Change Management for ERP System Implementation: Case Study of Shell Petroleum Development Company Nigeria Limited

[1]Ogbasi, P.A. & [2]Ebem, D. U.
Department of Computer Science
University of Nigeria
Nsukka, Nigeria
[1]ogbasiprogress@gmail.com
[2]deborah.ebem@unn.edu.ng

ABSTRACT

Modern business environment usually causes many organizations to change their standalone application systems to an Enterprise Resource Planning (ERP) system in line with their organizational operations management process. In this research, a theoretical and practical approach was used to investigate the activities needed to supervise a radical change that comes with an ERP system project in multinational organization business process change management and implementation process with considerations on fundamental issues in managing organizational change, including critical success factors, such as communication, motivation and users' awareness, readiness, willingness and expectations. A case study of Shell Petroleum Development Company (SPDC) provides a platform to collect both qualitative and quantitative data that were analysed using NVivo and SPSS. Empirical results from the survey shows that demographic features of the sample analysed indicates that frequency of 71.4% of the respondents were male and 17.9% of the percentage were management staff from four key departments which are: HSE Department 'A' (30.8%), Commercial and Public Relations Department 'B' (38.1%), Admin and Accounts Department 'C' (75.0%), Technical and Operations Department 'D' (53.3%) and other Department (68.4%). Only 22.6% of the respondents had been involved in the ERP development pilot phase of the project. 35.7% of the largest group were between ages 40 and 59 years. Results also show that there was lack of communication and information sharing; the degree of agreement on being informed about the progress being made, the impact of the change on their work and what was expected from them was quite low. However, they (users' of the ERP systems) also agreed that there should have been better communication approach. In this regard, communication, motivation, participation, training, leadership and management commitment were determined to be the key success factors in the SPDC-SAP-ERP change management.

Keywords: ERP, Change Management Process, SPDC-SAP ERP Implementation,

ISTEAMS Cross-Border Conference Proceedings Paper Citation Format

Ogbasi, P.A. & Ebem, D. U. (2017): Change Management for ERP System Implementation: Case Study of Shell Petroleum Development Company Nigeria Limited. Proceedings of the 9th iSTEAMS Multidisciplinary Conference, University of Ghana, Legon, Accra Ghana. Pp 137-148

1. BACKGROUND TO THE STUDY

Continuity of productivity is a cardinal aspect of every business, and this can be easily achieved by choosing the right business operational process management approach and system implementation, like the Enterprise Resource Planning (ERP). ERP system is a combined set of programs that delivers supports for critical organizational business process activities like manufacturing and logistics, accounting and financial analysis, sales and marketing, human resources, etc. With good ERP system, different departments of an organization can seamlessly share data and information, knowledge, minimises cost and improved business performance. Despite their benefits, some ERP systems fails and may also face implementation difficulties as a result of workers' resistance of the system, (Stratman and Roth, 1999). Smooth implementation of ERP system requires the establishment of core competencies in which change management process model can be adopted to promote the implementation of ERP in the workplace.

In most organizational change management process, mainly more than one variable; e.g. organizational structure, tools, procedures, responsibilities, projects change at the same time. For instance, many organizations have shifted from standalone software applications to company-wide solutions called Enterprise Systems (ES) such as ERP systems (Dong, 2014) and System Applications and Products (SAP) as a typical example of ERP (Hall, 2016), that integrates business processes across the organization and standardize methods for data input and retrieval (Dong, 2014). Some authors are of the view that implementing these systems is not an issue of alteration of an already existing software systems; it is closely related with 'organizational revolution' (Bingi, Sharma and Godla, 1999). It affects people's work, responsibilities and it may bring about change in organizational structure. If the organization is complex, it can create turbulence which makes it even harder to perform a smooth implementation or to transform the operations and structure successfully. A good response to this kind of turbulent situation can be given through a comprehensive and strategically planned change management approach.

Change management comprises many aspects such as analyzing the organizational effectiveness and revealing the required changes to achieve better performance, and determining the steps to be followed by the system stakeholders for a successful change implementation (Hayes, 2007). It is usually not an easy process; there is no generalized approach to change management. In fact, sometimes a successful change requires more than what is defined as change management, i.e. an appropriate strategy, competence (including personnel with skills to adapt the change) and structure including organizational tools (Carter, 2008). Managing change involves understanding the drivers of the change and developing strategies to control both external and internal impacts on the organization while taking account of human factors; particularly attitudes and behaviors of people involved and organizational policies. Change has to do with the human being, and sometimes great effort must be spent on changing the values that people have internalized. When there is a change within the organization it may affect their behavior, shared beliefs, the way they do their jobs or the rules that shape mental models. Shared mental models are a part of organizational culture (Hayes, 2007), so to achieve the desired result it is important to consider human factors and organizational policies.

Presently, most large organizations like Shell Petroleum Development Company (SPDC) are changing their business process management from multiple standalone applications to a single sharable integrated business management system, like the ERP. A smooth transition from the use of present applications to a new system is often a major challenge for implementing new business process management system that ensures continual usage for business efficiency. This study involves a theoretical and practical approach to the activities needed to manage change that comes with an IT project (like the SPDC – ERP system development and implementation process). The focus will mainly be on SPDC-ERP change management process and fundamental issues in managing organizational change, including critical success factors, such as communication, motivation and users' awareness, readiness and willingness.

1.2 Aim and Objectives of the Research

The aim of this work is to use qualitative data analysis method to investigate and describe a transition process for successful ERP implementation for multinational organization. In this study, we consider SPDC Nigeria Limited with respect to how ideas and strategies together could play major role to overcome workers' resistance to ERP systems implementation. We attempt to:

- Investigate business process change management stages from both the process (i.e procedure) and people (i.e employee) aspects, which includes; awareness, willingness to change, expectations, proper communication, motivational approaches and other critical success factors.
- Examine and determine how good it is while managing the change procedure for improvement of the business overall process.
- Proffer a change management best practice procedure that can serve as a model for ERP implantation in an organization.

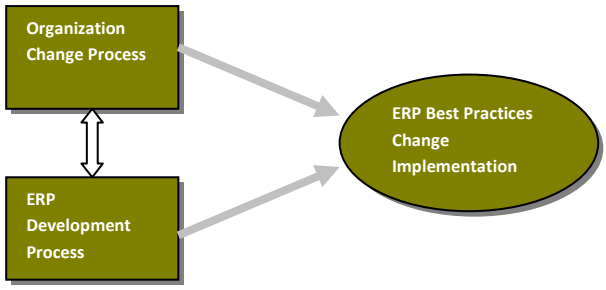

Figure 1: The ERP Process Analysis

1.3 Research Questions

In line with the objectives stated above, the main research questions guiding the study are:

1. How mature is the SPDC organization change management procedure followed during the ERP development process?
2. How is employees' approach towards change to the new ERP system, including their expectations, awareness, readiness, willingness and aptitude to change?
3. What are the significant factors that can have impact on the success of the ERP system implementation?
    a) What should be the proper communication approach during change management process?
    b) What should be the proper motivation approach?
    a. What are the other major success factors?

1.4 Case Study Description

A case study is an empirical analysis that investigates a phenomenon within a real-life context to offer solutions to challenging issues; (Yin 2013) covers all aspects of the case study method – from problem definition, design and data collection, to data analysis and composition and reporting. Case studies rely more on qualitative and statistical analysis over a large number of instances to connect cause and effect. In systems analysis, they are particularly suited to studies in which the researcher has little control over the key variables (Easterbrook et al. 2016).

In line with the research objectives, this research work was carried out in a multinational organization, the SPDC Nigeria Limited. SPDC has decided to shift from standalone applications to company wide solutions integrating their core business management process and operations. In line with SPDC business requirements, the company have designed and deployed an ERP system that is expected to integrate the business process across the company. The company's ERP project is to provide comprehensive enterprise solution that enables the implementation of project management using a single tool (one ERP system).

The SPDC-ERP project phase goes through a project management process model (and we identified the process model as MPX) that is specific to Information System/Information Technology (IS/IT) projects in large multinational organizations. The model consists of major phases explaining the activities to be completed. The phases are connected and at each phase, a steering committee accepts and agrees the proposed issue and takes decision about the issues.

In addition, business change management plan was defined by the company to deal with the employee side of change, intending to enable change acceptance and assimilation by all stakeholders. Some strategies including communication, training and support are planned to achieve a successful change management. Basically, it is not easy to arrive at a successful implementation; most change process initiatives may result in complex situations require efficient change management procedure.

1.5 An Overview of SPDC Nigeria Limited

In Nigeria, the Shell Petroleum Development Company (SPDC) is a major player in the energy services sector. SPDC Nigeria is a subsidiary of the Royal Dutch Shell that have been operating in Nigeria for almost eight decades now (since 1937), (Osarorsee, 2014). SPDC is one of the biggest energy producing corporations in Nigeria with 100% owned by Shell and operates as a joint venture with Nigerian National Petroleum Corporation (NNPC). SPDC's energy exploration and production operations are based on both onshore and offshore with oil mining lease area of approximately 31,000 square kilometres: 6,000 kilometres consisting of pipelines and flow lines (inclusive of flow stations), about eight gas plants and over 1,000 producing wells. The activities of SPDC are also noticeable in several affiliated companies it operates in Nigeria, and these include: Shell Nigeria Gas Company Limited that was established to promote gas utilization in Nigeria. Similarly, Shell Nigeria Exploration and Production Company (SNEPCO) established in 1993 to operate two offshore and three onshore oil mining licences with production sharing contract with NNPC. Shell is also a technical adviser to the Nigeria Liquefied Natural Gas (NLNG) with about 26% share of ownership. All these activities of SPDC require an efficient operation integrated management system.

2. LITERATURE REVIEW

Typically, an organization consists of workforce interacting in some kind of well structured way with a common purpose of achieving the same goal, (Siau, 2004). Due to the course of time variation in an organization in terms of shape, state and quality is "organizational change", (Poole, et al 2004). Many scholars have investigated change in organizations through various categories, e.g. revolutionary vs. evolutionary (Dillard and Yutha, 2005) and (Burke, 2012), transactional vs. transformational (Burke and Litwin, 1992; Burke, 2012), incremental vs. transformative (Dunphy and Stace, 2014). In most cases, revolutionary change is radical, when it occurs, organizations break off connections with the past (Burke, 2002, (Dellard and Youtha, 2016) and it is inevitable in the existence of turbulence or if the degree of change in the environment creates a need for readjustment by the organization (Dunphy and Stace, 2014).

On the other hand, evolutionary changes are small changes, in opposition to revolutionary changes; they actualize within longer period of time and, they do not result in an overthrow of the current system ((Dillard and Youtha, 2016). Evolutionary changes are more common than revolutionary as it involves the trending nature of infrastructure used by organizations, including their application system that manages data and information for business operations and planning process, such as ERP applications, whereas there is higher resistance to revolutionary changes (Burke, 2012). The work of (Bruke, 2012) also review that revolutionary change is associated with transformational change and according to (Bridge, 2016), second-order change and transformative change by (Goesun, 2013), while evolutionary change is related with transactional change (Bruke, 2012), first-order change (Bridge, 2016) and incremental change (Goesun, 2013).

2.1 Change Trends during Enterprise System Implementation in Organization

Occasionally there seems to be strictness within the organization that small movements do not help; radical change is needed to stimulate the organization and maintain efficient business process flow (Dellard and Youtha, 2016), suggest that, if an organization wants to change the enterprise system, usually it should not be by slow degrees. Because implementing an ERP system in most cases results in a sweeping organizational change (Nah, 2002). Accordingly, Dong (2001) asserts that enterprise systems can entail either revolutionary or evolutionary change depending on the scope of the system developed.

In the view of (Davenport, 2014) asserts; it is clear that enterprise systems can offer a very high benefits but it is risky as well. To receive these benefits, change management of Enterprise System (ES) implementation should be planed carefully by applying critical success factors such as top management commitment, operations process restructuring and people side of change management (e.g. Bingi, Sharma and Godla, 1999; Jarrar, Al-Mudimigh and Zairi, 2000). Suggesting a process-based change management framework (Aladwani, 2001) notes that ERP implementation needs to include technical, organizational and people oriented strategies. Enterprise systems may encounter several technical challenges. However, they are not the primary reasons of the failure, management and business aspect has higher impact on ERP implementation success (Davenport, 1998). According to HP (Hewlett-Packard), ERP implementation has much to do with people rather than technology and processes (Jarrar, Al-Mudimigh and Zairi, 2000).

Corporate organizations may develop strategies for change plan, using appropriate change management techniques and tools, project management covering the entire business and business process redesign (Al-Mashari and Zairi, 2000). According to (Hall, 2016) and (Hong and Kim, 2002) point out the importance of ERP packages' fitted to the organization's functionalities, business structure and organizational culture. Organizational culture plays a more significant role if it is more than incremental change, because at that time success cannot be achieved by changing only the structure and the strategy (Senior and Fleming, 2006). Despite ERP's considerable growth in recent time, there are still major challenges that organizations may encounter when implementing ERP.

According to (Dillard and Yuthas 2016), most multinational firms are using ERP and that more small and midsize companies have begun to adopt ERP. In spite of ERP's promises to benefit companies and a large capital investment, not all ERP implementations have successful outcomes in organizations. High proportion of ERP implementations regularly have delayed an estimated schedule and overrun an initial estimated project cost (Ehie and Madsen, 2015). Furthermore, the literature indicates that ERP implementations have sometimes failed to achieve the organization's targets and desired outcomes. Much of the research reported that the failure of ERP implementations was not caused by the ERP software itself, but rather by a high degree of complexity from the massive changes ERP causes in organizations.

2.2 ERP and Employees Change Management Process

Change management plays a vital role in ERP implementation (Jarrar, Al-Mudimigh and Zairi, 2000). The actions that are taken during change management process are specific to circumstances, organization and the project. Therefore, it is not easy to manage change, but it does not mean that it is impossible; different strategies can increase the success (Self and Schraeder, 2009). Sometimes managers believe the fallacy that if the methods for change management were successful in the past it will be successful in the future too. Their direct relationship approach may fail whilst taking account of the dynamic environment and increasing complexity of the organizations (Burke, 2012).

From employee's perspective, changing business process management usually goes through some stages with employees and it is important to note the failure of focusing more on business change rather than employee issues. Successful change can be attained paying attention to the business change and employee related issues as shown in Figure 2. It shows that when emphasis is more on business change than on employees, it may result in loosing valued staff, falling behind the timeline and decreased efficiency. Similarly, if emphasis is greater on employees than keeping the balance between employees and implementing business change, it may results in not achieving the business objectives. In business, success is achieved when business change is introduced and employees have the awareness and desire to implement the change, the knowledge and ability to make it happen and reinforcement to keep the change in place, (Hiatt and Creasey, 2003).

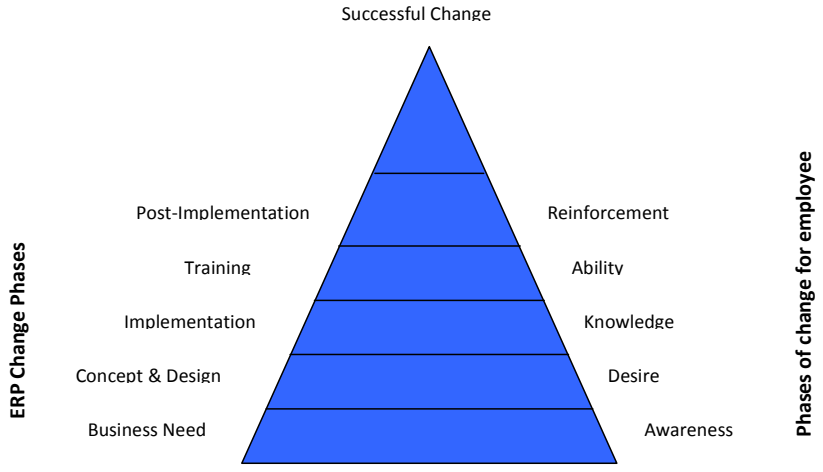

Figure 2: ERP and Employee Change Phases

2.3 Change Management Process Models

Different change management processes are available to be adopted, developed by different researchers, e.g. (Pugh, 2007), (Carter, 2008) and (Galoppin and Caems, 2007) cite Lewin's (1951) three-stage change management process model which is one of the earliest change management process model. Based on Lewin's approach Carter (2008) developed a seven-stage model addressing three factors, 'structure' of the organization, 'skills' and 'strategy' that should be considered whilst carrying out change. Unlike Carter's non-linear model, (Hayes, 2007) suggested a linear model created by Hayes and Hyde (1998), but this model includes some feedback loops and some repeatable stages. This linear model starts with analysing the external environment for threats and opportunities to find out if there is a need for change.

Clarke and Garside (1997) developed a practical framework on the bases of the best practices gathered from various organizations. They have associated different parts of change management process with some key success factors which are: 'commitment', "people issues" (social and cultural), 'communication', "tools and methodology", 'interactions with other changes. Each factor comes forward at different stages of the change process. Due to the importance of engaging higher level staff and increasing the ownership of the project in the early stages, commitment starts taking an active role just after it has been agreed to do the project and a project manager is assigned. Social and cultural issues are linked with developing a project team, whilst 'communication' is essential during team building activities and while running the project plan. The issues related with tools and project management methodology comes forward during project plan approval and interactions in the organization become prominent whilst monitoring. Based on these success factors they have developed a benchmarking tool (maturity model) by combining good practices in different change management processes. In this maturity model they have divided the success factors into five levels creating a matrix that includes a checklist of different issues within each factor on different levels. Thus, it can be used to measure the maturity degree of the change management activities.

Although each model has its own approach and benefits, but for most organization like SPDC business operations and process change management, Kurt Lewins approach to change management is suitable. There are some common aspects to most change management system model; they all start by analyzing the present status in order to realize the need for change, proceed with actions and end with process review. In the work of (Pugh, 2007) and (Self and Schraeder, 2009) assert that the first step in an implementation process should be ensuring the readiness for change.

2.4 Overview of Kurt Lewin's Change Management

Lewin's change management theory is a planned change process guide that involves three sequential different and important steps; Unfreezing Stage, Moving to a new level (or Change Stage) and Refreezing Stage.

Unfreeze → ***Moving*** → ***Refreezing***

Unfreezing: the change process starts with finding a method of making it possible for people to let go of an old process management pattern that was counterproductive in the organization. The desire to change occurs at this stage of the process. Example is moving from a paper based documentation system to an automated system in an organization where paper trails have become unmanageable and antiquated.

Unfreezing the present forces that maintain current employees attitudes are reduced through analysis of the present situation. Practically, important changes are realized through dialogue and re-educational activities such as team building, personal development, and brain-storming.

Moving: this stage involves a process of change in thoughts, feelings, behaviour, or all three, this in some way more liberating or more productive than doing things the old way. It is in this stage that employees involved (the change target team) are convinced that the new way is better than the old. After analysing the present situation, new structures and processes are put in place to achieve the desired improvements.

Refreezing: finally, the stages culminate to establish the change as a new habit or process that becomes the standard operating procedure or status quo.

Table 2.3: Change management process model, (Pugh, 2007)

Lewin's (1951) three stage model (Pugh, 2007)	**Unfreezing** *Creating a healthy organization, being aware of the need for change, persuasion, top management involvement, and building confidence, communication, identifying stakeholders and managing their expectations.* **Moving** *Following a comprehensive strategy by setting unambiguous objectives and challenging targets that helps individuals to develop knowledge while moving to a new level.* **Refreezing** *Making sure that change is a part of organizational culture while changing the attitudes, structure of the organization, spreading the new mindset and information.*

Also, the model above includes human (i.e. employees) factors such as employee's behaviour, emotions and some approaches. In this vain, a change process is supposed to be systematic in which case the employee factors and hard issues such as technology, organizational formation and strategies have to be compatible with each other. Hence the change model must include both soft and hard issues within the organization. Importantly, the change process is expected to promote an open discussion of barriers and also provide collaborative development among stakeholders. Thus we adopt an integrated strategy that covers both organizational structure and people (staff and management attitudes) oriented strategies.

3. RESEARCH METHODS AND DESIGN

From the research questions above, we aim at evaluating business process change management approach from both process (i.e procedures) and people (employees) viewpoint and identifying possible proper approach that can be adopted to make the transition and implementation easier. Based on this, qualitative research approach which provides a reflective understanding of the structure of the organization of our case study in line with Kurt Lewin's change management model is professed to be suitable. The research is based on a single-case study approach that involves the observation of one organization. The case study approach is generally perceived to be mainly quantitative approach, providing an intensive investigation of a subject within an organization (or deferent organizations) to gain a wider understanding of the research investigation, (Rudestam and Newton, 2007).

4. DATA COLLECTION

During the research investigation, both the qualitative and quantitative data were collected using parallel mixed method design in which the quantitative data was embedded with qualitative one, but quantitative results are more dominated (Nagy and Biber, 2010). We used stratified sampling method to gather data in which case where target population was divided into non-overlapping groups and potential participants were randomly selected from each group. In forming the target population groups, the aim was to achieve adequate number of respondents and also to include employees who will provide comprehensive data: the top managers involved in the change management implementation or in the initial change stage of the ERP project were simply grouped according to their departments and then randomly selected managers from each group were visited for a face-to-face interview. This method was suitable and used because interviewees were seen to be able to evaluate the change process management team approach and the process continued on the idea that more viable data can be obtained and better understanding of the transition process can be achieved by listening to the users who have experienced the change management process.

Also, the population for the study was determined using stratified sampling technique were potential users were divided into groups according to their departments and respondents were selected randomly from each group.

4.1 Research Instruments and Participants

Interview questions (see Appendix) were design to collect and analyse three types of data, these are:

a) Quantitative data through 5-point Likert Scale format and 5-point Semantic Differential Scale format.
b) Qualitative data using open-ended questions and
c) Demographic data allowing to identifying the group each interviewee belonged to.

Multiple choice questions were associated with participants' views on how change management process team had been working. Similarly, the open-ended questions were more related with participants' approach and perception, the problems resulted during the change management process and suggestions for the improvements. Structured type interviews were adopted for the survey, (Biggam, 2008). This means that the questions were prepared in advance and presented in the same order to achieve a focus on the research problem. For quantitative data, the survey was employed by using 5-point Likert Scale and qualitative data from open-ended questions and also demographic data, such as; gender, age, length or duration of employment, department and position. Close-ended questions were designed to bring a better understanding of users' awareness, willingness acceptance and ability to change, whereas open-ended questions aimed at revealing the expectations of users, and proper communication and motivation approach.

Total of twelve interviews were conducted the participants (comprising of employees from various departments in SPDC) who are actively involved in the SPDC-SAP project design and implementation process either as part of the team, pilot or steering committee member. Questionnaires were sent to potential users, both to employees who had experience with the project and those ones who did not have. About 81 participant response rate was 32%. Later the online sample size calculator was used (as suggested by Biggam's (2008)), and the result had validly represented the whole population with 90% confidence level and about 10.0 confidence interval. The low response rate reason was that the time was short and many employees who are potential users had not been properly informed about the project implementation, the questions participants heard made them feel uncomfortable to answer the questions, and most employees were absent for official trip or on annual leave.

4.2 Data Analysis

In our study, qualitative data like interview transcripts, internal and external documents pertaining to the SPDC-SAP ERP system development and implementation process were analyzed using content analysis: the data was coded and categorized with NVivo 11 for efficient analysis. NVivo 11 is a qualitative data analysis (QDA) application software used for research.

Similarly, quantitative data from interviews and surveys were analyzed using PASW Statistics/SPSS 18 (Statistical Package for Social Scientist) a software tool for making advanced statistical analysis. The Parameters for: Mean value, Correlation and Frequency distribution was performed to get more meaningful quantitative results. The qualitative and quantitative data complementing each other was blended in determining the maturity level of the ERP system change management process.

5. RESULTS

We present the results of the empirical data collected through the case study. Our findings from interviews and surveys conducted were analysed objectively and it indicates that demographic features of the sample were analyzed with frequency of 71.4% of the respondents were male and 17.9% of the percentage were management staff.

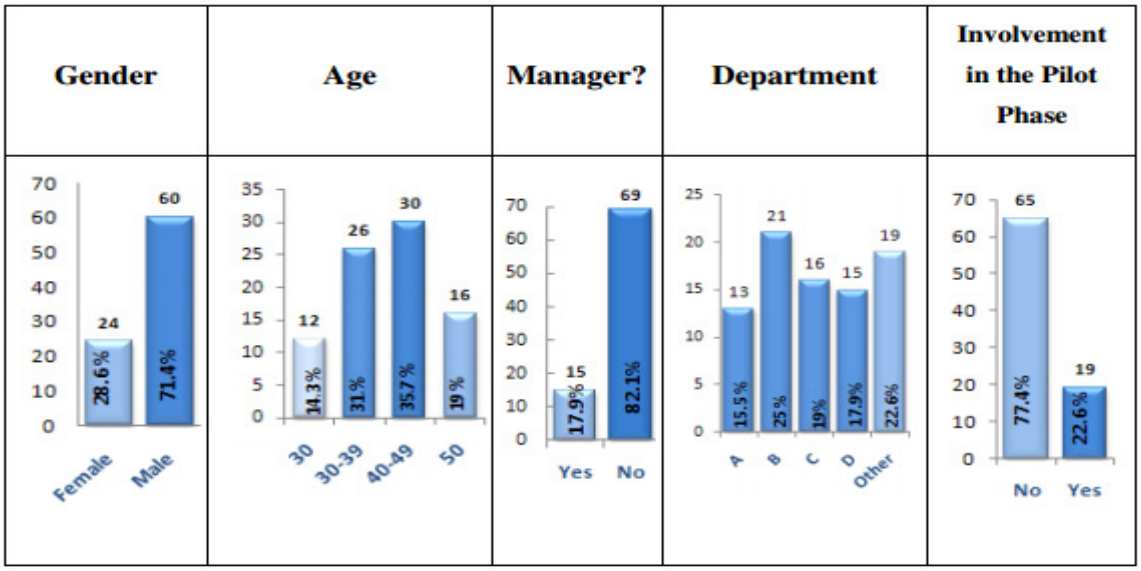

Figure 5.1: Results Showing Demographic information Base on Gender, Age, Position, Department and Project phase involvement.

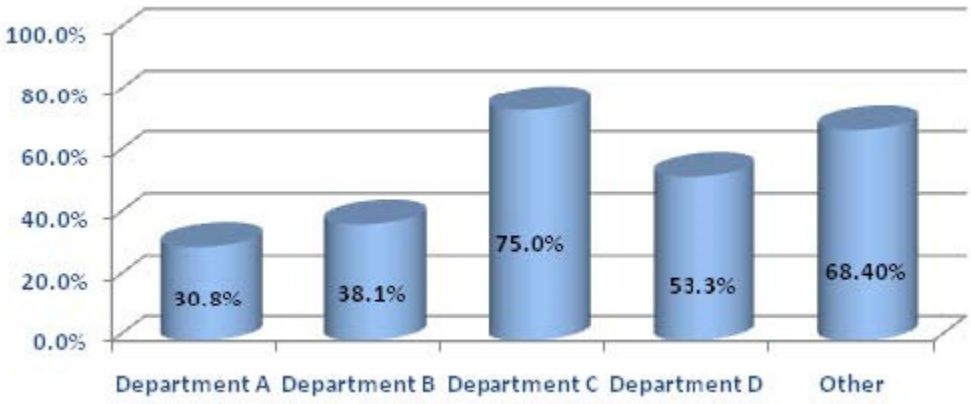

Figure 5.2: Chart Showing Percentage of the SPDC-SAP Users' Awareness of the Project Based on departments.

Also, majority of the respondents percentage (71.4%) of male staff were from four key departments which are: HSE Department 'A' (30.8%), Commercial and Public Relations Department 'B' (38.1%), Admin and Accounts Department 'C' (75.0%), Technical and Operations Department 'D' (53.3%) and other Department (68.4%). Only 22.6% of the respondents had been involved in the ERP development pilot phase of the project. 35.7% of the largest group were between ages 40 and 59 years. Users' response concerning awareness of the project from Table 1 indicates that: 38.1 % intend to use the system for performing their job as often as they need to as they strongly agree, 15.5 % agree that the change can enhance their career while 13.1% did not agree.

Table 1: Showing Frequency and Percentage of the Project Awareness:

	Awareness of the project		Informed about the progress*		Knowing impact of change*		Knowing what is expected*	
	#	%	#	%	#	%	#	%
Strongly Disagree	13	15.5	12	26.7	11	24.4	11	24.4
Disagree	11	13.1	12	26.7	14	31.1	13	28.9
Neutral	15	17.9	12	26.7	8	17.8	11	24.4
Agree	13	15.5	6	13.3	10	22.2	5	11.1
Strongly Agree	32	38.1	3	6.7	2	4.4	5	11.1
Total	84	100 %	45	100%	45	100 %	45	100 %

Results are obtained using the data provided by participant who are aware of the project: # frequency, %: percentage.

Table 2: Evaluation of respondents answers with respect to Tools and Methodology.

	Effective usage of project man.		Understanding and ability to use		Understanding the impact of change		Effectiveness in resource management	
	#	%	#	%	#	%	#	%
Very Low	1	8.3	1	8.3	1	8.3	3	25.0
Low	3	25.0	2	16.7	1	8.3	1	8.3
Medium	5	41.7	1	8.3	5	41.7	4	33.3
High	2	16.7	6	50.0	4	33.3	2	16.7
Very High	0	0	2	16.7	1	8.3	0	0
Total	11	91.7	12	100.0	12	100.0	10	83.3
Missing	1	8.3	1	8.3	1	8.3	2	16.7

Table 2 shows the users' response to the implementation of the new ERP system. From the employees who had not got any training, did not have experience with SPDC-SAP and were not involved in the project only 25.0% believed that they can use the software if enough training is provided. On the other hand, from the users who had been involved in the pilot, or had experience with the project or received training; 50.0% agreed that they can use the software if enough training is provided.

6. CONCLUSION

Strong organizational change is a difficult process, most often, I.T related projects like ERP implementation do not always materialise as planned in most cases it is not possible to manage change using a streamline step of change management process. In some projects it is easy to lay down steps to follow in the project management, but when it involves ERP project development and implementation because people (developer and users) are involved and serious effort need to be put in place for critical factors: proper communication between the system developers, users' awareness of the project and training to reach success.

The main objective of this work was to focus on important factors that pertain to managing SPDC SAP ERP implementation project. Three main aspects were covered by our research questions, these are: process, users' approach to the system and key success factors of the ERP implementation.

- In the SPD-SAP ERP project implementation, it is important to create awareness of the and informed users of the project existence during an early change management process
- Feasible information should be made available to the ERP system users about the benefits and possible constraints of the system.
- The change management process should cover both technical and non technical aspects of the user organization, example: communication, motivation, commitment, information sharing, users trust issue of psychology, change management team and leadership.

REFERENCES

1. Abdinnour-Helm, S., Lengnick-Hall, M. L. and Lengnick-Hall, C. A. (2003): Pre-Implementation attitudes and organizational readiness for implementing an ERP system. European Journal of Operational Research, Vol. 146, pp. 258-273.
2. Aladwani, A. M. (2001): Change management: Strategies for successful Enterprise Resource Planing Implementation. Business Process Management Journal, Vol. 7, No. 3, pp. 266-275.
3. Al-Mashari, M. and Zairi, M. (2000): Information and business process equality: the case of SAP R/3 implementation. The Electronic Journal on Information Systems in Developing Countries, Vol. 2, No. 4, pp. 1-15.
4. Beer, M. and Eisenstat, R. A. (1996): Developing an organization capable of implementing strategy and learning. Human Relations, Vol.49, No. 5, May 1996, pp. 597-620.
5. Beer, M., Eisenstat, R. A. and Spector, B. (1990): Why Change Programs Don't Produce Change. Harvard Business Review, Vol. 68, No. 6, November-December 1990, pp. 158-166.
6. Biggam, J. (2008): Succeeding with Your Masters Dissertation: Practical Step by Step Handbook. Open University Press, England.
7. Bingi, P., Sharma, M. K. and Godla, J. K. (1999): Critical issues affecting implementation of ERP System. Information System Management, Vol. 16, No. 3, pp. 7-15.
8. Bridges, W. (2016): Managing organizational transitions. Organizational Dynamics, Vol. 15, pp. 24-33.
9. Buchanan, D. and Badham, R. (1999): Power, Politics, and Organizational Change: Winning the Turf Game. Sage Publications, London.
10. Burke, W. W. and Litwin, G. H. (1992): Causal model of organizational performance and change. Journal of Management, Vol. 18, No. 3, pp. 523-545.
11. Burke, W. W. (2012): Organization Change: Theory and practice. Sage Publications, Thousand Oaks.
12. Cameron, E. and Green, M. (2004): Change Management Makin Sense: A Guide to the Model, Tools and Techniques of Organizational Change. Kogan Page Limited, Great Britain.
13. Carter, E. (2008): Successful Change management. The Journal for Quality and Participation, Vol. 31, No. 1, Spring 2008, pp. 20-23.
14. Carter, L., Ulrich, D and Goldsmith, M. (2005): Organizational Practices in Leadership Development and Organization Change: How the Best Companies Ensure Meaningful Change and Sustainable Leadership. John Wiley & Sons, San Francisco.
15. Clarke, A. and Garside, J. (1997): Development of best practice model for change management. European Management Journal, Vol. 15, No. 5, October 1997, pp. 537-545.

16. Clarke, A. and Manton, S. (1997): Benchmarking tool for change management Processs. Business Process Management Journal, Vol. 3, No. 3, pp. 248-255.
17. Davenport, T.H. (2014): Enterprise system. Harvard Business Review, July-August 2014, pp. 121-31.
18. Dunphy D. C. and Stace D. A. (2014): Transformational and Coercive Strategies for Planned Organisational Change: Beyond the OD Model.Organization Studies, Vol. 9, No. 3, pp. 317-334.
19. Dong, L. (2001): Modeling top management influence on ES implementation. Business Process Management Journal, Vol. 7, No. 3, pp. 243-250.
20. Del Val, M.P. and Fuentes, C.M. (2003): Resistance to change: a literature review and empirical study. Management Decision, Vol. 41, No. 2, pp. 148-155.
21. Dillard, J., and Yuthas, K., (2016): Enterprise Resource planning systems and communicative action. Critical Perspectives on Accounting, 17(2), 202-223.
22. Ehie, I., and Madsen, M. (2015): Identifying critical issues in ERP implementation. Computers in Industry, 56(6), 545-557
23. Easterbrook, S., et al., (2016). Selecting empirical methods for software engineering research. In: Shull, F., Singer, J., and Sjøberg, D.I.K., eds. Guide to advanced empirical software engineering. London: Springer, 285–301
24. Galoppin, L. and Caems,S. (2007): Managing Organizational Change during SAP Implementations. Sap Press, Bonn.
25. Goesun, S., (2013): Challenges in Implementing Enterprise Resource Planning System in Large Organization: Similarities and Differences between Corporate and University Environment. MBA thesis, pp. 17-21.
26. Hall, R. (2002): Enterprise resource planning systems and organizational change: Transforming work organization?. Strategic Change, Vol. 11, August 2002, pp. 263- 270.
27. Hall, R. (2016): Organizational data management using Enterprise resource planning systems: Transforming work organization?. *Strategic Change*, Vol. 14, June 2016, pp. 79 - 91
28. Hayes, J. (2007): The Theory and Practice of Change Management. 2nd edn. Palgrave Macmillan, Basingstoke.
29. Henry, J. W. (1994): Resistance to Computer-based Technology in the Workplace Causes and Solutions. Executive Development, Vol. 7, No. 1, pp. 20-23.
30. Hiatt, J. M. and Creasey, T. J. (2003): Change Management: The people side of Change. Prosci Research, Loveland, Colorado, USA.
31. Jarrar, Y.F., AL-Mudimigh, A. and Zairi, M. (2000): ERP implementation critical success factors-the role and impact of business process management. ICMIT'00, Vol. 2, pp. 122- 127.
32. Lines, R., Selart, M., Espedal, B. and Johansen, S.T. (2005): The production of trust during organizational change. Journal of Change Management, Vol. 5, No. 2, June 2005, pp. 221-245.
33. Nagy, S. and Biber, H. (2010): Mixed Methods Research: Merging Theory with Practice. Guilford Press, NY.
34. Osarorsee, E. O., (2014): The Effect of Corporate Social Responsibility on the Performance of Oil Multinational Corporation. Masters Thesis for the Award of MBA in Management.
35. Poole, M. S. and Van de Ven, A. H. (2004): Handbook of organizational change and innovation. Oxford University Press, New York.
36. Pugh, L. (2007): Change Management in Information Services. Ashgate Publishing Limited, Aldershot.
37. Rudestman, K and Newton, R., (2007): Surviving Your dissertation: A comprehensive Guide to Content and Process. 3rd edn. Sage Publications, Thousand Oaks.
38. Self, D. R. and Schraeder, M. (2009): Enhancing the success of organizational change: Matching readiness strategies with sources of resistance. Leadership & Org Development Journal, Vol.30, No. 2, pp. 167-182.
39. Stratman, J. and Roth, A. (1999), Enterprise Resource Planning Competence: A Model Propositions and Pre-test, Design-Stage Scale Development, 30th DSI Proceedings, 20-23 November, pp. 199-201.
40. Siau, K. (2004). Enterprise resource planning (ERP), Implementation methodologies. Journal of Database Management, 15(1), i-vi.
41. Schwab, D. P. (2005): Research Methods for Organizational Studies. 2nd Edn. Lawrence Erlbaum Associates, New Jersey.
42. Servim, G., (2010): Change Management Model: Case Study of SAP Implementation in a Major Company. Masters Thesis.
43. Yin, R.K., (2013). Case study research: Design and methodologies. 3rd ed. CA, USA: Sage Publications.