. This is affecting the organizational processes of the company and the appropriate development of the projects.

As a consequence of this, the present research is proposing the actions to improve the organizational processes of the company Pangea in Bogotá in the light of ISO 9001 (continuous improvement of processes) or Business Process Re-engineering. (Totally redesign of processes).

4.1. Research Question

What actions could be proposed to improve the organizational processes of the company Pangea Business Solution-Bogotá in the light of ISO 9001 or Business Process Re-engineering?

5. Justification

The Project Manager has evidenced according to the description of problem mentioned the flaws are affecting the organizational process of the company Pangea Business Solution. For this reason, the present research wants to propose the actions to improve the organizational processes in the light of ISO 9001 or a Business Process Re-engineering.

This company has been chosen because is a foreign company. Pangea Business Solution is evidencing the use of a second language and, the present research allows to apply the administrative and business approach of the study Modern Languages at the ECCI University.

The author of this thesis, who has a management position in the project department of the company performs this research with a high veracity and in a future time has a second phase of applicability of the results obtained for the benefit of the company.

6. Goals and Delimitation

6.1. General Goal

To propose actions to improve the organizational processes of the company Pangea Business Solution- Bogotá in the light of ISO 9001 or Business Process Re-engineering.

6.2. Specific Goals

- To diagnose the current state of the organizational processes of the Company Pangea through an initial process of observation and a brief interview.
- To identify the strengths, weaknesses, opportunities and threats of the company Pangea Business Solution supporting the current problems of the company.
- To outline the corrective actions according to ISO 9001 or BPR.

6.3. Delimitation of Research

The scope of the project consist on proposing actions to improve the organizational processes of the company Pangea Business Solution-Bogotá in the light of ISO 9001 or Business Process Re-engineering. The first step is to diagnose the current state of the organizational processes of the company, the second step is identify the strengths, weaknesses, opportunities and threats in order to obtain the actions to improve the organizational processes of the company Pangea and the third step is to outline the corrective actions according to ISO 9001 OR BPR.

7. Theoretical Framework

7.1 ISO 9001 Standards

7.1.1 Quality Management System.

A Quality Management System is a tool that allows a company to plan, execute and control the different objectives in order to supply a service with a high standard of quality expecting the customer satisfaction and the continuous improvement of the processes of the company (British Standard, 2013).

Another definition is exposed by the Araba British Academy for higher education (2000) that says: “A quality management system is a management technique used to communicate to employees what is required to produce the desired quality of products and services and to influence employee actions to complete tasks according to the quality specifications” (p.265).

The purpose of a system of quality focuses on establishing a general vision in the organization with standards defined for the different teams of work that promote activities for the employees.

7.1.2 Quality Management Principles.

In a quality Management System there are eight principles that represent the standards of the ISO 9000. The function of these principles is establishing a framework as a guide towards continuous improvement.

The ISO Organization (2015) defines these principles as: “A set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management” (p.01).

The eight quality management principles are defined in ISO 9000:2005 and in ISO 9000:2004. These are based on carrying out a good practice in the implementation of the different ISO standards, these principles are:

- **Customer Focus:** All organizations or companies depend on their customers, therefore, the future and the growth of the company is focused on the satisfaction of the need of customers, so the objective is exceeding their expectations. The principal benefits are based on the revenue increase, market opportunities, and effectiveness in the use of resources to build a good environment with the customer and repeating the business (ISO, 2012). This principle allows us to understand the needs of the customers ensuring their expectations, to facilitate a good communication and the total satisfaction of the client and the service supplied.

- **Leadership:** “Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved achieving the objectives of the organization” (ISO, 2012, p.04). The principal benefits of this principle are focused on the experience towards goals of the company and the unification of activities to reach a high level of teams of work. The ISO (2012) exposes that a successful leadership considers the needs of all interested parties to establish a clear vision in the company, proposes different challenges and to create shared values based on an ethical model. Moreover, promotes the necessary resources and adequate training for their employees and it allows the freedom in their task to act with responsibility recognizing the contribution of the workers.

- **Involvement of people:** In all organizations there are people with different abilities, each person has a different way of thinking and this generating an atmosphere of great ideas for the development of new goals that can be achieved on the whole for the benefit of the company. The key benefits of this principle according to ISO (2012) is the commitment within the organization, the innovation and creativity to reach the aims of the organization, the autonomous work and the good attitude. “People should understand the importance of their contribution and role in the organization and they should accept their problems and their responsibility to solve the failures and to find opportunities to enhance knowledge and experiences” (ISO, 2012, p.05).

- **Process approach:** “A desired result is achieved more efficiently when activities and related resources are managed as a process” (ISO, 2012, p. 06). The principal benefits

according to a process approach are based on a lower cost and shorter times, predictable results and to establish appropriate responsibilities in each position of the organization. The application of this principle allows to define activities necessary for the organizational processes, analyze responsibilities focused on factors as resources and methods to contribute with the continuous improvement of different risk (ISO, 2012).

- **System approach to management:** All processes consolidated in a system to management are the main principle to build a successful organization, but this is possible when these processes achieve a high level of effectiveness and efficiency. The main benefits of this principle according to ISO (2012) are the integration and alignment of the processes to reach the desired results and to promote the interests of both parties. The application of this principle allows to structure a system and to understand the integration of the processes that supplies responsibilities to reduce functional barriers. (ISO, 2012).

- **Continual Improvement:** “Continual improvement of the organization should be a permanent objective of the organization” (ISO, 2012, p.08). This principle is focused on benefits as the organizational improvement, the strategies to enhance the different activities of the company and the flexibility to get new opportunities.

- **Approach to decision making:** “Effective decisions are based on the analysis of data and information” (ISO, 2012, p.09). The main benefit of this principle is the effectiveness of a last decision to apply the same decision in the present or in a future and to propose new challenges with the adequate approach for the company.

- **Mutually beneficial supplier relationships:** A relationship between an organization and a supplier is of mutually profit, therefore is necessary to build a good interdependence in order to handle an appropriate environment of work. According to ISO (2012) the key benefits are to create value for both parties, the optimization of cost of resources, to establish relationships of profit in a short term, to have an open communication, to share information and to propose activities of improvement.

7.1.3 ISO 9000 and 9001 Standards.

ISO (International Organization for Standardization) is the Organization in charge of establishing the standardization of specifications, guidelines of products and the security for the companies in worldwide, the ISO defines that: “The standards provide guidance and tools for companies and organizations that want to ensure their products and services consistently, meet requirements of customers and getting quality consistently improved.” (p.01).

The ISO 9000 standard supplied the vocabulary used in the different ISO standards and it is focuses on the eight elements of quality management principles to achieve a continuous improvement process. This is formed by: ISO 9001:2015 in charge of establishing the requirements of a quality management system, ISO 9000:2015 in charge of handling the basic concepts and the language, ISO 9004:2009 focuses on how to make a quality management system more efficient and effective and ISO 19011:2011 focuses on guidance on internal and external audits of quality management systems.

The ISO 9001 standard is used to establish a quality management system that allows the certification of a company by an external professional in this area. This standard specific of ISO 9001 is the documentation for the process of the implementation through a management quality system, management responsibility, resource management, measurement, analysis and improvement (ISO, 2009).

And the British Standard Institution (2015) claims that: “An ISO 9001 quality management system will help you to continually monitor and manage quality across all operations. As the world most widely recognized quality management standard outlines ways to achieve, as well as benchmark, consistent performance and service” (p.01).

The principal idea of the ISO 9001 is supply the best practice for an effective Quality Management System that allows a good way to organize people, resources and processes in order to reach the organizational goals and maximizing the internal processes of the company.

7.1.4 Scope of ISO 9001 Standards.

The ISO 9001 recognized that the adoption of a quality management system is a strategic decision with a high level of responsibility involving some aspects as: environment of changes, particular objectives, analysis of products and services offered and review of size and organizational structure, therefore it is necessary perform an adequate diagnosis in the implementation of quality system according the needs of the company.

About The British Standard Institution (2013) the scope of the ISO 9001 standards focus on specific requirements in an organization that needs a certification to show the level of quality to provide a product or service in order to achieve customer satisfaction including processes for the continuous improvement through an appropriate tool.

In addition is important to have account that all organization or company that have acquire a Quality Management System shall determine the processes necessary to applied this system, to establish a good method ensuring the control of the operation of the organization, to dispose with the resources and information necessary that allows the monitoring, measuring and analysis of the application implemented and to create strategies for the continuous improvement in each process.

7.2 Business Process Re-Engineering (BPR)

7.2.1 Business Process Re-Engineering.

The globalization is a process that generated different changes on the trade markets proposing new conditions for a competition in the business environment. This competition is seeking to increase the quality of the service and, to satisfy the needs of the customers, nevertheless the organizations are analyzing the internal processes to improve or to redesign through a Business Process Re-engineering.

According to Hammer and Champy (cited by Zigiariis 2000) clarify that:

“Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed” (p.02).

The process of reengineering aims at change in the technological, human and organizational structure to supply an effective delivery for the customer and to achieve their expectations, Zigiariis (2000) clarifies: “All these changes impose the need for organizational transformation, where all processes, organization climate and organization structure are changed” (p.02).

On the other hand it is important to say that a process is a structure that allows measure an activities designed to produce inputs and outputs according to requirements of each customer. The business process are characterized by three elements: 1.The inputs are all information and requests exposed for the customer to implement a new system. 2. The processing of data or information are processes defined in different stages with priority order, to establish an amount of time and money consumed. 3. The outcomes are the delivery of the expected result (Zigiariis, 2000).

To conclude this definition Zigiariis (2000) exposed that: “Business Process Re-engineering mainly intervenes in the processing part, which is reengineered in order to become less time and money consuming” (p.02).

7.2.2 Goals of the Business Process Re-Engineering.

The application of a Business Process Re-Engineering according to Zigiari (2000) focuses on:

- **Customer Focus:** All processes implemented in an organization should focus on the customer, for this reason is necessary to eliminate all complaints of the clients and to offer the best service to satisfy their needs.

- **Speed:** It is a principal element in the Re-engineering process considering that the time in the delivery of the result is not the promised at the moment to begin a project, however to save time is key in the implementation of this tool.

- **Compression:** Is necessary to organize the principal process of the company and secondary tasks or processes could be eliminated to reduce cost. The compression focuses on the priority and order of the processes of the company.

- **Flexibility:** To propose a new environment in the implementation of this tool to establish new conditions and competition in the different processes and structures in the organization.

- **Quality:** The quality is a main element to reach the expectations of the customers and to create strategies that allows a superior service. To carry out a quality process is

necessary performed a monitoring the process to improve any service offered by the company.

- **Innovation:** The competitive advantages are obtained having a high level of creativity and imagination through a good leadership and team of work.
- **Productivity:** Excellent productivity should be the result of the complete implementation of the Re-engineering process.

7.2.3 Methodology of Business Process Re-Engineering.

The Business Process Re-Engineering is a technique of redesign and restructuring to supply a total change in a short period of time. This is possible when in an organization there is coordination to implement this tool.

According to Zigiari (2000) to have a positive and adequate methodology is necessary: “Selection of the strategy, simplify new processes, organize a team of employees, to order the workflows, assign responsibilities and roles, automating processes using IT, train the team of process and introduce the redesigned process” (p.09).

The key to achieve a successful BPR is to apply the appropriate methodology that allows the creation an effective vision through a good team of work, clear goals and a guide of principles.

The adequate methodology about Zigiari (2000) is divided in the stages following:

- **The Imagine stage:** To identify different opportunities through a previous strategy to review the processes.

- **The Initiation stage:** Is assigned a corresponding team who defines goals, scope and requirements of the implementation re-engineering project.

- **The Diagnosis Stage:** To establish an adequate diagnosis using the different documentation of processes and sub-processes of the organization.

- **The Redesign Stage:** To design new processes through brainstorming and creativity techniques.

- **The Reconstruction Stage:** To Migrate the new technical processes and to modify the roles of human resources.

- **The Evaluation Stage:** To analyze and to examine total quality of programs implemented.

7.2.4 Phases of a Business Process Re-engineering.

To carry out a successful of Re-engineering is important to know the phases of this business process to obtain effective strategy with a positives results applied in an organization.

The phases according to Zigiariis (2000) are:

- **Phase Zero:** is the preparation and coordination of the project and it lasts two days approximately and its objective is to stablish a strong management system and to explain the implementation of Business Process Re-engineering.
- **Phase One:** is the business diagnosis and its measurements, it has a duration of four weeks approximately and its aims are to identify problems in different areas and to measure the process of the company in a determined cycle of time.
- **Phase Two:** is the selection of the process to modify the structure, it lasts seven weeks approximately and its aim is to redesign the processes that is feasible to change.
- **Phase Three:** is the technical design of the solution, it has a duration of ten weeks approximately, and it is proposed to automate the business process using workflows tools.

- **Phase Four:** is the personnel adjustment and training, it lasts ten weeks approximately and its objectives are to train personnel using IT and re-design different processes.
- **Phase Five:** is the management and employee empowerment, it has a duration of a week and its main idea is to establish positive attitude between teams of work.
- **Phase Six:** is the introduction of new processes into business operation, it lasts a day approximately and it proposed to reach the new operation on new processes.
- **Phase Seven:** is the totally improvement, is has a continuous duration after the end of the project and its main aim is to order the process of re-engineering.

8. Methodological Framework

The main objective of this methodological framework is gradually to explain the steps and to show the evidence most relevant in this project through, type and approach of research, methodological scope, data collection instrument, the representative sample, the analysis of the information, the SWOT matrix and the chart of actions to improve the organizational processes of Pangea Group. These issues allow the support and development of this project.

8.1 Methodological Approach.

The approach includes the design of the instrument that will be applied. There are three approaches according to the Social Sciences: Quantitative, Qualitative, which together form a third approach: The Mixed approach (Cauas, 2000). In the present research it applies the mixed approach that is supported in the process of initial observation, description of personal notes, a brief interview and the data analysis.

The Qualitative approach uses the data collection without numerical measurement to discover research questions and data analysis inductively; according to Creswell (2014):

This is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis, inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure. Those who engage in this

form of inquiry support a way of looking at research that honor an inductive style, a focus on individual meaning and the importance of rendering the complexity of a situation. (p.04)

According to Gomez (2006) the Quantitative approach is the data collection as equivalent to measuring. The classical definition of them, measuring means assigning number to objects and events according to certain rules.

The two approaches mentioned above are chosen because covers the needs and impacts allowing to seek and to analyze the information in this project of inductive way to take decisions based on the object of study.

8.2 Research Type.

This project is supported on analytical research. This type of research has been chosen to establish through an analysis of the observation and examination of a particular fact and to know the "Why" and "How" of a specific situation or problem, as the decomposition of a whole based on a relationship cause-effect, to find appropriate recommendations to improve or change it.

According to Barrera (2000): “analytical research is the analysis of definitions related to a topic, to study its elements in a comprehensive way and be able to understand it” (p.01).

Analytical research includes the following aspects: Synthesis and Analysis. The first aspect is to bring many things that form a coherent whole. Is reconstructing, reintegrating all parts of a broader way than had at the beginning and the second aspect is decompose a whole into its parts and to discover new meanings according to the new organization.

In this project the analytical research is reflected as a general initial observation as a whole and through personal notes thus, the information collected for discovering new results is broken down to contribute in this project.

8.3 Data Collection Instrument.

The instruments to carry out the data collection in this research are the survey and the interview. According to Scheuren (1980) “The word “survey” is used most often to describe a method of gathering information from a sample of individuals. The intent of the survey is not to describe the particular individuals who, by chance, are part of the sample but to obtain a composite profile of the population” (p.09).

It is estimated that this method is effective because it allows to obtain complete information, through of the survey the researcher can explain the purpose of the study and specific the information needed, if there is a misinterpretation of the question, the survey allows clarify us, ensuring a better response.

The survey used in this research consist of twelve questions. Three questions are related to personal information, the following six questions are related to information regarding the position and assignments and the last three questions are focused to the perception in the work environment.

For other hand, according to Acevedo (2013) the interview is a technique that seeks to satisfy different requirements of personal interaction. The term "interview" comes from the French "entrevoir" which means "seeing each other". It is an oral form of interpersonal communication, which aims to obtain information in relation to an object.

8.4 Piloting of the survey.

The data collection instrument that was chosen to carry out this research is the survey and to have greater accuracy in its applicability, is decided to perform the test of the survey before its implementation by the workers chosen as sample. The aim of the test is to determine whether the proposed questions are well formulated and consistent to get the desired result.

To perform the piloting of the survey is presented the survey to Country Manager of the company since he is a person with high knowledge and experience in organizational and functional management of the company. The country manager of the company Pangea reads the survey that initially was formed by 10 questions, these questions seemed to him very

appropriate and consistent with the research conducted however, he suggested additional questions in order to know about using a tool at the company and to know the use of it according to each worker.

In this way, the pilotage of the survey is concluded now with 12 questions to be applied at the selected sample.

8.5 Population and Sample.

The people chosen to carry out data collection, supporting evidences and helping the development of this research is the staff of the different departments of the company Pangea Business Solution – Bogotá, a sample was selected to apply the survey of this population.

The sample is a group of people selected from a population as study object to contribute in the survey of the research. The parameters of selection focused on choose two or three person of each team of work of a different department. “The sample size required for a survey partly depends on the statistical quality needed for survey findings; this, in turn, relates to how the results will be used” (Scheuren, 1980, p.10).

To conduct this survey is decided to choose a representative sample of the population of the company Pangea Business Solution because it is the object of directly involved study and it allows direct contact with a sample of ten workers to obtain a result with high accuracy.

This sample is composed by ten members of the company Pangea, which eight are engineers between 18 and 25, a woman of the administrative team and the Country Manager of the company. Of those surveyed, 4 are women and 6 are men. Seven respondents belong to the engineering department, 1 respondent belongs to the business intelligence department, 1 respondent belongs to the department of projects and 1 respondent belongs to administrative department.

8.6 Data Analysis.

The data analysis is taken as "the process through which it goes beyond the data to access the essence of the study phenomenon and their understanding and comprehension" (González, 2010, p.01). In order to propose the actions to improve the organizational processes of the company Pangea Business Solution- Bogotá in the light of ISO 9001 or Business Process Re-engineering.

This process of data analysis is divided four parts to evidence the process performed and understanding the development of the research, step by step: The first part is the initial diagnosis that exposed a general observation through personal notes and the brief initial interview, the second part is the analysis of results obtained of each question of the survey, the third part is the SWOT Matrix and the fourth part is a chart of actions to improve the organizational processes of the Company Pangea in the light of ISO 9001 and BPR.

8.6.1 Initial Diagnosis – General Observation.

According to the initial diagnosis is concluded that:

The initial process of observation began some months ago in a subjective way when the Project Manager of the company Pangea was evidencing some failures presented in the organizational processes of the company to meet the development of projects. This is evidenced by complaints from customers in emails and calls that exposes the failures of the each project and the times of delay to conclude each project. Because of this subjective observation, the team of projects performed an initial committee to propose a way to show these observations in a more objective way and to know whether these observations would become or not a problem for the company.

Thus, it is decided that the Project Manager would make an initial observation which would be conducted in an informal way through some personal notes or a journal with notes evidencing weaknesses in organizational processes, this informal monitoring lasted three months: May, June and July-2015. After a time of three months with repeated problems, is decided to formalize a research to propose corrective actions to improve organizational processes of the company Pangea. The formal research started on August of 2016.

The journal has textually the following personal notes by The Project Manager of the company Pangea Business Solution – Bogotá:

Personal Notes – Pangea Group

“Viernes 8 de Mayo 2015: Está es la primera semana de registro de notas personales, se puede observar que la mayoría de los trabajadores del área de integraciones y desarrollo no cumplen con el horario laboral establecido en la compañía. (Entrada, Salida, Almuerzo).

Viernes 15 de Mayo 2015: En la segunda semana se observa el descontento de los clientes debido al incumplimiento en las respectivas entregas de los proyectos.

Viernes 22 de Mayo 2015: En la tercera semana el proceso de observación refleja desorganización en la distribución de proyectos en las diferentes áreas. El registro anteriormente observado aún persiste.

Viernes 29 de Mayo 2015: En la cuarta y última semana del mes de Mayo, se observa que las notas anteriormente mencionadas siguen siendo reales y se refuerza el atraso en el desarrollo de los proyecto. Se evidencian quejas de los clientes vía mail y telefónicamente.

Viernes 5 de Junio 2015: En la primera semana del segundo mes, se puede observar que los ingenieros de diferentes áreas desconocen algunos temas importantes para la realización de proyectos. Las notas personales anteriormente observadas aún persisten.

Viernes 12 de Junio 2015: El incumplimiento de algunas políticas empresariales tales como la puntualidad, las normas de cortesía y el orden y aseo en la oficina persisten por parte del departamento de ingenieros. Las notas personales anteriormente observadas aún persisten.

Viernes 19 de Junio 2015: Se observa la ausencia de algunos departamentos de la compañía, lo que significa que algunas funciones se realizan en un mismo departamento por una misma persona, caso puntual para el departamento administrativo y financiero el cual es uno solo, lo que genera un alto volumen de trabajo en una persona.

Viernes 26 de Junio 2015: Los empleados se quejan de la ausencia de capacitación y acompañamiento por parte de un ingeniero senior para resolver problemas técnicos que se presentan en los proyectos. Las notas personales anteriormente observadas aún persisten.

Viernes 10 de Julio 2015: Se observa que por medios de comunicación como correo electrónico y vía telefónica los clientes se continúan quejando del retroceso de los proyectos, del cambio constante de recursos asignados a un proyectos y del desconocimiento de algunos

temas frente al mismo por parte de los ingeniero encargados. Las notas personales anteriormente observadas aún persisten.

Viernes 17 de Julio 2015: Se observa que algunas herramientas implementadas para el seguimiento y registro de proyectos como el CRM no son utilizadas por los empleados. Las notas personales anteriormente observadas aún persisten.

Viernes 17 de Julio 2015: Se observa que en la compañía se presenta un cambio constante de trabajadores en los diferentes departamentos de la misma. Las notas personales anteriormente observadas aún persisten.

Viernes 31 de Julio 2015: Se han completado tres meses exactos de un proceso de observación donde cada nota personal refleja la continuidad de algunos inconvenientes presentados. Las anteriores falencias observadas en la empresa Pangea, actualmente persisten.” Project Manager Pangea Group.

The personal notes mentioned above are supported by the observation process and by the following status of complaints estimated that are reflected in emails and calls from customers in a period from May to July 2015: Emails 20 approx. / Calls: 30 approx.

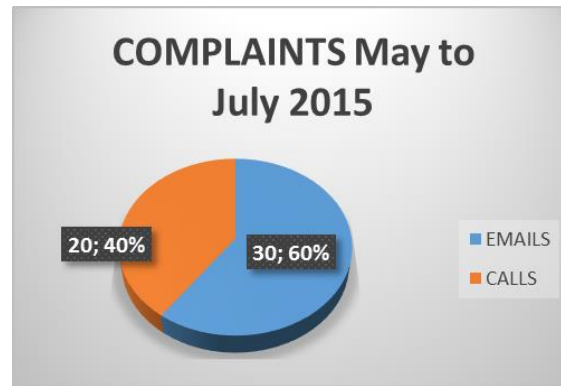


Figure 1. Complaints

To support the previous journal and to determine whether these observations are correct, the country manager performed a brief initial interview to researcher. The transcription of this initial interview says the following:

“Hola, buenos días, Mi nombre es Alberto Bustos soy el Gerente de País para Pangea Business Solution, nosotros somos una compañía dedicada al desarrollo de software y la implementación de soluciones Microsoft en Estados Unidos y en Colombia.

Actualmente Pangea cuenta con un Gerente de Proyecto, una asistente administrativa, el director país que soy yo, cuenta con diferentes áreas como área de desarrollo, área de integraciones y área de pedidos Online que es uno de los productos que tenemos actualmente en la compañía, tenemos 18 empleados. Dentro de esos 18 empleados lo que hemos notado en los últimos meses y en los últimos proyectos que se han venido manejando es que tenemos un incumplimiento constante y reiterativo frente a los clientes porque los ingenieros no están entregando a tiempo sus actividades, no están planeando sus actividades dentro de nuestra herramienta CRM que tenemos para la gestión de proyectos, tenemos algún equipo con falta de experiencia o demasiada juventud que no refleja el compromiso de lo que la empresa quiere reflejar ante los clientes. A parte de esos tenemos incumplimientos, llegadas tardes, falencias pues típicas de una empresa en crecimiento.”

As consequence of this initial diagnosis that reflects a process of observation by the Project Manager of the branch in Bogotá, is decided to perform a formal research in order to propose actions to improve the organizational processes of the company Pangea Business Solution in the light of ISO 9001 or Business Process Re-engineering.

8.6.2 Survey Results.

According to survey is concluded that:

The company Pangea has enough young staff in the team of works and this corresponding to staff that recently started to acquire experience. The male staff prevail in the company. The staff available to the company are people who are performing their studies and therefore they are obtaining work experience at the same time with their studies. The majority of respondents are working in the company belongs to the Engineering Department.

The total of workers are carrying out the activities according to each charge in office. Each person is responsible for a high volume of projects and responsibilities in the job. The various tasks and projects are worked in teams according to each department. For many workers of Pangea Company it is their first job. The majority of the workers don't agree with their salary accrued.

The strengths in the workplace are the responsibility of the team to carry out the projects and the comradeship that is reflected in the teams of work. The most shortcomings of the company are the bad distribution and the disorder of the projects. The use of CRM tool allows publicize activities and to keep the track of customers and their activities, addition manage projects. For each worker can to better their work is necessary more organization, money and assistance in the technical part.

The results of the survey obtained of each question provides important and necessary information for the development of research, the survey that was carried out consists of twelve questions. Three questions are related to personal information, the following six questions are related to information regarding the charge and assignments and the last three questions are focused to the perception in the work environment.

The first question corresponds to the range of ages of the sample selected for the implementation of the survey, it obtained as a result:

The 10 respondents 9 are between ranges of 18-25 years, one person is in the range of age 25 to 33 years and nobody is in the range of age 34-40 years. With this it can infer that the company Pangea has enough young staff in the teams of work and is deduced that the range of ages that corresponding of this staff are people that recently started to acquire experience.

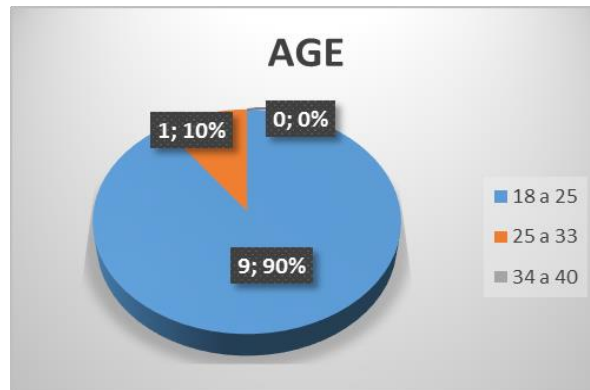


Figure 2. Age

The second question corresponds to the genre of the sample selected for the implementation of the survey, it obtained as a result: 4 people are women and 6 people are men, of this information is deduced that male staff prevail in the company.

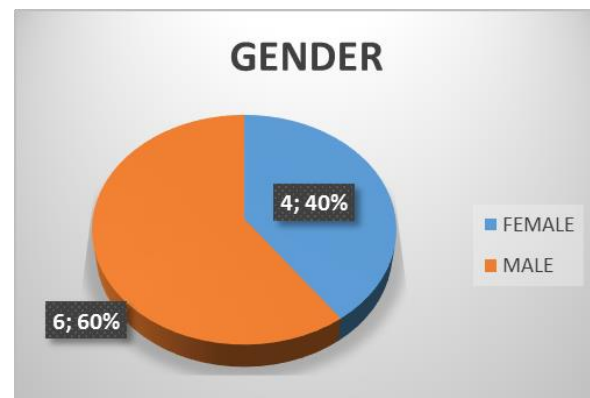


Figure 3. Gender

The third question corresponds to the level of study of each of the respondents selected for the implementation of the survey, it obtained as a result: 3 people have a level of study corresponding a technician or technologist, 6 people responded the option B that mean that currently, they are studying a study professional and an person selected the option C that corresponds to Professional graduated. According to previous information it can infer that the

most of staff of the company are people who are performing their studies currently. They are obtaining work experience at the same time with their studies.

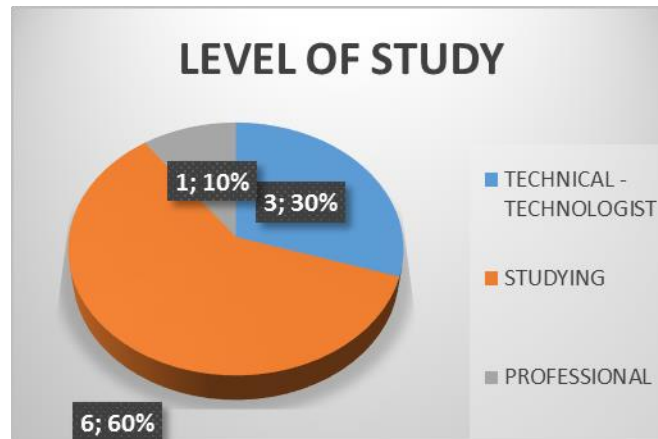


Figure 4. Level of Study

The fourth question corresponds to the department of the company to belongs each respondent selected for the implementation of the survey, it obtained as a result: Seven respondents belong to the Engineering Department, a person belongs to the Department of Projects, a person belongs to the Department of Business Intelligence and a person selected the option D that exposed the option "other" - Which?, and this person said: Administrative Department. According to previous information it can deduce that the majority of respondents are working in the company Pangea belongs to the Engineering Department, enhancing the activity of the company that is technological solutions supported by Engineers.

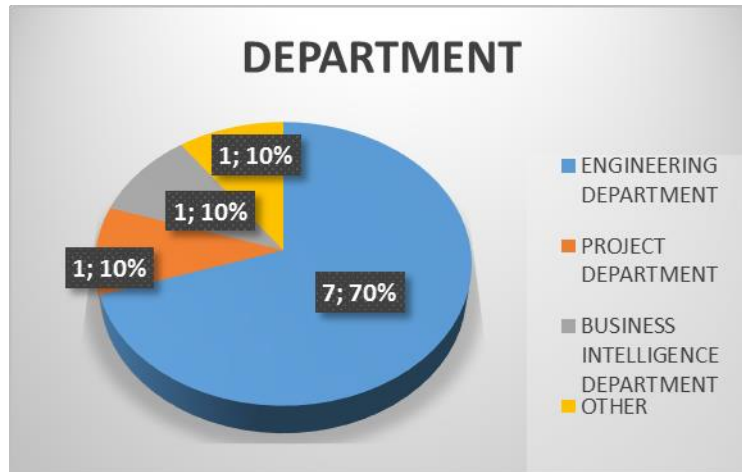


Figure 5. Department

The fifth question is to know if the staff are performing the duties corresponding of each charge, it obtained as a result that the total sample selected are carrying out the activities according to each charge in the office, because the total response selected was the option A that affirms the question proposed.

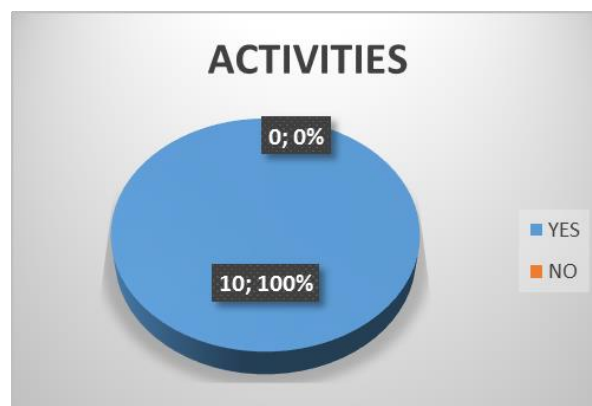


Figure 6. Activities

The sixth question corresponds to the amount of projects assigned currently of each worker of the sample, is obtained as a result: a person selected the option that corresponding to 1 or 2 projects, two people answered the b option that corresponding to 3 or 4 projects, seven people who represent the majority of the sample selecting the option C that corresponding to 5 or more projects. According of this information each person is responsible for a high volume of projects and responsibilities in the job.

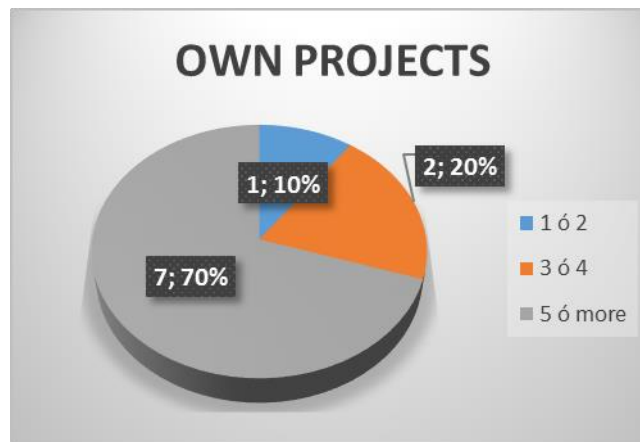


Figure 7. Own Projects

The seventh question corresponds to how many people work in the same team, it obtained as a result that nine people work with 2 or 3 people more and a person selected the option that corresponds a to work alone. According to this information various tasks and projects are working in teams according to each department.

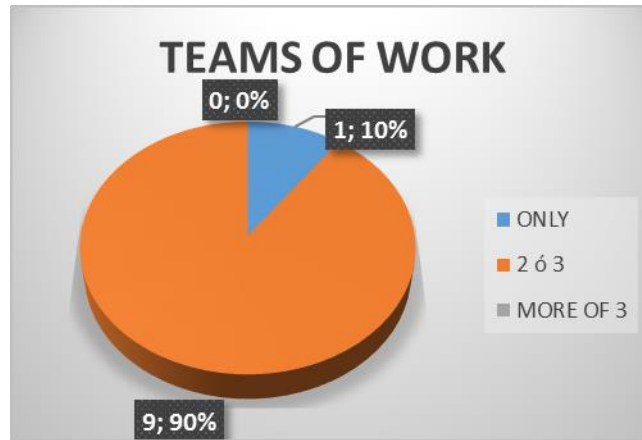


Figure 8. Teams of Work

The eighth question corresponds to the work experience in the currently charge of each respondent, it obtained as a result: 5 people have one year of experience, 4 people have less than one year of experience and a person has a year of experience or more. From the above information it can be inferred that for many workers of Pangea Company it is their first job.



Figure 9. Experience

The ninth question corresponds to salary accrued currently, it obtained as a result: 4 people are agree with their salary and 6 people that representing most of the sample doesn't agree with your earned salary.

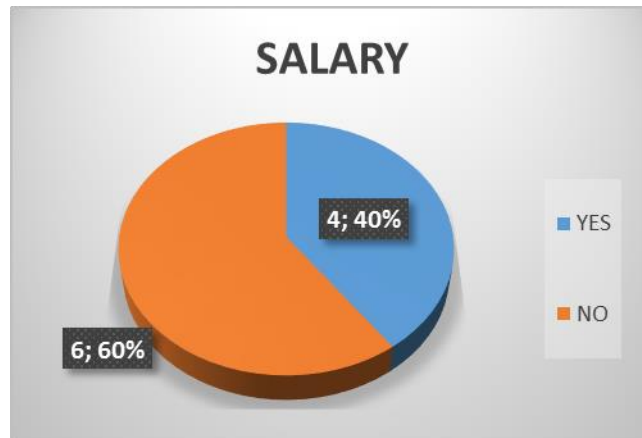


Figure 10. Salary

The tenth question in the survey is an open type question which seeks to know the perception of respondents in relationship with the weaknesses and strengths of the company, it obtained as a result that:

The most of sample surveyed are agreed that the strengths in the workplace are the responsibility of the team to carry out the projects. The next strength is the comradeship that is reflected in the work teams, another is the enthusiasm and the desire to learn from the workers because they are engineers in training and they want to go beyond the simple. Other strengths are cooperate record, the leadership and the communication.

On the other hand, the weaknesses of the company according to respondents are: the most shortcoming is the bad distribution of projects, this reflects a high workload for each team that leads to the bad distribution of time, the second weakness is the disorder of the projects and the third weakness is the absence of support and training because to the inexperience of the workers for this reason, is necessary a senior engineer to provide training and support to solve various technical problems.

The eleventh question corresponds to determine whether the CRM (customer relationship management) tool, which is used in the control and management of clients and of the projects helping to workers in their organization, is or no an effective tool, as a result: six people selected the option A, that is an affirmative answer and they said that it allows publicize their activities and to keep the track of customers and their activities, addition manage projects. On the other side 4 respondents said that they do not find it useful and it does not provide the necessary tools to optimize the work.

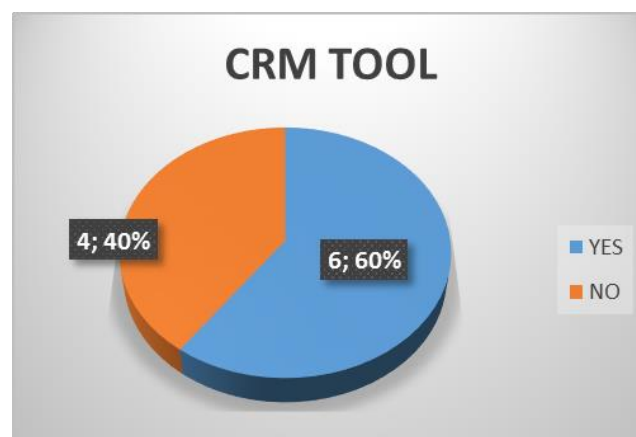


Figure 11. CRM Tool

The twelfth question in the survey is an open type question and seeks to know that is necessary to each worker can to better their work, it obtained as a result: organization and money, more control, a person who understands the business, a skilled, better distribution of projects and time, assistance in the technical part and customer management, incentives and a solid team and motivation.

8.6.3 SWOT Matrix.

Table 1. SWOT Matrix

	STRENGTHS	WEAKNESSES
<p style="text-align: center;">SWOT MATRIX</p> <p style="text-align: center;">PANGEA BUSINESS SOLUTION - BOGOTA COMPANY</p>	<p>S1.The company makes software implementation with personalized developments.</p> <p>S2.The company has allies like SIESA Enterprise and Microsoft Dynamics.</p> <p>S3.The company has the exclusive and own products to provide the service of a solution technological.</p>	<p>W1. The company hires young people to give new opportunities to students however, they don't have enough experience to support a project.</p> <p>W2. The workers have a large volume of projects and this complicates the development and the delivery time of each.</p> <p>W3. The company changes staff constantly and this produces a retrogression in the realization Of the projects and originates upset by customers.</p>

OPPORTUNITIES	STRATEGY SO	STRATEGY WO
O1.The company has American partners, this allows the possibility of expanding a product or service abroad.	S1-O1. To implement the development of a Personalized software according to the needs that is evidenced in the potential customers abroad.	W1-O3. To reduce the inexperience of young workers, is suggested to make training with relation to products and processes to internal and external staff to the company.
O2. The company works with customers potentially large and recognized, as the different Airports, this allows to know new success stories to other companies the same level.	S2-O3. To train the allies of the company to commercialization of new products offering great profit to both sides.	W2-O2. To organize the projects for each team equally and which are pertinent to the activities to optimize the time and to meet the all deliveries to customers.
O3. The company implemented new products and trains allies for the commercialization of these product.	S3.-O2. To offer exclusive products to potential customers presenting cases of previous success.	W3-O1. To consider the possibility of hire foreign workers to work in the Colombia branch.
THREATS	STRATEGY ST	STRATEGY WT
T1.The new product development causes a high instability in the revenue of the company while achieves a high commercialization of it.	S1-T2. To implement the products and services that are exclusives of the company, the staff must be trained to avoid incredibility of the customers in the process of work.	W1-T1 To hire staff with high level of study and work experience according to projects of the company.
T2. The inexperience of staff of the company is causing the loss and the incredibility on the part of customers and prospects.	S2-T3. To show and to train the allies of the company with new products to generate new partnerships.	W2-T3. To have a list of projects with partner company to organize team works and carry out the projects equitably.
T3. The completion of contracts with the partner company produces a high lack of customers that could affect the company's revenues.	S3-T1. To commercialize the new products of the company without to rely on income from these.	W3-T2. To choose a staff trained to carry out each project and to avoid retrogression and the change of staff in the projects.

8.6.4 Actions to improve the organizational processes.

According to research carried out previously, the initial diagnosis, the result obtained of survey and the SWOT matrix is concluded the following analysis to propose the actions to improve the organizational processes of the company Pangea Business Solution- Bogotá in the light of ISO 9001 or Business Process Re-engineering:

To keep in mind that the ISO 9001 standard proposes an improvement to solution some problem, while that the Business Process Reengineering (BPR) proposes a complete redesign to give solution some problem.

The ISO 9001 standard recognized that the adoption of a quality management system is a strategic decision with a high level of responsibility where involved some aspects as: environment of changes, particular objectives, analysis of products and services offered and review of size and organizational structure (Araba British Academy, 2000). According to the previous information is necessary to apply the ISO 9001 as an action to improve the following problems:

Table 2. Actions to take in the light of ISO 9001

ACTIONS TO IMPROVE THE ORGANIZATIONAL PROCESSES OF THE COMPANY PANGEA BUSINESS SOLUTION - BOGOTA IN THE LIGHT OF ISO 9001					
PROBLEMS	ACCORDING TO ISO 9001	ACTION TO TAKE	TOOLS OF CONTROL	TIME	PERSON
PROJECTS DISORGANIZA.	For continuous improvement is necessary to organize the projects according to priorities and delivery times considering that the customer is always the focus of the business.	To establish the staff necessary to carry out each project assigning specific tasks for each of the members. It should to make detailed monitoring of each phase of the project.	<ul style="list-style-type: none"> For each project will make a schedule of activities and times established for each task of project. In each team will be chosen a leader and the activities will divide equally. 	A month	Project Manager
INCOMPLETE TEAM	For improvement organizational processes is necessary to perform a restructuring achieving an efficient teams of works for the projects.	To have a maximum worker assigned to two projects. To evaluate the resources required for each project	<ul style="list-style-type: none"> According to the activities of each project will assign specific tasks for each worker equitably. 	Three Months	Team of Projects
ABSENCE OF MOTIVATION	For continuous improvement of projects is necessary to motivate because of this may depend the development of work and the dedication to show the customer deliveries.	To choose the "Employee of the Month" and to give incentives and bonus of different things. To recognize in public every achievement obtained and to have an accumulation of positive points to give a prize at the end of each project closed.	<ul style="list-style-type: none"> During a month will have an accumulation of positive points to give a prize. To celebrate special days like birthday for each employee. 	Monthly	Administ. Assistant

MISUSE	For continuous improvement of projects is necessary to carry out the control of each register of the activities in the tools offered by the company. In this case CRM.	To demand the use of this tool to handle major control of the projects and to optimize times.	<ul style="list-style-type: none"> • Weekly to present a report of control with the records of activities in the CRM tool. 	Weekly	Administ. Assistant
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The Business Process Reengineering is the radical redesign to achieve dramatic improvements such as cost, quality, service and speed it aims a change in the structure technological, human and organizational to supply an effective delivery for the customer and to achieve their expectations (Zigiaris, 2000). According to the previous information is necessary to apply the BPR as an action to improve the following problems:

Table 3. Actions to take in the light of BPR

ACTIONS TO IMPROVE THE ORGANIZATIONAL PROCESSES OF THE COMPANY PANGEA BUSINESS SOLUTION - BOGOTA IN THE LIGHT OF BUSINESS PROCESS RE- ENGINEERING					
PROBLEMS	ACCORDING TO BPR	ACTION TO TAKE	TOOLS OF CONTROL	ESTIM ATED TIME	PERSON RESPONSI BLE
INEXPERIEN. OF STAFF	According to the Business Process Reengineering is necessary to simplify new processes, assign responsibilities and roles, and introduce the redesigned process.	To hire professional staff with high level of expertise, responsibility and autonomy with the projects of the company.	<ul style="list-style-type: none"> The Project Manager should ensure that the hired staff must meet the vocational profile and ideal needed to carry out the projects of the company. 	Three months	Country Manager
ABSENCE OF DEPARTMENT.	The BPR says that must be assigned a corresponding team who defined goals, scope and requirements of the implementation of each project. To establish an adequate diagnosis using the different documentation of processes and sub-processes of each project.	To make a restructuring totally of departments of the company and to define the specific functions including some areas such as human resources, finance, quality and support, this can prevent a high volume of work in an area or an only person of the company.	<ul style="list-style-type: none"> In an adequate diagnosis to establish the different needs that evidenced the absence of departments in the company and the problems caused for it. 	Six months	Project Manager

<p>ABSENCE OF TRAINING</p>	<p>According to BPR is necessary to select each process for the change structure, technical design of the solution, personnel adjustment and training, the management of change and employee empowerment, introduction of new processes into business operation.</p>	<p>To redesign the process to assign a project to a team, additional, to implement a training as a prior knowledge of each project and is necessary to have an expert who knows the business and a senior engineer who can handle the technical part to help other workers.</p>	<ul style="list-style-type: none"> Each team of work must have a leader or senior engineer who can lead the team and to provide required training to other engineers. 	<p>A month</p>	<p>Leader Engineer</p>
<p>ABSENCE OF COOPERATIVE POLITICS</p>	<p>The BPR proposes a technique of redesigning restructuring to supplier a total change in a short period of time.</p>	<p>To restructure the company rules establishing strict regulations that allow the organization, the punctuality and the sense of belonging to the company.</p>	<ul style="list-style-type: none"> According to the mission and vision of the company to propose a manual of corporate policy. 	<p>Six months</p>	<p>Team of Projects</p>

Limitation: The main limitation that exists is the budget to carry out some actions mentioned above because currently the company doesn't have the financial resources available for it.

Possible solution: According to the Matrix SWOT previously evidenced, the company has partners abroad, which allows to market their products outside the country in order to get new clients and projects to achieve higher revenues to the company and solving some corrective actions that require certain financial budget.

9 Conclusions

According to research carried out previously and the data analysis mentioned above, the following conclusions proposed the actions to improve the organizational processes of the company Pangea Business Solution- Bogotá in the light of ISO 9001 or Business Process Re-engineering in order to give a response the research question initially exposed.

The actions proposed are two groups the problems or lacks of the company Pangea Group keeping in mind that the ISO 9001 standard proposes an improvement to solution some problem, while that the business process reengineering (BPR) proposes a complete redesign to give solution some problem into the organizational processes of the company.

In the company there are some aspects that are necessary to take action to improve the organizational processes based on a diagnosis in the light of ISO 9001, this meaning that this processes should suffer an improvement but isn't necessary a radical change. These were organized in the following global problems:

Disorganization of projects, incomplete teams for carry out the projects, absence of motivation by employees and misuse of tools such as CRM. For these problems it concluded in the light of ISO 9001 corrective actions to improvement of processes such as:

- According to British Standard Institution (2013) a quality Management System allows to plan, to execute and to control the different objectives to achieve to be the supplier of a service with a high standard of quality expecting the customer satisfaction and the continuous improvement of the processes of the company. According previous information to solve the disorganization of the projects is propose to plan, execute and control the organization of the projects considering that the customer is always the focus of the business and to establish the staff necessary to carry out each project assigning specific tasks addition, it should monitor each phase of the project by the project team for handling a continuous improvement.

- Into of the principles of ISO 9001 is founded the principle of Involvement of People that exposed that “People should be to understand the importance of their contribution and role in the organization and they should to accept their problems and their responsibility to solve it and to seek opportunities to enhance knowledge and experiences” (ISO, 2012, p.05). According to that, is proposed to restructure the teams in order to form efficient work teams for the projects. It propose to have a maximum worker assigned to two projects.

- Other principle of the ISO 9001 is the Leadership, this exposed that “Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved achieving the organization’s objectives” (ISO, 2012, p.04). According to above mentioned is proposed to create strategies to keep employees motivated through of leader in each department because of this may depend the development of work and the dedication to show the customer

deliveries. It propose to choose the "Employee of the Month" and to give incentives and bonuses of different things, also is proposed to recognize in public every achievement obtained and to have an accumulation of positive points to give a prize at the end of each project closure.

- According to ISO 9001 the process approach is “A desired result is achieved more efficiently when activities and related resources are managed as a process” (ISO, 2012, p. 06). For this reason, is necessary to carry out the control of each register in the CRM tools by each employee. Is necessary to demand the use of this tool to handle major control of the projects and to optimize times.

For other hand, is evidenced some problems that need to apply a Business Process Reengineering to implement a radical design, such as: Inexperience on the part of workers, the absence of departments in the company, absence of training and absence of norms of the company. For this problems, is conclude in the light of BPR corrective actions such as:

- According to uBPR is exposed Zigiari (2000) to have a positive and adequate methodology is necessary: “Selection of the strategy, simplify new processes, organize a team of employees, to order the workflows, assign responsibilities and roles, automating processes using IT, train the process team and introduce the redesigned process” (p.09). For this reason, is proposed to hire professional staff with high level of expertise, responsibility and autonomy to carry out the projects of the company in order to achieve an adequate methodology.

- The BPR says that there is an initiation stage: Is assigned a corresponding team who defined goals, scope and requirements of the implementation re-engineering project and there is the diagnosis stage: To establish an adequate diagnosis using the different documentation of processes and sub-processes of the organization (Zigiaris, 2000). According to this is proposed to make a restructuring totally of departments of the company and to define the specific functions by each including another areas such as, human resources, finance, quality and support, this can prevent a high volume of work in an area or an only person of the company.

- According to BPR is proposed to redesign the process to assign a project to a team, additional, to implement a training as prior of a knowledge of each project, and is necessary to have an expert who knows the business and a senior engineer who can handle the technical part to help other workers. This redesign to have seven phases according to Zigiaris (2000) are: preparation and coordination of the project, the business diagnosis, the selection of the process for change the structure, technical design of the solution, personnel adjustment and training, the management of change and employee empowerment, introduction of new processes into business operation and the continuous improvement.

- To restructure the company rules establishing strict regulations that allow the organization, the punctuality and the sense of belonging to the company because according to Zigiaris (2000) The BPR is a technique of redesign and restructuring to supplier a total change in a short period of time.

Finally, it can say that the present analytical research allows the application of actions to give an effective solution to the problems founded in the company Pangea Business Solution – Bogotá branch in the light of the ISO 9001 or a BPR. Currently the Project Manager (Bogota branch) is presenting this actions as a result of the research and the Country Manager decided to implement some recommendation according of this research.

10 Projections

- To commercialize the products outside of country in order to get new customers and projects achieving new revenues and to implement some corrective actions proposed that require certain financial budget.

- In addition, it is expected in a short time to implement all corrective actions, through ISO 9001 or BPR to contribute with the continuous improvement of organizational processes of the company.

- On the other hand, it is expected to make a test of the corrective actions in the company and propose the idea to implement into the company a quality management system ISO 9001.

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Annexes

A. Survey

La siguiente encuesta es realizada con el fin de contribuir en la presente investigación. Por favor responda la misma con la mayor veracidad posible.

1. Seleccione el rango correspondiente a su edad:

- a) 18 a 25
- b) 25 a 33
- c) 34 a 40

2. Seleccione su género:

- a) Femenino
- b) Masculino

3. Seleccione su nivel de estudio

- a) Técnico - Tecnólogo
- b) Profesional en curso
- c) Profesional graduado

4. Seleccione el departamento al que pertenece en su empresa:

- a) Departamento de Ingeniería
- b) Departamento de Proyectos
- c) Departamento de Inteligencia de Negocios
- d) Otro ___Cuál: _____

5. Considera que actualmente realiza las funciones correspondientes a su cargo:

- a) Si
- b) No

6. Cuántos proyectos tiene a cargo actualmente:

- a) 1 ó 2
- b) 3 ó 4
- c) 5 ó más

7. Cuántas personas trabajan en su equipo de trabajo y proyectos:

- a) Solo usted
- b) 2 ó 3
- c) Más de 3

8. Cuánta experiencia tiene en el cargo que actualmente realiza:

- a) Menos de un año
- b) Un año
- c) Dos años o más

9. Está de acuerdo con el salario que actualmente devenga:

- a) Si
- b) No

10. Escriba 5 palabras que definan las fortalezas y debilidades de su entorno laboral según su percepción:

Fortalezas

Debilidades

1.

1.

2.

2.

3.

3.

4. 4.

5. 5.

11. Cree que la herramienta del CRM le ayuda en la organización de su trabajo:

- a) Si
- b) No

Porqué: _____

12. Qué necesitaría para hacer mejor su trabajo:

B. Interview Country Manager

“Hola, buenos días, Mi nombre es Alberto Bustos soy el Gerente de País para Pangea Business Solution, nosotros somos una compañía dedicada al desarrollo de software y la implementación de soluciones Microsoft en Estados Unidos y en Colombia.

Actualmente Pangea cuenta con un Gerente de Proyecto, una asistente administrativa, el director país que soy yo, cuenta con diferentes áreas como área de desarrollo, área de integraciones y área de pedidos Online que es uno de los productos que tenemos actualmente en la compañía, tenemos 18 empleados. Dentro de esos 18 empleados lo que hemos notado en los últimos meses y en los últimos proyectos que se han venido manejando es que tenemos un incumplimiento constante y reiterativo frente a los clientes porque los ingenieros no están entregando a tiempo sus actividades, no están planeando sus actividades dentro de nuestra herramienta CRM que tenemos para la gestión

de proyectos, tenemos algún equipo con falta de experiencia o demasiada juventud que no refleja el compromiso de lo que la empresa quiere reflejar ante los clientes. A parte de esos tenemos incumplimientos, llegadas tardes, falencias pues típicas de una empresa en crecimiento.”

C. Evidence: Personal Notes – Pangea Group

“Viernes 8 de Mayo 2015: Está es la primera semana de registro de notas personales, se puede observar que la mayoría de los trabajadores del área de integraciones y desarrollo no cumplen con el horario laboral establecido en la compañía. (Entrada, Salida, Almuerzo, Onces).

Viernes 15 de Mayo 2015: En la segunda semana se observa el descontento de los clientes debido al incumplimiento en las respectivas entregas de los proyectos.

Viernes 22 de Mayo 2015: En la tercera semana el proceso de observación refleja desorganización en la distribución de proyectos en las diferentes áreas. El registro anteriormente observado aún persiste.

Viernes 29 de Mayo 2015: En la cuarta y última semana del mes de Mayo, se observa que las notas anteriormente mencionadas siguen siendo reales y se refuerza el atraso en el desarrollo de los proyecto. Se evidencian quejas de los clientes vía mail y telefónicamente.

Viernes 5 de Junio 2015: En la primera semana del segundo mes, se puede observar que los ingenieros de diferentes áreas desconocen algunos temas importantes para la realización de proyectos. Las notas personales anteriormente observadas aún persisten.

Viernes 12 de Junio 2015: El incumplimiento de algunas políticas empresariales tales como la puntualidad, las normas de cortesía y el orden y aseo en la oficina persisten por parte del departamento de ingenieros. Las notas personales anteriormente observadas aún persisten.

Viernes 19 de Junio 2015: Se observa la ausencia de algunos departamentos de la compañía, lo que significa que algunas funciones se realizan en un mismo departamento por una misma persona, caso puntual para el departamento administrativo y financiero el cual es uno solo, lo que genera un alto volumen de trabajo en una persona.

Viernes 26 de Junio 2015: Los empleados se quejan de la ausencia de capacitación y acompañamiento por parte de un ingeniero senior para resolver problemas técnicos que se presentan en los proyectos. Las notas personales anteriormente observadas aún persisten.

Viernes 10 de Julio 2015: Se observa que por medios de comunicación como correo electrónico y vía telefónica los clientes se continúan quejando del retroceso de los proyectos, del cambio constante de recursos asignados a un proyectos y del

desconocimiento de algunos temas frente al mismo por parte de los ingeniero encargados. Las notas personales anteriormente observadas aún persisten.

Viernes 17 de Julio 2015: Se observa que algunas herramientas implementadas para el seguimiento y registro de proyectos como el CRM no son utilizadas por los empleados. Las notas personales anteriormente observadas aún persisten.

Viernes 17 de Julio 2015: Se observa que en la compañía se presenta un cambio constante de trabajadores en los diferentes departamentos de la misma. Las notas personales anteriormente observadas aún persisten.

Viernes 31 de Julio 2015: Se han completado tres meses exactos de un proceso de observación donde cada nota personal refleja la continuidad de algunos inconvenientes presentados. Las anteriores falencias observadas en la empresa Pangea, actualmente persisten.”

Project Manager Pangea Group.

D. Evidences of complaints: email

Muy mal servicio...no los recomendaría

MC

Para:

Jammy Tatiana Casas Mateus<tatiana.casas@gabrica.com.co>;

Alberto Bustos;

Jairo Murillo;

Adriana castro;

...

vie 18/06/2015 6:50 a.m.

Jammy Tatiana Casas Mateus<tatiana.casas@gabrica.com.co>

Responder a todos|

Buenos días,

Llevo casi que todo este año tratando de solicitar que me den garantía de lo que nos vendieron como fueron las integraciones con el conector de ustedes pero se va a acabar este año y finalmente no funcionaron. Marcela intentó hacer lo que pudo pero definitivamente no se logró. En estos momentos Gabrica va a hacer cambios coyunturales en la arquitectura de ERP y me preguntaron por ustedes y realmente les dije que yo no los recomendaba.

Que decepción sinceramente del producto que les compramos.

Tatiana Casas.

De: Erika Morales [mailto:erika.morales@gemssa.com]

Enviado el: lunes, 27 de julio de 2015 15:54

Para: 'Alberto Bustos' <alberto.bustos@grouppangea.com>

CC: 'Adriana castro' <Adriana.Castro@grouppangea.com>

Asunto: No puedo ingresar al CRM de GEMS

Alberto buenas tardes.

Desde comienzo de julio, he intentado ingresar al CRM por el link dado y no ha sido posible por ningún explorador...

Agradezco me colabores en revisar que sucedió, pues lo he intentado por explorer y por google crm...

Les he escrito en reiteradas ocasiones y no tengo respuesta, ni vía email ni vía telefónica.

Quedo atenta.

Erika Ma. Morales Gaviria

Coord. Seguimiento de Contratos

John Fredy Rodriguez Morales <jfrodriguez@eldorado.aero>

Para:

SoporteColombia;

Viviana Joya Umana <vjoya@eldorado.aero>;

jsegura@eldorado.aero.;

...

sáb 09/05/2015 6:59 a.m.

Reenviaste este mensaje el 12/05/2015 3:46 a.m.

Buena tarde,

Agradecemos su valiosa colaboración, para verificar el cargue de planillas en el Capturador, teniendo en cuenta que no se han podido cargar con el archivo que nos remitió el CCO, y es de suma importancia para poder digitar los vuelos que operaron el día de ayer 08 de mayo.

Muchas gracias, quedo atento a su pronta respuesta, ya que no ha sido posible contactarlos telefónicamente y necesitamos darle prioridad a esto.

Cordialmente,

John Fredy Rodriguez Morales

Analista de vuelos y exenciones

OPAIN S.A.

Solicitud urgente de soporte

JT

Jammy Tatiana Casas Mateus <tatiana.casas@gabrica.com.co>

Responder a todos

Para:

SoporteColombia;

Cc:

Alberto Bustos;

Michelle Correa;

Fernando Betancourt;

lun 11/05/2015 1:25 a.m.

Para ayudar a proteger tu privacidad, parte del contenido de este mensaje se ha bloqueado. Para volver a habilitar las características bloqueadas, haga clic aquí.

Para mostrar siempre el contenido de este remitente, haga clic aquí.

Buenos días, desde el 28 de Abril que envié el correo electrónico no me han dado soporte al requerimiento de CRM. Alguien puede atender mi solicitud por favor?

Gracias,

[<http://www.gabrica.com.co>]

Viviana Joya Umana <vjoya@eldorado.aero>

Responder a todos

Para:

SoporteColombia;

Armando Ortega;

Cc:

Martha Yamile Cita Silva <mcita@eldorado.aero>;

Alberto Bustos;

Henry Carmona Cardona <henry.carmona@siesa.com>;

...

mar 19/05/2015 4:56 a.m.

Respondiste el 20/05/2015 8:19 a.m..

Buenos Días Armando,

Te informo que el proceso de facturación de Puentes y parqueos está bastante demorado. Solicito tu colaboración ya que llevamos mucho tiempo con este problema. Se debe revisar el proceso e indicarnos cuál es la causa del problema y poder dar solución por parte de OPAIN en caso de ser necesario.

Como es de tu conocimiento este proceso es muy importante para la compañía, por lo tanto espero una pronta respuesta ya que el tiempo de respuestas es muy demorado.

Muchas gracias. Slds.

Cordialmente,

Viviana Joya Umaña
Analista Sistemas de Información
OPAIN S.A.

Jorge Castro <jcastro@petroworks.com.co>

Para:

Paola Salamanca;

SoporteColombia;

jue 11/06/2015 7:54 a.m.

Marcar para seguimiento. Completado a las jueves, 25 de junio de 2015.

Consumo de ACPM pw 100 hasta la fecha 10-06-2015 (1).xlsx13 KB

Guardar en OneDrive - Pangea Group, Corp

Buenas tardes Paola.

Por favor me ayudes lo más pronto posible con la actualización de la Información en los reportes de operaciones del Taladro PW100 en la sección de ACPM de la siguiente manera según archivo adjunto. Para todos los días del 31 de Mayo al 10 de Junio se debe actualizar los saldos de existencias del día anterior y el nuevo saldo al finalizar el día.

Para los días 31 de mayo y 1 de junio se debe ingresar adicionalmente los consumos según archivo.

Agradezco agilizar este tema.

Cordialmente.

Jorge H. Castro S.
Coordinador Senior de Auditoria
e-mail: jcastro@petroworks.com.co

Luz Marina Jarro M. <lmjarro@simoniz.com.co>

Responder a todos|

Para:

Jairo Murillo;

Alberto Bustos;

'Jorge E Gama' <jgama@simoniz.com.co>;

'Robeiro Ramirez Gallego' <robeiro.ramirez@siesa.com>;

Adriana castro;
'Deiber Caicedo' <deiber.caicedo@siesa.com>;
German Gomez;
'Mauricio Saldarriaga Arenas' <mauricio.saldarriaga@siesa.com>;
'Jose Maria Dussan' <jmdc@siesa.com>;

Cc:
'Henry Edilberto Ruiz Rojas' <herr@siesa.com>;
'Jose Andres Espitia Español' <jae@esiesa.com>;
cms_usuario3@simoniz.com.co;
'Ariolfo Pardo Acuña' <apa@siesa.com>;

...

lun 22/06/2015 2:40 a.m.

Respondiste el 22/06/2015 2:52 a.m..

Buenos días

Como lo manifesté en el correo anterior y via telefónica en reiteradas ocasiones, se debería plantear una solución de forma que garantice, que los desarrollos después de probados se ejecuten de una forma estable. Así como se propone es difícil tomar una decisión cuando hacer modificaciones se hacen ASUMIENDO RIESGOS.

La URGENCIA, se ha generado debido a que se ha venido manifestando el mal funcionamiento del conector, pero no se ha tomado ninguna acción para implementar el ambiente de pruebas que sugieren.

Me preocupa, que una modificación a PRUEBA Y ERROR, genere el caos en el inventario, como ha sucedido cuando han hecho este tipo de cambios.

Agradezco evalúen bien la propuesta que se va a implementar, para que esta no sea por el momento y en 2 días el problema sea más grave.

Cordialmente,

**LUZ MARINA JARRO M.
SISTEMAS**