AN ASSESSMENT OF BUSINESS PROCESS REENGINEERING IMPLEMENTATION IN WATER WORKS CONSTRUCTION ENTERPRISE

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An Assessment of Business Process Reengineering Implementation in Water Works Construction Enterprise

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CHAPTER ONE

1. INTRODUCTION

The Water Works Construction Enterprise (WWCE) is a state owned enterprise under the Ministry of Water Resources and Energy of the Federal Democratic Republic of Ethiopia. The enterprise's mission is to deliver quality, effective, and efficient services to its customers in the construction of dams, irrigation and drainage networks, water supply and sewerage networks, construction of roads and buildings, land reclamation, river diversions, deep well drillings, hydro power plants, and to manufacture and distribute different kinds of pipes necessary for its activities. WWCE's vision is to become a leading preferred construction enterprise in East Africa, especially in dam and irrigation development, hydropower construction, dry port, road and other construction activities by 2022.

Over the past eight decades, WWCE has evolved through many forms of organizational structure. In the late 1940s Water Resource Agency was established under the then Ministry of Public Works of the Ethiopian government and in the 1950s, with America's 'Point Four' aid program, rural water development operation was set up to drill water wells in rural areas. Under the same aid program the Blue Nile Basin study was initiated and a hydrology section was established as second area of the water sector. The rural water well drilling section of the agency, with few drilling machines, was carrying out water well drilling activities in the rural areas of the country while the hydrology section was conducting river basin studies.

From 1975 to 1994 the organization went through a series of reorganizations under government ministries and commission. In1994 when state owned enterprises were reorganized, the task of rural water supply was delegated to Regional Governments, and the Water Works Constructions Enterprise (WWCE) was re-established as a state-owned major construction enterprise. Since its establishment, WWCE has been operating as an autonomous public enterprise, in a market oriented economic environment.

As a state owned enterprise, WWCE's main client has been primarily the federal government and most of the projects so far have been on water diversion and irrigation development, dam construction, and construction of supporting infrastructure. Ethiopia, with a total area of about 1.13 million km², has an estimated 55 million hectare of arable land with 10 million hectare suitable for irrigation (Ministry of Water Resources, 2002). Not surprisingly, the

Ethiopian government has made water resource development strategy as one of the key components of its development strategy, which has meant the development of irrigation dams and utilization of underground water, among other things. To this end, the Ministry of Water Resources and Energy, for instance, has identified 560 irrigation potential sites on the major river basins which puts the total potential irrigable land in Ethiopia to 3.7 million hectares, as part of Ethiopia's water resource development strategy. The Government of Ethiopia has also put a plan to double the land under irrigation from 200,000 hectares in 2002 to more than 400,000 hectares by 2016 (Ministry of Water Resources, 2002). The government has backed up its plan with considerable resource to irrigation and hydropower dams over the past two decades, which has expanded the demand for construction services several folds. As a result, WWCE's operation has expanded several folds primarily due to the growing number of government projects of irrigation and land reclamation, dams, inland ports, and roads. Between 2002 and 2012 fiscal years, for instance, the enterprise's employees have increased by eight fold, from 1206 to 9669 permanent and contract employees. Similarly the enterprise's **budget** has grown from a mere 10 million birr fiscal year budget in 2002 to more than 3 billion birr in 2012. Currently, the enterprise has deployed more than 400 different kinds of construction machineries on its project sites.

Among the enterprise's major on-going projects are the Tendho and Kesem dam and irrigation development projectsunder construction at cost of 5.4 billion birr to irrigate 80,000 hectares of land; the Ribb dam and irrigation development project under construction at a cost of 1.4 billion birr to enable local farmers irrigate 20,000 hectares of land; the Gidabo dam and irrigation development project under construction to enable local farmers develop 11,000 hectares through; and the Kuraz sugar development and Omo river diversion projects. Recently, the enterprise has completed Semera Dry port, Mojo Dry port, and Fincha sugary factory expansion project.

The increasing investment in construction has been accompanied by growing demand from customers for better **quality, efficiency,** and **effectiveness** in the delivery of construction services. A recent example of such demand was when foreign financers had to put additional conditions in one of WWCE's water supply projects, the Gefersa Water Supply Rehabilitation Project, conditions that were not in the initial bid document. Although WWCE won the bid, the European Union, the financer of the project, demanded that WWCE meet ISO and other internationally accepted standard requirements.

WWCE has the biggest market share in the construction of irrigation dams and deep well water drilling in Ethiopia which makes it one of the leaders in the construction industry in Ethiopia. The vision of WWCE is to become a leading preferred construction enterprise in East Africa, especially in dam and irrigation development, hydropower construction, dry port, road and other construction activities by 2022.

Currently, WWCE is managed by board of management and its day to day operations are managed by a chief executive officer (Annex I). The board is composed of the Minister of Water, Irrigation and Energy,Board Chairman; with Special Advisor to the President; Director of National Lottery Administration; State Minister of Government Finance Administration Control in the Ministry of Finance; Bureau Head of Oromya Water, Mineral and Energy; and Director of Water Supply Sanitation Directorate serving as members.

Boards Authority and Responsibility as defined by Proclamation No. 25/1992 include:

- Make decisions on all policy matters with the exception that has to be presented to the supervisory Authority.
- Hire the enterprises' General Manager, and setting the manager's salary and allowances.
- Approve the hiring, placement and termination of management members under the direct supervision of the general manager, as well as approving their salaries and allowances.
- Approve long and short term plans, budgets, and internal bylaw of the enterprise.
- Approve long term loans and credits of the enterprise.
- Approve the sales of less important resources of the enterprise
- Oversee the accounts and resources of the enterprise
- Present Auditor's financial reports and performance reports to the supervisory authority of the enterprise,
- Propose the increase or decrease of the enterprises' capital.
- Develop an integrated result oriented business process policy.

Thus, the board has a broad range of decision making authority over the enterprise's over all activities and future plans. The board is supposed to hold regular meetings once a month, to oversee the performance of the organization.

The day to day operations of WWCE is managed by the top management of the enterprise with the leadership of the chief executive officer, two deputy executive officers, and ten business processes listed below:

1. Planning, monitoring and Evaluation market promotion process,
2. Communication Affairs process,
3. Informant Technology process,
4. Legal Service Process
5. Corporate Ethics & Grievance Process
6. Change Management Process seen on the organizational structure.
7. Supply & Property Administration Process
8. Finance Process
9. Human Resource Management & Development Process /executive officer/ and
10. Construction Core process

The chief executive officer runs the organization and works as the bridge between the board of management and the organization.

With the expanding market share, the rising number of employees, the variety of machineries and equipment deployed WWCE has been increasingly faced with organizational, managerial, and technical challenges in managing and completing mega projects in the water development sector. The problem has been compounded by the enterprise's inadequate information technology (IT) infrastructure and minimal use of IT in its business processes. Currently, WWCE does not have a web site, it does not have intranet for internal communication among management and employees, and it does not have email services. WWCE collects its daily, weekly and monthly report through radio messages or by means of fax. There are few projects that have started to send reports via email messages.

The study, design, and implementation of Business Process Reengineering has been carried out at WWCE over the past seven years to enhance the organization's competitiveness in order to become the leader in the water resources development sector. The author, will examine the BPR implementation at WWCE and the success or failure factors attributable the organizations BPR implementation experience.

1.1. Background of the study

The WWCE has embarked to bring about performance change through business process reengineering (BPR) since 2006. The decision to go through BPR was initiated by the board of management of WWCE in line with government's policy and direction to improve civil service through Business process reengineering (BPR). Furthermore, BPR was viewed as necessary for WWCE because previously the organization had attempted to apply Process Improvement to bring about change without success. The stated goals of WWCE in introducing BPR were expanding its capacity to handle complex projects; shortening delivery time of projects; and increasing its market share in the construction industry in Ethiopia.

Before the start of study to implement BPR, training was given to WWCE's management and to those who were going to serve as team members in the study and implementation of BPR. The trainees were selected by the top management and by department heads of the Business Improvement. Through an open bid process to hire consultants Pro-impact, a local consulting firm, won the contact to guide the BPR team in the study and design of BPR. Payment for the consulting services was to be paid in three phases: first instalment when the consultants produce the "*AS IS*" document; second instalment when the "*TO BE*" document was produced; and third and final instalment when the BPR designing phase is completed and ready for implementation. A core process team was formed from those who took the training and the study was launched in late 2006. During the course of the study and design of BPR, the BPR study team with the guidance of the consultants tried to apply almost all the BPR principles and methodologies. The team started by addressing the question of why BPR study was needed, analysed the *AS IS* work process of the organization, and at the designing stage the *TO BE* work process was developed. Few positions were eliminated, while new management positions were introduced in the management structure.

The study and the design of the new process had taken several turns before it was finally introduced in 2009, at the insistence of the board of management. During the course of the study the deputy general manager who was providing support and leadership for the study team and the department head of public relations and business development, who was in charge of documenting the study process, left WWC leaving the BPR study without anyone in charge.

Before the full scale implementation of the new design, **a pilot test was supposed to be carried out** to make sure that new work process design works smoothly and to make any

corrections that would arise during the pilot test. This phase was, however, skipped and in December 2009, BPR was officially introduced at WWCE directly, primarily in response to the board's pressure. At the start of the implementation of the new business process the general manager of WWCE, who had led the organization for many years left the organization and the team leader of the core process study team who has been key in documenting the new process to be introduced retired due to age.

Beyond such turnovers and change of personnel at the middle of the course, the biggest challenge of all to the study and implementation of BPR at WWCE was the lack of commitment on the part of the top management of the organization. In spite of some attempts by the Board of Management to put their weight behind the study and implementation, the top management failed to play a leading role at all stages. The author believes the reason behind such reluctance to support were two fold. First, as the push to implement came from the party in power, through the board of management, many top management members at WWCE who were not members of the ruling party (EPRDF), viewed the study and implementation of BPR as a clear threat to their position. As a result, the very management that was supposed to lead and undertake the initiative was absent. Consequently the role of top management in leading the consultants and the study team to conduct the study and the design of the new work process were left to their own device. The only follow up that was coming was from the Board of Management which as few and far between. The second reason was related to the age factor. Among the principles of BPR is that the top management who leads the BPR study and implementation should be young, energetic and ready for change. In the case of WWCE, however, the general manager was close to retirement age and the members of the team he chose to participate in the study, design, and implementation were either those who were viewed as professionally incompetent or those who did not want the change to take place.

So whenever the Board of Management asked about the status and progress of the study and design of the BPR, it was the consultants who reported directly to the Board of Management, while the top management at WWCE stayed on the side. To make matters worse, the core team leader who was leading the core team during the study and design of BPR retired just six months after the BPR implementation begun.

Recent BPR implementation documents of WWCE also show that there was gap of knowledge among employees about the changes that were designed to take place in the

organization. Employees were not properly communicated or oriented before hand to create awareness and ownership of the project. Furthermore, the documents show that the management did not sell the vision of the change process effectively to its employees to make them embrace the new process. The whole project of BPR study and implementation has, therefore, been to a bumpy start resulting in a series of changes of the course of BPR implementation at WWCE.

Implementation of BPR started with replacing the function oriented organizational structure to process oriented three layer organic structure. The new business process of organization was reorganized from departments to process units (Annex I) based on the BPR study. This was followed by the assignment of executive officer and process managers. In order to oversee the implementation of the newly designed work process and to measure its performance a new department was created within WWCE. At the middle of the implementation process, training was given to the core process team on Balanced Score-Card (BSC) in order to orient them how to measure the performance of the newly designed work process.

Once the new business process was set in place, among the problems experienced were the absence of new working manuals consistent with the new business process, and out-dated collective agreement which meant applying old working manuals and procedures to the newly applied business processes. These and related problems made the transition from the old function oriented organizational structure to the new one confusing at best. Based on the impact of BPR on the organization's performance so far, the author believes that the efforts put and the resources deployed to the study, design and implementation of BPR has so far been minimal at best. While the management did not officially abandoned the implementation of BPR, it can be argued that WWCE has failed in bringing the desired change through BPR.

While all public institutions in Ethiopia have embarked on BPR projects, there are few researches on how successfully BPRs have been implemented. Among those available, experiences of successful BPR implementation suggest that change management needs to be well underway by the time the new process is ready to be implemented (GAO, 1997). On the other hand, if change management is delayed, it is argued that building support and momentum among the staff for implementing the new process would become difficult, however good the new process might be.

Over the past seven years, planning, designing, and implementing changes through business process reengineering (BPR) at the WWCE has remained to be a major challenge and priority to its management. This research examines how WWCE applied business process reengineering and sheds light on some of the problems as related to BPR implementation plan and managements' commitment to and ownership of the new process. While WWCE has spent considerable time as well as financial and technical resources to bring about organizational change through BPR, the impact of the new process in terms of achieving its intended goals are mixed at best. In conducting this research, the author will aims to examine **why BPR implementation was not as successful** at WWCE by taking stalk of the range of activities undertaken by the organization to implement BPR vis-à-vis what are considered as the norms success factors to ensure a reasonable transition to the new process. In this regard the author will give special emphasis to the issues of management of human and technical issues surrounding the implementation of the new process.

1.2 Statement of the Problem

Several researchers on organizational change have written about the importance of business process re-engineering (BPR) as a change management tool for business organizations to bring about efficiency and effectiveness in producing or delivering goods or services to their customers. Since the 1990s, BPR~~m~~, as a management tool, had attracted wide popularity among progressive firms as response to the changing economic environment and to the growing internal external competition around the world. Such transformation was claimed to bring about increased profitability and competitiveness. A study by Ranganathana and Dhaliwal (2001), for instance, showed that about 87% of firms surveyed at the time were either engaged in BPR projects, or indicated their intention to take up BPR projects in the next few years.

This research aims to examine **how WWCE attempted to implement organizational change through BPR and whether or not the desired changes have been materialized.** The research emphasises on examining the range of activities that needed to be performed to bring about organizational change vis-à-vis what have been performed. By identifying the gaps between the BPR implementation sequencings as suggested by Evans and others and the actual steps followed by WWCE's management, the author aims to provide case study as

to why implementing business process reengineering in the Ethiopian public sector context may be a challenge.

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~~The impacts of implementing BPR on employees……..~~

~~The success of BPR implementation is dependent on how clear the study of Business Process was done in the AS-IS stage, the DESIGNesign stage and TO-BE stage of the study. The researcher will try to assess the BPR study andthe problems encountered inimplementing itin Water Works Construction Enterprises. In this respect the task ofT the following questions will project will be addressed in this project.the Issues:~~

~~What process does it took on the study?~~

~~How long did the study taketo complete?to finish BPR study.~~

~~Where the resources made available?to the study available.~~

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~~The impacts of implementing BPR on employees……..~~

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~~Where the resources made available?to the study available.~~

~~What w as the Role of the Top Management in the study of process of the BPR study and its implementationimplementation phase?~~Basic Research Questions

Many organizations have tried to implement BPR to bring about a breakthrough organizational transformation and Water Works Construction Enterprise (WWCE)is one of

such organizations in Ethiopia. It has hired external consultants; deployed managerial, human, and financial resources to implement BPR with the goal of expanding its capacity to handle complex projects, shortening delivery time of projects, and increasing its domestic market share. While external consultants play catalytic role in the design and implementation of BPR, leadership commitment in managing change, culture and communicating of the new system to employees are critical success factors (GAO, 1997, Al-Mashari and Zairi (1999).

The researcher aims to explore how WWCE managed the process of BPR implementation with particular emphasis on the steps taken to make the employees of WWCE own the new process and to address the adverse effects of the process on employees in order to achieve the desired goals. To this end the researcher will investigate on whether there was an implementation plan; whether the BPR implementation was accompanied by change management plan; and whether the top management of the organization was addressing change management issues.

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~~Objective of the study~~

~~The general objective of the study is to assessimplementation of PBR in public enterprisesBPR. It will critically evaluate the process of BPR Study and its implementation in water works construction enterprise.~~Objective of the Study

The success of BPR depends on several factors among which a well thought out implementation plan is one. This study aims to examine WWCE's BPR implementation plan in the light of a generally accepted processes and standards of BPR implementation plan. Based on the findings, this study would provide a case study of how BPR implementation plan or the lack of it can affect the success or failure of BPR in bringing about the desired changed in an organization.

1.4.1

The specific objectives ~~of the study~~ are to:

- To investigate whether BPR implementation at WWCE was accompanied by change management plan

- To investigate whether the organizations' executives addressed change management issues such as employee's readiness, knowledge and skill while implementing the new process.
- To examine whether a new business process has been implemented and if the new process is achieving the desired results in terms of delivery time, quality service and ensuring customer satisfaction.

1.5 Significance of ~~Redesign WWCE's core business process and support business process to achieve a paradigm shift in the performance of co t, quality, service, and speed (timely accomplishment of projects.) Determine how the enterprise must do its bus ness profitably and efficiently. Indicate ways and means how to bring radical improvements of se vice arrangement, workflow, process and systems. Identify jobs tha is relevant and compatible with the new thinking of the reengineering output Redesign organizational structure that meets its current strategy. Design a pay system that fits the unique aspects of the organization i s human resources and enable WWCE to attract and retains qualified staffs. Re~~

~~3 esign working manuals of different departments of the organization~~

~~4~~

~~The stated goals of the management when introduced the implementation of BPR To construc~~

~~5 6 large scale multipurpose dams during the 2007-2011, To st rt collection of investment costs at l~~

~~1. ast from 2 irrigation dams in the year 2009.~~

~~2. xpand the market share by 5% every year during 2007 – 2010, The level~~

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~~3. of involvement of management~~
~~Allocation~~

~~4. f resources i.e. budget assigned,~~
~~study teams formed as one Core p~~

~~5. ocess and five support processes,~~
~~Training concer~~

~~ing BPR was facilitated,~~

~~Steering committee for BPR facility were members of top management~~

~~Formed team members were selected by top management~~

~~The involvement of employees is considered as a very little except~~

~~Rational for the study~~

~~WWCE is among the largest state owned enterprises in Ethiopia undertaking mega projects in the area of water resource development in Ethiopia. In the absence of well developed and competitive construction firms from the private sector, WWCE has a crucial role to play in creating national capacity to harness the water resources of the country for development purposes. Understanding of the various attempts by~~ ~~Rational for~~ **Study**

As an industry leader in the construction and water resources development sector, examination of how WWCE applied business process reengineering to transform itself into competitive organization can shed light ~~WWCE to transform itself into a competitive business organization and the challenges it is facing in the process can provide valuable lessons and new approaches to solve old problems. Beyond the enterprise, such a study can also be useful to understand the challenges that business organizations in general~~

~~1. and state owned enterp~~

~~ises in particular in Ethiopia would have to overcome to become competitive in today's globalized markets and economies.~~

~~Objective of the study~~

~~In today's competitive global market Business Process Reengineering (BPR) c~~

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~~anges that take place in many big companies are driven primarily by customers' demand, competition, and the changing technology and environment.~~

~~WWCE has experienced tremendous growth and change over the past two decades in particular driven by the bourgeoning public and private investment in construction sector. Such growth in demand has brought tremendous business opportunities and considerable challenges for WWCE. The demand by clients to get their projects delivered on time, the need to train and retain skilled professionals who can manage complex p~~

~~ojects, and the need to adapt to the ever changing technology in the construction sector are some of the challenges that WWCE has to cope with.~~

on whether or not BPR can be appropriate management tool to bring about a more effective and efficient of way doing business in the construction industry in Ethiopia.

Beyond the enterprise and the industry, such a study can also be useful to understand how best to implement organizational change using BPR as a management tool and the steps and sequences an organization would have to follow in state owned enterprises in Ethiopia. This study would also contribute to the knowledge of management tools to bring about organizational change in the context of Ethiopia.

~~Expected outcome of the study~~1.6. Scope of the ~~Limitation of~~Study

To make the study manageable in terms of time and other resources, the study will be limited to BPR implementationof WWCE in the Head Office and one Branch office in Addis Ababa.

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~~**The main goal of WWCE in introducing BPR has been to expand its capacity to handle c**~~

~~B. **mplex projects, to shorten delivery time of projects, and to stay competitive in its project cost management. The obj**~~

~~C. **ctive of this study is to:**~~
~~**Examine the forces behind the implementation of BPR implementation in the context of WWCE's organizational**~~

~~D. **ulture.**~~
~~**Discuss the specific methodology pursued in the implementation of BPR in WWCE out**~~

~~E. **f the several existing BPR application methodologies**~~
~~**Examine the effects of**~~

~~F. **BPR (if any) implementation on WWCE's efficiency and competitiveness.**~~
~~**Identi**~~

~~**2.** *y the challenges that WW*~~

~~**E has been faci**~~

~~**g in implementing its BPR**~~
~~**Conclude and suggest possible recommendation in light of identified problems.**~~**1.7 Limitations**

As a case study of one state owned enterprise, the findings of this research with regard to the BPR implementation would be limited to the experience of WWCE. Hence, its contribution to the theory of organizational change and would be limited. More studies would have to be undertaken to make broader generalization as to whether or not business process reengineering can be effective management tool to bring about organizational change and transformation in Ethiopia's context.

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1.8 Research Methodology

~~of the Study~~1.8.~~14.1~~ Data Source

In this study descriptive and qualitative research methodologies have been employed. Qualitative information was gathered through primary and secondary source. The Primary source included in-depth interview, group discussion and the results of structured ~~questioner~~questionnaire. Secondary data sources included WWCE TOR, BPR design documents, books, journals, and the Internet.

1.8.2 ~~4.2~~ Sampling Method

Sampling method used for this process is non-probabilistic sampling. The population of the Study is the employees

~~1.~~ of WWCE at the head office and one branch office.

1.8.3 ~~4.2~~ Data Collection and Analysis

Data was collected using self-administered questionnaire. Once the data are collected, the researcher encoded the raw data to the computer using SPSS 15. Then the data was cleaned and made decisions about missing values. ~~D~~Description of ~~ription of~~facts based on some statistical analysis and tabulation, frequency distribution and graphs are used.

~~3~~ 1.9 Organization of the Study

The study has been organized in four chapters. Chapter one presents introductory part of the study. Chapter two presents the review of related literatures. The third chapter contains the data presentation and interpretation. Finally chapter four presents the summary of the findings, conclusion and recommendation.

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CHAPTER TWO

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4 2. Literature Review

2.1. Definition of Business Process Reengineering

Hammer and Champy (1993), the authorities in BPR, define business process reengineering as "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.35). This definition contains four key components of what BPR involves.

Applying BPR as a change management tool requires organizations to think fundamentally about what they do and why they do things. Among the critical questions which should be asked by the management are "why do we do what we do?" and "why do we do things the way we do it? According to Hammer and Champy, reengineering first determines what a company or an organization must do, and then decides how to do it. Implementing BPR also requires redesigning the business process radically which means disregarding all existing structure and procedures and inventing completely new ways of accomplishing work. Hammer and Champy (1993) underscores the centrality of reinvention when they said "Reengineering is about business reinvention-not business improvement, business enhancement, or business modification"(p.36). Business process is another core concept in BPR which discards Adam Smith's notion of division of labour and specialization as applied in the form of breaking work into its simplest tasks and assigning each task to a specialist. Instead Hammer and Champy (1993) define business process as "a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer"(p.38).

The goal of reengineering, according to Hammer and Champy, is to bring about dramatic improvements in the organization's performance. Thus, reengineering should not be about "making marginal changes or incremental improvements but about achieving quantum leaps in performance"(p.36). If the goal is to bring marginal changes, what is needed would not be reengineering but fine-tuning of the existing process.

Goksoy (2012), provides various definitions attributed to academic scholars and practitioners in BPR literature. For instance, Lindsay, according to Goksoy, views BPR as a management tool, in which business processes are examined and redesigned to improve cost efficiency and service effectiveness. In the view of Doomun and Jungum, on the other hand, define BPR as an organizational initiative to fundamentally re-examine and redesign business processes with the objectives of achieving competitive breakthrough in quality, responsiveness, cost, satisfaction and other critical process performance measures. By contrast, Peter Drucker takes reengineering as a radical shift away from the tradition in which performance was primarily rewarded by advancement into managerial ranks, to a state where the future holds very few "control" positions. In the ideal, reengineering company will not have hierarchy, but the idea of purposeful value added interaction.

A related issue has to do with the definition of the term business process. Definitions of the term business process vary, although many researchers suggest that it comprises a number of interrelated activities that cut across functional boundaries in the delivery of an output (Fitzgerald and Murphy, 2004).

In spite the varying definition, at the core of the definition is BPR as an organizational approach anchored on work requirements or process. In contrast to the functional organization approach, which is based on specialization of tasks, process based approach focuses on a series of activities required to achieve an outcome or to produce goods or services. In this regard Talwar's, (1993, p.26) definition of a process as "any sequence of pre-defined activities executed to achieve a pre-specified type or a range of outcomes" captures the essence of what a process is. Under the process approach, tasks or activities which are scattered in the functional structure of an organization would be brought together. Taking a new product development case as an example, under a process approach the functions of sales, research, manufacturing, and distribution would work together to create, build, sell and transport a product. By contrast a functional organization would have handled each of these functions in isolation or with minimum communication. Thus, the success of a process centred organization would depend on the extent to which the multiple functions required to produce outcomes are functioning together.

2.2. Types of Business Processes

As there is no consensus on the definition of the what BPR is, there are no blue prints of the types of business process, which in turn leads to confusion among practitioners in particular.

Hammer and Champy (1993) in this regard provide a loose framework of how companies may identify their business processes when they said "One way to get a better handle on the process that make up a business is to give them names that express their beginning and end states. These names should imply all the work that gets done"(p.122). They further suggest creating process maps gives a picture of how work flows but leaving the details to each organization or company to determine.

Earl (1994) provides a four-strand typology of BPR projects, which helps to categorize projects as spanning core processes and support processes. These are *core processes*, *support processes*, *business network processes* and *management processes*. Core processes are those processes central to business functioning. They typically represent the primary value-chain activities and relate directly to external customers. Examples of core processes in a company would include order fulfillment processes**.** Support processes, on the other hand, are back-office processes which reinforce the core processes. They are typically secondary value-chain activities and relate more to internal customers. Among the typical examples of support process include information technology, financial systems, and human resources systems.Business network processes are the processes which extend beyond the boundaries of the organization into other organizations such as suppliers and customers. The fourth category consists of management processes, those processes through which firms plan, organize and control resources. Some of the typical activities of management process include strategy development, direction setting, and managing the organization. Earl's typology provide a better framework as they can be applied across any organization irrespective of what business it is involved in.

2.3. BPR Methodologies

The central issue in business process reengineering is the question of "how" to do it. While literature on discussions about the merits of BPR or the failures of BPR abound, the author noted that there are no generally accepted methodology on how to implement the reengineering of the business. Evans (1993), for instance, proposed a four- steps approach to business process reengineering. According to Evans, the first stage should be "To Be" stage, a phase when the vision of where the organisation wants to be and what it requires of its business processes as a consequence are defined. The second phase would be the "As Is" stage where the current business processes are defined. The third phase, "The Plan" stage

would involve making a plan to accomplish the move from the 'as is' stage to the 'to be' stage. The fourth phase would be “The Crossing” stage which is concerned with implementing the plan.

Fitzgerald and Murphy (1995), on the other hand, argued that trying to build a vision of the future process before understanding the current process is problematic as one has to understand the process before considering to redesigning it. Thus, they reject Evans’ idea of developing a vision of the reengineered process before understanding the current process. Instead, the authors adapted a seven step structured approach to devise their BPR methodology which is expressed as a series of phases, each of which addresses a basic question with regard to the direction and process of BPR implementation. These are:

1. Selecting process or processes to be reengineered to address the basic question of where to start the reengineering.
2. Establishing a process team to undertake the task of reengineering the process.
3. Understanding the current process to address the question "Where do our stakeholders see us now?"
4. Developing a vision of the improved process consistent with the direction that the stakeholders want to see the organization moving.
5. Defining the new logical model of the process and identifying the actions needed to move to the new process.
6. Establishing the new physical process model.
7. Negotiate/execute a plan to accomplish.

Although the above phases are presented as linear steps, Fitzgerald and Murphy (1995) underscore that a central tenet of the strategy is that it is based on an iterative approach. At any stage, it is permissible and may be desirable to revert to a previous stage for further refinement.

Hammer and Champy suggest a six step methodologyfor BPR, starting the first step with the *introduction into business reengineering*, a stage where the case for reengineering is communicated and the vision for the future is set. By presenting the organization’s business problems and the current situation this stage creates the justification for the need for change. The next phase would be *identification of business processes.* During this phase, the most important business processes are identified and are described from a global perspective using

a set of process maps. From this exercise, a number of process maps which reflect how these high-level processes interact within the company and in relation to the outside world are produced. The third stage would be the *selection of business processes* which need to be redesigned. Criteria for selecting processes for redesign would include factors such as whether a process contributes to the organisation's strategic direction, whether it has an impact on customer's satisfaction etc. At the fourth stage the reengineering team needs to gain a better *understanding of the existing selected processes*, what they do, how well or how poorly they perform, and the critical issues that govern their performance. Only after gaining fully understanding those selected processes can the reengineering team should proceed to the redesigning process. The fifth stage is where the task of *redesigning of the selected business processes* is performed. As the new rules and new ways of work should be invented at this stage, this step is the most creative phase of the methodology, and imagination and inductive thinking should characterise this phase. The final stage is the *implementation of redesigned business processes* which covers the implementation phase of the BPR project. Hammer/ Champy do not talk about implementation as much about project planning. They believe that the success of the implementation depends on whether the five preliminary phases have been properly performed.

Another commonly applied BPR methodology is the Process Reengineering Life Cycle (PRLC) which consists of six stages (Guha et.al.,1993): envisioning new processes, initiating change, process diagnosis, process redesign, reconstruction and process monitoring.

Envisioning new processes. The organization's leaders start with an examination of how they would run their business without any constraints whatsoever. This process does not address the question of how current work can be improved, but how it should be done to achieve maximum performance in all measures. This stage even involves the aspect of aligning the reengineering effort with the corporate strategies and organizational goals.

Initiating change. In this stage, the reengineering project is prepared for performance. The reengineering team is assembled from a multiplicity of units within the organization and external change agents are, if necessary, allocated to the project. At the same time, the reengineering route is staked out and performance goals are defined and set.

Process diagnosis. On the basis of the performance goals to be accomplished the reengineering is able to perform an in-depth analysis of the processes to be reengineered. Existing processes are described and hidden problems are uncovered. This stage is critical for the further success of the reengineering efforts due to its importance to process redesign.

Process redesign. Several dimensions are available as measures for redesigning business processes, as there are time, cost, productivity, quality and capital commitment. Using a single dimensional approach would lead to suboptimization of processes, so a consideration of multiple dimensions is to be used. However, some of the performance measures are concurrent, a fact that requires the definition of preferences.

Reconstruction. This stage includes implementing change and anchoring it in the organization and addresses the organization's ability of adopting change. Failure during change implementation may result in costly project failure and erosion of employees' confidence.

Process monitoring. The identified and implemented processes have to be monitored in continuous process in order to scan their performance and contribution to quality improvement. This is made possible by an iterational process, in which the new process are used as input to stage 3 (diagnosis) of the methodology, and then being "looped". This includes that reengineering projects are not handled in the conventional way of being initiated, performed and finished, but rather as an ongoing process of permanent improvement.

Unlike the Hammer and Champy's methodology, the Process Reengineering Life Cycle methodology views that reengineering the process is rather a continuous process in which inputs from the new processes are being used to diagnose previously undetected problems and to improves the process.

The methodologies developed by various consulting firms share, several commonalities. As Simon, K (2003) pointed out they all contain the phases of Initiation, Analysis, Design, Implementation and Deployment. However, each firm adds specific elements to the general concept. For instance, Simon (2003) compared Andersen Consulting's BPR methodology with that of McKinsey & Company and found two key areas of difference. McKinsey, uses pilot approach, where the new processes are tested in a laboratory environment before full implementation. This business simulation is used for verifying the process prototype against

the defined performance objectives. By contrast Andersen Consulting has a strong emphasis on technology from the diagnostic phase, i.e. that the current IT-infrastructure and the applications in use are analyzed concurrently to the business processes (pp. 72-73).

While there are commonalities in the all the methodologies discussed above and others, the absence of standard methodology based on a common framework that ensures success in reengineering projects can still have significant impact on the success or failure of BPR projects. In this regard, Tsalgatidou (1995) rightly states that while there exist a large number of BPR methodologies, none of which is a panacea and the challenge in structuring a BPR project is to select the approach that is best suited to the situation in hand, taking into account organisation objectives, capabilities and economic or competitive requirements. Stating the importance of methodology, Tsalgatidou, has put it in the following way:

> …the selection of the right methodology that meets the needs of the project and is understood and supported by the project team is very important. A BPR methodology sets the framework for the undertaking of a BPR effort. It is used to support related activities to reengineering such as: the definition of the project boundaries, the selection of the right people to empower the BPR team, the definition of a project manager, the selection, definition and analysis of the business processes that are candidates for reengineering and so on (p.)

The fact that there is no generally accepted methodology can compound the challenge of implementing BPR projects to an already challenging endeavour. In this regard Reijersa and Mansarb (2005) identify two categorises of challenges in implementing BPR: technical challenge to develop a process design that is a radical improvement of the current design; and socio-cultural challenge resulting from the severe organizational effects on the involved people. In this regard, it should be pointed out that among the criticisms levelled against BPR, its lack of human dimension is at the center.

2.4. Success factors

Experiences of many organizations over the years are filled with many failed or abandoned BPR projects. Not surprisingly, BPR has been viewed by many as a failure in bringing needed transformation in organizations in a sustainable way. For BPR projects to succeed, it is argued that certain conditions need to be in place within the organization. Paper and Chang (2005), for instance contend that "**The working environment** of any organization permeates everything people do… and top management must cultivate an environment conducive to change to make BPR work" (p.125). In this regard the authors go further to argue that for

BPR to succeed five success factors need to be in place: the environment success factor, people success factor, methodology success factor, the change vision success factor, and the IT perspective success factor. According to Paper and Chang, while these factors overlap and they are interdependent the change vision is the blueprint that provides direction for successful BPR.

Management's commitment is yet another critical factor since some of the biggest obstacles that reengineering faces are lack of sustained management commitment and leadership; unrealistic scope and expectations; and resistance to change (Malhotra, 1998). Resistance from key persons who would be affected by a BPR effort is rated as primary reason for BPR's failure (Hammer and Champy, 1993). Davenport, one of the early proponents of BPR for instance has admitted that in implementing BPR effects of re-engineering on employees has been overlooked. Successful implementation, thus, requires a cautious handling with regards to implementation plan, the people and the politics (Linden, 1994). Kotter (1996), also argues that employee's ownership of the organization's clearly stated vision of change as key element in BPR's success. Ownership of the vision, according to Kotter and others, avoid skepticism and resistance to change among members of the organization. **Leadership's commitment** is yet another decisive element in the process of reengineering as it assures necessary follow up and allocation of resource for the reengineering of the business process. As a whole a number of authors underscore the need for paying due attention to the human factor for BPR to succeed. Furthermore, introducing an organizational culture which fits the new system and creating positive thinking towards BPR are considered key ingredients for a successful BPR implementation.

Studies show that successful implementation of BPR projects can benefit an organization by increasing its productivity through reduced process time and cost, improved quality, and greater customer satisfaction. This however requires successful implementation of the change management and culture which include revision of reward systems, communication, empowerment, people involvement, training and education, creating a culture for change, stimulating receptivity of the organization to change, and setting comprehensive implementation plan are most important. Hence, **setting comprehensive implementation plan**, **addressing change management issues** and **measuring the attainment of desired results to ensure successful implementation,** as well as to avoid implementation pitfalls (Cooper and Markus, 1995; Hammer and Stanton, 1995; Carr and Johansson, 1995) are viewed as prerequisites for BPR success.

Based on a study of two Iranian companies, Abdolvand, Albandivi, and Ferdowsi (2008, 498-502) reveals that egalitarian leadership, collaborative working environment, top management commitment, change management systems(new reward systems, performance measurements, employee empowerment, timely training and education, information technology are the essential factors for BPR success. On the other hand, resistance to change that emanates from middle management's fear of losing authority, employee's fear of losing job, scepticism of project's results and feeling uncomfortable with new working environment play negative role. Ahmad, Francis and Zairi (2007,452-454) have found similar results when they assessed BPR implementation in three private higher education organizations in Malaysia.

United States General Accounting Office (GAO) has developed a guide on how to assess the implementation of BPR in government agencies. According to GAO, "Reengineering starts with a high-level assessment of the organization's mission, strategic goals, and customer needs. Basic questions are asked, such as "Does our mission need to be redefined? Are our strategic goals aligned with our mission? Who are our customers?" (1997, p. 5). According to this approach only after the organization rethinks what it should be doing, does it go on to decide how best to do it. So GAO's assessment guide agrees with Evans approach of defining the vision and mission should be the starting points of BPR of an organization.

Running a pilot process before implementing the new one is yet another factor that contributes to the successful implementation of BPR. Piloting helps identify problems and bottlenecks related to the process and helps eliminate failures which are likely to happen. This kind of trial may take time and cost much but in case of the failure of the new process the time and cost in order to amend it would be much greater (Peppard and Rowland, 1995). Similarly, Peter Keeble (1995) underscores the critical role that pilot testing plays in the redesigning and replacing of old by new ones.

> The new processes and support systems must be proven to work before full roll-out. ... The process should also be piloted. The pilot should test the process, systems and new organizational structure. It may be necessary to use legacy systems during piloting in which case the interworking with these systems, which may be counter to many of the culture of the new process, may cause difficulties. The risk of developing replacement systems before piloting may be too great depending on the nature of the process being reengineered and its reliance on support systems. Reengineering is about a change of culture as well as a change of tasks, the whole "package" must be tested (Keeble, 1995. P. 240)

Hammer and Champy (1993) recognize the importance of the human resource when they state "companies are not asset portfolios, but people working together to invent, sell and provide service." Human factor plays an important role in the daily operations, performance and consequently in the success of organizations. **No reengineering effort will succeed without first re-educating and retraining people who will ultimately work the new process.** According to Meg Whitley, "if you are going to move information and responsibility down to the low level, then the key question is how can you be sure that people will behave appropriately? You need to be sure that everyone is playing by the same rule book" (Brown, 1994). Hence, the success of BPR is closely linked to the success of human resources and human resource policies which act as an enabler for business process reengineering. The human resource enablers focus on new process skills, job motivation and human resource policies.

2.5. The Role of Information Technology in BPR

Hammer and Champy (2001) underscored the importance of information technology in implementing BPR as they contended that a company that cannot change the way it thinks about information technology cannot reengineer. However, Hammer and Champy also warn against throwing computers at existing business problem as this can block reengineering altogether by reinforcing old ways of thinking and old behavior patterns. According to Hammer and Champy, organizations should look at technology not through the lens of their existing processes but in terms of how they can exploit the latest capabilities of technology to achieve entirely new goals (pp. 87-89). In this regard, among the most frequently proposed application areas of information technology in conjunction with BPR efforts, include *shared database, expert systems, mobile computing and communication, workflow technology and groupware* (Simon, Kia 2003**).** *Shared database* becomes important in BPR in order to allow a wide distribution of critical business information, sharing data base is considered on the most important areas IT can contribute to a more effective and efficient performance of business process. *Expert systems*, on the other hand, focuses on enabling non-experts to perform expert work by capturing and widely distributing knowledge. *Mobile computing and communication***,**is yet another aspect of IT that has emerged with the development of powerful laptop computers and new telecommunications technology, such as GSM (Global System for Mobile Communication), ISDN (Integrated Services Digital Network), ATM (Asynchronous Transfer Mode). These technologies have made new forms of work possible

including telecommuting, and field staff being able to keep in contact with their company. Another IT group is the *Workflow technology and groupware*, which can improve the performance of business while workflow systems generally are designed for supporting a smooth flow of a case through the organization; groupware is focused on collaboration within working groups and teams, and provides mechanisms for sharing knowledge and ideas.

Other IT services considered as enablers for the success of BPR include client/server technology, data capturing technology (scanner / barcode reader/ RFID), telephony (Integration of computer and telephone systems; VoIP; Unified communications), Web services and Service-Oriented Architecture (SOA), Imaging technology, work flow management systems, and Business Process Management (BPM) to mention some

2.6. BPR and the public sector

The political and economic feasibilities of applying BPR in the public sector are questioned by some researchers. They argue that for most public organizations, radical changes in the way government delivers its services and products could be problematic. Halachmi (1995) for instance contend that since each area of a public agency is monitored by and serves multiple stakeholders, a successful change cannot take place without the consent of all the affected stakeholders. Forging such a consensus may prove beyond the ability of many public administrators (Halachmi, 1995). According to Halachmi, while there are possibilities for the implementation of BPR in the public sector, the added value of implementing BPR would be mainly its potential as an incentive to get complex change processes within organizations started. Others are even more skeptical about the success of BPR in public sector. They argue that that BPR in public sector is likely to fail due to the culture of traditional civil service which emphasize on continuity, predictability, and fairness. Factors such as lack of senior management commitment; initiative fatigue; resistance to change; misunderstanding of the requirements of the business; unwillingness to take risks at senior management level; and communication are also attributed to BPR failures in the public sector.

In Ethiopia, some reports of international organizations such as the IMF suggest that Civil Service Reform Program (CSRP) by introducing a range of interventions such as BPR, has contributed to the economic growth in the country due to improved service delivery (CSRP in Ethiopia, 2013). Getachew & Common's (2007) study of the outcomes of Ethiopia's public sector capacity reform in the Ministry of Trade and Industry also assert that service delivery time has been reduced to 39 minutes. Worldwide experiences, however, suggest that BPR as

a change approach has been politically, managerially, and often technically difficult to implement.

2.7. Challenges in Implementing BPR

BPR as a change management approach aims at achieving quantum improvements in business performance, a detail plan as how the new processes are tested, employees are redeployed, offices are arranged, resources are decided and the communication plan, change management strategies, controlling and monitoring as well as implementation arrangements are the main components of BPR implementation plan (Hammer and Champy, 1993). Effective BPR implementation planning that spells out the work that needs to be done, with time frames, milestones, decision points, and resource allocations; is essential for smooth transition from task orientation to process orientation (GOA, 1997; Jackson, 1997).

For a successful BPR implementation Al-Mashari and Zairi (1999) examined five factors including change in management, management competencies, organizational structure, BPR project management, and IT sub-structures. Other researchers have also classified the reasons for the success of process reengineering projects into four groups of egalitarian leadership, working environments, top management commitment, and managerial support (Crowe et al., 2002). The employees' resistance against change, communication breakdown, personnel turnover during transition, are viewed as the reason for most failures (Crowe et al., 2002; Kotter, 1996).

2.7.1. Change Management

Change management is considered by many researchers an essential success factor in BPR implementation projects (Cooper and Markus, 1995; Hammer and Stanton, 1995). It involves revision of reward systems, communication, empowerment, people involvement, training and education, creating a culture for change, and stimulating receptivity of the organisation to change. Evaluating impact of the changes on all individuals, the organization and stakeholders and defining changes related to reward systems, responsibilities, work policies, processes and procedures, skills development and training, culture, motivation, communication and non-behaviour risks are very important to succeed in BPR implementation project (Kliem,1996). The greatest challenges of implementing BPR lie not in managing technical or operational aspects but in managing human dimensions of change.

Experts in the area advice organizations to focus on planning and accountability for change management so as to manage the transition to process orientation. Especially during the implementation, executives in organization implementing BPR must be in the forefront in dealing with the social, psychological, and political resistance to change (Carr, 1993; GAO, 1997; Davenport and Nohria, 1994; Kotter, 1996).

Organizations also need to set effective communication strategies with stakeholders to ensure common understanding among stakeholders (Davenport, 1993; Hammer and Stanton, 1995; Carr and Johansson,1995). There should be clear explanation from executives on how the organization plans to achieve its goals by finding better ways of doing work. The executives need to reiterate the performance problems, customer dissatisfactions, budgetary pressures that had been facing the organization before the BPR conception. The existing reward systems can no longer be appropriate for the new work environment and system. Coupled with encouraging staffs to question current assumptions, it is essential to announce the new staff motivation mechanism set by organization (Hammer and Champy,1993; Harvey,1995; Davenport and Nohria, 1994). The organization's culture will gradually change as staff come to share their perceptions of the new situation, collectively subscribe to new norms, expectations, and responsibilities and new reward systems (GOA, 1997, Davenport, T. and Stoddard, D., 1994). The new reward and incentive must encourage harmony among employees and it should be clearly based on performance measures. Setting air and widespread reward system and new job titles, are some of the factors that facilitate the smooth implementation of BPR (Towers, 1994; The Trouble with Reengineering, 1995). It is also crucial to promote a culture of self-management and collaborative and interactive team works. Employees should be motivated to set their own goals and monitor their own performance as well as identifying problems hindering the smooth implementation of BPR projects. Hence encouraging and empowering individuals are critical to successfully implement process oriented projects (Cooper and Markus, 1995). Effective one-to-one and one-to-many interactions are necessary to induce organizational changes effectively Jackson,(1994). In additions to this, creative and understanding leadership that can clearly communicate to a wide range of employees, motivate and involve them, is important in dealing with organizational resistance Hammer and Champy, (1993).

Active participation of staffs in BPR implementation is necessary for the success of the project (Dawe, 1996). All people that are involved in the implementation should not be discouraged. At the beginning errors and mistakes should be tolerated as the implementation

commences. BPR supports teamwork and integration of labour, co-operation, co-ordination, and interactions; interpersonal skills, IT skills, performance monitoring, process analysis and planning knowledge are very important dimension of training required to succeed in the implementation processes (Cooper and Markus, 1995; Towers, 1994).

2.7.2 Performance Management

Performance management applies to organizations as well as individuals and includes recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently. This performance management helps organization to measure its performance. Setting performance measures are necessary to indicate the levels of achievements (Zairi and Sinclair, 1995). There have been different types of performance measurements techniques. Among these, self-assessment, management by objective, integrated performance management system, and work flow based monitoring and balanced scorecard approaches can be mentioned. Balanced scorecard approaches use a number of financial and non-financial indicators on a regular basis which has a framework with four perspectives. These are; the financial, the customer, the internal business, and the learning and growth perspective. This performance measuring and monitoring tool is used for the purpose of strategic performance reporting; to link strategy with performance measures; to present different perspectives (Kaplan and Norton, 1996). Determining if the new process is achieving the desired results using performance measurement and continuously improving the new process is vital for the success of BPR projects.

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CHAPTER THREE

3. Data Presentation and Analysis

3.1 Data Presentation

The result of the study is presented on the basis of quantitative and qualitative research by using questionnaires, interviews, focus group discussion, observation and secondary data. The structured questionnaire and the in-depth interview are based on GAO's (1997) BPR Implementation Assessment Framework and the WWCE checklist for implementation of BPR. The results are analysed on the bases of questionnaires posed to 59 respondents; in-depth interviews with 20 BPR team members and 5 management members, two trade union members; as well as group discussion with employees who are considered to have had significant input for the study. Documents such us strategic plan of the organization, annual and semi-annual progress reports of the organization before and after the implementation on the BPR study were also used to interpret the results of the survey.

In this regard the analysis focuses on the efforts made to make the transition from the old to the new process smooth, the leadership's commitment in the areas of change management, communication strategy and building sustainable transition as well as shaping the human resources towards the desired organizational change.

In the following sections, findings of the survey and focus group interviews will be discussed starting with background of respondents, follow up of implementation plan, change management plan, management's support and commitment to address change management issues. Whether the BPR project has achieved its desired objectives and success or failure factors will also be considered.

3.2. Background Information of Respondents

This research analysis is based on the employees of the WWCE with varying years of service in the organization. Out of the 59 respondents, 60.6% of them have service years between 5 to 25 years, 37% of them have 1 to 5 years and 3.4% of them less than one year. In terms of their role in the implementation of the BPR project in the enterprise, 66.1%of the respondents were experts who have been the main implementers of the project; 3.4% were from the board of managements; 3.4% from top management. Of the remaining balance 6.8% were process owners, 6.8% team leaders, and 6.8% BPR study team members, 5.1% sub-process owners, and 1.7% of the respondents was executive officer (Table 1).

Looking into their educational background, more than two third of the respondents (69.5%) were first degree holders;10.2% were postgraduates; and 20.3% of them had attained diplomas and certificate. Slightly more than half of the respondents (50.8%) were females while the balances were males (Table 1).

Table1. Background Information of Respondents

Service years of respondent		Frequency	Percent
Valid	< a year	2	3.4
	1-5 years	22	37.3
	5-10 years	16	27.1
	10-15 years	3	5.1
	15-20 years	1	1.7
	20-25 years	7	11.9
	> 25 years	8	13.6
	Total	59	100.0

Position of respondent		Frequency	Percent
Valid	board member	2	3.4
	top management	2	3.4
	executive officer	1	1.7
	process owner	4	6.8
	BPR study team	4	6.8
	sub process owner	3	5.1
	Team leader	4	6.8
	Employee	39	66.1
	Total	59	100.0
Qualification of Respondent		Frequency	Percent
Valid	Masters Degree	6	10.2
	First Degree	41	69.5
	Advanced Diploma	1	1.7
	Diploma	10	16.9
	Certificate	1	1.7
	Total	59	100.0
Sex of respondent		Frequency	Percent
Valid	Male	29	49.2
	Female	30	50.8
	Total	59	100.0

Source: Questionnaire Result, 2013.

3.3 Following a Comprehensive Implementation Plan

In the whole process of implementing BPR, having a comprehensive implementation plan and executing such a plan is like using a bridge to cross from where the organization was, "*AS IS*", to where the organization wants to arrive, "*TO BE*". The vision and direction of where the management wants to steer the organization are reflected in the implementation plan. According to GAO's (1997) implementation assessment guide, an implementation plan should be sketched that spells out the work that needs to be done, with time frames, milestones, decision points, and resource allocations. Training and workforce issues are equally important elements of an effective implementation plan. In this regard, pilot testing provides a method for refining the process and building support for full implementation of the new process across the agency.

Not surprisingly, implementation is the most difficult part of reengineering project and having a comprehensive plan of implementation is the prerequisite to start the process of change in the organization. Thus, one category of the questions posed to respondents were aimed at soliciting their views with regard to the BPR implementation plan. By asking a question about the availability of a comprehensive plan to the respondents, the author's goal

was to examine the extent to which the management has been successful in developing a comprehensive plan of BPR implementation that was embraced by the employees of the organization.

Under this category of questions, four sub-categories of questions were posed to respondents. These sub-categories attempted to solicit response about respondents' awareness and/or view about each issue within the implementation plan. The findings from the questionnaire are discussed below under each sub-category.

3.3.1. Availability of Written plan for BPR Implementation

Many researchers suggest running a pilot process before implementing the new one helps identifying problems and bottlenecks related to the process and helps eliminating failures which are likely to happen. While this kind of trial may take time and cost resources, it is argued that rectifying failures resulting from the new process would take more time and cost more resources (Peppard and Rowland, 1995).

Once a decision is made to implement BPR the organization needs to establish a transition team to manage the implementation process. The team includes the project sponsor, the process owner, members of the reengineering team, and key executives, managers, and staff from the areas directly affected by changeover from the old process to the new.

One of the questions posed to respondents was aimed at examining whether WWCE' plan to implement BPR took into consideration all the key factors for a successful implementation such as preparing a written plan for pilot testing, identifying all tasks, setting time frames for implementation, and whether or not resources needed to implement the process were quantified. Respondents were asked to choose one out of five possible answers: strongly agree, agree, not sure, disagree, strongly disagree to each question. Their responses were tallied and the frequency to each answer were summed (Table 2).

On the question of whether WWCE had prepared a written plan for Pilot testing 45.8% of the respondents responded positively while 54.2% disagreed or strongly disagreed. When asked if all the tasks to be implemented in the process were identified 40.7% of the respondents agreed or strongly agreed that all the tasks were identified while 59.3% disagreed. More than 69% of the respondents also disagreed that the time frame of implementation was set with only 28.8% responding affirmative. To the question of whether the resources required for the

implementation were quantified, only 35.6% agreed or strongly agreed while 64.4% disagreed or strongly disagreed.

GAO's (1997) assessment guide and many other BPR methodologies stresses on the importance of having a pilot testing before the major implementation as it provides an opportunity for to develop a method for refining the process and building support for the full implementation of the new process. Having a pilot testing also allows the management to evaluate the soundness of the proposed process in actual practice; to identify and correct problems with the new design; and it enables the management to refine performance measures. Lindon (1998) and others (Hammer and Champy, 1993; John Jeston & Johan Nelis, 2008) also point out the need to set time frame for implementation, to assign individual roles and responsibilities to those who would take part in implementing the new process, and to quantify resources needed for the implementation of the plan.

Feedback is one critical component of BPR implementation plan. Having a system for gathering implementation problems and for sharing implementation solutions enables an organization to have an effective feedback system. In this regard, the implementation experience of successful BPR implementation such as that of Northrop Grumman BPR Team Report (2005), as well the GAO's (1997) assessment guide all underscore the need for developing a formal evaluation process to determine the efficiency and effectiveness of the new process both during pilot tests and full implementation. Such a process should also allow the agency to pinpoint trouble spots, so that corrective actions can be developed quickly.

Table 2. Availability of BPR Implementation Plan WWCE, Addis Ababa, 2013.

The Office prepared a written plan for pilot testing		Frequency	Per cent
Valid	Agree	27	45.8
	Disagree	32	54.2
	Total	59	100.0
All tasks to be implemented in the process were Identified		Frequency	Per cent
Valid	strongly agree	3	5.1
	Agree	21	35.6
	Disagree	35	59.3
	Total	59	100.0
The time frame of implementation was set		Frequency	Per cent
Valid	strongly agree	3	5.1
	Agree	14	23.7
	not sure	1	1.7
	Disagree	40	67.8
	Strongly disagree	1	1.7
	Total	59	100.0

Resources required for the implementation were quantified		Frequency	Per cent
Valid	strongly agree	4	6.8
	Agree	17	28.8
	Disagree	36	61.0
	Strongly	2	3.4
	Total	59	100.0
The implementation plan provided a means for collecting implementation problems		Frequency	Per cent
Valid	strongly agree	3	5.1
	Agree	27	45.8
	Disagree	26	44.1
	Strongly disagree	3	5.1
	Total	59	100.0
The implementation plan provided means for collecting and sharing implementation solutions		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	23	39.0
	Disagree	32	54.2
	Strongly disagree	2	3.4
	Total	59	100.0
The implementation plan created a means for monitoring during the implementation		Frequency	Per cent
Valid	strongly agree	4	6.8
	Agree	17	28.8
	Disagree	37	62.7
	Strongly disagree	1	1.7
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

In order to assess the soundness of WWCE's implementation feedback system, three interrelated questions were posed to respondents. On the question of whether the implementation plan provided a means for collecting implementation problems, 50.9% agreed or strongly agreed that indeed the implementation plan did provide means for collecting implementation problems while 49.2% disagreed or strongly disagreed (Table 2).

3.3.2. Establish a Transition Team to Manage BPR Implementation.

The importance of organizations' need to establish transition team that can guide the transition process of the reengineering projects is underscored (Lindon, 1998) and transition teams have to guide implementations of BPR project to move smoothly from old process to the new one. The fact that an implementation team consisting of different disciplines with different remits had been set up, meant that the group is endeavouring to work towards the successful BPR implementation. In this respect, besides having potentials of integrated multidiscipline knowledge and skills; establishing the team in this way helps to devise

planning schemes showing a realistic timeframe for the full implementation of BPR projects (Guhu et al., 1993).

In order to determine the level of awareness of the respondents on the establishment of a transition team, a question was posed to respondents on whether transition team to manage BPR implementation was established. Of the total respondents 39% agreed or strongly agreed that there was a transition team established to guide the reengineering effort. By contrast 55.9% of the respondents disagreed while 3% were not sure on the establishment of transition team (Table 3).

On a follow-up question respondents were asked if the makeup of **the transition team involved all stakeholders i**ncluding the project sponsor, the process owner, members of the reengineering team, key executives, managers, and staff from the areas directly affected by the implementation of the new process. Of the total respondents 49.2% disagreed or strongly disagreed while 45.8% agreed or strongly agreed that the transition team included all stakeholders. Only 5.1% of the respondents were not sure whether the transition team consisted of all stakeholders. To a related question on whether necessary arrangements were made for a smooth transition, 67.8% of the respondents disagreed or strongly disagreed that the necessary arrangement was made for a smooth transition from the old to the new process. Only 28.8%, less than one-third, agreed or strongly agreed that the necessary arrangement was made.

Respondents were also asked whether executives and managers who are affected by the process change actively promoted and facilitated the implementation of the new process. While 37.6% responded positively (agree or strongly agree) 59.3% responded negative, with 5.1% not sure.

Table 3 Establishing Transition Team WWCE, 2013.

A transition team established to guide the reengineering effort		Frequency	Per cent
Valid	strongly agree	5	8.5
	Agree	18	30.5
	not sure	3	5.1
	Disagree	33	55.9
	Total	59	100.0
A transition team is made up of the project sponsor, the process owner, members of the reengineering team, and key executives, managers, and staff from the areas directly affected by the implementation of the new process		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	25	42.4

	not sure	3	5.1
	Disagree	28	47.5
	Strongly disagree	1	1.7
	Total	59	100.0
The transition team has made necessary arrangements with the Office's administrative offices to transition smoothly from the old process to the new		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	15	25.4
	not sure	2	3.4
	Disagree	39	66.1
	Strongly disagree	1	1.7
	Total	59	100.0
Executives and managers who are affected by the process change actively promoted and facilitated the implementation of the new process		Frequency	Per cent
Valid	strongly agree	5	8.5
	Agree	17	28.8
	not sure	2	3.4
	Disagree	35	59.3
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013

3.3.3. Workforce Training and Redeployment Issues

Addressing human resource issues including the revision of reward systems, communication, empowerment, training and education, and stimulating receptivity of the organization to change are viewed by many among the critical success factors in implementing BPR. The success of the whole concept of business process hinges primarily on the organization's ability to successfully transform its employees from controlled to empowered employees. As Hammer and Champy (1993) pointed out "People working in a reengineered process are, of necessity, empowered. As process team workers they are both permitted and required to think, interact, use judgement, and make decisions"(p.75). The authors go even further to stress the centrality of employee empowerment for the success of BPR when they said "Empowerment is an unavoidable consequence of reengineered processes; processes can't be reengineered without empowering process workers"(p.75).

Consequently when dealing with organizational change through BPR, Training and redeploying workforce are often major challenges and generally require considerable preparation time. When a process is redesigned many of the tasks workers perform are completely changed or redistributed while some positions may be eliminated and yet other

tasks created or modified. Workers may also need to handle a broader range of responsibilities, rely less on direct supervision, and develop new skills.

One of the questions posed to respondents was whether **the transition team identified the new tasks, roles, and responsibilities**. A majority of respondents, 54.2%, disagreed or strongly disagreed that such was the case while 44.1% agreed or strongly agreed that new tasks, roles and responsibilities were identified by the transition team (Table 4).

A related issue to the new roles and responsibilities is accountability as the redesigned processes would empower employees. Such new roles and responsibilities need to be communicated to the employees and training needs should be identified for the new processes to be operational. The respondents were asked if the **transition team identified the training needs required by the new process** and 69.5% of them did not agree that training needs were identified. Only 30.5% agreed or strongly agreed that training needs were identified. Not surprisingly, more than 76% or the respondents also disagreed or strongly disagreed to the follow up questions of whether **employees who would need training were identified (**Table 4). Based on the survey responses majority of the respondents did not think that the transition team knew how many employees would be affected by the new process and training needs were identified. Furthermore, the respondents did not think there were plans to provide training for those who needed as a result of the new redeployment.

Table 4.Workforce Deployment and Training and Redeployment, WWCE 2013.

The transition team identified the new tasks, roles, and responsibilities		Frequency	Per cent
Valid	strongly agree	5	8.5
	Agree	21	35.6
	not sure	1	1.7
	disagree	31	52.5
	Strongly disagree	1	1.7
	Total	59	100.0
The team identified the training needs required by the new process (NP)		Frequency	Per cent
Valid	strongly agree	2	3.4
	agree	16	27.1
	disagree	37	62.7
	Strongly Disagree	4	6.8
	Total	59	100.0
The team identified how many employees would be affected by redeployment in the implementation of the NP		Frequency	Percent
Valid	strongly agree	6	10.2

	agree	14	23.7
	not sure	1	1.7
	disagree	35	59.3
	Strongly Disagree	3	5.1
	Total	59	100.0
The team identified how many employees and which employees needed retraining.		Frequency	Per cent
Valid	strongly agree	2	3.4
	agree	9	15.3
	not sure	3	5.1
	disagree	39	66.1
	Strongly disagree	6	10.2
	Total	59	100.0
The Office/enterprise/ developed training programs		Frequency	Per cent
Valid	agree	12	20.3
	not sure	5	8.5
	disagree	36	61.0
	Strongly Disagree	6	10.2
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

3.3.4. Use of Pilot Testing to Evaluate the New Process.

Piloting helps identify problems and bottlenecks related to the process and helps eliminate failures when fully implemented. Since reengineering is about a change of organizational culture as well as a change of tasks, it is argued that the whole package must be tested. In this regard McAdam and Corrigan (2001), argued that it is necessary to have clear picture about the pilot test and employees need to be trained and understand their roles and responsibilities. Similarly Hammer and Champy (1993) emphasized that based on the feedbacks of employees and other stakeholders, corrective actions should be taken so that the revised process design can be tested with satisfactory results before proceeding to full implementation (GAO, 1997; Lindon, 1998; McAdam, R. and Donaghy, J.,1999).

Among the category of questions posed to respondents by the author, one was concerning pilot testing. One of the questions, within this category, posed was whether or not a pilot test strategy to test the new process was put in place and whether concerns of stakeholders were considered in the process. Out of the 59 respondents 45 of them, more than 76%, did not believe that the transition team had selected a pilot test strategy that suits the new process. 43 of the respondents, about 74%, also did not believe that the transition team had developed performance measures and data gathering procedures to be used during the pilot. Not surprisingly, the response given to subsequent questions were similar. For instance, when respondents were asked if the transition team had measured the performance of the pilot test

45 of them, more than 46%, disagreed or strongly disagreed that such measure was taken. Only 11 respondents, less than 20%, believed that the team had measured the performance of the pilot test (Table 5). Furthermore, when respondents were asked if the new process designed was pilot tested with satisfactory results before proceeding to full implementation,76.3% of the respondents disagreed or strongly disagreed that was the case. The responses seem to be consistent with the way the project was implemented as explained at the introduction. Although the BPR project envisaged a pilot test to make sure that new work process design works smoothly and to make any corrections that would arise during the pilot test, this phase was skipped during implementation.

Table 5: Use of Pilot Testing to Evaluate the New Process WWCE, 2013

1. The team selected a pilot test strategy to suit to the new process and considered the concerns of stakeholders.		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	11	18.6
	not sure	2	3.4
	Disagree	44	74.6
	Strongly disagree	1	1.7
	Total	59	100.0
2. The team developed performance measures and data gathering procedures to be used during the pilot		Frequency	Percent
Valid	Agree	15	25.4
	not sure	1	1.7
	Disagree	40	67.8
	Strongly disagree	3	5.1
	Total	59	100.0
3. The team carefully measured the performance of the pilot test		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	10	16.9
	not sure	3	5.1
	Disagree	43	72.9
	Strongly disagree	2	3.4
	Total	59	100.0
4. The transition team identified and took corrective actions required		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	13	22.0
	not sure	2	3.4
	Disagree	40	67.8
	Strongly disagree	3	5.1
	Total	59	100.0
5. The Office gathered customers' and stakeholders' feedback about the pilot test		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	10	16.9
	not sure	3	5.1
	Disagree	42	71.2
	Strongly disagree	3	5.1
	Total	59	100.0
6. The new process designed was pilot tested with satisfactory results before proceeding to full implementation.		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	11	18.6
	not sure	2	3.4
	Disagree	40	67.8
	Strongly disagree	5	8.5
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

3.4. Change Management Plan

Change management is considered an essential factor for the successful implementation of BPR. Researchers and practitioners recommend that organizations focus on planning and accountability for change management so as to manage the transition to process orientation. In this regard executives in an organization implementing BPR are expected to be at the forefront in dealing with the social, psychological, and political resistance to change (Carr, 1993; GAO, 1997; Davenport and Nohria, 1994; Kotter, 1996).

A list of questions related to change management plan of WWCE were posed to respondents to explore the extent to which WWCE's BPR implementation was accompanied by the change management plan in order to mitigate the effects of the transition from the old to the new processes.

The questions posed to respondents focused on the alignment of change management tasks, assignment of responsibilities to specific individuals for carrying out change management tasks, and provision of periodic assessments of employees' needs, concerns, and reactions. While there were some variations with regard to each question, overall respondents did not believe that there was a change management plan in place. For instance, when respondents were asked if the Office refined its plan to facilitate needed cultural changes across the organization 67.8% disagreed or strongly disagreed that such was the case. By contrast only 32.2% agreed or strongly agreed that the Office had refined its plan to facilitate cultural change. On a related issue, respondents were asked if the change management plan provided periodic assessments of employees' needs, concerns, and reactions; 72.9% of the respondents did not think that the change management plan provided periodic assessment of employees' needs and concerns. Those who agreed or strongly agreed were only 23.7%. Likewise, 67.8% of the respondents disagreed or strongly disagreed that the change management plan had assigned responsibilities to specific individuals for carrying out change management tasks. Only 25.4% of the respondents agreed that the change management plan had assigned responsibilities (Table 6).

Table 6 Availability of change management plan in implementing BPR 2013.

The Office refined its plan to facilitate needed cultural changes across the Organization.		Frequency	Percent
Valid	strongly agree	1	1.7
	Agree	18	30.5
	Disagree	32	54.2
	Strongly	8	13.6
	Total	59	100.0
The change management plan identified specific change management tasks.		Frequency	Percent
Valid	strongly agree	3	5.1
	Agree	18	30.5
	not sure	2	3.4
	Disagree	34	57.6
	Strongly	2	3.4
	Total	59	100.0
The change management plan aligned the change management tasks with the project and implementation timetables.		Frequency	Percent
Valid	strongly agree	2	3.4
	Agree	15	25.4
	Disagree	40	67.8
	Strongly	2	3.4
	Total	59	100.0
The change management plan assigned responsibilities to specific individuals for carrying out change management tasks.		Frequency	Percent
Valid	Agree	15	25.4
	not sure	4	6.8
	Disagree	33	55.9
	Strongly	7	11.9
	Total	59	100.0
The change management plan provided periodic assessments of employee needs, concerns, and reactions.		Frequency	Percent
Valid	strongly agree	1	1.7
	Agree	13	22.0
	not sure	2	3.4
	Disagree	41	69.5
	Strongly	2	3.4
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

Many researchers and practitioners underscore the critical role that change management plays in implementing BPR successfully. Lindon (1994), for instance, argued that management plan need to be aligned with the BPR implementation time tables and individuals who should carry out the change management plan tasks should be assigned in due process of the reengineering project implementation. Similarly, Hammer and Stone (1995) affirmed that

organizations need to refine their change management plan to induce cultural changes. Furthermore, it is argued that it is necessary to prepare change management plan that enables periodic assessment of employees needs concerns and reactions so as to be successful in BPR implementation (Cooper and Markus, 1995; Maull et al., 1995; Campbell and Kleiner, 2001).

3.5 Are Organization's Executives Addressing Change Management Issues?

3.5.1 Availability of communication strategy

Management's commitment to BPR implementation is considered by all researchers and practitioners as the key success factor. Yet one of the biggest obstacles that the reengineering faces is lack of sustained management commitment and leadership. One of the ways managements' commitment can be expressed is whether or not there is an effective communication strategy or not. In the absence of a communication strategy company executives will find it hard to manage and address the issues that emerge during the implementation process.

In order to assess the extent to which WWCE's top management had put in place an effective communication strategy, a series of questions which reflect the availability or otherwise of a communication strategy were posed to respondents. One of the questions posed to respondents was whether senior executives clearly emphasized that major improvements are imperative. About **51% of the respondents agreed or strongly agreed** that senior executives have clearly emphasised that improvements are very important while 47.5 % disagreed on the idea that executives stressed on the necessity of major improvements in the implementation process (Table 7). Effective communication is vital to sell the new process and organizational and cultural changes which accompany the new process.

A follow up question was posed on whether communications efforts were made by senior executives in addressing the common objections to change. Among the respondents 37.3% of them agreed or strongly agreed that the communications effort directly addressed the common objections (resistances) to change, whereas 62.7% of them disagreed or strongly disagreed that efforts were made by the executives in addressing resistance to change. However, when respondents were asked if the communication efforts explained the necessity of change more than 49% of the respondents agreed or strongly agreed that indeed the communication efforts explained the necessity of change. On the other hand, 47.5% of the

respondents disagreed or strongly disagreed that communications efforts did explain the necessity of change. This is one of the few areas where more respondents were positive on aspects of the BPR implementation. However, given the narrow difference between those who agreed and those who disagreed, the response provided to the this specific question seems to be an outlier in light of the negative responses given to most of the questions asked on other issues pertaining the BPR implementation at WWCE. In fact when respondents were asked a follow up question on whether the communications effort begun early in the process after the identification of customer service issues and performance improvement; more than 76% of the respondents disagreed or strongly disagreed that such was the case (Table 7).

Many researchers and practitioners argue that one of the factors affecting success in BPR implementation is the communication strategy of the organization. Lindon (1998), for instance stated that change requires marketing since good works don't necessary sell themselves. Hence, it is recommended that senior executives emphasize on major improvements and communicate it to all employees (GAO, 1997). In particular, an open and transparent communication between managers and subordinates is viewed as essential in creating common understanding. In short communication efforts ought to address common objectives of change (GAO, 1997; Mohsen Attaran & Glenn G.Wood, 1999).

Table 7 Availability of communication strategy for BPR Implementation WWCE, 2013

Senior executives clearly emphasized that major improvements are imperative		Frequency	Per cent
Valid	strongly agree	4	6.8
	Agree	26	44.1
	not sure	1	1.7
	Disagree	28	47.5
	Total	59	100.0
The communications effort directly addressed the common objections (resistances) to change		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	20	33.9
	Disagree	37	62.7
	Total	59	100.0
The communication effort explained the necessity of change		Frequency	Per cent
Valid	strongly agree	3	5.1
	Agree	26	44.1
	not sure	2	3.4
	Disagree	26	44.1
	Strongly	2	3.4
	Total	59	100.0
The communication effort explained why change is workable		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	17	28.8
	Disagree	39	66.1
	Strongly disagree	2	3.4
	Total	59	100.0
The communication effort explained why change is beneficial		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	27	45.8
	not sure	1	1.7
	Disagree	26	44.1
	Strongly disagree	3	5.1
	Total	59	100.0
The communications effort begun early in the process after the identification of customer service issues and performance improvement goals		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	11	18.6
	not sure	1	1.7
	Disagree	43	72.9
	Strongly	2	3.4
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

Moreover, while communication efforts should aim at addressing the need for changes, they should be workable and beneficial. Based on the respondents answers to a series of questions as depicted on table 7, however, WWCE executives' communication strategy was not

effective in creating common objectives of change among employees of the organization, in selling the need for change at WWCE, and in sharing share credit of success with everyone in the organization.

3.5.2 Management's Role in Communicating the Change

While having an effective communication strategy is necessary without the management's leadership to effectively communicate the change needed, the future of a BPR project is doomed to fail. Researchers and practitioners in the field argue that employee's ownership of the organization's with clearly stated vision of change to be key elements in BPR's success. Such ownership, however, can be only be attained if management plays its role of communicating the change effectively. Among the expected management's roles towards communicating change effectively include sharing vision and information with subordinates, establishing open communication between supervisors and their subordinates, using their subordinates' ideas constructively, paying due attention to the efforts and contributions made by employees, sharing the credits for success with everyone, and encouraging subordinates and employees to take new tasks and responsibilities. .

In order to assess the management's role in communicating change a series of questions were asked as depicted on table 8. The answers given to these questions show that by and large respondents did not feel that management was playing its role effectively as expressed in their responses. For instance when respondents were asked if **management encouraged subordinates and employees to new roles and responsibilities**, 76.3% of the respondents disagreed or strongly disagreed while 20.3% agreed that management was encouraging employees to take new roles and responsibilities. Similarly when respondents were askedif **executives gave due attention to the efforts, contributions, and innovations made by employees** during the reengineering project about 68% responded negative. Moreover more than 66% of the respondents did not think **managers were using their subordinates' ideas constructively** (Table 8). The only area where management seems to have fared better was in sharing vision and information with their subordinates. Out of the 59 respondents 27 of them or 45.8% agreed or strongly agreed that managers were using their subordinates' ideas constructively. But even in this area it is important to note that more than 52% of the respondents did not think managers were using their subordinates' ideas constructively.

Table 8. Management's Role in Communicating the Change WWCE ,2013

Managers shared vision and information with their subordinates		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	26	44.1
	not sure	1	1.7
	Disagree	28	47.5
	Strongly	3	5.1
	Total	59	100.0
There is an open communication between supervisors and their subordinates		Frequency	Per cent
Valid	strongly agree	3	5.1
	Agree	17	28.8
	not sure	1	1.7
	Disagree	33	55.9
	Strongly	5	8.5
	Total	59	100.0
Managers constructively use their subordinates' idea		Frequency	Per cent
Valid	strongly agree	4	6.8
	Agree	14	23.7
	not sure	2	3.4
	Disagree	37	62.7
	Strongly disagree	2	3.4
	Total	59	100.0
Executives gave due attention to the efforts, contributions, and innovations made by employees during the reengineering project.		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	15	25.4
	not sure	2	3.4
	Disagree	39	66.1
	Strongly disagree	1	1.7
	Total	59	100.0
Executives widely shared the credits for success with everyone		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	21	35.6
	not sure	3	5.1
	Disagree	32	54.2
	Strongly disagree	2	3.4
	Total	59	100.0
Encouragements were made to Take New Roles & Responsibilities		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	11	18.6
	not sure	2	3.4
	Disagree	44	74.6
	Strongly disagree	1	1.7
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

3.5.3 The Office's Effort in Facilitating Effective means of communicating the Change

Among the key roles management plays in implementing BPR is to provide to training for its staff, managers, and executives to prepare them for the new roles and responsibilities called for by the new process. Lack of sufficient training and reward system can hold back organizations the capability of implementing BPR. Negotiating the allocation of the new processes with clear understandings of authority and responsibility is yet another aspect of the management's role in implementing BPR. Lindon (1998) for instance, indicated that mangers should discuss and create common understanding as to how authority and responsibility for the new process is going to be allocated. Equally important is the extent to which executives include managers in making the Offices' management responsive to needed changes and in designing policies and procedures. In this regard, Will Artley (2001) underscored the importance of should pursuing participatory approaches by managers and executives when allocating authorities and responsibilities.

Six questions concerning the Office's effort in facilitating effective means of communicating the Change were posed to respondents. The first question was whether the Office provided training to its staff, managers, and executives to prepare them for the new roles and responsibilities called for by the new process. Of the 59 respondents 49.2% of them agreed or strongly agreed that the Office indeed provided training to its staff, managers, and executives while 47.5% disagreed and 3.4% were uncertain that such training was provided (Table 9). The proportion of those who agreed is very close to those who disagreed which may suggest that there respondents were equally divided between those who received training and those who did not which may have played a factor in how they responded. Another line of inquiry was whether or not executives and managers negotiated the new process to be allocated with clear understanding of authority and responsibility. While 45.8% agreed 49.2% of the respondents disagreed or strongly disagreed (Table 9). One of the changes expected as a result of BPR implementation is the reorientation of performance appraisal and reward process to the implementation of the new process. When respondents were asked if the Office has reoriented its performance appraisal and reward process to the implementation of the new process, only 45.8% of the respondents agreed or strongly agreed while 54.2% did not think that the Office has reoriented its performance appraisal and reward process in line with new process (Table 9).

Table 9. Efforts made in Facilitating Effective Means of Communicating Change WWCE,2013

The Office provided training to its staff, managers, and executives to prepare them for the new roles and responsibilities called for by the new process.		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	27	45.8
	not sure	2	3.4
	Disagree	28	47.5
	Total	59	100.0
Executives and managers negotiated of the new process to be allocated with clear understandings of authority and responsibility		Frequency	Per cent
Valid	strongly agree	1	1.7
	Agree	26	44.1
	not sure	3	5.1
	Disagree	27	45.8
	Strongly Disagree	2	3.4
	Total	59	100.0
The executives included managers in making any needed changes to the Office's managerial structure.		Frequency	Per cent
Valid	strongly agree	2	3.4
	Agree	27	45.8
	not sure	2	3.4
	Disagree	28	47.5
	Total	59	100.0
The Office reoriented its performance appraisal and reward process to the implementation of the new process.		Frequency	Per cent
Valid	Agree	22	37.3
	not sure	5	8.5
	Disagree	32	54.2
	Total	59	100.0
The Office reoriented its performance appraisal and reward process to the fulfilment of performance improvement goals.		Frequency	Per cent
Valid	Agree	23	39.0
	not sure	3	5.1
	Disagree	32	54.2
	Strongly disagree	1	1.7
	Total	59	100.0
Executives involved managers in defining the Office's policies &procedures for using Office performance indicators to assess managerial & staff performance.		Frequency	Per cent
Valid	strongly agree	5	8.5
	Agree	27	45.8
	not sure	2	3.4
	Disagree	25	42.4
	Total	59	100.0
The organization induced a set of attitudes, beliefs & cultural norms needed to be built in the organizations.		Frequency	Per cent
Valid	strongly agree	4	6.8
	Agree	26	44.1
	not sure	2	3.4
	Disagree	25	42.4
	Strongly disagree	2	3.4
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

Overall the difference between those respondents who believed that the Office was using effective means of communicating change and versus those who did not agree is very close.

Implementing BPR requires providing major roles to be played in order to motivate employees to take new responsibilities. As a result of reengineering, staff often have a broader range of responsibilities and are empowered to make decisions and take actions with less direct supervision than before. Moreover, the need to create inclusive and participatory environment, reorientation of performance appraisal and reward system are necessary to hit the target. In all these areas the response of more than half of the respondents indicate that the organization has gaps in reorienting performance appraisal and reward process to the fulfilment of performance improvement goals and to the implementation process.

Kanter, (1991) argued that success of organizational change depends on the development of a new organizational culture that supports any new strategies. Change management plan needs to be well underway by the time the new process is ready to be implemented GAO, (1997). The absence or delayed change management task makes very difficult to build support and momentum among the staff for implementing the new process, however good it might be.

3.6 Is the New Process Achieving the Desired Results?

The end goal of business process reengineering is the realization of the vision that propelled the very BPR project in the first place. As stated at the introduction of this study, the decision to go through BPR was viewed as necessary to expand WWCE's capacity to handle complex projects; to shorten delivery time of projects; and to increase its market share in the construction industry in Ethiopia. The study and the design of the new process had taken several turns before it was finally introduced in 2009, and it is still an ongoing project. While it may be early to fully capture the successes and failures of the BPR implementation at WWCE, the researcher has attempted to explore the early signs of the result of BPR implementation at WWCE. In this regard,an organization has no way of knowing if the new process has produced the desired results or not without a meaningful performance measures. Good performance measures generally include a mix of outcome, output, and efficiency measures. Outcome measures assess whether the process has actually achieved the intended results. Output measures examine the products and/or services produced by the process, such as the number of claims processed. Efficiency measures evaluate such things as the cost of the process and the time it takes to deliver the output of the process (a product or service) to

the customer. On-going performance measurement provides the feedback which is so critical for continual improvement and future successes.

To this end, the researcher posed a series of questions aimed at probing into whether or not performance measures were identified, whether performance measures were linked to the organizations strategic goals, and whether performance measures were integrated into the organization's performance measurement system. Included in the questions were also whether the management and staff use data to assess the performance of the new processes, and whether the new process has achieved its stated goals.

One of the critical components of BPR implementation is the feedback mechanism to regularly evaluate the new process and to fix problems which arise as a result of its implementation. Such follow up and regular evaluation would enable management to determine if the new process is achieving the desired results and whether actions are needed to improve the new process. In order to assess the extent to which the management has been effective in getting feedback a question was posed if the organization's executives, managers, and staff used the measurement data being gathered to assess the new process' performance. The responses to the question show that 71.2% of the respondents disagreed or strongly disagreed that the measurement data being gathered was used to assess the new process. By contrast only 22.1% agreed that data gathered was being used to assess the new process (Table 10).

As shown in table 10 below the overall response to the questions indicate that the majority of respondents did not believe performance measures were identified, nor did they agree that the performance measures included a mixture of outcome, output and efficiency measures. For instance when respondents were asked if the transition team identified necessary data for routinely assessing the performance of the reengineered process on a long-term basis 32.7% agreed while 62.1% disagreed or strongly disagreed that performance assessments were set in place. Moreover, about 56% of the respondents did not believe that the performance measures were integrated into the organization wide performance measurement system while 42% of them agreed that performance measures were integrated into the organization wide system. Not surprisingly more than 78% of the respondents believe that the new process has not achieved its desired goals (Table 10).

Many researchers suggest that performance measure be placed and progress of implementation of BPR project monitored against a set of stated objectives (Hagel, 1993; Guha et al., 1993; Feltes and Karuppan, 1995). In this regard there are a variety of measures that can be deployed to monitor performance such as outcome, output, impact, and input measures (Hagel, 1993; Kaplan, Robert, Norton, David., 1993). The results of this study, however, suggest that WWCE's effort to place performance measures to evaluate and monitor the new processes has not been successful so far.

Table 10.The New Process's Achievement of Desired Results WWCE, 2013

The transition team identified necessary data for routinely assessing the performance of the reengineered process on a long-term basis.		Frequency	Percent
Valid	strongly agree	1	1.7
	Agree	18	30.5
	not sure	3	5.1
	Disagree	35	59.3
	Strongly disagree	2	3.4
	Total	59	100.0
The performance measures included a mixture of outcome, output& efficiencymeasures.		Frequency	Percent
Valid	strongly agree	3	5.1
	Agree	16	27.1
	not sure	1	1.7
	Disagree	36	61.0
	Stronglydisagree	3	5.1
	Total	59	100.0
The performance measures linked to the organization's strategic goals.		Frequency	Percent
Valid	strongly agree	2	3.4
	Agree	25	42.4
	not sure	2	3.4
	Disagree	27	45.8
	Strongly disagree	3	5.1
	Total	59	100.0
The performance measures were integrated into the organization's wide performance measurement system.		Frequency	Percent
Valid	strongly agree	3	5.1
	Agree	21	35.6
	not sure	2	3.4
	Disagree	31	52.5
	Stronglydisagree	2	3.4
	Total	59	100.0
The New Process Achieved its Planned Performance Goals		Frequency	Percent
Valid	strongly agree	1	1.7
	Agree	11	18.6
	not sure	1	1.7
	Disagree	42	71.2
	Strongly disagree	4	6.8
	Total	59	100.0
The organization's executives, managers, and staff used the measurement data being gathered to assess the new process' performance.		Frequency	Percent
Valid	strongly agree	6	10.2
	Agree	7	11.9
	not sure	4	6.8
	Disagree	40	67.8
	Stronglydisagree	2	3.4
	Total	59	100.0

Source: Survey research, Addis Ababa, 2013.

3.6.1 New process's Desired Result with reference to Customer Satisfaction

One of the central goals of BPR implementation is to ensure customer satisfaction in terms of the quality and delivery of goods or services. Customer-related measures such as complaints, customer satisfaction levels, timeliness/ response time, adherence to schedule and responsiveness are some of the parameters that can be used to measure services delivered to customers. The other measure that should also be considered is effectiveness and efficiency measure (Kaplan, Robert S., Norton, David P., 1993).

WWCE's goals in implementing BPR are not different in this regard and the researcher decided to test if one of the central goals was achieved as a result of BPR implementation. As the researcher had limited time and resource she was not able to gather primary information directly from WWCE's customers in order to measure customer satisfaction as a result of BPR implementation. Instead the researcher took an indirect approach by asking questions regarding customer satisfaction to respondents, who are employees of WWCE including some working at middle and senior management levels. The questions posed to respondents focused on whether the organization was able to satisfy customers' expectations, to reduce cycle time (waiting time) of project delivery, and to improve its competitiveness by improving quality and/or by reducing cost.

The responses to the questions posed show that 62.7% of the respondents did not believe that WWCE was able to satisfy customers' expectations or to reduce cycle time (waiting time) of project delivery as after BPR implementation. The response was even more negative when respondents were asked if the organization increased its own competitiveness by reducing costs. More than 81% of the respondents disagreed or strongly disagreed that WWCE has reduced its costs to increase competitiveness (Table 11).

The one area where responses were not as unfavourable was in the area of quality improvement. When respondents were asked if the organization increased its own competitiveness by improving quality 50.9% disagreed or strongly disagreed while 47.5% of them agreed or strongly agreed that the organization has increased its competitiveness by improving quality. However, in light of the negative responses to many of the questions related to the overall BPR implementation at WWCE the researcher did not think such response to be as truly reflective of the overall results of BPR implementation.

Table 11New Process's Results in terms of Customer Satisfaction WWCE 2013.

The organization was able to satisfy customers' expectations after implementation of business process reengineering program		Frequency	Percent
Valid	strongly agree	5	8.5
	Agree	14	23.7
	not sure	3	5.1
	Disagree	35	59.3
	Strongly	2	3.4
	Total	59	100.0
The organizations was able to reduce cycle time (waiting time) of Project delivery following the implementation of the business process reengineering program		Frequency	Percent
Valid	strongly agree	4	6.8
	Agree	17	28.8
	not sure	1	1.7
	Disagree	32	54.2
	Strongly	5	8.5
	Total	59	100.0
The organization increased its own competitiveness by improving quality		Frequency	Percent
Valid	strongly agree	3	5.1
	Agree	25	42.4
	not sure	1	1.7
	Disagree	26	44.1
	Strongly disagree	4	6.8
	Total	59	100.0
The organization increased its own competitiveness by reducing costs.		Frequency	Percent
Valid	strongly agree	3	5.1
	Agree	8	13.6
	Disagree	43	72.9
	Strongly disagree	5	8.5
	Total	59	100.0
The organization encouraged managers and staff to use performance data to further improve the new process		Frequency	Percent
Valid	strongly agree	2	3.4
	Agree	23	39.0
	Disagree	31	52.5
	Strongly disagree	3	5.1
	Total	59	100.0

Source: Survey research, 2013.

CHAPTER FOUR

4. Summary, Conclusions and Recommendations

4.1. Summary

For the past few years, planning, designing, and implementing changes through business process reengineering (BPR) at the WWCE has remained to be a major challenge and priority to its management. The purpose of the study was to assess BPR implementation in Water Works Construction Enterprise in light of the experiences and theories of BPR implementation strategies advocated by proponents of the change management. Implementing BPR requires organizations to think fundamentally about what they do and why they do things. Among the critical questions which should be asked by the management are "why do we do what we do?" and "why do we do things the way we do it? Thus, in implementing BPR an organization first determines what a company or an organization must do, and then decides how to do it.

At its core BPR is an organizational change tool anchored on work requirements or process. In contrast to the functional organization approach, which is based on specialization of tasks, process based approach focuses on a series of activities required to achieve an outcome or to produce goods or services. As the goal of reengineering is to bring about dramatic improvements in the organization's performance, reengineering should not be about "making marginal changes or incremental improvements but about achieving quantum leaps in performance. Thus, implementing BPR requires redesigning the business process radically which means disregarding all existing structure and procedures and inventing completely new ways of accomplishing work.

Because of the radical approach it takes, implementing BPR requires successful implementation of the change management and culture which include revision of reward systems, communication, empowerment, people involvement, training and education, creating a culture for change, stimulating receptivity of the organization to change, and setting comprehensive implementation plan. Hence, having a comprehensive implementation plan and executing such a plan is like using a bridge to cross from where the organization was, "*AS IS*", to where the organization wants to arrive, "*TO BE*". The vision and direction of where the management wants to steer the organization are reflected in the implementation plan. Not surprisingly setting comprehensive implementation plan, addressing change

management issues and measuring the attainment of desired results are, therefore, viewed as prerequisites for BPR success.This research has attempted to examine how WWCE applied business process reengineering with particular focus on its BPR implementation plan. To this end, five categories of research questions were formulated to explore how WWCE's BPR implementation experience fared over the past four years compared to the accepted benchmarks for successful implementation of BPR.

The broad categories of questions were aimed at exploring whether or not WWCE's BPR implementation plan consisted the elements necessary for success, such as management's commitment, plans to deal with the social, psychological, and political resistance to change, creating a culture for change, setting the reward systems to fit the new processes, and running a pilot process, among others. More specifically the categories of questions were aimed at soliciting answers to the following questions:

1. Was there a BPR implementation Plan?
2. Was BPR implementation plan accompanied by change management plan?
3. IsWWC's management addressing change management issues?
4. Is the new process achieving the desired results?
5. What are the factors associated with attainment of performance goals?

Under each category a series of questions were developed to explore the issue. Descriptive survey method was employed in the study to gather relevant data from the representative of the population. By purposive sampling technique, simple random sampling was taken to represent population.The results were analysed on the bases of the responses of 59 respondents to the questionnaires presented. In-depth interview with 20 BPR team members and 5 management members, 2 trade union members as well as group discussion with employees who are believed to have input for the study participated in enriching the survey results. After the questionnaires were distributed and interviews were conducted, collected data have been organized, tabulated with the help of SPSS15, analysed and interpreted. Based on the analysis and interpretation of the results the findings of the survey are summarized below.

4.1.1. Was there a BPR implementation Plan?

Availability of Written plan for BPR Implementation. A successful BPR implementation requires a comprehensive plan which, among other things, identifies the tasks to be

implemented, sets a time frame for the implementation of the plan, includes a pilot testing plan, quantifies resources required for the implementation were quantified, and with a mechanism to monitor the implementation. WWCE respondents were asked a series of questions which contained these and related elements listed in table 2. While there some variations in the extent to which respondents disagreed or strongly disagreed to each question, in all cases majority of the respondents disagreed or strongly disagreed that WWCE had a comprehensive plan for BPR implementation. Out of the 59 respondents, 67.8% did not agree that the time frame for implementation was set, 61% of them did not believe that resources required for implementation were quantified, 59.3% did not agree that all tasks to be implemented in the process were identified, and 54.2% did not think the Office had prepared a written plan for pilot testing. Viewed in totality, the responses suggest that the implementation plan that was prepared by the Office was not embraced by the majority of employees. The reasons for such failure could be many including lack of management commitment to implement the plan, lack of effective communication, just few to mention.

Establish a Transition Team to Manage BPR Implementation. As many writers and practitioners emphasis on the importance of organizations need to establish transition team that can guide the transition process of the reengineering projects, the researcher posed a series of questions related to establishing a transition team. Of the total respondents only 39% agreed or strongly agreed that a transition team established while 55.9% of them disagreed or strongly disagreed that a transition team was established (Table 3). To a related question on whether necessary arrangements were made for a smooth transition, 67.8% did not believe that the necessary arrangement was made while only 28.8%, less than one-third, agreed or strongly agreed that the necessary arrangement was made.

Workforce Training and Redeployment Issues. Many researchers and practitioners stress on the importance of workforce training and the success of the new business process hinges primarily on the organization's ability to successfully transform its employees from controlled to empowered employees. Among the questions posed to respondents was whether the transition team identified the new tasks, roles, and responsibilities to which 54.2%, disagreed or strongly disagreed that such was the case while 44.1% agreed or strongly agreed. On a related question, respondents were asked if the transition team identified the training needs required by the new process and 69.5% of them did not agree that training needs were identified. Furthermore, when respondents were asked if the transition team identified how

many employees and which employees needed retraining, 66.1% did not believe training needs of employees were identified (Table 4). Overall the responses to the survey questions in this area suggest employees training needs as a result of the new redeployment were not addressed adequately.

Use of Pilot Testing to Evaluate the New Process. The importance of pilot testing before the full implementation of the new process is stressed by many researchers and practitioners. Piloting helps identify problems and bottlenecks related to the process and helps eliminate failures when fully implemented. One of the questions asked was whether or not a pilot test strategy to test the new process was put in place and whether concerns of stakeholders were considered in the process. Out of the 59 respondents 45 of them, more than 76%, did not believe that the transition team had selected a pilot test strategy that suits the new process.

4.1.2. Was BPR implementation plan accompanied by change management plan?

Having a change management plan is considered among the key factors for the successful implementation of BPR. Researchers and practitioners recommend that organizations focus on planning and accountability for change management so as to manage the transition to process orientation. The researcher posed a series of questions related to the change management plan of WWCE and the overall response suggests that the Office did not have an effective change management plan. For instance, 67.8% percent did not think the Office refined its plan to facilitate needed cultural change, and 72.9% did not believe the change management plan provided periodic assessment of employees' needs and concerns. Moreover, 67.8% of the respondents disagreed or strongly disagreed that the change management plan had assigned responsibilities to specific individuals for carrying out change management tasks (Table 6).

4.1.3. Is WWC's management addressing change management issues?

While researchers and practitioners readily agree on the centrality of management's sustained commitment and leadership for a successful BPR implementation, it is also one of the biggest obstacles that BPR projects face during implementation. In order to measure the extent of management's commitment to BPR implementation at WWCE the researcher developed three categories of questions dealing with availability of communication strategy, management's role in communicating the change, and management's efforts to facilitate effective communication of the change. More than 62% of respondents disagreed or strongly

disagreed that efforts were made by the executives in addressing resistance to change, more than 76% disagreed or strongly disagreed that management encouraged subordinates and employees to new roles and responsibilities. Moreover, more than 54% of respondents did not think that the Office has reoriented its performance appraisal and reward process in line with new process (Table 9).

4.1.4. Is the new process achieving the desired results?

The end goal of the whole exercise of business process reengineering is the realization of the vision of the organization that propelled the very BPR project in the first place. In WWCE's case the decision to go through BPR was viewed as necessary to expand WWCE's capacity to handle complex projects; to shorten delivery time of projects; and to increase its market share in the construction industry in Ethiopia. The researcher asked respondents a series of questions in order to explore if and whether the new process was achieving desired results. More than 71.2% of the respondents disagreed or strongly disagreed that the measurement data being gathered was used to assess the new process and 78% of the respondents did not believe the new process achieved its planned performance goals. Overall the results undoubtedly show that the new process has not achieved the desired results.

The results are not surprising given the fact that the BPR implementation has been haphazard in many areas on the ground. The researchers own experience and the performance report of WWCE show that out of 9 preliminary BPR implementation checklists which are meant to be done on quick win bases only three items are put to practice on partial bases. Direction pointers are put in place to guide office location, entrance card for external customers is set and suggestion box is put in place. However, the other six points were not in place or put into practice to facilitate the BPR implementation. Furthermore, secondary level checklists which include cascading organizational goals to all process and sub process, reporting the output by the Balanced Score Card (BSC) which is chosen for performance measurement of the office are not put to practice. Weekly meetings which were meant to encourage sharing ideas between employees and managers to enhance transparency as well as make to bring about change of attitude among employees in implementing BPR are not being conducted either.

4.2. Conclusion

Based on the literature review, the background information on how the BPR project has been carried out from the start, and based on the responses to the survey questions, WWCE's BPR implementation has not been a success for many obvious reasons.

To begin with, while the BPR project was initiated by the Board of Management of WWCE, the board members did not run the day today operation of the organization in order to address issues which arise during the study and implementation of BPR. At the same time the BPR project was not fully embraced by the top management of WWCE for a variety of reasons. Moreover, the study and the design of the new process which started in 2006 had taken several turns before it was finally introduced in 2009, at the insistence of the board of management. During the course of the study the deputy general manager who was providing support and leadership for the study team and the department head of public relations and business development, who was in charge of documenting the study process, left WWC leaving the BPR study without anyone in charge. At the start of the implementation of the new business process the general manager of WWCE, who had led the organization for many years left the organization and the team leader of the core process study team who had played key role in documenting the new process to be introduced retired due to age. Beyond such turnovers and change of personnel at the middle of the course, the biggest challenge of all to the study and implementation of BPR at WWCE was the lack of commitment on the part of the top management of the organization. In spite of some attempts by the Board of Management to put their weight behind the study and implementation, the top management failed to play a leading role at all stages. Survey results clearly show that management did not play its role in spearheading the change towards process oriented performance organizational set up and performance at WWCE. While there are a number of other factors that can contribute to the failure of BPR projects, lack of management's commitment without a doubt is a recipe for poor performance and failure as experienced by many organizations that tried to implement business process reengineering?

Notwithstanding the centrality of the lack of management's commitment at WWCE, the study also showed that WWCE's BPR implementation plan lacked several critical components. One of the critical components of a comprehensive implementation plan should be **pilot testing**. Since reengineering is about a change of organizational culture and tasks, the

whole package of the new process needs to be tested to get feedback from employees and other stakeholder on the bases of which corrective actions can be taken to revise and redesign the new process before proceeding to full implementation. In 2009, the pilot testing phase was, however, skipped at WWCE and in December 2009, BPR was officially introduced directly, primarily in response to the board's pressure. Not surprisingly the results of the survey clearly show that there was not pilot testing strategy in place as confirmed by more than 76% of the respondents.

Setting a transition team that can guide the transition process of reengineering is another essential component of a comprehensive implementation plan for BPR project to move smoothly from old processes to the new ones. However, the survey results show that among the central weaknesses of WWCE implementation is the transition team established to manage the transition to the new processes. Majority of the respondents, about 56%, did not believe that there was a transition team set in place and about 68% did not think the necessary arrangement was made for a smooth transition from the old to the new process.

Addressing human resource issues including empowerment, **training and education** are viewed by many among the critical success factors in implementing BPR. Consequently when dealing with organizational change through BPR, Training and redeploying workforce are often major challenges and generally require considerable preparation time. In the case of WWCE's BPR implementation the study shows several gaps regarding training and redeployment of workforce according to the new processes. Among the problems revealed include failure to identify the new tasks, roles, and responsibilities of employees. Moreover, the number of employees who would be affected by the new process and their training needs were not identified. Not surprisingly, majority of the respondents did not think there were plans to provide training for those who needed as a result of the new redeployment.

Feedback mechanism is yet another critical factor for a successful BPR implementation to regularly evaluate the new process and to fix problems which arise as a result of its implementation. Such follow up and regular evaluation would enable management to determine if the new process is achieving the desired results and whether actions are needed to improve the new process. However, the results of the study suggest that WWCE's executives, managers, and staff did not have the feedback mechanism as measurement data being gathered was not used to evaluate the new processes.

Overall, the study showed that WWCE did not embark on BPR implementation with a comprehensive implementation plan as it lacked several critical factors that are associated with successful BPR projects. This can be attributed to the lack of ownership and resistance to change on the part of management which were manifested at various stages of the BPR project. Not surprisingly while the organization officially embarked on the implementation of BPR, more than four years ago tasks continue to be performed the old way.

4.3 Recommendation

The lessons that can be drawn from this study based on WWCE's experience are consistent with the experience of many unsuccessful BPR projects in Ethiopia and around the world. As clearly pointed out by GAO (1997), reengineering starts with a high-level assessment of the organization's mission, strategic goals, and customer needs where basic questions such as "Does our mission need to be redefined? Are our strategic goals aligned with our mission? Who are our customers?" are clearly spelled out. It is only after the organization rethinks what it should be doing, that it gets to decide how best to do it. What WWCE in particular and policy makers who set the BPR to be implemented by the public sector may learn is that BPR is not for all and visionary and committed management should be the starting place when considering BPR. Moreover, a committed and visionary management should have a comprehensive implementation plan with adequate resources and persistence to succeed

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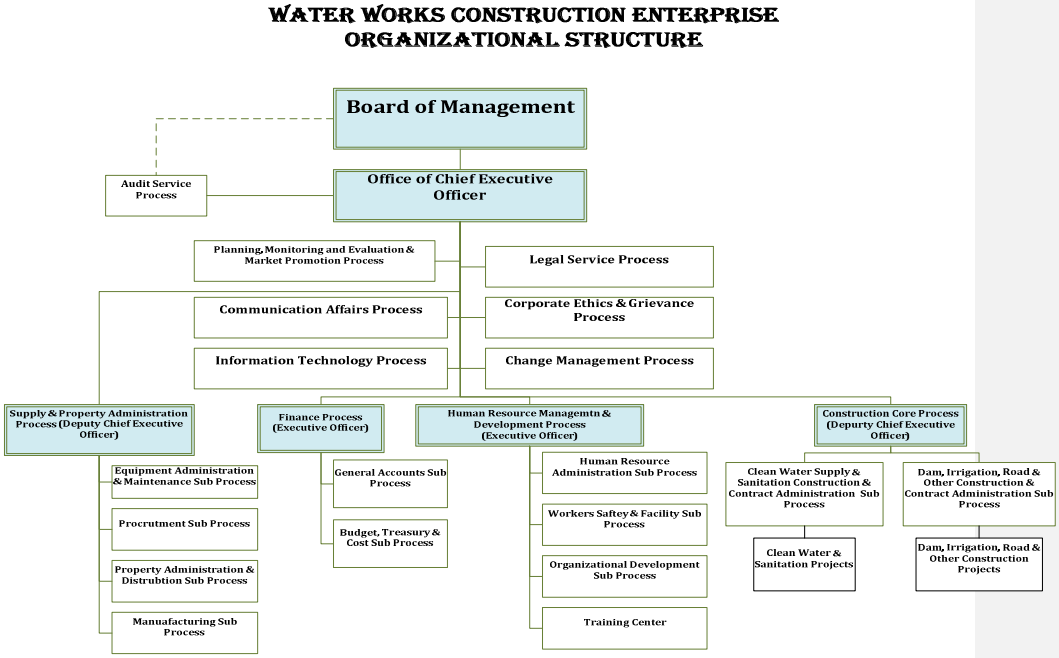
ANNEXES

Annex I. WWCE Organizational Chart

Annex II– Questionnaires

Annex III- Checklists

Annex I. WWCE Organizational Chart



Annex II.

Assessment of BPR implementation in the Water Works Construct ion Enterprise WWCE Survey questionnaire

Dear Respondent,

My name is Mitselal Gebre, currently a Postgraduate Student in Indria Gandhi National Open University. I would very much appreciate your participation in this study which I am undertaking for my Master's degree requirement,–on the topic, "The assessment of BPR implementation in the Water Works Construction Enterprise (WWCE). The study is an attempt to investigate whether there was a comprehensive BPR implementation plan, whether change Management Issues were addressed and thereby investigate if BPR implementation in WWCEE has made a difference in the organization interms of contract delivery, efficiency, employee satisfaction etc...

Whatever information you provide will be kept strictly confidential and will not be shown to other persons. The exercise will take about 20 minutes. If you are interested in the results of this project, I will be glad to send you a summary of the findings after completion of the study. Thank you for participating and making this study a success.

Tel: +251-913-527771, E-mail: mitselal@yahoo.com

Please put '√' mark for your answers

No.	Questions	Answers	
I	**Background of participant**		
1	Name and Address of the Institution	WWCE, Addis Ababa, Ethiopia	
2	**Name of the process (write it please)**		
3	**Sex of the Respondent**	Male	
		Female	
4	Position of the respondent:	1. Board member	
		2. Top Management	
		3. Executive officer	
		4. Process owner	
		5. BPR Study team member	
		6. Sub process owner	
		7. Team leader	
		8. Employee	
		9. Consultant	
		10. Any other	
5	Service years	1. Less than a year	
		2. 1-5	
		3. 5-10	
		4. 10-15	
		5. 5-20	
		6. 20-25	
		7. above 25 years	
6	Qualification of Respondent	1. Masters Degree	
		2. First Degree	
		3. Advanced Diploma	
		4. Diploma	
		5. Certificate	

No.	Questions / Extent of agreement	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
II	**Comprehensive Implementation Plan**					
A	**Availability of written plan for pilot testing**					
1	The Office prepared a written plan for pilot testing					
2	All tasks to be implemented in the process was Identified					
3	The time frames of implementation was set					
4	Resources required for the implementation quantified					
5	The new structure was reasonably suited to fit to the nature of the work process, and structure of the Enterprise					
6	The implementation plan provided a means for **collecting** implementation problems					
7	The implementation plan provided means for collecting and **sharing** implementation solutions					
8	The implementation plan created a means for **monitoring during the** implementation					
B	**Establishing transition Team**					
1	A transition team established to guide the reengineering effort					
2	A transition team made up of the project sponsor, the process owner, members of the reengineering team, and key executives, managers, and staff from the areas directly affected by the implementation of the new process					
3	The transition team has made necessary arrangements with the Office's administrative offices to transition smoothly from the old process to the new					
4	Executives and managers who are affected by the process change actively promoted and facilitated the implementation of the new process					
C	**Workforce training and Redeployment**					
1	The transition team identified the new tasks, roles, and responsibilities					
2	The team identified the reporting relationships					
3	The team identified the training needs required by the new process					
4	The team identified how many employees would be affected by redeployment in the implementation of the new process					
5	The team identified how many employees and which employees needed retraining.					
6	The team identified how many employees and which employees will be affected by reductions-in-force.					
7	The Office/enterprise/ developed training programs.					
8	The team benchmarked governmental agencies to learn about the successful ways to plan workforce redeployment, retraining, and reductions.					
D	**Use of Pilot Testing to Evaluate New Process**					
1	The team selected a pilot test strategy to suit to the new process and considered the concerns of stakeholders.					
2	The team ensured the test-unit fully understood the pilot test.					
3	Transition team ensured employees sufficiently trained &understood their roles.					
4	The team developed performance measures & data gathering procedures to be used during the pilot.					
5	The performance measures reflected the project goals.					
6	The team carefully measured the performance of the pilot test.					
7	The transition team identified and took corrective actions required.					
8	The Office gathered customers' and stakeholders' feedback about the pilot test.					
9	The new process designed was pilot tested with satisfactory results before proceeding to full implementation.					
10	The transition team carefully measured the performance of the pilot test.					

No.	Questions / Extent of agreement	Strongly Agree	Agree	Not sure	Dis-agree	Strongly Disagree
II	**Change Management**					
A	**Refine and implement change management plan**					
1	The Office refined its plan to facilitate needed cultural changes across the Organization.					
2	The change management plan identified specific change management tasks.					
3	The change management plan aligned the change management tasks with the project and implementation timetables.					
4	The change management plan assigned responsibilities to specific individuals for carrying out change management tasks.					
5	The change management plan provided periodic assessments of employee needs, concerns, and reactions.					
B	**Availability of Communication Strategy**					
1	Senior executives clearly emphasized that major improvements are imperative					
2	The communications effort directly addressed the common objections (resistances) to change.					
3	The communication effort explained the necessity of change.					
4	The communication effort explained why change is workable.					
5	The communication effort explained why change is beneficial					
6	The communications effort begun early in the process after the identification of customer service issues and performance improvement goals.					
7	Managers shared vision and information with their subordinates.					
8	There is an open communication between supervisors and their subordinates.					
9	Managers constructively use their subordinates' idea.					
10	Executives gave due attention to the efforts, contributions, and innovations made by employees during the reengineering project.					
11	Executives widely shared the credits for success with everyone.					
12	Encouragements were made to Take New Roles & Responsibilities.					
13	The Office provided training to its staff, managers, and executives to prepare them for the new roles and responsibilities called for by the new process.					
14	Executives and managers negotiated of the new process to be allocated with clear understandings of authority and responsibility.					
15	The executives included managers in making any needed changes to the Office's managerial structure.					
16	Has the Office reoriented its performance appraisal and reward process to the implementation of the new process?					
17	The Office reoriented its performance appraisal and reward process to the fulfilment of performance improvement goals.					
18	Executives involved managers in defining the Office's policies and procedures for using Office performance indicators to assess managerial and staff performance.					
19	The organization induced a set of attitudes, beliefs and cultural norms needed to be built in the organizations.					

No.	Questions / Extent of agreement	Strongly Agree	Agree	Not sure	Dis-agree	Strongly Disagree
III	**Performance Monitoring (Result Related Issues)**					
A	**A. Performance Measure in Place**					
1	The transition team identified necessary data for routinely assessing the performance of the reengineered process on a long-term basis..					
2	The performance measures included a mixture of outcome, output, and efficiency measures.					
3	The performance measures linked to the organization's strategic goals.					
4	The performance measures were integrated into the organization's wide performance measurement system.					
5	The New Process Achieved its Planned Performance Goals.					
6	The organization's executives, managers, and staff used the measurement data being gathered to assess the new process' performance.					
8	The organizations was able to satisfy customers expectations after implementation of business process reengineering program					
9	The organizations was able to reduce cycle time(waiting time) of Project delivery following the implementation of the business process reengineering program					
10	The organization increased its own competitiveness by improving quality					
11	The organization increased its own competitiveness by reducing costs.					
12	The organization uses Performance Information to Continually Improve the New Process.					
13	The organization encouraged managers and staff to use performance data to further improve the new process.					
14	The Office periodically assess process performance goals in order to determine the potential for achieving higher level of performance					

In-depth Interview Guidelines

I. Back ground of Participant

Please put '√' mark for your answers

Position :		**Qualification**		**Service Year**		**Sex**	
1.Board member		1.Masters Degree		1. Less than a year		1. Male	
2.Top Management		2. First Degree		2. 1-5		2. Female	
3.Executive officer		3.Advanced Diploma		3. 5-10			
4.Process owner		4. Diploma		4.10-15			
5.BPR Study team member		5.Certificate		5. 5-20			
6.Sub process owner				6.20-25			
7.Team leader				7.above 25 years			
8.Senior expert/engineer							
9.Others							

Workforce Training and Redeployment

1. Has the office Developed Training Programme?_____
   _____
2. Has the transition team met with other governmental agencies and private businesses to learn about the successful ways to plan workforce redeployment, retraining, and reductions?
   _____
   _____
3. Are Organizations' executives working closely with employee unions to minimize the potential for adverse effects of the implementation on its members and to make use of union suggestions where feasible?
   _____
   _____
4. Has the Organization provided career counsellors and outplacement assistance as needed to help employees plan new career paths or seek new employment?
   _____
   _____

Change Management

Refining and Implementation of Change Management Plan

1. Does the office have comprehensive Change Management plan?
   _____
   _____
2. Did the Office use outside experts to help its executives and the transition team to become more aware of underlying organizational and cultural issues that can pose obstacles to reengineering? Can you give names
   _____
   _____
3. Did the Office use outside experts to help its executives and the transition team to incorporate proven techniques for managing these obstacles and achieving change objectives?_____
   _____

Senior Executives Encouragement to Accept New process and Roles

1. Have senior executives clearly identified and explained the Organization's concerns regarding the business process in achieving its objectives and other change drivers?
   _____
   _____

2. What formal and informal opportunities have senior executives provided for employees to provide feedback about the operational and personal problems they face during implementation?
   _____
   _____
3. Are senior executives' committed to assist as to how employees can make the transition to the new process can be communicated and reinforced to the employees?
   _____
   _____
4. Has the Office provided career counselling or outplacement assistance to individuals at all ranks who have lost their positions, who must develop new career plans, or who chose to resign?
   _____
   _____

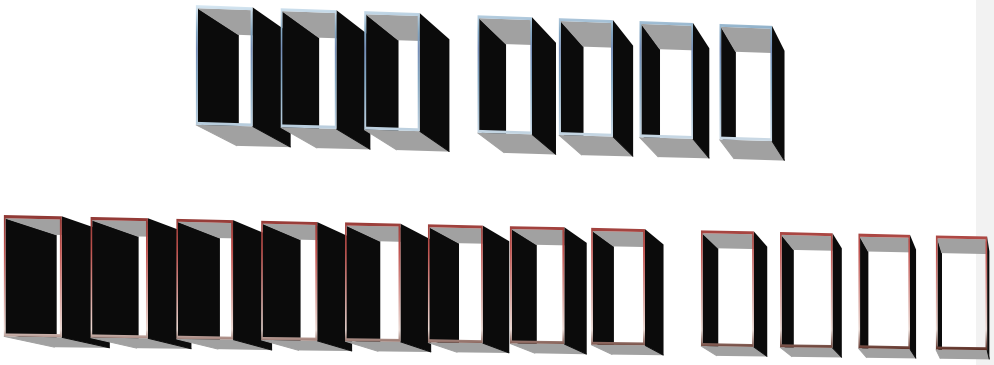
Performance Measure

1. What performance measures for the new process did the Office actually decide to put in place? Do these measures differ from the team's recommendations? If so why?
   _____
   _____
   _____

Results of Business process reengineering implementations

1. Did WWCE quantified Percentage point improvement in return on investment as a result of the BPR program?
   _____
   _____
   _____
   Did WWCE quantified Percentage point improvement in cost to income as a result of the BPR program?
   _____
   _____
   _____
2. Did WWCE quantified reduction in cycle time as a result of BPR? If yes please mention some examples_____
   _____
   _____
3. Which responses best describes WWCE's ability to satisfy customers following the implementation of business process reengineering program?
   - Expectations exceeded delighted customers
   - always meet expectations
   - consistently meet expectations
   - generally meet expectations
   - sometimes meet expectations
   - Unable to meet expectations at all
4. What action is the Office taking to correct any shortfalls in expected performance? _____
   _____
   _____
   _____

Annex III



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