



**ADDIS ABABA UNIVERSITY
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**Addis Ababa Institute of Technology
Mechanical Engineering Department
(Industrial Engineering Stream)**

An Integration of BPR and TQM Implementation Model

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DECLARATION

I hereby declare that the work which is being presented in this thesis entitle “*An Integration of Business Process Reengineering (BPR) and Total Quality Management (TQM) Implementation Model*” is original work of my own, has not been presented for a degree of any other university and all the resources of materials used for the thesis have been duly acknowledged.

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ABSTRACT

Ethiopian public as well as private organizations have undertaking organizational transformation to increase the effectiveness and efficiency of their performance. BPR was selected by the Government in order to improve the performance of service delivery to citizen. On the other hand, some private organizations including service and manufacturing industries are implementing QMS – ISO 9000 as performance improvement.

The objective of this thesis is to identify implementation problems and impacts on organizational performance on BPR and QMS – ISO 9000 in order to develop an integrated model for combining BPR and TQM as a management strategy and to explore the advantage of such integration. To achieve this objective, 31 organizations that are found around Addis Ababa are surveyed to analyze implementation of BPR, QMS and organizations implementing both BPR and QMS at different times, to extract their implementation problems and impacts.

The finding includes: public institutions implemented their redesigned processes which are not supported by performance measures, new salary scale, new rules and regulation; great time variation (average 2 years) between actual versus planned time for implementation, fail to integrate with continuous improvement, Inadequate IT infrastructure, are some finding are with BPR implementation. On the other hand, lack of internalizing the benefits of ISO 9000, top management commitment, fails to bring break through improvement are some of the findings of ISO 9000 implementation. Further more, common implementation problems are: lack of strategic alignment, lack of recognition and reward system, lack of practical experienced consultants. Positive and negative impacts of BPR and ISO 9000 are also analyzed in this thesis. Based on the above findings, a model is developed which integrates BPR and TQM, at which it enhance their positive impacts and minimizes their negative impacts. At last but not least, implementation plan for the developed model is developed.

Key Words: *Business Process Reengineering (BPR), Total Quality Management (TQM), Quality Management System (QMS), ISO, implementation model.*

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ACRONYMS

AAU	Addis Ababa University
BNQP	Baldrige National Quality Program
BS	British Standards
BSC	Balanced Scorecard
BPR	Business Process Reengineering
CBE	Commercial Bank of Ethiopia
CSF	Critical Success Factor
CSR	Civil Service Reform Program
DBE	Development Bank of Ethiopia
ECAO	Ethiopian Conformity Assessment Organization
ecbp	engineering capacity building program
EFQM	European Framework Quality Model
EMI	Ethiopian Management Institute
EPRDF	Ethiopian People Republic Democracy Freedom
EQA	Ethiopia Quality Award
EQSA	Ethiopian Quality and Standard Authority
ERCA	Ethiopian Revenue and Customs Authority
FCSR	Federal Civil Service Reform
GoE	Government of Ethiopia
ISO	International Organization for standardizations
KPIs	Key Performance Indicators
MoCB	Ministry of Capacity Building
MoE	Ministry of Education
MoSLA	Ministry of Social and Labour Affair
MoTC	Ministry of Transport and Communication
MoTI	Ministry of Trade and Industry
MR	Management Representative
NIST	National Institute of Standards and Technology
PSCAP	Public Sector Capacity Building Support Program
PSIP	Delivery Improvement Policy
QMS	Quality Management System
TQM	Total Quality Management
TC	Technical Committee
WIC	Walta Information Center

CHAPTER ONE – INTRODUCTION

1.1. BACKGROUND

These days, profit-making companies are facing great challenges of market competition. They are not guaranteed to stay in a market that was previously under their control for the days to come. Newly emerged or efficient existing companies may take considerable market share of an inefficient company. The competition gets tougher and tougher as time goes on. This is because of:

1. Unlimited increase in customers' needs and tastes,
2. Unlimited increase in number and types of profit making companies and
3. High technological development in both service giving and production companies.

The challenging economic climate leads many organizations to realize that improved quality is an essential entry ingredient for successful global competition. Total Quality Management (TQM) is based on a broad organizational commitment to make continuous quality enhancements in products and services for customers over a long term. Business Process Re-engineering (BPR) allows for radical changes in organizational processes intended to make quantum leaps in performance by taking advantage of the advances in the information and telecommunication technology. Even though they seem to be two completely opposite approaches, TQM and BPR can well be combined into the “endless quality improvement” concept.

TQM is considered to be a major strategic approach to deliver quality products and services that go beyond customer expectations. At the same time, many organizations are implementing BPR programmes, “the hot management tool” in order to achieve breakthrough results. Many organizations implement BPR simultaneously as they are involved in a continuous improvement process of TQM. Some of these programmes have been successful while others have not. Even though there are differences between what TQM and BPR can accomplish and how organizational change and improvement is achieved, their tools and techniques can be integrated in a way which provides a company with the strengths of both approaches. No philosophy or set of tools, however, can overcome a poorly designed implementation plan. The reliance on TQM and BPR tools and

techniques will not necessarily result in success if the quality improvement or redesign initiatives are not linked with the organization's strategic goals and culture. Hence the organization's strategic goals and culture plays a paramount role for the successful implementation of BPR and TQM.

Several researchers have commented that a short-term and radical change of a process achieved through BPR programmes should be followed with long-term continuous improvements offered by TQM. BPR could be utilized again when another dramatic process change is required [13].

Ethiopia's transformation agenda has evolved during the last decades. It has developed in response to awareness that capacity deficits have hampered the ability of the state to reduce poverty and promote democratic development, including responsive service delivery, citizen empowerment and good governance. To enhance the capacity of public institutions and to create an ideal environment for investment and economic growth, the public sector in Ethiopia has gone through a series of reform processes including reforms for the civil service [16]. To achieve the reforms, the government has been adopted different change management tools particularly BPR which is currently being implemented in all organization under the leadership of Ministry of Capacity Building.

1.2. STATEMENT OF PROBLEM

Almost all Ethiopia public organizations have completed design phase of BPR and have implementing the new design process. Many of these have rolled out the tested designs through full scale implementation. All ministerial offices indulging agencies/authority have been undertaking BPR project, out of which half of them have fully implemented BPR and are currently undertaking Balanced Scorecard (BSC) as a performance measure for the new process and strategic plan. The rest public services (ministerial and agencies/Authorities) are in the verge of accomplishing pilot testing.

Even though all governmental service organizations have redesigned their processes based on BPR principles and requirements, some of these institutions are claimed to have registered dramatic results in the form of creating internal change agents, increasing efficiency (reducing cycle time, improving service delivery, and reducing cost) and

enhancing their mission effectiveness. Some institutions completed the reengineering in a relatively shorter period while others took long time to complete their BPR studies. Some institutions have not even yet started implementation. This indicates, despite the fact that similar BPR frameworks are being used in the country; there are organization specific factors that make the effect of implementation of BPR in one organization different from the implementation of BPR in another organization. Some organizations have returned to their previous (traditional) way of doing.

Apart from BPR, many private as well as few government organizations implement QMS based on ISO 9000 standards, but a few of them are getting certified to ISO 9000, and to quality award (Ethiopian Quality Award). Some ISO 9001 certified organizations are complaining that they did not gain the benefits of ISO 9001 after implementation instead increases bureaucracy, paper work, in their day-to-day operations. Even though, the ISO 9001 enforced companies to be customer focused and process approach, activities and tasks of ISO 9001 certified organizations are organized in functional/department based which leads to customer dissatisfaction and improper resource utilizations.

The argument of this research is that BPR and/or QMS failures are not because of the principles; rather it is totally the result of implementation challenges.

In line with the problems, this study will answer the following research questions:

1. What are the main implementation challenges in BPR and TQM?
2. What are the critical success factors for BPR and TQM for Ethiopian organization?
3. What are the impacts of BPR and QMS on Ethiopian organization?

1.3. OBJECTIVE OF THE THESIS

General Objective

The general objective of this study is to proof the failures of change management tools that are basically emanated from implementation and to develop an approach for combining TQM and BPR implementation as a management strategy.

Specific Objectives:

- Clearly define similarities and differences between BPR and TQM

- Identify the challenges that leads to implementation failures in both BPR and TQM
- Analysis the impacts of BPR and TQM in order to identify the drawbacks of each change management tool.
- Analyzing institutions that are directly or indirectly participated in the implementation of BPR and TQM
- Developing an implementation model integrating both BPR and TQM
- Developing an implementation plan for the developed model

1.4. EXPECTED RESULTS

The expected result of this study will benefit the university and any organization that needs to implement both change management tools at the same time. Furthermore, the implementation model which integrates BPR and TQM helps organizations to adopt in order to get the competitive advantage of both tools.

1.5. SCOPE

This study is not a full-blown assessment of the impact of the still-ongoing Business Process Reengineering and TQM/QMS in the Ethiopian organization. It is rather a scoping study aiming at assessing the implementation problems and the results gained after implementation of BPR and QMS. It is limited to only federal ministries (including agencies and authorities), and organization located around Addis Ababa. A total of five ministries including their agencies and authorities, and four federal organizations are assessed as BPR implementing organizations. In addition to this, fifteen private and public organizations are also assessed as QMS implementing organizations. Hence regional government offices and private organizations are not part of the sample for this research.

Even though the assessment of this study is on governmental service organization to identify the challenges and bottlenecks in implementation of BPR, the implementation model of an integrative approach of BPR and TQM will be concentrated for Ethiopian organizations. This thesis; therefore, is limited on the development of an integration of BPR and TQM implementation model for manufacturing as well as service industries.

1.6. RESEARCH METHODOLOGY

The research methodology used to accomplish the study includes literature survey, data collection, and problem identification; sample and sampling technique, analysis and synthesis. They are discussed in detail as follows:

1.6.1 LITERATURE SURVEY

The survey include: Review of previously performed thesis works, Ethiopian enterprise towards quality, what is BPR, history of reengineering, the concept of reengineering, methodology of BPR, improving methods of continuous improvement, successes and critique against BPR, alternative to reengineering, break through improvement versus continuous improvement, state of the art in BPR, implementation process, linkage of BPR with TQM and QMS, etc. All of the above topics will be obtained from books, magazines, journals, internet sources, etc. The objective of surveying literature, therefore, is to differentiate the similarities and difference between BPR and TQM in implementation methodology, principles and other requirements.

1.6.2 DATA SOURCES AND COLLECTION TECHNIQUES

Data collected from both primary and secondary sources. The primary data collected through interviews and direct observation. The secondary data relevant to the study are taken from documents of BPR and QMS implementing organizations, books, magazines, internet sources and journal.

Data sources – Primary Data collection is going to be done through visiting and observing organizations which implement BPR and/or TQM. The sources of the primary data are employees, design team members, reform officers, national quality assurance team members (consultants), and leaders of selected public institutions. The secondary data for BPR implementing organizations is collected from quality assurance/supervision survey reports, quarterly reports at the MoCB, minutes, and other documents, internal reports and records from the selected public institutions, implementation and communication strategy documents, performance/customer opinion records, statistics on skill profile of the civil service, performance assessment reports, etc and the secondary data for QMS implementing

organizations is collected from EQSA, documentation of QMS in from the selected organizations, and their internal audit report, etc.

Data Collecting Tools – Interviews, questionnaire and data relevant to my study from the organizations assessed, books, magazines, internet sources and journal.

Interview: - Interviews are the most common way to gather data, and it is also good and efficient. The in-depth information of the research domain can be represented by the interview. It is often described as a qualitative research method. The quantitative research methods collect a small quantity of information from many subjects; conversely, interviews collect dozens of information from a dab of subjects. The interview can be considered as a “holistic” research method, as every tiny bit of information contributes to the comprehensive picture with regard to what the interviewee wants to say. There are two kinds of interviews, structured and unstructured. Structured interview is doing the interview by following a list of questions. The interviewer must be objective and can not influence the interviewee’s opinion. Hence structured interview (see appendix c) are prepared to change management officer for selected organizations. Unstructured interview is an unbending conversation between the interviewer and the interviewee, the style is free-flowing rather than rigid. The interviewer adjusts the questions according to how the interviewee is responding.

Questionnaires: - Questionnaires are composed by a crop of questions in order to collect information from the respondents, there are often standardized answers which make it easy to edit the data, and it is anonymous.

Generally there are four types of questionnaire in such a way that it is prepared for reengineering team and employees for organizations that implement BPR and Management representative and employees for organization that implement TQM or QMS.

A total of 109 questionnaires were distributed, out of which 89% (97) were returned. Out of the returned questionnaire 92% (89) were completed. The detailed about the questionnaire type and the percentage of returned questionnaire is shown in table1.1.

Table 1.1: Questionnaire type versus questionnaire returned

<i>No.</i>	<i>Questionnaire type</i>	<i>Qty distributed</i>	<i>Returned questionnaire</i>	<i>Complete questionnaire</i>	<i>Incomplete questionnaire</i>
1	BPR Questionnaire for Reengineering team	32	28	26	2
2	TQM/QMS Questionnaire for MR	15	14	13	1
3	BPR Questionnaire for Employees	32	27	24	3
4	TQM/QMS Questionnaire for Employees	30	28	26	2
Total		109	97	89	8

Observation:- The researchers, in consultation with the top management of the selected institutions, selected one core processes and measure the extent of the efficiency of these systems to observe the process performance particularly on workflow, office layout, customer complaint handling system, etc.

1.7 PROBLEM IDENTIFICATION

The problems related with the implementation of either BPR and ISO 9001 are identified so that an integrative approach model will be developed in order to take the advantage of both tools.

1.8 DATA ANALYSIS AND SYNTHESIS

After the collection of the raw data on BPR and ISO 9000 methodologies from different research papers and companies which implemented either of them; the data are synthesized and analyzed using different statistical techniques to develop an integration of BPR and QMS implementation model. A detail implementation plan is developed forth model.

1.9 DISCUSSION, RECOMMENDATION AND CONCLUSION

Based on the results of analysis obtained, a final conclusion and recommendation is given to gain the benefits of both BPR and TQM.

1.10 SAMPLE SIZE AND SAMPLING TECHNIQUES

1.10.1 SELECTION OF INSTITUTIONS FOR THE STUDY

Five ministerial offices with their relevant agencies/authorities, i.e. 16 federal organizations and four federal institutions are selected for the assessment of BPR and twenty organizations were selected for the assessment of QMS – ISO 9000. Hence a total of thirty six organizations were surveyed in this study, out of sixteen organizations were fully implemented BPR and twenty were implemented QMS and certified to ISO 9001. These organizations were purposively selected with consultation of the national quality assurance team members of FCSR in the Ministry of Capacity Building – for BPR case and with consultation of lead auditors of Certifications department in the EQSA for QMS case. See Appendix B for the full list of these institutions.

Table 1.1 shows sample size for the selected organizations implementing BPR and QMS. There are a total of 100 ministerial offices including agencies/authorities currently implementing BPR, out of which 48 are currently implementing BPR at pilot and full scale [35]. Out of the fully BPR implementing institutions, 16 are taken as sample size.

Concerning to QMS – ISO 9001, according to ISO 2010 survey, 22 organizations were ISO certified. Based on Ethiopian Conformity Assessment Organizations (ECAO), a total of 14 organizations (construction sectors and engineering consultancy) were certified to ISO 9001 on 2010. Hence there is not clear information on the total number of ISO 9001 certified in Ethiopia as well as around Addis Ababa. This is due to the fact that, there are different certifying agents other than ECAO. Although there is information constraints, 15 organizations which are found around Addis Ababa are selected for the assessment of QMS – ISO 9001. See the list of these organizations on appendix B.

Table 1.2: Sample size for selected organizations found around Addis Ababa

<i>S. No.</i>	<i>Change management tool</i>	<i>No. organizations implementing change program</i>	<i>Pilot and fully implemented BPR or certified to ISO 9001</i>	<i>Sample organizations</i>	<i>Sample size (Respondents)</i>	<i>Remark</i>
1	BPR	100	48	16	64	Federal institution
2	QMS – ISO 9001	----	-----	15	45	Organizations that are found around Addis Ababa
Total		----	-----	39	109	

Sampling of employees and reengineering teams/management representative – The researchers select all the top management team and two reengineering teams/one management representative, in their interview and questionnaire distribution. As to the sampling of employees, two questionnaires are distributed for organization implementing BPR and QMS.

1.10.2 VALIDATION OF INSTRUMENTS

The researcher undertook pilot testing for validating the questions in the questionnaire whether they represent the measurement of the variable designed, whether the questions are in the right direction of achieving the objectives of this research, or to assess how far the questions in the questionnaire are clearly understood by the respondents.

1.11 ORGANIZATION OF THE PROJECT

This study will be structured in six main chapters. Other than current chapter, introduction, there are five chapters which are described in the following lines.

Chapter 2 (Literature Review) - This chapter will present theories related to BPR and TQM, mainly their difference and similarities on basic concept methodologies in order to extract their integration.

Chapter 3 (BPR and QMS in Ethiopia) – This chapter deals about the introduction of BPR and QMS in Ethiopia.

Chapter 4 (An Integration of BPR and TQM Implementation Model Development) -

This chapter will present development of an integration of BPR and TQM implementation model and implementation plan.

Chapter 5 (Conclusion and Recommendations) - This chapter will present the conclusion and implications based on the findings in chapter four and interpret according to theories

The overall structure of the project is summarized as shown in the figure below.

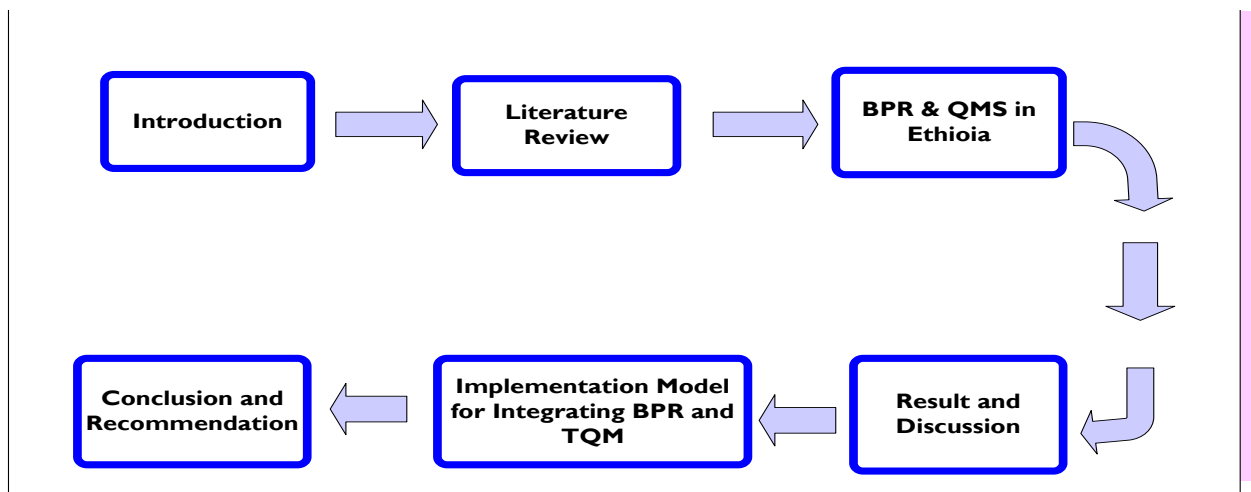


Figure 1.1: Overall structure of the study

CHAPTER TWO – RELEVANT LITERATURE REVIEW

The main objective to this chapter is to differentiate similarity and difference between BPR and TQM in their characteristics, principles, implementation of methodologies, etc in order to create the possibility of integration of both systems.

2.1. INTRODUCTION

In the past, industries following the Adams Smiths theory had concentrated on mass production and those that are service rendering did not worry about the service they provided, in short they were very much concerned about their interest rather than their customers.

But in today's world, where the market place is highly competitive and global, being good enough is no longer good enough. Now the world is changing, customers' expectations are rising all the time, competition is greater and the successful businesses will always be those, which are continuously improving what they do.

Change management becomes central problem at the dawn of the third millennium, in an environment ever more turbulent and economy ever more complicated. Which management philosophies, strategies, change management tools, programs and methods to use – becomes the key question for enterprise survival and growth. New operational and transformational strategies are formulated and steadily improved, through programs and methodologies, to satisfy the needs of enterprise for sustainability and success.

The recurring theme of so-called quality revolution refers to regarding quality not as a pure formality but indeed the central notion of managing. Quality management is a business philosophy aiming at attaining improving business performance. QM application assures product quality consistent with user requirements, high efficiency in business management, and higher conformance of strategic and operative management as well as suitable framework for application of other advanced concepts in attaining business objectives.

Survival and growth can be attained by businesses which readily adapt to the requirements of the demand, offer appropriate quality with justified price, and deliver to the customer just in time or faster than others. Strategic steering and holistic approach to success factors

– quality, cost, time and flexibility - have the ability to improve competitiveness and business performance.

Integrated quality management is focused on the importance of attaining business results through synergetic integration of advanced approaches and good practice, under “conceptual umbrella” of quality management [9]. Within itself, it comprises all accumulated experience of management development, several managerial approaches results in a more complete business success, such as:

- Just-in-Time (JIT) concepts underlies the importance of process management integration and quality through information integration, production segmentation; and synchronizing purchasing
- Total Quality Management (TQM) is oriented to customers, processes and people, requiring employees to be competent and to also be suppliers, and customers simultaneously;
- Quality Management System (QMS), based on international standard series ISO 9000, provides a baseline for future improvement;
- Business Process Re-engineering (BPR) includes fundamental improvement of entire business using information technologies;
- Balanced Score Card (BSC) is aimed at holistic view of business performance geared toward vision and strategy and
- Knowledge Management and Intellectual Capital Management are focused on creation, acquisition, transfer and use of knowledge as well as intellectual property value.

However; this thesis mainly focuses on an integration of BPR and MQS implementation for Ethiopian manufacturing enterprises. Concepts, principles, methodologies and integration of implementation for both BPR and TQM are discussed in the next section.

Currently, in our country, due to the government decision all industries especially service rendering, are implementing BPR by benchmarking. BPR unlike QMS is a radical change in the business and making the institution process oriented.

2.2. BUSINESS PROCESS RE-ENGINEERING (BPR)

Business process re-engineering (BPR) was popularized as a formal concept by the writings of Hammer, Davenport and Short [13] and Hammer and Champym [1], but perhaps James Harrington [8], with his emphasis on process improvement in action, was the real originator. The earlier work of Hammer and the later expanded version of Hammer and Champy [1] tended to focus on corporate transformation while the other influential text of Davenport and Short [13] has a focus on business process redesign, linking the concept specifically to developments in technology and industrial engineering. Many of the first cases of BPR had a heavy focus on information technology, to enable redesign implementation.

In recent times BPR has emerged as the concept which enables an organization to take a radical and revolutionary look at the way in which it operates and the way work is done, and references to it abound in management and technical publications with such words as ‘radical’, ‘dramatic’, ‘rethinking’, ‘optimize’, ‘redesign’ [7]. It has become popular in a short period of time, promising amazing results very quickly in relation to corporate and technological change, transformation and competitive pressures.

Recent surveys of executives have indicated frustration with BPR outcomes [18], and 50 to 70 percent of all reengineering initiatives fail in achieving their objectives [1]. Further more the causes of BPR failure included mismanagement of change, lack of know-how, and misunderstanding of reengineering [32].

Process re-engineering or new process design demands more imagination and inductive thinking and radical change than process redesign, with those charged with the implementation of a project encouraged to abandon their belief in the rules, procedures, practices, systems and values that have shaped the current organization. It raises and challenges assumptions such as make or buy decisions, structures, functional responsibilities and tasks, systems and documentation (e.g. supplier payment), elimination of specialist departments, etc. Hammer and Champy [1] define reengineering as:

A fundamental rethink and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed.

The approach is based on the view that continuous improvement is not sufficient to meet the organizational expectations for business development and change. Business process re-engineering seeks to make major fundamental, radical and dramatic breakthroughs in performance and is holistic in nature. The main focus is to ensure a ‘clean slate’ or ‘greenfield’ approach to processes, pinpointing that part of the organization on which to put the emphasis and highlighting the processes which add value. It is, however, not without the risks and demands on resources, time and costs which are associated with the efforts involved in a re-engineering project. The concept is based on making best use of information technology (IT) in terms of communication and information-handling systems. It harnesses the enablers of technology and the release of the innovative potential of people to achieve breakthrough improvements, requiring a change from functional thinking to process thinking.

2.2.1. THE PRINCIPLES OF BPR

The fundamental principles of BPR represent good management practice. Despite the difference in emphasis and terminology used by various authors the principles and values remain relatively common. From different publications such as Hammer and Champy [1], Macdonald [5], the main principles of BPR can be summarized as follows.

- Strategic in concept
- Customer-focused
- Output- rather than input-focused
- Focus on key business processes
- Process responsibility and decisions at the point where work is performed
- Cross-functional in nature
- Involve internal and external customer–supplier relationships
- Involve senior management commitment and involvement
- Involve networking people and their activities
- Involve integration of people and technical aspects

- Require clear communication and visibility
- Have a mindset of outrageous improvement
- People at all levels of the organization must be prepared to question the status quo in terms of technology, practices, procedures, approaches, strategies

A number of these principles are similar to QMS principles as described in section 2.3.

2.2.2. IMPLEMENTATION OF BPR

The implementation of BPR requires a greenfield approach along the lines of ‘If we were to start this company now, with the knowledge we have, how would it be organized?’ The focus is looking at completely new ways of accomplishing work, i.e. redesigning from scratch. However, there is no single methodology for BPR and an organization should adopt the appropriate practices which suit it best [17].

2.2.2.1. ORGANIZING BPR

The following are the key factors in the implementation of a successful BPR project:

Project champion - The champion should establish the vision and goals, allocate resources, empower employees, hold employees accountable for the activities allocated to them, resolve functional and departmental conflicts, and communicate and champion change.

Steering committee - As with all major projects it is recommended that a steering committee of appropriate personnel and representatives from major stakeholders is established.

Process design team - Establish a process design team of six to eight members who have the appropriate skills, expertise and knowledge of processes and their analysis and measurement, facilitation and project management, IT and data-handling, innovation and creative thought, and team-building. Consultants and equipment suppliers often provide a useful supplement to the team.

Process owner - Once the process design team’s recommendations have been accepted, the implementation phase can begin. This usually involves disbanding the team and the establishment of a process owner, responsible for the actual re-engineering and accountable for the process goals.

Implementation team - The team members are effectively the managers of the newly designed process. They will usually be drawn from the membership of the process design team.

2.2.2.2. BPR METHODOLOGY

Many researchers have introduced several methodologies to support a BPR effort. An organization has to choose between these approaches to support a BPR project, but none of them is a panacea. The challenge in structuring a project for improving the performance of business processes is to select the approach that is best suited to the situation in hand, taking into account organization objectives, capabilities and economic or competitive requirements.

The majority of BPR methodologies share common features and steps. In the following sections we describe a representative sample of these methodologies. In the end we describe the differences of these methodologies and the value and the importance of each special step in a BPR effort. Moreover, the main reasons behind the failure of BPR projects are discussed and a list of factors that should be considered in order a reengineering effort to be successful is provided. Among the different BPR methodologies, the two BPR methodologies, namely creators' methodologies, namely Hammer/Champay's and Davenport's are discussed below.

The Hammer/Champy Methodology

Hammer and Champy [1] suggested a methodology for BPR, which was refined by Champer's Consultant Company. The six phases of the methodology are shown in table 2.1.

Table 2.1: Hammer/Champy [13] Methodology

<i>S.N</i>	<i>Object Steps</i>	<i>Objectives</i>
1.	Introduction into Business Reengineering	The CEO initiates the project describes briefly and pragmatically the current business situation to start actions. It introduces the vision to the employees of the company.
2.	Identification of Business Processes	This step looks at the broad picture, of how processes interact within the company and in relation to the outside world. One deliverable is a graphical display of all processes.

<i>S.N</i>	<i>Object Steps</i>	<i>Objectives</i>
3.	Selection of Business Processes	The third step serves to select such processes, which - once reengineered - will lead to high value for the company's customers. Also processes, which lend themselves to easy reengineering, are being selected.
4.	Understanding the Selected Business Processes	This step does not dwell on a detailed analysis of the functioning of the selected business processes, rather concentrates on the performance of the current processes as opposed to what is expected from them in the future.
5.	Redesign of the Selected Business Processes	The fifth step is according to Hammer/Champy the most creative of all. It is characterized by imagination, lateral thinking and some sort of craziness.
6.	Implementation of Redesigned Business Processes	The last step covers the implementation phase of the Business Reengineering project. Hammer/Champy do not talk about implementation as much as about project planning. They believe in the success of the implementation, once the five preliminary steps have been properly performed.

The Davenport Methodology

Davenport [13] puts Information Technology at the heart of Business Reengineering. For Davenport Information Technology possesses the most important role for innovating Business Processes. Despite his emphasis on innovation and technology, Davenport [13] states, that organizational and human resource issues are more central, than technology issues to the behavior issues that must occur to within a business process. His methodology covers six steps (table 2.2).

Table 2.2: The Davenport [13] Methodology

<i>S.N</i>	<i>Object Steps</i>	<i>Objectives</i>
1.	Visioning and Goal setting	The first step is needed to focus all subsequent actions on company visions and process goals. Cost reduction is considered an important goal, yet Davenport warns against concentrating too much on cost-cutting, because other goals, such as worker satisfaction, reduction of time requirements, and improvement of process performance might be discriminated against.
2.	Identification of Business Processes	This step identifies the business processes, which should be reengineered. Davenport advises Business Reengineering teams to concentrate on a few important, not more than 15 core processes.
3.	Understand and Measure Processes	The third step studies the exact functioning and performance of the selected Business Processes. This differentiates Davenport from the Hammer/Champy approach. Davenport in particular wants to make sure, that during the process redesign old practices are not being "reinvented" and performance benchmarks

<i>S.N</i>	<i>Object Steps</i>	<i>Objectives</i>
		for the redesigned processes are being set up.
4.	Information Technology	The fourth step serves to study the applicability of Information Technology tools and applications for the newly designed work processes.
5.	Process Prototype	This step covers the design of a functioning prototype of the new Business Process. People in the company study this prototype, develop ideas for enhancements and make themselves comfortable with the redesign of their work processes.
6.	Implementation	The last step serves to implement the tested prototype on a company-wide basis. Davenport considers this step crucial to the success of the overall effort, since implementation takes roughly double as long (minimum one year) as the foregoing steps.

Comparison of Selected BPR Methodology

The comparison of the selected methodologies shows many similarities. First, the overall approach Business Reengineering projects take is of a linear nature. Further, Business Reengineering projects take a similar route as Information Technology implementation projects. Within the three consecutive steps, the individual approaches differ in the scope of project preparation. Davenport [13] asks for a complete preparation including visioning, whereas the other methodologies contrast by hands-on approaches right from the project start. Davenport also addresses the people side of Business Reengineering, but only as far as implementation issues are concerned. Taking the conclusion further, and applying it to the sources of existing methodologies, then Hammer/Champy [1] appear to see Business Reengineering as yet another systematic and marketable approach for fast and cost-efficient implementation of planned change. Technically oriented academics take a broader view, yet shy away from really integrating social psychology into their linear approaches, because this might be considered nonscientific by colleagues. An eclectic approach is preferable as they include elements both from Hammer/Champy and Davenport methodologies.

2.3. TOTAL QUALITY MANAGEMENT (TQM)

Over the past 20 years, quality has been hailed as the key factor for success. However, the organizational world has been increasingly moving away from the traditional “quality” concept, as a function of inspection, control, audit, and review, as these are all now seen as non-value adding. Some of TQM’s basic concepts came out of Bell Telephone’s labs in the

early 1920s. Refined and developed by Deming, Juran, Crosby, and then Ishikawa and Taguchi, and later on others - TQM calls for continually improving quality by using statistical measures to track, both, problems and the results of efforts to fix these problems.

Total Quality Management (TQM) is a management approach for improving processes in an organization in order to manufacture products or offer higher quality services which satisfy the customer. The approach emphasis number of elements: the improvement process is continuous and never ending; the improvement processes are undertaken by teams, some of which are organic and some which are task ad-hoc; each process has an inherent improvement which must be learned in a systematic manner [23]. TQM – involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes.

Total quality management requires that the principles of quality management should be applied in every branch and at every level in the organization with an emphasis on integration into business practices and a balance between technical, managerial and people issues. It is a company-wide approach to quality, with improvements undertaken on a continuous basis by everyone in the organization. Individual systems, procedures and requirements may be no higher than for a quality assurance level of quality management, but they will pervade every person, activity and function of the organization. It will, however, require a broadening of outlook and skills and an increase in creative activities from those required at the quality assurance level. The spread of the TQM philosophy would also be expected to be accompanied by greater sophistication in the application of tools and techniques, increased emphasis on people (the so-called soft aspects of TQM), process management, improved training and personal development and greater efforts to eliminate wastage and non-value adding activities. The process will also extend beyond the organization to include partnerships with suppliers and customers and all stakeholders of the business. Activities will be reoriented to focus on the customer, internal and external with the aim to build partnerships and go beyond satisfying the customer to delighting them. The need to self-assess progress towards business excellence is also a key issue.

There are many interpretations and definitions of TQM. Put simply, TQM is the mutual co-operation of everyone in an organization and associated business processes to produce

value-for-money products and services which meet and hopefully exceed the needs and expectations of customers [7]. TQM is both a philosophy and a set of guiding principles for managing an organization to the benefit of all stakeholders. There are eight quality management principles [6], these are:

- *Customer focus.* Organizations depend on their customers and therefore should understand current and future customer needs, meet customer requirements and strive to exceed customer expectations.
- *Leadership.* Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives.
- *Involvement of people.* People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit.
- *Process approach.* A desired result is achieved more efficiently when activities and related resources are managed as a process.
- *System approach to management.* Identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objective.
- *Continual improvement.* Continual improvement of the organization's overall performance should be a permanent objective of the organization.
- *Factual approach to decision-making.* Effective decisions are based on the analysis of data and information.
- *Mutually beneficial supplier relationships.* An organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value.

2.3.1. CONTEMPORARY PRACTICAL MODELS OF TQM

While most management researchers agree that TQM is one of the most significant management inventions of the century, the real influence for contemporary management practices comes from widely spread practical applications of TQM. Two major frameworks, ISO 9000 family of quality standards and Quality Awards, are generally accepted as models for Total Quality Management [24]. ISO 9001 based quality systems have traditionally taken only a limited approach to TQM focusing mainly on ensuring the

quality of the sales-delivery process, but the recent developments of ISO 9000 quality management standards are consistent with the philosophy and practices of quality awards. These two frameworks give a mature, well-defined, and widely accepted definition of Total Quality Management. Studies indicate that TQM did not reach an integrated set of commonly accepted practices before there was general acceptance of the ISO 9001 as quality management systems and quality award models [25]. They provide a consistent and comprehensive definition of total quality management, opposite to the work of individual quality gurus [26].

a) ISO 9001 Standard

The ISO 9000 standards were developed with the primary goal of being used in international trade [25]. The core objectives in creating these standards were to break down trade barriers and to rationalize business-to-business relationships [6]. This process has led to situations where many organizations require their suppliers to be certified. ISO 9001 certification demonstrates that an organization has implemented the minimum level of quality control. Beyond this symbolic role, which actually can lead to significant business benefits in the form of simplified and standardized business relationships, ISO 9001 standards are used to improve the internal effectiveness of the production processes. The ISO 9000 family of standards is developed from British Standards BS 5750 [25]. It is maintained by the International Organization for Standardization, which has made the standards widely accepted. By the year 1998, 143 countries were using this international standard or national standards. The first version of these standards was published in 1987. The technical committee ISO/TC 176 is responsible for drawing up and updating the ISO 9000 series, which is a collective effort of all member countries of the organization. The first revision took place in 1994; the second revision was in 2000; and the third revision (ISO 9000:2008) was finally accepted and published by 2009. Organizations certified according older version of the standard have three years to update their quality management systems to comply with the new standard. This development of ISO 9000 family of standards is an important justification for the importance of this research, because with the new standard, the organization must implement a quality management system, which is significantly broader in scope. Organizations preparing for certification according to ISO 9000:2000 will face similar problems as identified in the studies of the TQM

implementation programs. The old 1994 version was not identified as a model for TQM. Rather, it is focused on quality assurance and it has the main application to ensuring standardized internal processes to provide product and services that meet predefined requirement. It does not explicitly stress the importance of continuous improvement and customer satisfaction (ISO 9004, guidelines for performance improvement). All requirements of the ISO standard are compatible with quality award criteria, and it can be considered as a subset of quality award criteria, but the latest 2008 version is more comprehensive in scope and can be considered an alternative for quality award criteria. ISO 9000:2008 standards are a collection of three documents [6]:

- Quality Management System – Fundamentals and Vocabulary
- Quality Management System – Requirements (ISO 9001)
- Quality Management system – Guidelines for Performance Improvement (ISO 9004)

ISO 9001 and 9004 have been developed to complement each other. The first provides detailed requirements for scope and implementation of quality management. It is also used as a reference in the certification process. The latter gives directions and guidance on a wider range of objectives for a quality management system compared to ISO 9000 standards, but they both share similar structure and are intended to be used parallel to one another. It is recommended, as a guide for top management, to move beyond the specific requirements of ISO 9001 in pursuit of continual performance improvement.

1. Scope
2. Normative Reference
3. Terms and Definitions
4. Quality Management system
5. Management Responsibility
6. Resource Management
7. Product Realization
8. Measurement, analysis and improvement

b) Quality Award Model

Business excellence is symbolized by a number of models based on the premise that excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy that is delivered through People, Partnerships and Resources, and Processes. In Europe excellence is promoted by the European Foundation for Quality Management (EFQM) through the EFQM Excellence Model. In the USA excellence is promoted by the National Institute of Standards and Technology (NIST) through the Baldrige National Quality Program (BNQP) [6].

Around the world, several Quality Awards are being presented for excellence, for example, in Ethiopia excellence is promoted by Ethiopia Quality Award (EQA). Among the quality awards mentioned above, Ethiopian Quality Award will be discussed in the next section.

Ethiopian Quality Award (EQA)

Ethiopian Quality Award is established by the initiation of Addis Ababa University (AAU) and Walta Information Center (WIC) in 2007. The board is directed, under which a jury, technical/evaluators financial sections and administration units are established to manage the program. The award is issued annually to organizations, which demonstrate performance excellence in product and services quality [37].

EQA Assessment Procedure

A. Award Categories

EQA has the following award eligibility categories:

- | | |
|--|---|
| <ul style="list-style-type: none">◆ <i>Manufacturing</i><ul style="list-style-type: none">▪ <i>Large scale</i>▪ <i>Medium scale</i>▪ <i>Small scale</i>◆ <i>Construction</i><ul style="list-style-type: none">▪ <i>Large scale</i>▪ <i>Medium scale</i>▪ <i>Small scale</i> | <ul style="list-style-type: none">◆ <i>Service profit making</i><ul style="list-style-type: none">▪ <i>Large scale</i>▪ <i>Medium scale</i>▪ <i>Small scale</i>◆ <i>Service non-profit making</i><ul style="list-style-type: none">▪ <i>Large scale</i>▪ <i>Medium scale</i>▪ <i>Small scale</i> |
|--|---|

Evaluation Process

The evaluation process has the following steps [37]:

Stage 1: Application

Stage 2: Self-assessment

Stage 3: Submission of self-assessment report

Stage 4: Independent review by the technical committee

Stage 5: Consensus review by the technical committee

Stage 6: Short listing

Stage 7: Second registration

Stage 8: Site visit review

Stage 9: Technical committee recommends award receipts to the judge

Stage 10: Judges' evaluate and recommend, and

Stage 11: EQA board approve the recommend award receipts

Comparison between Quality Award and ISO 9001

One characteristic that distinguishes these models from ISO 9000 is that the Models are a non-prescriptive framework that recognizes there are many approaches to achieving sustainable excellence. Another is the award scheme. Excellence awards are generally annual events where winners collect awards. The award does not have a time limit although an organization can apply again after a suitable lapse, usually 5 years. However, unlike the ISO 9000 certification scheme there is no continuous assessment and organizations don't lose the award for failing to maintain standards. There are many similarities between the business excellence concepts and the quality management principles used as a basis for the ISO 9000:2000 family of standards as shown in Table 2.3.

Table 2.3: comparison between Business excellence and Quality Management principles

<i>Business Excellence Concepts</i>	<i>Quality Management Principles</i>
<p>Customer focus The customer is the final arbiter of product and service quality and customer loyalty, retention and market share gain are best optimized through a clear focus on the needs of current and potential customers.</p>	<p>Customer focus Organizations depend on their customers and therefore should understand current and future customer needs, meet customer requirements and strive to exceed customer expectations.</p>
<p>Leadership and constancy of purpose The behavior of an organization's leaders creates a clarity and unity of purpose within the organization and an environment in which the organization and its people can excel.</p>	<p>Leadership Leaders establish unity of purpose and direction for the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives.</p>
<p>People development and involvement The full potential of an organization's people is best released through shared values and a culture of trust and empowerment, which encourages the involvement of everyone.</p>	<p>Involvement of people People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit.</p>
<p>Management by processes and facts Organizations perform more effectively when all interrelated activities are understood and systematically managed and decisions concerning current operations and planned improvements are made using reliable information that includes stakeholder perceptions.</p>	<p>Process approach A desired result is achieved more efficiently when related resources and activities are managed as a process.</p>
	<p>Factual approach to decision-making Effective decisions are based on the analysis of data and information.</p>
	<p>Systems approach Identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives.</p>
<p>Continuous learning, innovation and improvement Organizational performance is maximized when it is based on the management and sharing of knowledge within a culture of continuous learning, innovation and improvement.</p>	<p>Continual improvement Continual improvement of the organization's overall performance should be a permanent objective of the organization.</p>
<p>Partnership development An organization works more effectively when it has mutually beneficial relationships, built on trust, sharing of knowledge and integration with its partners.</p>	<p>Mutually beneficial supplier relationships An organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value.</p>
<p>Public responsibility The long-term interest of the organization and its people are best served by adopting an ethical approach and exceeding the expectations and regulations of the community at large.</p>	<p>There is no equivalent principle in ISO 9000; however, ISO 9004 Clause 5.2.2 stresses that the success of the organization depends on understanding and considering current and future needs and expectations of the interested parties.</p>
<p>Results orientation Excellence is dependent on balancing and satisfying the needs of all relevant stakeholders.</p>	<p>There is no equivalent principle in ISO 9000; however, ISO 9004 Clause 5.2.2 ISO 9000; however, ISO 9004 Clause 5.2.2 does recommend that the organization should identify its interested parties and maintain a balanced response to their needs and expectations.</p>

Source: [6]

The differences between the Business Excellence Model and the Quality Management Principles are small enough and hence, it is more benefits to be gained by looking for synergy rather than for conflict.

2.4. AN INTEGRATION OF BPR AND TQM

2.4.1. COMMON GROUNDS AND SIMILARITIES

Before trying to point out the differences between TQM and BPR, it is more useful to find the similarities. These points represent a wide viewpoint and are meant to highlight the broad commonalties between the two approaches, not to suggest that BPR and TQM are similar in their application methodologies. It is worth to note that while BPR and TQM share many of the same dimensions and goals, the two are not mutually exclusive and need to be done jointly.

A. Quality Improvement and Process focus:

Both, TQM and BPR, are quality movements that seek to enhance an organization's capabilities for the future. Quality goals concentrate on the reduction of variation in processes and the application of effective measurement systems. Customers play a central role in being the determining factor of the standards of quality. In today's world, quality is in the eyes of the beholder, i.e., the customer. It is the customer's perception that counts. BPR has much in common with TQM in this respect. The definition of the process to be reengineering is in part a technical matter, concerning judgments about where the problem actually lies in the light of available information. Within the organization, this customer-defined quality is translated into process-focus. At the heart of TQM is the idea that improvement comes from addressing the processes, which deliver the defective or inadequate end-results, rather than on concentrating on the results themselves. As for BPR, the process focus is an intrinsic paradigm of the reengineering strategy. Critical success factors are used to identify the organization's core processes, which will undergo redesign. Conformance quality (meeting customer requirements) and perceived quality (exceeding customer requirements) improve profitability. Reducing waste and increasing productivity are natural by-products of a systematic process of quality improvement. As such, both TQM and BPR aim at improving an organization's operations to enhance its ability in

delivering quality products and services with the ultimate aim of augmenting productivity, increasing profitability, and gaining market share.

B. Top Management Support

Setting the stage for quality improvement involves everything that the business does from becoming aware of the need for significant change to establishing a commitment to actually follow through. The desire to actually deliver quality involves senior management's initiation and continued commitment, constituting the basic drive behind the whole process. It involves goal setting, barrier reduction, training, and leadership. Setting the stage means that one must create an environment in which business improvement is encouraged and nourished. A vision of "change for quality" must accompany such efforts and be dispersed through out the organization. As management establishes the vision of what it wants to accomplish and where it wants to go, it must put in place "support systems" to help employees understand and implement the forthcoming change. To ensure positive results, steering performance must be consistent with the vision.

Senior management's role is to lead the change, not to manage it. It is responsible for shaking the barriers, i.e. removing road-blocks set up within the organization by people opposing change. Senior management must provide inspirational vision of the ultimate goal to be achieved.

C. Serious investment in the human resource: Empowerment, Teamwork, Training

For any quality campaign to be successful, you need top-down active leadership that facilitates real change and a bottom-up quality management improvement process in order to achieve real sustainable bottom line results. Management's role is to invest in the campaign by motivating and involving others through broadening the ownership base of the idea. Only when employees develop a sense of ownership, will they embark upon it with true enthusiasm and motivation. Ownership must ultimately rest with the line operations in terms of engagement and accountability, for it is this human element of the organization that will ultimately deliver the quality and present the organization's image to the final customer. Delivery of quality implies a commitment and dedication, not only by senior

management, but also by every single person within the organization, and sometimes outside of it.

From the concept of empowerment follows the concept of group-work or teamwork. Teamwork is a technique where by individual members of a team work together to achieve a common goal. Teams are an essential structural ingredient of both approaches. Teams are needed to meet the challenges of the environment. The increased value placed on empowering employees as a means of improving productivity while simultaneously improving employee satisfaction leads to increased reliance on teams. Employees need to work together to meet new challenges. The theme is central to both TQM and BPR, as it aids communication, improves cooperation, reduces internal competition and duplication of effort, and maximizes talents of employees on a project. Teams are a vital “management tool” given that collaborative decision making allows for creativity. The need for fewer layers of management and more information for better communication and more efficiency will arise. Decreasing hierarchy will also remove organizational blockages to critical change.

An organization stands and falls with the people in it. It is therefore imperative to understand and anticipate individuals’ expectations, emotions and behavior. This includes managing for fear and resistance to change. Communication is crucial factor not only to an organization’s employees, but also to all its stakeholders, including owners, external customers, suppliers, press, etc. These aspect are frequently neglected in implementation of TQM, and more so in BPR. While these are intrinsic aspects of the Total Quality Approach, they are only marginal where BPR is concerned. In comparison with TQM, BPR under-rates the human dimension.

D. Metrics and Measurement:

The selection and application of relevant performance metrics is critical to achieving success. Performance metrics must fit the business objectives and must be customer focused and driven. Today’s quality standards are defined by the customers whose needs, desires, and expectations vary considerably. As such, a company should use the same measures as their customers in order to create a common ground for evaluating

performance. Results should be directly measurable in terms of customer satisfaction, process cost, process quality, process speed, and ultimately in increased shareholder value and capital creation.

4.2.2 STRATEGY DIFFERENCES

A. Radical Versus Incremental

The major substantial difference between TQM and BPR, it has been argued, is the principle of radicalization. This radical element of BPR change is a striking departure from the incremental change of TQM projects. Process reengineering approaches process improvement in a drastic manner wiping out the old and putting in place new processes. While process management is based on the concept of continuous, evolutionary improvement, process reengineering searches for breakthrough improvements and revolutionary methods for doing work. To encourage a radical organizational rethink, the starting point for reengineering is a blank sheet of paper. The reengineering effort tears apart the current process and systematically rebuilds it. ‘Continuous improvement’ of TQM responds to growing customer needs and expectations and ensures a dynamics evolution of the quality management systems in a slow, but sure mode. The pace of reengineering is ambitious, in comparison with TQM’s conventional change programs.

B. Innovation Versus Improvement:

The other major difference between TQM and BPR has to do with the level of change. A number of authors view organizational improvement activities as points on a continuum ranging from incremental improvement to radical change. Due to its focus on existing processes, TQM will rarely lead to radical innovation; rather it brings about change in a snowball effect so that the end result shows significant departure from the initial state of affairs; but still change and improvement are no more than incremental. It is within this context that the debate arises as to whether or not BPR, as a vehicle of radical change and innovation, is becoming a substitute for the incremental improvement of TQM. The logic behind it is that as the external environment is becoming more volatile and a more radical approach to change is needed. The “clean slate” approach in implementing BPR is in itself a thrust for creative thinking. Separating those responsible for scrutinizing the process from

those charged with identifying the role of IT guards against any biases or hindrances created by current system limitations, processes, people, or activities.

C. Risk and Pay-back Period:

The pace of reengineering is ambitious, in comparison with TQM's conventional change programs. As such, high risk due to radical change is a natural consequence of BPR. Reengineering programs promise significant benefits - higher margins, lower expenses, and improved productivity, to name a few. But these efficiencies are seldom gained without trade-offs. The sweeping changes brought about by reengineering cannot fail to influence a company's risk profile. Risk managers need to devise training programs that will help minimize the impact of change. Reengineering without training and education is unthinkable. Risk management is an inherent part of reengineering. Companies must assess the risks associated with changing business processes. TQM, in contrast to BPR, it is a much lesser risk. It involves neither the radical nor the dramatic changes that are an intrinsic part of BPR; rather TQM addresses the organization from a cultural standpoint that works on changing attitudes and behaviors over a long time period. A short-term focus in TQM weakens the organization and rarely ensures that the ultimate goal is achieved and sustained. It frustrates the people involved because they quickly realize that it takes time to develop the skills, attitudes, and knowledge required to make a difference to customers and to the bottom line. A long term focus, however, signals strong unwavering commitment and eventually wins over the people who must make it all happen. A long-term focus and a sense of urgency are entirely compatible attitudes in TQM and, in fact, are the right ones.

BPR, on the other hand, is a one strike or one shot thing. Its relative short time frame results in quick outcomes, which renders it even more risky. TQM's incremental improvement-oriented changes are a long-term investment. Miraculous results will not appear overnight, especially because TQM is addressing a "culture" issue. Changing attitudes, behaviors, and beliefs is the most difficult and lengthy process and organization can undergo.

The difference and similarities of TQM and BPR (table 3.2) are summarized based on six parameters namely theoretical roots, founders, motto, basic principles, the management of change and outcomes [34].

Table 2.4: Comparison between BPR and TQM

<i>Dimensions</i>	<i>TQM</i>	<i>BPR</i>
I. Theoretical Roots	<ul style="list-style-type: none"> ▪ Statistical Theory (SPC) ▪ System Theory 	<ul style="list-style-type: none"> ▪ Concurrent Engineering ▪ Production Engineering ▪ Practice driven ▪ System Theory
II. Founders	<ul style="list-style-type: none"> ▪ Deming, Crosby, Juran, Imai, Shewhart, Taguchi, Ishikawa 	<ul style="list-style-type: none"> ▪ Hammer, Champy
II. Mottto	<ul style="list-style-type: none"> ▪ A group of ideas and techniques directed towards enhancing through improving the quality of products and processes 	<ul style="list-style-type: none"> ▪ A set of ideas about radical redesign and change in business processes to achieve breakthrough results (major gains in cost, service, or time).
IV. Specific Basic Principles and Assumptions	<p>A. <i>Organizational Goals:</i> serving customer needs to fullest extent possible by supplying goods/services of highest quality</p> <p>B. <i>Time Orientation:</i></p> <ul style="list-style-type: none"> ▪ Dynamic; ▪ Philosophy of incremental and continuous improvement; ▪ Short and long term perspective <p>C. <i>Coordination and control</i></p> <ul style="list-style-type: none"> ▪ Coordinating through process action groups (cross functional); ▪ Both control and coordination exercised by managers and employees. <p>D. <i>Work Design</i></p> <ul style="list-style-type: none"> ▪ System-based optimization guided by specific design principles; ▪ Formation of implementation teams. <p>E. <i>Technology</i></p> <ul style="list-style-type: none"> ▪ Technology may be a key factor in quality improvement. <p>F. <i>Customer and Supplier Orientation:</i></p> <ul style="list-style-type: none"> ▪ Internal and external customer and suppliers as integral part of the system <p>G. <i>Reward:</i></p> <ul style="list-style-type: none"> ▪ Individual, team and system-based 	<ul style="list-style-type: none"> ▪ quantum leap in performance by focusing on key processes that ‘really matters’, emphasizing strong leadership, technology and radical change ▪ Dynamic; ▪ Philosophy of radical and rapid change; ▪ Short term cycle to achieve desired result. ▪ Coordinating and control by reengineering teams, process owners and steering committee; ▪ Both control and coordination exercised by managers. ▪ System-based guided by key design processes; ▪ Formation of process teams. ▪ Information technology as an essential facto in work design. ▪ Processes’ customers are an integral part of the system. ▪ System and individual-based.

<p>V. The Management of Change</p>	<p>A. <i>Change Orientation:</i></p> <ul style="list-style-type: none"> ▪ Change process lead by management and/or quality council; ▪ The effort is mostly guided by ISO 9000 and/or Award Evaluation processes and/or some combination of specific guidelines provided by quality expert. <p>B. <i>Change Phase, Mechanism and processes:</i></p> <ul style="list-style-type: none"> ▪ Broadly defined deductive-based phases and basic activities. ▪ Team learning and system learning mechanism 	<ul style="list-style-type: none"> ▪ The change is lead by top management and steering committee; ▪ The effort is guided by process owner and reengineering (process design) teams. ▪ Clearly defined inductive-based phases. ▪ Information technology as key element in team process learning.
<p>VI. Outcomes</p>	<p>A. <i>Continuous Improvements:</i></p> <ul style="list-style-type: none"> ▪ Established <p>B. <i>Organizational Learning:</i></p> <ul style="list-style-type: none"> ▪ Specific to quality related issues. <p>C. <i>Organizational Performance Measures:</i></p> <ol style="list-style-type: none"> 1. Customers and suppliers satisfaction: <ul style="list-style-type: none"> ▪ Established 2. Quality Standards: <ul style="list-style-type: none"> ▪ Established and extensively improved. 3. Production Cost reduction: <ul style="list-style-type: none"> ▪ Advocated. <p>D. <i>Organization Culture:</i></p> <ul style="list-style-type: none"> ▪ New quality-based organization culture. 	<ul style="list-style-type: none"> ▪ Unknown ▪ Learning mechanism based on key organizational processes. ▪ Advocated ▪ Established quality standards related to processes. ▪ Established ▪ New innovation-based organization culture.

Source: [34]

2.4.3. INTEGRATING BPR AND TQM

In response to globalization and growing competitiveness of world markets, enterprises are continually looking for different management techniques to make their business operations competitive. A wide range of systems such as TQM, benchmarking, Business Process Re-engineering (BPR) and so on have been deployed as drivers to improve competitiveness [19]. TQM is based on continuous improvement principles to facilitate change on a constant and progressive basis. BPR, on the other hand, advocates large step changes using structural process re-design and a fundamental rethinking of the business. In spite of their differences, these two approaches are seen by some researchers as being compatible. For example, Love and Gunasekaran, [27] have presented TQM as a good starter for BPR and MacDonald and Dale [17] believe that BPR and TQM can be used jointly since they have many common features.

On the other hand, Leach [28] argues that continuous improvement is a better and less risky means of making changes in a company than re-engineering, claiming that a continuous improvement process helps to maintain stability. He also argues that re-engineering does not allow employees to assimilate the changes made and that when re-engineering leads to downsizing, the commitment of employees decreases. MacDonald and Dale [17] have also analyzed the differences between TQM and re-engineering and amongst their conclusions are:

- Large step changes are riskier, more complex and more expensive than continuous improvement. This implies that TQM may be preferable for developing countries for certainty, cost and simplicity reasons.
- Reengineering places more emphasis on equipment and technology rather than people; TQM is the opposite. Developing countries are generally relatively technology scarce and relatively labour abundant though workers in developing countries may not be highly skilled.
- Reengineering tends to concentrate on one process at a time using a project planning methodology, whereas TQM takes a more holistic view of the organization, building improvement into all aspects of business operation.

The purpose of introducing a new management technique is to boost productivity and hence remain competitive in the global market. When an enterprise implements TQM workers develop certain important qualities such as team working, problem analyzing, finding a solution independently, acquiring training skills, etc. Therefore, workers become more conscious that a static position cannot be maintained if the enterprise wishes to successfully compete in the global market. This gradual but continuous change with in enterprises and workers' cumulative knowledge helps to realize large step innovations by implementing BPR or benchmarking. Conversely, one may also argue that a reengineered enterprise might have acquired a culture for change and improvement which is conducive to implement TQM. Put another way, although BPR is fundamentally designed and controlled from the top of the organization, BPR principles must be communicated company-wide and training and education programmes implemented to teach employees their tasks in the new process design [29]. In this way, organizations develop effective vertical and horizontal

communication channels, and training and education infrastructures which are very useful for the implementation of TQM.

In BPR approach, changes are dictated by top management whereas TQM requires the active participation of the entire workforce (including executive's commitment) across the organizational hierarchy. The fact that top management commitment is important for the implementation of TQM shows that the barrier might be less in companies that underwent BPR, where top managers are more aware of the need for radical improvement in processes to maintain competitiveness. Dixon *et. al.* [30] have studied companies which have simultaneously developed TQM and re-engineering initiatives and found that there were several similarities. In both cases the size of the initiative affected the entire company, cross-functionality was a requirement, IT was important for re-engineering and considered to be useful for continuous improvement, and management support was needed in both initiatives. The main underlying difference is that with TQM changes were made with the active participation of employees, whereas with re-engineering changes were dictated by top management. Childe *et al.* [31] note that one of the benefits of BPR is that it "establishes mechanisms to ensure continuous improvement of the re-design processes. This is so because BPR is regarded as a direct method to introduce dynamism and awake the organization from its traditional position. After a radical change in the design of the process, continuous improvement would perhaps be seen as contributing to adjustments and improvements to the re-engineered process.

Regardless of their difference, the source of the synergy remains in the complementary relationships that exist when TQM and BPR are integrated. The model presented in Figure 2.1 depicts this relationship and explains what TQM and BPR can gain from each other in their co-living process.

A TQM work-process study would reveal what needs to be improved and how these improvements can help the organization exceed customer expectations. When the need for improvements surpasses the scope of a gradual change, BPR programmes can be initiated. A customer-oriented BPR can be implemented only if the organization can address all the socio-technical and business requirements. Likewise, the TQM study of the workplace can

be comprehensive and representative of the total business requirement when supported by the system thinking of BPR. In fact, the system output can only be marginally efficient unless BPR is accomplished concurrently with a TQM work process analysis [19].

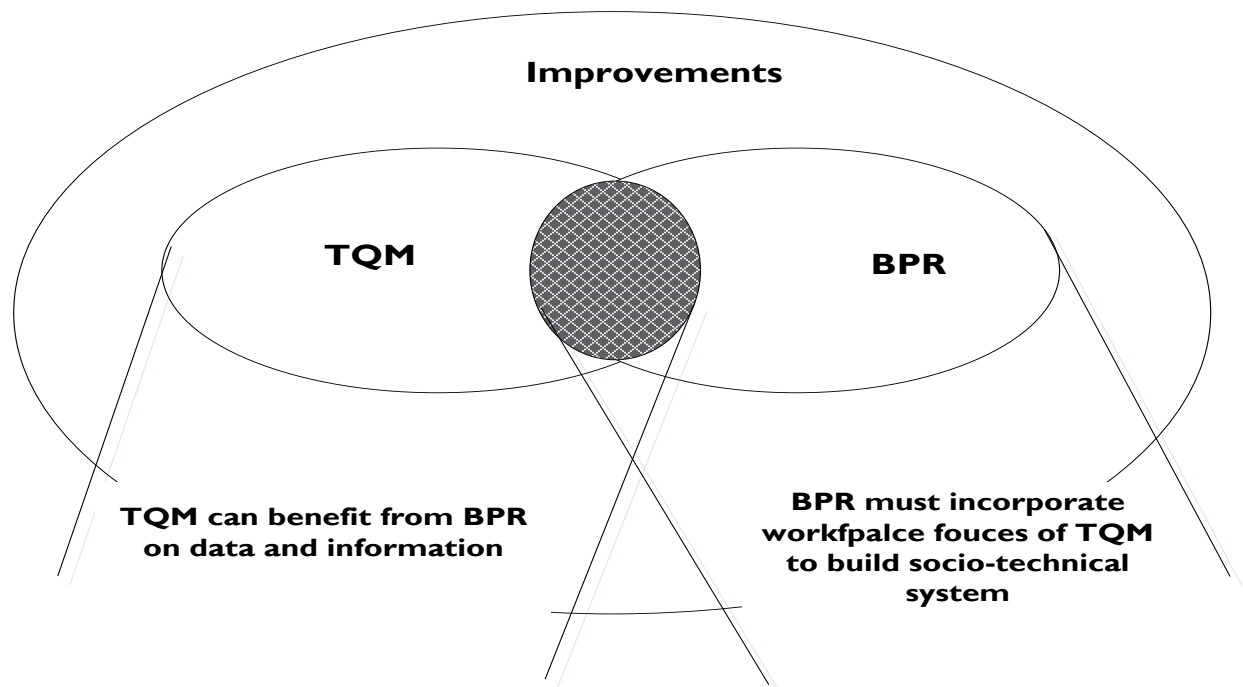


Figure 2.1: Complementary relationships of BPR and TQM. [19]

2.4.3.1. INTEGRATION APPROACH

There are four alternative approaches to integrating improvement and innovation activities with firms [13]. These are not exclusive – one firm may want to employ all four:

- Sequencing change initiatives
- Creating a portfolio of process change programs
- Limiting the scope of work design
- Undertaking improvement through innovation

Sequencing Change – this approach to integration is to alternate between improvement and innovation for a specific process over time (figure 2.1). Ideally, firms would first stabilize a process, and then apply innovation for radical change, then settle into continuous improvement so that gains will not be lost. They would then return to innovation once again, and thus keep the sequence moving. Again, to avoid confusion, these initiatives should take place within the context of one overall quality or improvement program.

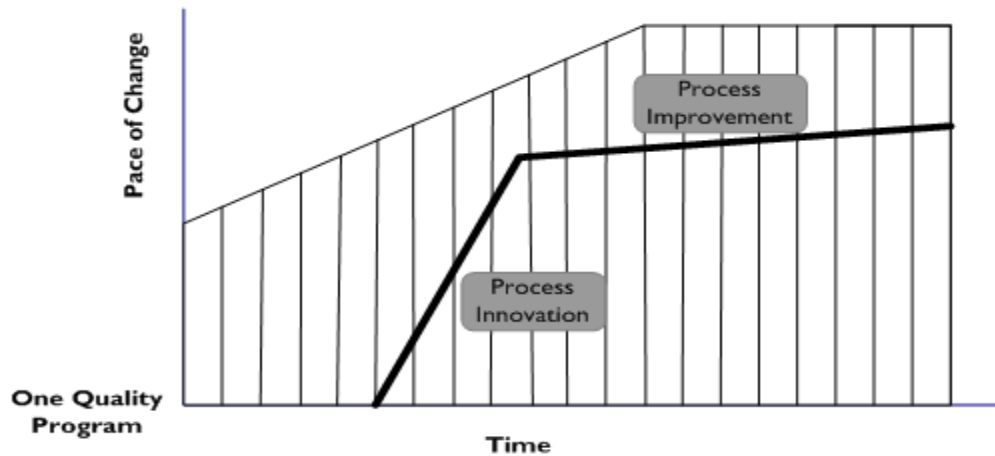


Figure 2.2: Sequential alternation over time. [13]

However, a full cycle of stabilization, innovation, and improvement may take five years or more [13]. This makes it a somewhat hypothetical approach since few firms have the time to move through such a cycle.

Creating a Portfolio of Processes – this approach to integration is taking off among the leading firms in process management. It involves mapping all processes – at both narrow and broad levels – and then categorizing them by the type of change necessary.

In order to adopt a portfolio approach, firms need to take several preparatory steps. First, they identify all of the processes that need attention. Since continuous and focused improvement are usually practiced at the narrow level, at least some of the broad processes should be defined in terms of the sub processes that feed in to them.

Next, it is important to develop clear criteria for ranking the processes for the various approaches. Those that need rapid improvement are obviously candidates for focused improvement or restructuring. In selecting processes for innovation, a reasonable list of criteria might include high relevance to strategy, a low level of current process functioning, the presence of a committed, capable sponsor, a willingness to invest and a favorable history change in that area. If these factors are missing, continuous improvement may be more appropriate approach.

Limiting the scope of work design – one of the problems of process innovation or reengineering is that it does not involve participation by all or even many of the workers

who perform the process. As practiced from most firms, it is largely instigated from the top down. This is unfortunate since it is much easier to get people to commit to new work process when they are the ones who helped design it. This is often the case in successful quality programs.

One way to preserve the employee participation found in continuous improvement initiatives is to have process innovation teams design only the high-level process flows. The next step is to as those who will perform the process to decide how they want to design the detailed aspects of their part of the process. The high-level design might specify the inputs and outputs to the detailed work process, and the performance objectives in terms of cost, time or quality. The remainder of the design would be up to the work team itself.

Undertaking improvement through innovation – many firms find it difficult to make the investments in systems and human change needed to bring about radical process innovations. Although they know that the return on these investments is high, simply freeing up the resources to develop such innovations can be difficult at a time when even the most successful U.S. firms are keeping a close watch on their balance sheets. In such situations, it may be appropriate to combine short-term improvement with longer term innovation with the same process change initiative. The short-term changes can be put in place for their own value, or they can be used to finance a longer term innovation project.

2.5. SUMMARY

The principles and practices of BPR have their base in other concepts such as TQM, work study, group technology, etc. The same applies to the tools and techniques used in BPR. The researcher is believed that BPR is complementary to TQM, rather than being an alternative or in opposition to it. For example, TQM can help to ‘hold the gains’ achieved through BPR and can create an environment that will help to ensure the success of BPR projects.

Even though TQM and BPR have differences, they share common themes, such as a focus on customers, key processes, eliminating waste, and benchmarking. One of the key differences is that BPR places more emphasis on equipment and technology and TQM more emphasis on people. BPR tends to concentrate on one process at a time using a

project planning methodology, whereas TQM takes a more holistic view of the organization, building improvement into all its areas of operation. Total quality management acts as the foundation for an organization's day-to-day functioning and continual improvement that allows and supports the development of BPR as an effective business improvement tool. To get the best out of both concepts they should be combined and integrated to produce a comprehensive approach to business improvement.

BPR requires dedication, acceptance of risk and considerable upheaval. It is important that an organization is clear on this because it is so easy to find it in conflict with the potential cost savings. Not every organization is capable of accomplishing the level of change required, but any organization that has the ambition to be the best cannot ignore BPR but must accept the challenge. Some industries which operate in dynamic environments are more suited to taking on the risks associated with BPR than others, where the disturbance of processes could have severe consequences. It is also important for organizations to identify the integration approach for integrating both BPR and TQM. Among the four types of integration approaches, the researcher argued that "creating a portfolio of process for change" is better than the others as it is applied by many famous firms and due to the fact that all processes might not need radical change. Both are important to stimulate process innovation so that organizations can become more agile in responding to unpredictable changes and respond quickly to the needs and demands of customers.

CHAPTER THREE – BPR AND QMS IN ETHIOPIA

3.1. BPR IMPLEMENTATION STATUS IN ETHIOPIA

3.1.1. EVOLUTION OF PUBLIC SERVICE REFORMS

Spanning over a decade, Ethiopia's transformation agenda has evolved over three phases (1992, 1996-2000 and 2001 onwards) in response to a growing awareness that pervasive deficits in capacity have hampered the ability of the state to secure the fundamentals of poverty reduction and democratic development including responsive service delivery, citizen empowerment, and good governance [22] However, the first reform phase in the early days of EPRDF rule was politically motivated by aiming to root out an entrenched but 'articulate section of the national elite' that remained from the Dergue regime [21] Following the consolidation of power, the Government also acknowledged the deep institutional constraints on basic functions such as policymaking, service delivery, and regulation. Core public management systems at the federal and regional levels were hampered by outdated civil service legislation and working systems; the absence of a medium-term planning and budgeting framework; ineffective financial and personnel management controls; inadequate civil service wages and inappropriate grading systems; poor capacity for strategic and cabinet-level decision-making; and insufficient focus on modern managerial approaches to service delivery.

In recognition of these constraints, the Government embarked on a comprehensive *Civil Service Reform Program* (CSRP) in 1996, marking the second reform phase. Indicative of Ethiopia's "first generation" capacity building efforts, the CSRP sought to build a fair, transparent, efficient, effective, and ethical civil service primarily by creating enabling legislation, developing operating systems, and training staff in five key areas: (i) Expenditure Control and Management, (ii) Human Resource Management, (iii) Service Delivery, (iv) Top Management Systems, and (v) Ethics. Successful efforts (for example, budgeting, planning, and accounting reforms) at the federal level were intended to provide *prototypes* for regional authorities. The CSRP also faced some delays due to the Ethio-Eritrea border conflict 1998-2000 [22].

The most recent reform phase began in September 2001, with the launch of the Public Sector Capacity Building Support Program (PSCAP), which also revived the CSR. The Government has moved quickly to prepare the CSR for its “full implementation” across all regions and levels of government. Pilot studies and special programs on performance and service delivery improvements in selected Ministries, Agencies, and Bureaus have been initiated. These include; the establishment of focal points responsible for reform implementation across tiers of government; a series of workshops undertaken to sensitize the political leadership and civil servants across the country; and the launch of a “special program” of Performance and Service Delivery Improvement Policy (PSIP) in priority Ministries, Agencies, and Bureaus designed to deepen the implementation of performance management. PSIP, along with other reform programme areas, have promoted BPR as a key management initiative, particularly in those ministries that interface directly with the private sector.

Over time it was believed that an important condition to undertake the reforms was to implement BPR. It was identified that to solve the problems of hierarchical bureaucracy with many non-value adding works/staffs/positions, nepotism, etc; BPR is seriously implemented in all public institutions gradually. The reason why the Ethiopian government adopted BPR is that the current system has to be completely changed and redesigned and BPR can do this job. Services delivered by the public institutions are characterized by

- ◆ Long time taking
- ◆ Costly (high transaction cost)
- ◆ Incompetence (not up to the needs of customers)
- ◆ Not responsive (many complaints, questions, comments etc from customers but no response)
- ◆ Not dynamic (the world is changing but our public institutions are stagnant)

MoCB has taken the responsibility to initiate BPR implementation as organizational transformation tool in all the ministries and all regional offices. BPR national team has established for this purpose to carry on the reform consultation and implementation among all the ministries and all regional offices. The ministerial steering is a position to oversee, monitor, and evaluate the progress of change implementation tool – BPR. Besides MoCB,

regional capacities building bureaus has formed formal change management teams to monitor and evaluate the progress BPR implementation tool in regional public sectors.

Figure 3.1 show the overall procedure how BPR is emerged in Ethiopia and how it has been implemented in different ministerial and regional offices.

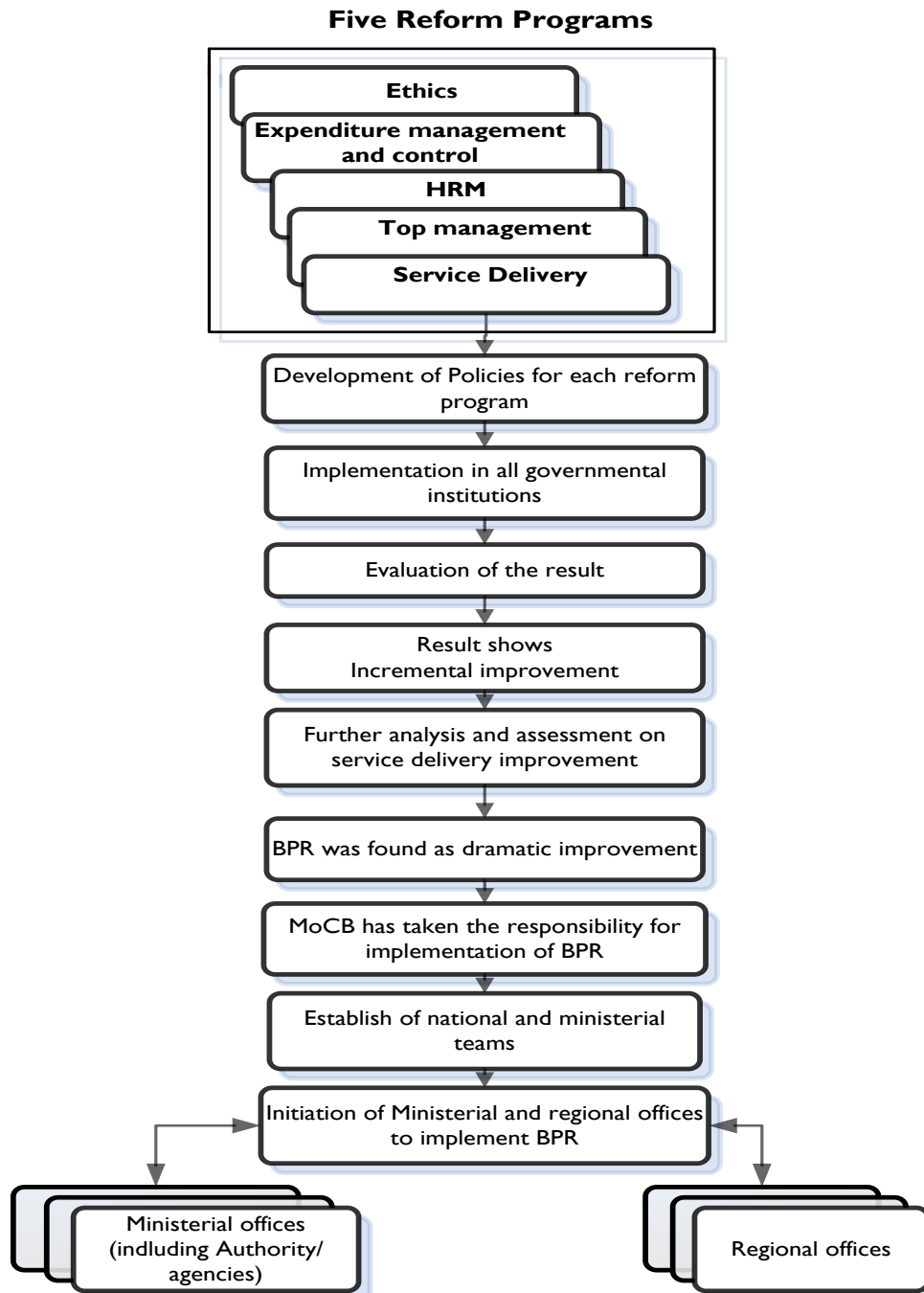


Figure 3.1: Overall procedure of BPR implementation in Ethiopia.

3.1.2. IMPLEMENTATION OF BPR IN PUBLIC ORGANIZATION

From 2002, the GOE placed greater emphasis on improving service delivery, through the coordinated application of international management tools in the civil service. BPR was introduced in 2003 and applied across public organizations in Ethiopia as part of the civil service reform program. It had been realized that most of the work being done in the public sector did not add value for the customers. Organizations lacked proper focus on their missions and visions, and some of them had overly hierarchical structures that were control based rather than results based. BPR was therefore introduced as a transformational tool, one that would aid in transforming the organizations, leading them to focus on their missions and visions in line with government priorities. BPR therefore required that management teams that are strategy oriented be created in every organization, to lead the organizations in the processes of transformation. BPR is being used to develop new business processes that are focused on organizational objectives, realized through re-aligning the organizational structures to suit the business processes. It was therefore important that business processes be redesigned to maximize customer value, while optimizing the use of resources required for delivering services and products.

Each Ethiopian public institution follows five phases for implementation of BPR, which is developed and distributed by FCSRPO under MoCB. These phases are discussed below:

Phase I - Preparation for Reengineering: In this phase, reengineering of business processes starts with discussions by top management (of the organizations to be reengineered) in consultation with the assigned consultant. Discussions centre on the BPR implementation approach for the transformation of the existing bureaucratic and functionally organized operations. After preparing the general action plan for BPR implementation, the process of reengineering proceeds with the identification of reengineering team members. The team members undergo a one week intensive training. The BPR advisory teams are tasked with technically guiding the organizations. The process of developing the business vision and new business processes is then undertaken by the staff of the organization.

Phase II – “AS IS” Phase: The next phase is the understanding of the existing operations and identification of processes that are fragmented in the various functional departments.

14% of the institutions that were assessed are at this stage. The main objective of this phase is to identify disconnects, value adding processes, and setting desired outcomes and stretched objectives.

Phase III – “TO-BE” Design Phase: In this phase, teams produce one or more alternatives to the current situation that satisfy the strategic goals of the organization. This is the phase in which the business processes are re-designed. Having identified the potential improvements to the existing processes, “To-Be” model are developed using the various modeling methods, bearing in mind the principles of process design.

Phase V - Organizing and Implementing Phase: In this phase, the new redesigned processes are implemented, following endorsement and approval by the stakeholders. Each team works on identifying activities implied by each process and sub-process, group activities, define process structures, and identify personnel requirements and specifications for each job.

BPR has been introduced in the 82% of the civil service organizations so far, with 40% of these at full implementation stage. The impact of BPR on service delivery has largely been positive and the Ethiopian reforms have become a major success in service delivery due to the changes and efforts of BPR transformation work of the Government. Efficiency has increased, bureaucratic tendencies have been collapsed, one stop shops have been introduced and accountability and transparency has improved. Motivation is high in the civil service and the attitudes have changed for the better [35].

There has been tremendous achievement in implementing BPR successfully across the Ethiopian civil service. Despite the challenges faced, where some institutions have had to repeatedly do some stages, today BPR is being implemented in 82% of the institutions that were assessed. There are 48 federal institutions that are currently implementing BPR at either pilot or full scale level [35]. However, this study concentrates on federal institutions, regional intuitions under Addis Ababa city administration and private companies located around Addis Ababa.

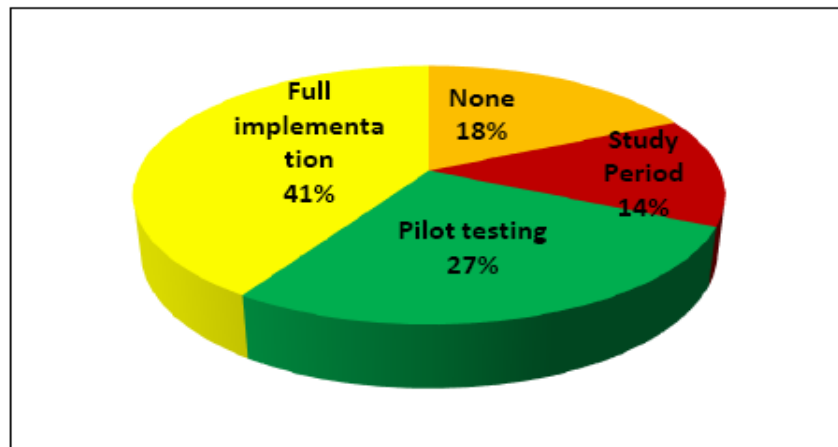


Figure 3.2: Level of BPR Implementation in the Civil Service. (*Source:* [35])

As shown in figure 3.2, 82% of the institutions surveyed are undertaking BPR implementation at different levels. Out of the 82%, 14% are at the study period, 27% are at the pilot testing stage, while 41% are at full implementation, and the rest 18% did not start implementation of BPR [35].

3.2. QMS IN ETHIOPIA

Quality management system practice was started since 1994 when ISO 9001:1994 was developed. Quality is promoted has been provided by *Quality and Promotion Department* under Ethiopian Quality and Standard Authority (EQSA). ISO 9000 training was provided to manufacturing and service industries for implementation of ISO 9001:1994. EQSA has been providing and training and consultancy service to ISO 9001 at minimum cost so that companies implement ISO 9001.

Based on ISO 9001 survey in Africa on 2010 (table 3.1), the number of ISO 9001 certified organizations in Ethiopia were 2 in 2004, and 22 companies in 2008. The number certified companies are low as compared to the number of companies found in Sudan, i.e. 77 companies were ISO 9001 certified in 2008.

Table: 3.1: ISO 9001 Africa survey based on 2010 survey

<i>Country</i>	<i>December 2004</i>	<i>December 2005</i>	<i>December 2006</i>	<i>December 2007</i>	<i>December 2008</i>
Ethiopia	2	3	3	20	22
Sudan	37	32	55	82	77

Kenya	158	169	183	204	257
Eritrea	-	-	1	1	1
Egypt	810	1,326	1,928	1,535	1,944
Zimbabwe	109	129	128	136	157
South Africa	2,486	3,119	3,259	3,383	3,792

Sources: [36]

In addition to EQSA, Quality is promoted by other governmental and non-governmental organizations like ecbp, Ethiopian Quality Award (EQA) at which quality infrastructure under ecbp is engaged to developing national quality infrastructure and building the capacity of private organizations by consulting and financing the cost of implementation of ISO 9001 for private companies under capacity building program for private companies, and EQA was first initiated by Addis Ababa University and Walta Information Center in 2007. The award is directed by Board of Director, under which jury, technical assessors/evaluators, financial sections and administration unites are established to manage the program. Three Ethiopian companies get award of EQA in 2010. The award is issued annually to organizations, which demonstrate performance excellence to product and service quality.

CHAPTER FOUR – ANALYSIS AND RESULT

4.1 ORGANIZATIONS IMPLEMENTING BPR

4.1.1 INTRODUCTION

A total of sixteen public organizations were surveyed to assess the implementation of BPR and its impact on organizational performance. In order to achieve this, two questionnaires for reengineering team and two questionnaires for employees has been distributed for each organizations (table 1.1). Out of the total questionnaires (64) distributed for reengineering teams and employees, 81% (26) and 75% (24) were completely filled respectively.

4.1.2 REENGINEERING TEAM REFLECTION ON BPR PROJECT

Implementation Plan versus Actual

The average planned time frame for BPR project is 1 ½ year at which most organizations started full implementation of BPR on 2007. However the actual time took to fully implement the change program was 3 years. This shows that, there is a great time variation between planned against the actual.

Top Management Commitment

Respondents were asked whether there was top management commitment or not during the implementation of BPR and asked to rate the level of commitment. 92% of the respondents believed that top management was committed for BPR project and the rest 8% were replied that top management was not committed. The level of top management commitment is evaluated on a scale ranging from 1 = very low to 5 = very high (table 4.1).

Even though 92% of the respondents agreed that top management committed, the level of commitment was low, especially recognition and rewards during implementation of BPR was low with a mean value of 1.7. However top management was good in awareness creation and training program to employees, and supply of sufficient resources to reengineering teams with a mean value of 3.3.

Table 4.1: Level of top management commitment

General commitment	Mean	Rank
Recognition and rewards during implementation	1.7	1
The frequency of meeting related to BPR study evaluations by the steering team	3.1	2
The extent of the leadership continuously monitoring and motivating the reengineering teams	3.1	3
Awareness creation and training programs to employees were adequate	3.3	4
Supply of Sufficient resources to reengineering teams	3.3	4

Note: 1 = very low; 5 = very high

BPR Implementation Process

The criteria assessed in this section are issues related to process design and pre-implementation preparation. Regarding to leadership, change management and communication at corporate level, more than half respondent agreed that there was clear dynamic change plan; clear BPR methodology set in advance; and reengineering team were adhering to BPR methodology. In fact the duration training provide to reengineering team is crucial to order to adhere and familiarized with BPR methodology. However 35% of the respondents (reengineering team) replied that training is given for less than a week; 54% of them, for a week; and the rest 11% replied that training is provided between 1 to 2 weeks.

Table 4.2: Implementation of BPR Process

No.	Criteria	Agree	No opinion	Disagree
1	Issues Related to process design			
1.1	Regarding Leadership, change management and communications at Corporate Level			
	There was a clear and dynamic change strategy/plan	54%	19%	27%
	There was a clear BPR methodology set in advance	62%	23%	15%
	Reengineering teams were adhering to the BPR methodology	58%	12%	31%
1.2	Regarding capacities for process design			
	The composition of the reengineering team was balanced with respect to varieties of qualifications	65%	15%	19%
	The composition of the reengineering team was balanced with respect to the mix of insiders and outsiders	65%	12%	23%

No.	Criteria	Agree	No opinion	Disagree
	Responsibilities were clearly pinpointed before pilot testing	69%	19%	12%
2	Pre-Implementation preparation			
	The employee deployment process was transparent	46%	31%	23%
	Employee complaint on deployment decision were properly handled	65%	19%	15%
	Office layout design was supported with the required facilities for the process	58%	8%	35%
	Awareness creation and training programs to employees were adequate	58%	19%	23%

Challenges and Success Factors of BPR Project

Challenges during BPR Implementation

Table 4.3 shows the challenges faced during BPR project. The result indicates that the main challenges and problems was fear of losing their job position. During the design phase, some reengineering teams feel fear of loosing their jobs position and consequently the designed process may be deflected in of reengineering interest. This is mostly happened in organizations that did not let outsider involvement.

Information system was the second major problem at which it could support the newly designed process. This result is in line with an interview result at which the stretched objectives the new redesigned process formulated by considering IT infrastructure, However, It could not support the new designed process as it was expected.

Table 4.3: Challenges in PBR project

No.	Challenges	Mean	Rank
1	Fear of losing their/job position	3.88	1
2	Information systems infrastructure unable to support BPR	3.73	2
3	Lack of involvement of people	3.69	3
4	Not enough employee training to implement BPR	3.31	4
5	The BPR process was much larger than anticipated	3.31	4
6	Lack of top management commitment	3.19	6
7	Lack of understanding of the implementation requirements	3.04	7
8	Downsizing but keeping the old organization structure	2.42	8

Note: 1 = very low, 5 = very high

Critical Success Factors

Figure 4.1 represents the important factors to the successful reengineering of an organization based on ten criteria at which they are selected from different journals and with consultation of senior consultants from Federal Civil Service Reform Office, Ethiopia. This is true that none of the factors has not labeled as irrelevant.

Based on the surveyed result, top management commitment, effective change management, sufficient financial resources, early involvement and participation of employees, teamwork and culture, QMS and reward system were seen as important or critical for the BPR implementation in Ethiopian organization context. Unsurprisingly all the surveyed organizations see top management commitment as critical in 100 per cent of cases. The researcher has further investigates whether top management is critical for the successfully implementation of BPR, all the interviewees agreed that top management commitment is critical for the successful implementation of BPR. However, the level of their commitment was poor as shown in table 4.2

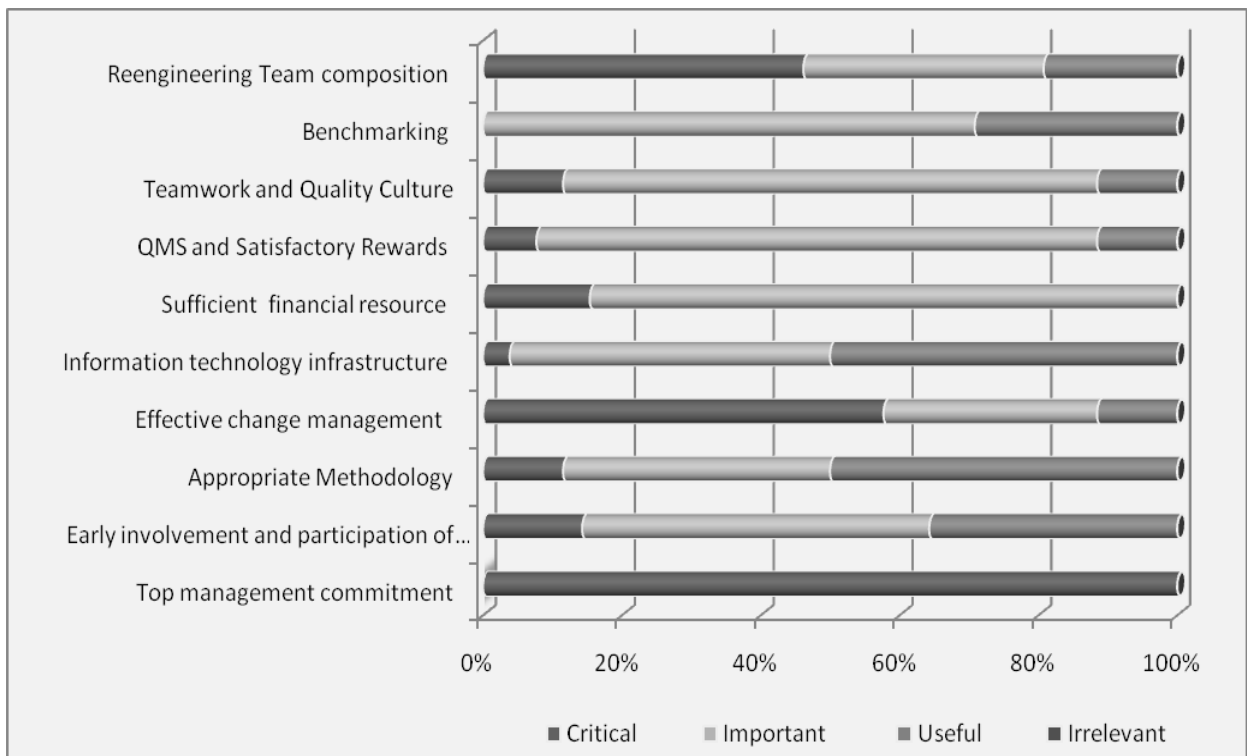


Figure 4.1: Critical Success Factors for BPR implementation

Impact of BPR

The impact of BPR is prepared in three criteria (table 4.4) namely performance baseline, rate of change after implementing BPR and overall performance improvement. The result indicates that the performance baselines are all above the average. Hence there is an improvement in performance baseline. However, the incentive and reward after BPR implementation is rated below the average, with the mean value of 1.73. This is further investigated through interview with change management officers. All the respondents believed that incentive and reward system is not incorporated with the new designed system due to the fact that the management and measurement system has not implemented in almost all organizations. All organizations have implementing BSC as performance measure for BPR and strategic plan. Many employees are complaining for not having incentive and reward system, and low salary scale. This resulted employees turnover.

Obsolete rules and regulations are broken in all organizations that implemented BPR, however the rules and regulations particularly for human resource and finance for all organizations has not yet approved by the concerned organization, i.e. Federal Civil Service Agency and Ministry of Finance and Economic Development respectively. This leads to work with existing rules and regulations even though the organizations have implemented BPR. This result is in line with the result shown in table 4.4, the mean value of new rules and regulation as part of BPR process is below the average (2.31).

Table 4.4: Impact of BPR

Criteria	Mean	Rank
Performance baseline		
▪ Change in reduced cycle time	3.77	1
▪ Change in reduced cost	3.04	2
▪ Change in improve quality of services	3.50	3
Rate of change after implementing BPR		
▪ In skill ,knowledge	3.38	1
▪ In behavioral and attitudinal change	3.38	2
▪ In team coordination, organizational and management	3.08	3
▪ In culture, value and believe	2.85	4
▪ In incentive and reward system	1.73	5
Overall Performance improvement		
▪ Organizational structure change after BPR	4.04	1

Criteria	Mean	Rank
▪ Decision making authority of employees after BPR	2.96	2
▪ New rules and regulation as part of BPR process	2.31	3
▪ Measurement to evaluate performance.	2.22	4

4.1.3 EMPLOYEES REFLECTION ON BPR PROJECT

In this section, employee perception on BPR project will be analyzed. It focuses on the following factors:

- Employees participation in BPR project
- Training after implementation of BPR
- Level of job satisfaction
- Employees empowerment after implementation of BPR

Employee participation in BPR Project

Respondents (employees) are asked to rate the level of employees participation in BPR project. Hence 50% of the employees agreed that employee participation was medium, 25% of them high and the rest 25% of them low. This result, therefore, indicates that employee participation in BPR participation was good.

Training after implementation of BPR

Training after implementation of BPR shows that 75% of the respondents agreed that they have taken training which helps them to perform their job and the rest 25% replied that they did not take training. Out of the 75% who took training, 58% of them agreed the level of effectiveness and efficiency of the training was medium

Level of job satisfaction

The level job satisfaction indicates that 17% of the employees are highly satisfied with their current job, 37% of them at which their level of satisfaction are medium, and the rest 46% of them are dissatisfied (low) with current job. In addition to this, 67% the employees agreed that they are not earning (salary) with what they deserve for their job. The researcher further investigates this with change management officers of each organization. Almost all change management officers agreed that the current salary scale is not competitive with current market economy of the country. This results employee turnover

and this in turn affects the performance of each processes in such a way that newly designed processes are suffering from lack of qualified employees.

Employees empowerment after implementation of BPR

Table 4.5 shows employees’ empowerment status after implementation of BPR based on agree, no opinion, and disagree. The criteria are categorized in to three namely empowerment, work monitoring and team culture.

Based on Empowerment criteria, above half (54%) of the employee agree that they know their duties and responsibilities after implementation of BPR, however 96% of the respondents agreed that there is not recognition and reward system. This result is inline with reengineering team opinion in table 4.5, at which respondents replied that incentive and reward system is very low. Based on work monitoring, more that half (79%) of the respondents disagree on timely and accurate information status on performance that they achieved.

Table 4.5: Employee empowerment after implementation of BPR

<i>Criteria</i>	<i>Agree</i>	<i>No opinion</i>	<i>Disagree</i>
<i>Empowerment</i>			
I know my duties and responsibilities (job description)	54%	17%	29%
I have given the full authority to perform my duties and responsibilities	46%	25%	29%
There is recognition and reward system	4%	0%	96%
<i>Work monitoring</i>			
I get timely information on the status of the performance targets that I achieve	0%	21%	79%
I get accurate information on the status of the performance targets that I achieve	0%	21%	79%
My process owner uses the system to identify performance gaps in the team/process	25%	25%	50%
<i>Team culture</i>			
My process owner properly coaches me whenever I have problems in performing my job.	25%	25%	50%
The team is encouraged to suggest further improvements on the process.	33%	25%	42%

4.2. ORGANIZATIONS IMPLEMENTING QMS – ISO 9001

4.2.1 INTRODUCTION

A total of fifteen organizations found around Addis Ababa are participated in the survey. Out of the total organizations, four organizations implemented both BPR and ISO – 9001. Like to BPR implemented organization, here also, one questionnaire to Management Representative (MR) and two questionnaires to employees are distributed. Furthermore, interview is conducted with MR of each organization. Out of the total questionnaires (45) distributed for MR and employees, 87% (13) and 87% (26) were completely filled respectively.

4.2.2 MANAGEMENT REPRESENTATIVE (MR) REFLECTION ON QMS PROJECT

Implementation Plan versus Actual

The average planned time frame for QMS project is 1 year, however, the actual time took to fully implement the change program was 2 years. This shows 1 year variation between planned against the actual.

Top Management Commitment

Respondents were asked the level of top management commitment during the QMS project at their respective organization. The criteria to measure the level of top management are prepared by consultation with experts from EQAS and different journals. Table 4.6 indicates that the level of top management commitment is above the mean value for all the criteria except for the criteria “Established quality objectives and ensure they are established at each relevant function and level’ which is below the mean value (2.7). The top management commitment, therefore, is good based on the mentioned criteria.

Table 4.6: Top management commitment during the implementation of QMS

<i>Criteria</i>	<i>Mean</i>	<i>Rank</i>
Established quality objectives and ensure they are established at each relevant function and level	2.7	1
Established the quality policy and ensure it meets prescribed criteria	3.2	2
Customer needs and expectations are determined, converted into requirements and fulfilled to achieve customer satisfaction	3.2	3
Employees recognitions and rewards system	3.4	4

<i>Criteria</i>	<i>Mean</i>	<i>Rank</i>
The extent of the leadership continuously monitoring and motivating the implementation team	3.5	5
Communicated the importance of meeting customer requirements	3.8	6

Note: 1 = very low, 5 = very high

Challenges and Success Factors of QMS Project

Challenges during QMS Implementation

Like to BPR Implementing organizations, QMS implementing organizations are also asked the challenges and problems during the QMS project, from document preparation to fully implementation. Table 4.7 shows that the main challenges and problems were lack of financial and human resources followed by limited time for implementation. Employee's resistance to change and lack of top management commitment are ranked 3rd and 4th respectively.

Table 4.7: Problems during QMS project

<i>Problems and Challenges</i>	<i>Mean</i>	<i>Rank</i>
Lack of financial and human resource	3.8	1
Limited time for implementation	3.7	2
Employees resistance to change	3.5	3
Lack of Top management commitment	3.3	4
Not enough employee training to implement QMS	3.2	5
Lack of involvement of people	2.3	6

Note: 1 = very low, 5 = very high

Critical Success Factors for QMS – ISO 9001

Figure 4.2 shows critical success factors for successful implementation of QMS – ISO 9001. The criteria are prepared by benchmarking relate journals and consultation of senior consultants in EQSA. Similar to BPR critical success factor, top management commitment is critical (100%) for the success implementation of QMS – ISO 9001. Except customer consultation, all the criteria are found to be critical or important for the successful implementation of QMS.

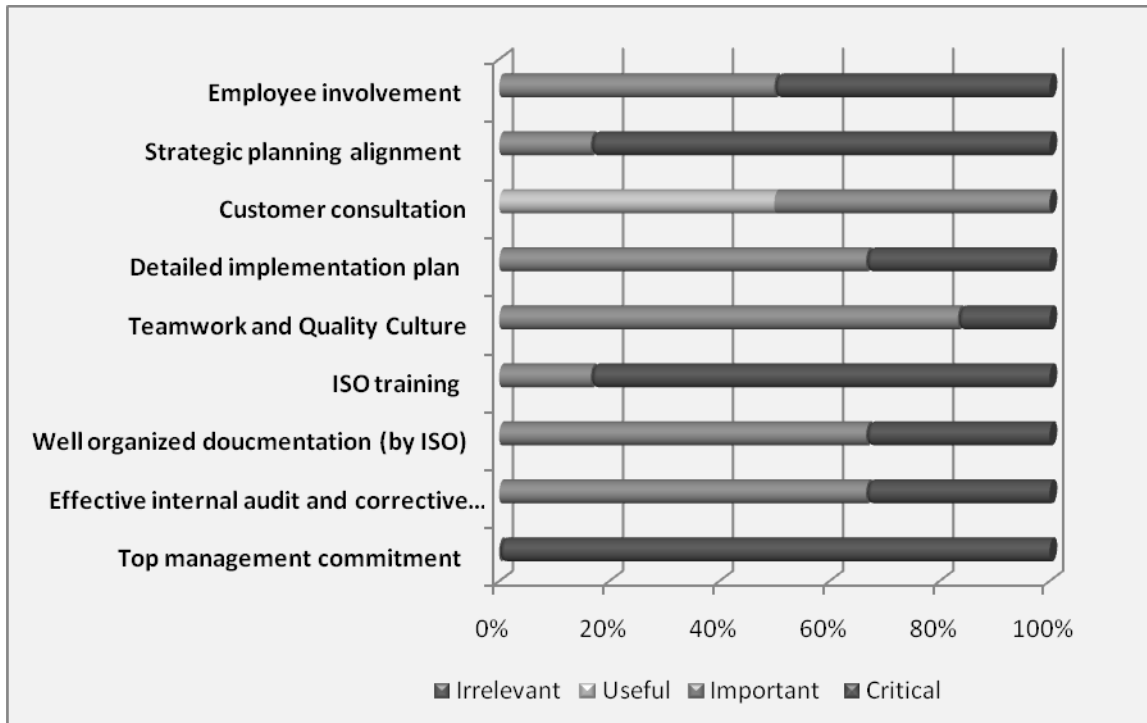


Figure 4.2: Critical Success Factor for successful implementation of QMS

Impact of QMS – ISO 9001

The criteria to evaluate the impact QMS project are similar to the criteria in BPR project (table 4.4). The result indicates that the performance baselines are all below the average except improved quality product or service. Some change management officer/CEO replied that the cycle time and cost has increased after implementation of QMS, this is may be due to more paper work and bureaucracy increased for the sake of error minimizing. However, the performance baselines after implementing BPR are all above the mean value for a scale ranging 1 = very low and 5 = very high.

The incentive and reward (table 4.8) after QMS implementation is rated below the average, with the mean value of 2.0. This is result is similar to BPR at which the respondents rated incentive and reward system below the mean value (1.73). One of the main reasons for this is may be due to the fact that, the standard requirement of ISO – 9001 did not mention any about employee motivation.

Measurement to evaluate performance after implementation of QMS is also below the mean value (2.0). This is also due to fact the system (ISO – 9001) did not mention about performance measurement of employees.

Table 4.8: Impact of QMS

<i>Impact of QMS</i>	<i>Mean</i>	<i>Rank</i>
<i>Performance baseline</i>		
Change in improve quality product or services	3.8	1
Change in reduced cost	2.0	2
Change in reduced cycle time	1.8	3
<i>Rate of change after implementing QMS</i>		
In skill ,knowledge	3.7	1
In team coordination, organizational and management	3.2	2
In behavioral and attitudinal change	2.6	3
In culture, value and believe	2.3	4
In incentive and reward system	2.0	5
<i>Overall Performance improvement</i>		
Customer satisfaction	4.3	1
Decision making authority of employees after TQM/QMS	3.0	2
Measurement to evaluate performance.	2.0	3

Note: 1 = very low, 5 = very high

4.2.3 EMPLOYEES REFLECTION ON QMS PROJECT

Similar to section 4.2.1.3, employee perception on QMS project will be also analyzed. It focuses on the following factors:

- Employees participation in QMS project
- Training after implementation of QMS
- Level of job satisfaction
- Employees empowerment after implementation of QMS

Employee participation in QMS Project

Respondents are asked to rate the degree of employees participation in QMS project. Hence 91% of the employees agreed that employee participation was medium or high. Like to

BPR implementing organizations, employee participation in QMS participation was also good.

Training after implementation of BPR

Training after implementation of QMS indicates that 73% of the respondents agreed that they have taken training which helps them to perform their job and the rest 27% replied that they did not take training. Out of the 73% who took training, 63% of them agreed that the level of effectiveness and efficiency of the training was high

Level of job satisfaction

The level job satisfaction after implementation of QMS indicates 64% of the employees are highly satisfied with their current job, 27% of them at which their level of satisfaction are medium, and the rest 9% of them are dissatisfied (low) with current job. Further more, 73% the employees agreed that they are earning (salary) with what they deserve for their job. Where as, 27% of employees on BPR organization are not earning (salary) with what they deserve for their job.

Employees empowerment after implementation of QMS

Table 4.9 shows employees’ empowerment status after implementation of QMS based on agree, no opinion, and disagree. The criteria are categorized in to three namely empowerment, work monitoring and team culture.

Respondents agreed (more than 50%) with all the mentioned criteria except on “recognition and reward system” and “my manger/process owner use the system to identify my performance gap”. The result indicates that 73% of the respondents disagree on “there is recognition and reward system”.

Table 4.9: Employees empowerment

<i>Criteria</i>	<i>Agree</i>	<i>No opinion</i>	<i>Disagree</i>
Empowerment			
I know my duties and responsibilities (job description)	91%	9%	0%
I have given the full authority to perform my duties and responsibilities	91%	9%	0%

<i>Criteria</i>	<i>Agree</i>	<i>No opinion</i>	<i>Disagree</i>
There is recognition and reward system	18%	9%	73%
Work monitoring			
I get timely information on the status of the performance targets that I achieve	64%	9%	27%
I get accurate information on the status of the performance targets that I achieve	55%	9%	36%
My process owner uses the system to identify performance gaps in the team/process	18%	9%	73%
Team culture			
My process owner properly coaches me whenever I have problems in performing my job.	45%	9%	45%
The team is encouraged to suggest further improvements on the process.	82%	9%	9%

4.3. ORGANIZATIONS IMPLEMENTING BOTH BPR AND ISO 9001

A specialized interview questions are prepared for organization that implement both BPR and QMS – ISO 9001 at different time. These questions mainly focus on the following areas:

1. The change management tool at which the organization first implement and whether it is the result of strategic plan or not
2. The challenge and problems faced while implementing one after the other change management tool
3. The benefits gained by implementing both change management tools

Concerning to the fist interview question, two organizations (TVET colleges) implemented BPR first at which it is initiated by the government (MoCB), and then QMS which is initiated by ecbp. However, the rest organization, Ethiopia Plastic S.Co., implemented QMS first by the initiation of Public Privatization Agency and then BPR – by the initiation of the company itself. All the organization agreed that the implemented change management tool is not the result of their respective strategic plan instead they are initiated either by government or other stakeholder. This show that the implemented change management tools were not aligned with their strategic plan and management which lead to failure.

The main challenges while implementing one Change management tool after the other are summarized as follows:

For organization implementing ISO 9001 first then BPR:

- Re-naming and modification of all processes and procedure prepared by ISO 9001, which leads increased cost of change management tool, and prolonging time frame for implementation.
- Employees resistance to change(BPR)
- Lack knowledge in differentiating the similarities and difference of both BPR and ISO 9001, which helps to integrate both tools.
- Employees training and implementation expenses was high.

For organization implementing BPR first then ISO 9001 - : these organizations did not faced more problems as compared to the above case; however, lack of knowledge in differentiating the similarities and difference of BPR and ISO 9001, and employees training and implementation of expenses were also some of the problems faced for these organization.

However, these challenges mentioned above can be eliminated by integrating both BPR and TQM at the same time, at which the change management teams will take adequate training on both change management tools and the employees are also provided awareness training on both tools.

Concerning to the third interview question, the following benefits are summarized by implementing both BPR and ISO 9001:

- Radical improvement in performance baseline (cycle time, cost and service/product quality)
- Documentation system for each process has properly handled
- Increased customer satisfaction
- Responsibility and authority of each employees clearly defined
- Increased employee satisfaction.
- Teamwork spirit among employees has increased

Integrating BPR with TQM

Table 4.10 shows an overall agreement across all the surveyed organizations including BPR and ISO 9001 implementing organizations in rating the level (on a scale of 1 = very low to 5 = very high) of the three approaches for integrating TQM with BPR.

Table 4.10: Ranking of approaches of integrating TQM with BPR

<i>Factors</i>	<i>Mean</i>	<i>Rank</i>
Making continuous improvement (TQM/QMS – ISO 9001) come after radical process change (BPR)	3.7	1
Combining both BPR and TQM/QMS – ISO 9001 at the same time.	3.2	2
Making radical process change (BPR) comes after continuous improvement (TQM/QMS – ISO 9001)	2.1	3

The highest ranking approach among all organizations is making continuous improvement (TQM/QMS – ISO 9000) comes after radical redesign. The second approach is combining both BPR and TQM at the same time. Making radical process change (BPR) comes after continuous improvement (TQM/QMS – ISO 9001) was rated below average.

The integration approach question had to be asked to organizations that are familiar with both BPR and TQM, however, only three organizations were implemented both BPR and ISO -9001. Hence it is difficult to draw conclusion within this analysis.

4.4. COMPARISON OF BPR, QMS, AND BPR AND QMS IMPLEMENTING ORGANIZATIONS

In this section BPR, QMS and an integration of BPR and QMS implementing organization will be compared based on the following criteria:

- Performance improvement
- Standard requirement
- System maintaining and updating
- Performance measurement system
- Impact of the change management tool

Table 4.11: Comparison of BPR, QMS, and BPR and QMS implementing organizations.

Criteria	BPR implementing Organizations	QMS – ISO 9001 certified organizations	BPR and ISO 9001 implementing organizations (at different times)	Remark
Performance baseline	The performance baseline (quality, cost, cycle time, service level) are all above the mean value (for a scale ranging from 1=very low, 5=very high)	Quality of product and service is above the mean value (3.8), changes on cycle time and cost are all below the mean value.	The performance base line is better than BPR/ QMS implementing organization.	
Recognition and reward system after implementation	Out of the total respondents for BPR surveyed organizations, 96% agreed that there is no recognition and reward system, and the rest 96% agreed that there is recognition and reward system	Out of the total respondents for QMS – ISO 9001 organizations, 73% of them agreed that there is no recognition, reward system, 18% of them agreed that there is recognition and reward system, and the rest 9% had no opinion.	Recognition and reward system is not developed at the exact time for BPR implementing organizations, on the other hand the ISO 9001 requirement did not mention any thing about recognition and reward system	
Level of job satisfaction	<ul style="list-style-type: none"> ▪ The level of employee satisfaction with their current job is 46% of the respondents is low, 37% of them are medium, and the rest 17% of them high. ▪ Out of the total BPR surveyed organizations, 67% of them are not satisfied with their current salary and the rest 37% of them are satisfied with their current salary. 	<ul style="list-style-type: none"> ▪ The level of employee satisfaction with their current job is 9% of the respondents is high, 27% of them are medium, and the rest 64% of them high ▪ Out of the total ISO 9001 surveyed organizations, 73% of them are satisfied with their current salary and the rest 27% of them are not satisfied with their current salary 	The level of job satisfaction is better than either BPR or QMS – ISO 9001 implementing organizations.	
Standard Requirements	Absence of standard requirement for implementing BPR leads to inconsistent way of implementing	Presence of standard requirement leads to uniformity way of implementing based on the requirements	No standard requirement to implement both BPR and QMS	
System Maintaining and updating	Unless the organization has assigned responsible process/department for updating, any organization	ISO 9001 enforces to maintain and update their system whenever there is change on	The internal audit conducted as per the companies plan may also maintain and update both	

Criteria		BPR implementing Organizations	QMS – ISO 9001 certified organizations	BPR and ISO 9001 implementing organizations (at different times)	Remark
		(BPR) does enforce to maintain or update. This in leads to return organizations to their previous way of doing.	operation and these companies are audited every three year to update the certification.	tools at the same time.	
	Performance Measurement system	BPR enforces to implement management and measurement system for the newly designed process, however all BPR implementing organization are under implementing of BSC which helps as performance measure for both BPR and Strategic Plan.	The ISO requirement enforces to develop measurement system for the process in order to monitor and evaluate the processes, however, it does not mention any this about the performance and motivation of employees	These organizations are benefited from BPR and QMS, even though BSC is under implementation.	
I P A C T	+ ve Impacts	<ul style="list-style-type: none"> ▪ BPR Changed the focus orientation of services to the needs of the clients ▪ BPR reduced Bureaucracies ▪ Multi skills encouraged ▪ Employees empowerment ▪ Process are developed end-end-end based on customer focus 	<ul style="list-style-type: none"> ▪ Company image increased ▪ Increased market ▪ Increased customer satisfaction 	<ul style="list-style-type: none"> ▪ Companies implementing both change management are benefited as the drawback of one is solved by the other. 	By integrating both BPR and TQM, their positives impacts will be optimized and the draw backs of one change program will be solved by the other change program
	- ve Impacts	<ul style="list-style-type: none"> ▪ Employees perception to BPR is not good ▪ Employees turnover increased as result of the current salary scale is not matched with the employees they deserve 	<ul style="list-style-type: none"> ▪ Increased bureaucracy ▪ Reduced flexibility in performing jobs. 		

(Source: the researcher's result)

4.5. DISCUSSION

BPR has been widely implemented in the public sector of Ethiopia. This is so because Services delivered by public institutions are characterized by: very sluggish, costly (high transaction cost), incompetent (not up to the needs of customers) and unresponsive. Some manufacturing industries are also starting implementing BPR after they recognize its benefits. There are good examples to tell about the changes brought by the implementation of BPR in some of the public offices. The experiences of the Ministry of Trade and Industry (MOTI), the Ethiopian Investment Commission, and the Ethiopian Customs Authority are instructive examples of how institutions can be transformed to be more responsive, efficient and effective. These three public institutions were taken as good examples in the IMF Country Report No. 06/27 [40] for Ethiopia (2006). For instance, in the License and Registration Department of MOTI, it was taking a company 26 working steps and 35 days to secure a trade license, but after BPR it takes only 6 work steps and 34 minutes. On the other some private organizations increased their performance effectiveness and efficiency by implementing QMS – ISO 9001

However, there are a number of problems as discussed the previous sections. The implementation problems of BPR especially based on business diamond and the problems related QMS – ISO 9001 are discussed as follows:

The business system diamond shows the feature of new form of reengineered organization. This shows that reengineering is making systemic organizational change (a paradigm shift); it is not a fragmented change practice. In reengineered organization the four aspects shown on the figure are interrelating. However, almost all Ethiopians intuitions have not completed the four points of business diamond step-by-step; especially all organizations did not develop management and measurement system for their newly designed processes. This is due to the fact that, the MoCB has lately started implementation of BSC as performance measurement after implementation of the redesigned processes.

The four aspects of business diamond for Ethiopian public institutions during BPR implementation is analyzed below:

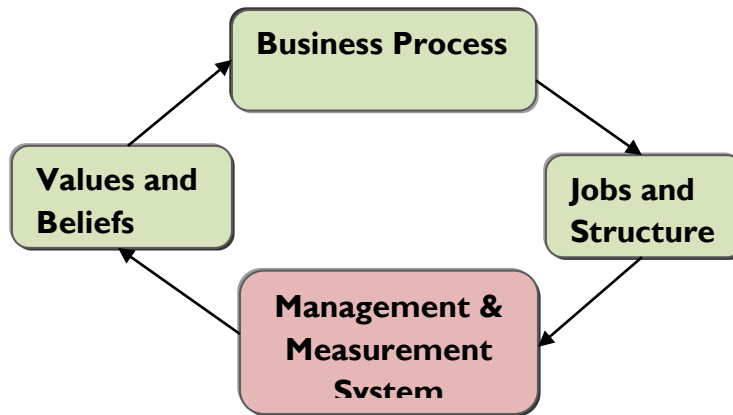


Figure 4.3: Evaluation business diamond to Ethiopian organizations

- Based on the first point of business diamond, almost all the assessed organizations have identified and redesigned their processes based on the BPR principles and requirements.
- Based on the second point business diamond business diamond, jobs are clearly described to the redesigned process and the organizational structure is changed from hierarchical to flat one, which reduces bureaucracy, cycle time, unnecessary approval, resource wastage, etc. however the there was minor problems in employee deployment, and employee complaint on deployment decisions, and office layout. Concerning the criterion, employee deployment process was transparent, 23% of the respondents (BPR teams) replied disagree, 46% them were agree, and the rest 31% of the respondents replied no opinion. With the regard to the designed office layout, 35% the respondents was agreed that the office layout was not supported the required facilitates for the process, 58% of them agreed that the office layout supported the redesigned business processes. The researcher has observed more half of the organizations were working with their previous office
- With regard to management and measurement system, all institutions did not develop measurement and management system for the redesigned process. This inline with the analysis result, at which all the respondents (reengineering teams, employees) agreed that there is recognition and reward system (which is part of management and measurement system) after full implementation of BPR. Further more all respondents agreed that they paying with their previous salary scale and this resulted 67% of the

respondents are not satisfied with their current salary for what they are performing their jobs. This is due to the fact that Federal Civil Service Agency (FCSA) did not revise and approve institution's proposed salary scale for the new redesigned processes and job assignments.

However, employees from private organizations, that are surveyed, are satisfied with job as well as current salary they are paid. According to the result shown in section 4.2.3, 73% of the respondents are satisfied with their current salary scale. Unlike public institutions, private organizations are fast responsive to internal and external factors like competition, revision of salary scale, product/service diversification, etc because they can decide themselves on crucial issues that may affect their business. Whereas public institutions are waiting for any other concerned authority/agency until their issues are approved.

- ◆ Each institution has formulated BPR project structure like COE, steering team, Czar, process owner, reengineering, constantans, etc. The steering committees (Reform officers) together with BPR were creating awareness on the implementation of BPR to the employees. However employees' participation to reach on consensus about the change program was not conducted properly. Moreover, some organizations conducted awareness creation at each phase of the BPR project, and some others conducted awareness creation once before starting BPR implementation.

Generally, all public institutions implemented BPR before developing management and measurement system and without revising the salary scale for the redesigned process. According to the analysis result, the following are the major findings (problems and challenge) during and after implementation of BPR:

- Lack of experienced, and qualified consultants for BPR project
- Change resistant due to:
 - BPR was perceived a political issue rather than change management tool
 - Lack of communication at each phases of BPR implementation
 - Fear of losing their job

- New rules and regulations for the redesigned process are not implemented in parallel with the implementation of processes due to delayance in approval and distribution from the concerned institutions.
- Lack of enforcing organizations to maintaining and update the implemented BPR like that of ISO 9001,
- Fail to develop management and measurement system before implementation of BPR
- Fail to revise the salary scale based on the load of the assigned job before implementation of BPR – leads to employees turnover
- IT could not support the redesigned processes appropriately during implementation of BPR.
- Lack of continuous improvement for the designed processes
- Inadequate consideration employees capability during the implementation of BPR
- Lack of recognition and reward system after implementation of BPR

On the other hand, the main challenge and problems during and after implementation of QMS are the following:

- Implementation of ISO 9001 was not aligned with strategic plan
- Lack of top management commitment in establishing quality objectives and quality policy.
- Lack of adequate project management
- Lack of properly understanding the ISO 9001 requirements due lack of internalizing the need of implementing the change program.
- Lack of qualified consultant for implementation of QMS,
- Implementing ISO 9000 because they are forced to by the marketplace, whether or not ISO 9000 is in fact appropriate to their business.
- It increases paper works on day-to-day operations,
- Decreased flexibility due to increased bureaucracy for checking, reviewing, approval, validating, etc,

CHAPTER FIVE – IMPLEMENTATION MODEL FOR INTEGRATING BPR AND TQM

This chapter presents the development of implementation model for integrating BPR and QMS at which any organization that needs the advantage of both change management tools.

5.1. WHY INTEGRATION IS NECESSARY

Radical change or BPR is not sufficient for the organization to meet customer expectations or to eliminate variations. It should be integrated with other change management tools like ISO 9000, TQM in order to gain competitive advantage towards business excellence.

BPR and QMS - ISO 9001 have their merit and demerit after implementation. However their drawbacks can be solved by integrating of both change management tools. According to the analysis result in the previous chapter, the drawbacks of BPR that can be solved by integrating TQM with BPR are:

- Opportunity to return to the previous way of doing is high due to enforcing requirement to audit their performance.
- Absence of process improvement after implementation,
- Inadequate recognition and reward system
- It failing to recognize the importance of people as compared to TQM

On the other hand, the drawbacks of QMS that can be solved by integrating BPR with TQM are:

- Many paper works
- Increased bureaucracy
- Reduced flexibility in performing jobs due to the ISO 9001 requirements
- Absence of performance measurement and reward system incorporated in the system (ISO 9001 requirements)
- Fail to restructure the organization on process based.

Based on the analysis, both BPR and ISO 9001 fail to incorporated recognition and reward system after implementation. Recognition and reward system is one of the motivating

factors for employees. Hence this can be solved by integrating BPR with TQM because recognition and reward system is one element in TQM implementation.

The concept of integrating both systems can lead the radical thinking developed system to a continuous learning system. The principal focus of TQM is on organization of organizational processes, not fundamental changes in its form and function. TQM is based on continuous principles to facilitate change on a constant and progressive basis. It has been widely regarded and adopted as a means of achieving continuous improvement. Any new process will be amenable to further improvement once it has been implemented; TQM is a proven way to help these changes on a continuous basis.

As a management philosophy, TQM is essentially a way of planning, organizing and understanding each activity that is carried out at different levels of the business organization. It is conceived as function base approach which involves placing customer as the focal point of operations. The aim is to continuously improve process performance in order to satisfy customer requirements. The application of BPR can provide on the base for the subsequent development of TQM. At last by expounding on the two concepts and by considering the drawback of BPR, flexible systems with continuously organization's performance improvement business process are established.

5.2. BENCHMARKING FROM BPR METHODOLOGIES

Most reengineering methodologies share common elements, but simple differences can have a significant impact on the success or failure of a project. After a project area has been identified, the methodologies for reengineering business processes may be used. In order for a company, aiming to apply BPR, to select the best methodology, sequence processes and implement the appropriate BPR plan, it has to create effective and actionable visions. Referring to 'vision' we mean the complete articulation of the future state (the values, the processes, structure, technology, job roles and environment) For creating an effective vision, four basic steps are mentioned below.

- The right combination of individuals come together to form an optimistic and energized team
- Clear objectives exist and the scope for the project is well defined and understood

- The team can stand in the future and look back, rather than stand in the present and look forward
- The vision is rooted in a set of guiding principles.

All methodologies could be divided in general 'model' stages:

The Envision stage: the company reviews the existing strategy and business processes and based on that review business processes for improvement are targeted and IT opportunities are identified.

The Initiation stage: project teams are assigned, performance goals, project planning and employee notification are set.

The Diagnosis stage: documentation of processes and sub-processes takes place in terms of process attributes (activities, resources, communication, roles, IT and costs).

The Redesign stage: new process design is developed by devising process design alternatives and through brainstorming and creativity techniques.

The Reconstruction stage: management technique changes occur to ensure smooth migration to the new process responsibilities and human resource roles.

Implementation stage: implement the tested prototype on a company-wide basis.

The Evaluation stage: the new process is monitored to determine if goals are met and examine total quality programs.

Successfully BPR implementing organizations brings breakthrough improvements, however they are fail to integrated the BPR with continuous improvement. This is due to the fact the system (BPR requirements) does not enforce organizations to evaluate/audit, maintain, and update the implemented system. The absence of performance auditing may lead to return to traditional way doing.

5.3. PROPOSED MODEL FOR BUSINESS EXCELLENCE

Organizations are unique and each must find its path to success by continuously learning and customizing best practices. Thus, this model shall be set up in such a way so as to

present a broad framework of generic ideas applicable to all organizations. The model can be considered a recipe; a mixture of best practices from BPR, TQM and ISO 9000. However, it is not suggested that such a model will be a silver bullet. Its effectiveness depends on thoroughly understanding the business and the people in it. The aim of the model is to help organizations achieve performance excellence by ensuring a healthy balance between stability and continuous change. Stability comes from a bed-rock of culture and values shared by organizational people, supported by a stable strategy, and systems that change only in a ‘creation or reorientation’ effort. Continuous change comes from continuous learning, and both aspects rely on fully committed and educated people. Hence, the objectives of the model will be to focus on delighting the customer, to emphasize organizational people as the main competitive advantage and to develop a commitment to continuous learning and improvement.

The proposed model concentrates on strategic plan because all the surveyed organizations implemented the change programs not as result their strategic plan, but they enforced and/or initiated by the government, NGO (ecpb), market competition. This may results not to implement successfully. Hence organizations should develop/revise their strategic plan prior to implement any change management tool.

The detail implementation model which integrates BPR and TQM includes five phase, these are:

- *Phase One: Preparation*
- *Phase Two: Design Improvements*
- *Phase Three: Integrate the Designed/Redesigned with QMS*
- *Phase Four: Implementation*
- *Phase Five: Continual Improvement*

Phase One – Preparation

The main purpose of this phase is to review the business’s strategic vision to ensure that any proposed changes in the business’s operations are in line with business strategy. This phase is important for both BPR and TQM implementation in order to have strategic alignment.

To identify improvement opportunities, a number of techniques such as Competitive Analysis, Value Chain Analysis, and Critical Success Factors Analysis are utilized during this phase to identify Key Performance indicators (KPIs). This leads to the identification of critical processes.

The reason why revision of strategic plan comes at the beginning is due to the fact that all the surveyed organizations were implemented the change program, either BPR/QMS or both tools not as a result of their strategic plan. Public institution implements BPR by the government initiations under the responsibility of MoCB in order that the public institutions would improve their service delivery. Similarly private organizations implement ISO 9001 either they are forced by the market competition or initiated by ecpc under the program of private companies capacity program.

In this phase the following activities are performed:

- Review the strategic objectives of the business as this will provide an indication of the need for change. From this review the decisions will be taken to radical or incremental improvement for key processes of the organization in line with the business objective.
- Securing management commitment.
- Choose change management teams. This will include establishing the team and educating its members in the fundamentals, principles and requirements of BPR and TQM.
- Map the strategic processes of the project as it is, concentrating on the big picture. Identify and define customer needs and requirements, and pinpoint which of the key processes have the greatest influence on the customer. This will involve customer surveys and the like.
- Define strategies that can match business needs and characteristics with customer requirements.
- Establish organizations awareness to create shared vision
- Prioritizing processes based on their importance that needs radical and/or incremental improvements

Phase Two – Design Improvements

This phase involves design of radical or incremental improvements for the analyzed processes in phase one. Design improvement is undertaken by consideration the principles of BPR and TQM, and social and technical capabilities.

One of the main challenges of BPR implementation was that the social and technical capabilities were not considered during the redesign phase. This is due to the philosophy of BPR at which it concentrate on how to be redesign the process in order to gain dramatic improvement regardless of the social and technical capabilities. Many institutions were suffering from lack of qualified employee and IT infrastructure for the redesigned processes.

Generally the following activities will be performed in this phase

- Identify opportunities for improvement e.g. IT, Benchmarks and principles of BP and TQM
- Design/redesign by consideration social and technical capabilities

Phase Three – Integrate the Designed/Redesigned Processes with QMS

Since ISO 9000 is one of framework for TQM and it is the stepping stone to TQM [38], it is important to integrate the redesigned processes with QMS so that the integrated quality system will be maintained and updated due to the fact ISO 9001 enforces to conducted internal audit is conducted to measure the performance of the system with a predefined schedule in order to find opportunity for improvement by minimizing any errors.

The main reason to incorporate this phase in the implementation model is that; many BPR implemented organizations are returned to their previous way of doing (traditional way) due to one or more of the following reasons:

- Lack of performance audit based on the process objectives at scheduled interval,
- Lack of responsible person/team, or organization who measures, evaluates, taking corrective and preventive action, updates, etc for the redesigned processes
- Lack of enforcing requirements of BPR as that of ISO 9001.

This phase includes the following activities:

- Develop quality policy, quality objective, quality manual, ISO 9001 system procedure (control of document, control of record, preventive action, corrective action, and internal audit procedures), and procedures for the designed/redesigned processes, forms and checklists.
- Develop management and measurement system to measure the performance of the strategy, processes and employees
- Develop recognition and reward system based on the developed management and measurement system.
- Develop process based organizational structure and salary scale

This phase, therefore, helps organizations to create every process teams involved to take responsibility for their own quality assurance and to make quality improvements in the processes for which they are responsible because every employee is aware of his/her organization's quality policy, objectives, and necessary procedures for each processes, duties and responsibilities. Moreover, employees performance are measured based on their performance. This will result employees satisfactions.

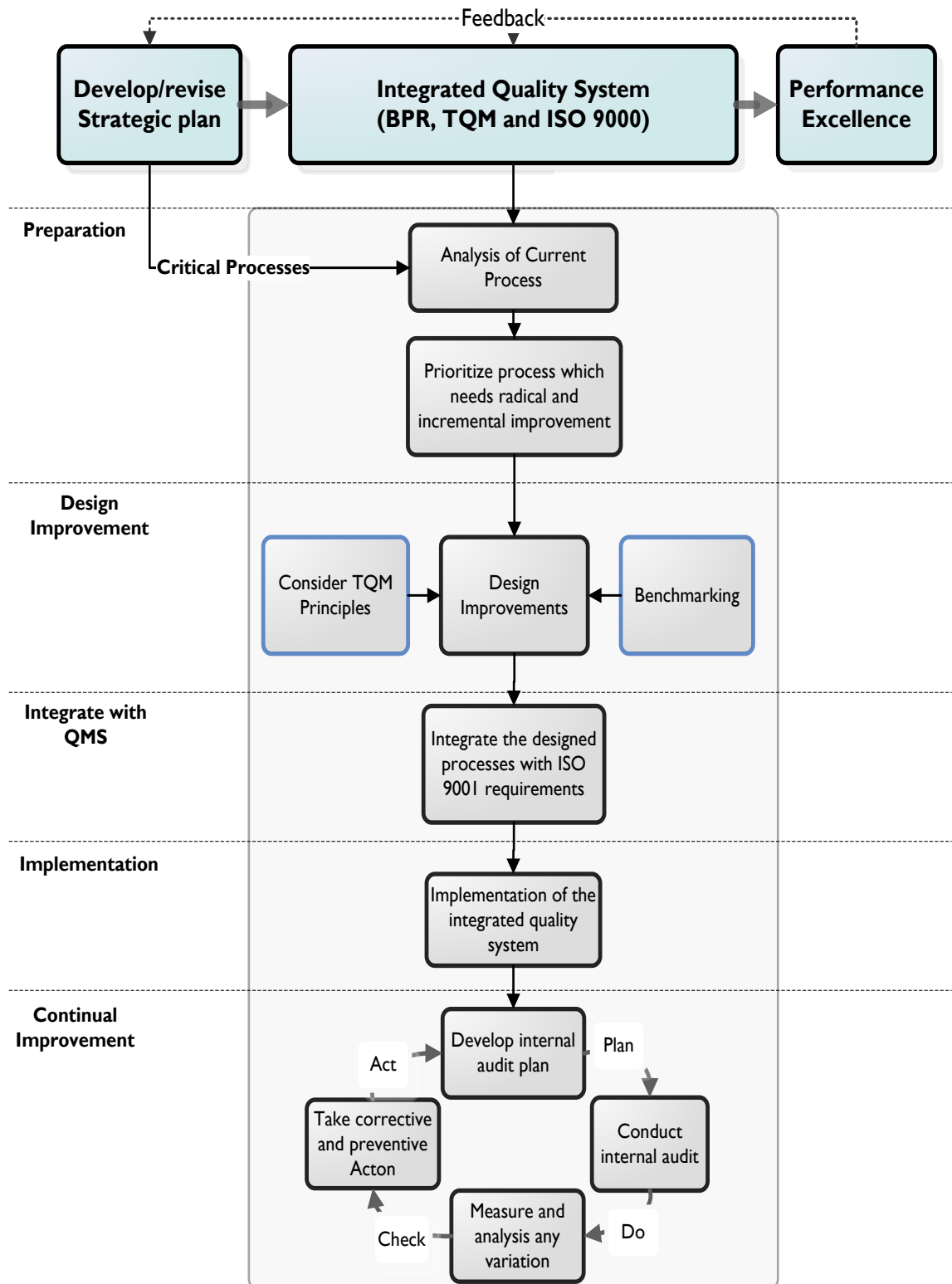


Figure 5.1: An Integration of BPR and TQM implementation Model

Phase Four – Implementation

This phase involves the following activities:

- Developing an implementation plan.
- Agreeing the goals and objectives for the designed/redesigned process and communicating them to all concerned.
- Developing education and training programmes to provide specific skills for employees to fulfill their new role.
- Deployment of human as well as infrastructures (office furniture with new office layout, IT, hardware, etc)
- Emphasizing teamwork though by creating good team sprit

The implementation planning calls for simultaneous execution of both radical and rapid as well as gradual and on going changes. Of the many challenges during this phase, the most crucial are inadequate IT infrastructure, the development of appropriate training program, employees resistance and the establishment of learning loops as an integral part of continues improvement.

Phase Four – Continual Improvement

This phase helps the implemented system to improve the performance or the organizations based on the performance of measurement developed in phase four. It developed based on Deming cycle.

This phase general includes:

- Develop internal audit plan
- Conduct internal audit
- Measure and analysis any variation
- Take corrective action and preventive action

5.3.1. ANALYSIS OF THE PROPOSED MODEL

One of the objectives of this study is to develop an implementation model which integrates BPR and TQM in order to gain competitive advantage of both change management tools.

This model is unique from the BPR or TQM implementation model as it integrates both change management tools.

The advantage of this model is therefore, summarized as follows:

- Less consultancy cost, and implementation time as compared to the organizations that implemented BPR and QMS at different times
- Organization using this model will gain the benefits of TQM and BPR, some of the benefits are:
 - Radical and incremental improvements for processes based on the priority for the degree of change for the processes.
 - Enable to develop Process-based organizational structure
 - Provide a means of documenting the organization's experience in structure manner that will provide a basis for educating and training of staff and systematic improvement of performance.
 - Increased customers (internal and external) satisfactions due to developed recognition and reward system
 - Provide the means of enabling employees to perform tasks right the first time
 - Provides to evaluate the performance based on scheduled internal audit which helps to identify areas of improvement

On the other hand, the developed model may have some drawbacks, like high cost of consultancy, employees resistance, confusion of implementation team on the precipices of BPR, TQM and QMS, etc. However, some of them will be avoided by providing adequate training to the implementation team, and the other drawback are minor as compared to the benefits gained from the integration.

5.3.1. TQM CONSIDERATIONS WHEN REENGINEERING

Even though the model integrates both BPR and TQM at the same time, it starts with reengineering then integrates with TQM. Therefore, it is necessary to analyze the factors that should be considered during at each stage of a BPR methodology in order to become

closer to one which is managed along TQM lines. This is addressed using the five stages of a BPR project in section 5.2.

The Envision stage:

Any company that needs to implement TQM should revise/develop strategic plan in order analyses critical processes which needs priority for radical or incremental improvement.

Initiation stage:

Selecting members – TQM affects the whole organization, so team members have to represent all departments. They should have authority to implement the changes and possess the leadership capacity to motivate people into participation. The quality department can assume the role coordinator of this task.

Training members in BPR and TQM – Members of the team have to be trained in the philosophy and practices of both BPR and TQM.

The Diagnosis stage:

Consumers' needs, requirements and demand – Customer needs and requirements (current and latent) drive a TQM approach to managing a business. Special emphasis should be put on finding out customers requirements using a range of measuring instruments to listen to 'customer voices'.

Competitors products and quality – Consumers evaluate the quality of a product and/or service in comparison with other offerings. Therefore, a systematic process of competitive analysis needs to be in place.

Company (or brand) actual reputation – The image of the company and its brands is a basic element in defining the aims of a TQM policy. A traditional organization can have a good reputation but at the expense of being cost uncompetitive. In this case, the aim should be to maintain and improve the reputation and competitive position of the organization. If the reputation of the organization has become tarnished, the aim should be to improve, not only through better product and service quality offerings but also through a marketing policy that helps to communicate to consumers a new commitment to quality.

Existing quality problems – Some of the most common problems facing traditional managed organizations are: high defect rates, excessive inspection costs, lack of

communication, unsatisfied employees and dissatisfied consumers, leading to high levels of operating costs. These problems and their causes should *be identified*.

Employees commitment – Employees commitment is a key point for the success of a TQM policy. The level of employee satisfaction and their commitment to the organization needs to be evaluated prior to the introduction of TQM. If a lack of the appropriate commitment has been identified, the reasons have to be pinpointed and the appropriate means to change this situation analyzed and put into place.

Level of training of employees and the potential for increasing their skills and knowledge – A traditional organization does not attach great importance to training and the level of employee skills and knowledge is likely to be low. If an organization does not apply an adequate policy of recruitment, it is also possible that the basic knowledge and skills of employees will be basic. To generate a culture of continuous improvement after BPR, the training and education processes should not be considered as a temporary intervention or relating just to the implementation of re-engineered processes. Training should be considered as a permanent process to increase employees' understanding, knowledge and skills.

Workforce management system – The workforce management system has to be analyzed with respect to the degree of concordance with the approach proposed by TQM. This has to stimulate teamwork and establish an appropriate incentive system and leadership to produce the necessary loyalty to the organization, pride in work and a focus on common organizational goals.

Suppliers relationships – The role of suppliers should be taken into account at the beginning of the re-engineering process; suppliers must be regarded as partners and not as adversaries. The supplier selection processes, traditionally based on price, should be radically changed so that quality and reliability gain relevance.

Level of inter-departmental communication – Communication between different departments tends to be weak in traditionally managed organizations. The barriers to communication have to be identified to analyze ways to eliminate them and put in place new methods and mechanisms.

Use of quality management tools and techniques – Traditional organizations only use quality management tools and techniques in a limited way or use them improperly. In a TQM approach, employees at all levels of the organizational hierarchy should use a range of tools and techniques within a systematic problem solving approach. This is in line with the BPR philosophy, but it must be borne in mind that the company must continue with their improvements in the TQM approach. The use of the tools and techniques is strongly related with the level of employee training, so appropriate analysis must be conducted in accordance with training needs.

Product design process – In a TQM organization, design is carried out with the participation of different departments so that it is possible to maximize customer satisfaction while exploiting resources and technological capabilities. In this concurrent approach to new product design and development all the departments participate at the same time, creating design teams involving supplier and customer representatives. In a traditional organization the design process is based on a series approach.

The Redesign stage:

Once the diagnosis stage has been done the next step is to decide which processes needs radical and which of them needs incremental improvement. The importance of these changes will depend on the difference between the traditional organization and the ideal TQM organization. The EQA for Business Excellence can provide this template. A benchmarking approach can also help to identify possible changes, determine which are the most important and how to implement them. This task should be undertaken by the team created to manage the BPR project.

Implementation:

Introduction of TQM – The introduction and development of TQM begins with training, education and the motivation of personnel and other necessary changes in the workforce management system.

Defining mechanism for unanticipated problems – Unexpected situations can appear with the best planning process and it is normal to find some unanticipated problems. If appropriate procedures are in place to face these problems their effects can be reduced.

Managing resistance – One of the most common problems is the resistance of employees across all sections of the organizational hierarchy to make the necessary changes. This resistance should be anticipated and ways to overcome it given adequate attention.

The Evaluation stage

The results of TQM should not be seen in the short term. The time that customers come to recognize the improved quality of the company's product and services can also be long; this is perhaps more the case for consumer businesses than it is in the industrial situation. TQM is based on a continuous improvement process; therefore the continuous evaluation of results will be the signal of whether the company is applying the concept in the right way.

5.3. PROPOSED MODEL FOR CIVIL SERVICE REFORM

Based on the interview conducted with different reform officers from different federal and ministerial organizations, most interviewees share common problems on the implementation of new reform program. Some of the major problems related to introduction of new reform (BPR) programs were:

- ◆ Assuming BPR as ready made for all institutions. All public institutions including financial institutions are initiated to implement BPR. BPR may not be applicable to all institutions.
- ◆ Lack of testing and evaluating the result of the change program (BPR) in selected institutions prior to implementation in all public institutions. This helps to analyze the impact of the change program on the overall performance of the institution and take any corrective action. The challenges and problems faced in the selected organizations would not be repeated in other organizations. This in turn helps to reduce ineffective resource consumption, especially many organizations were sending their reengineering teams abroad for benchmarking due to lack of previously successfully implementing local organizations.
- ◆ Lack of qualified and experienced consultants. This is obvious that no one was qualified for consultation of BPR before the introduction of BPR to Ethiopia. Most senior consultants from MoCB have taken training either in local training providing instructions, e.g. EMI, or abroad. This resulted in some misunderstanding with

institution's reengineering team members due to lack of practical experience on BPR implementation. This in turn results prolonging the project duration.

This kind of disseminating/introducing new change program may lead to decrease employees loyalty when ever there is change program.

The researcher has proposed civil service reform model whenever FCSA intends to introduce new change program. This model will solve the above mentioned problems when the GoE intends to introduce new reform program.

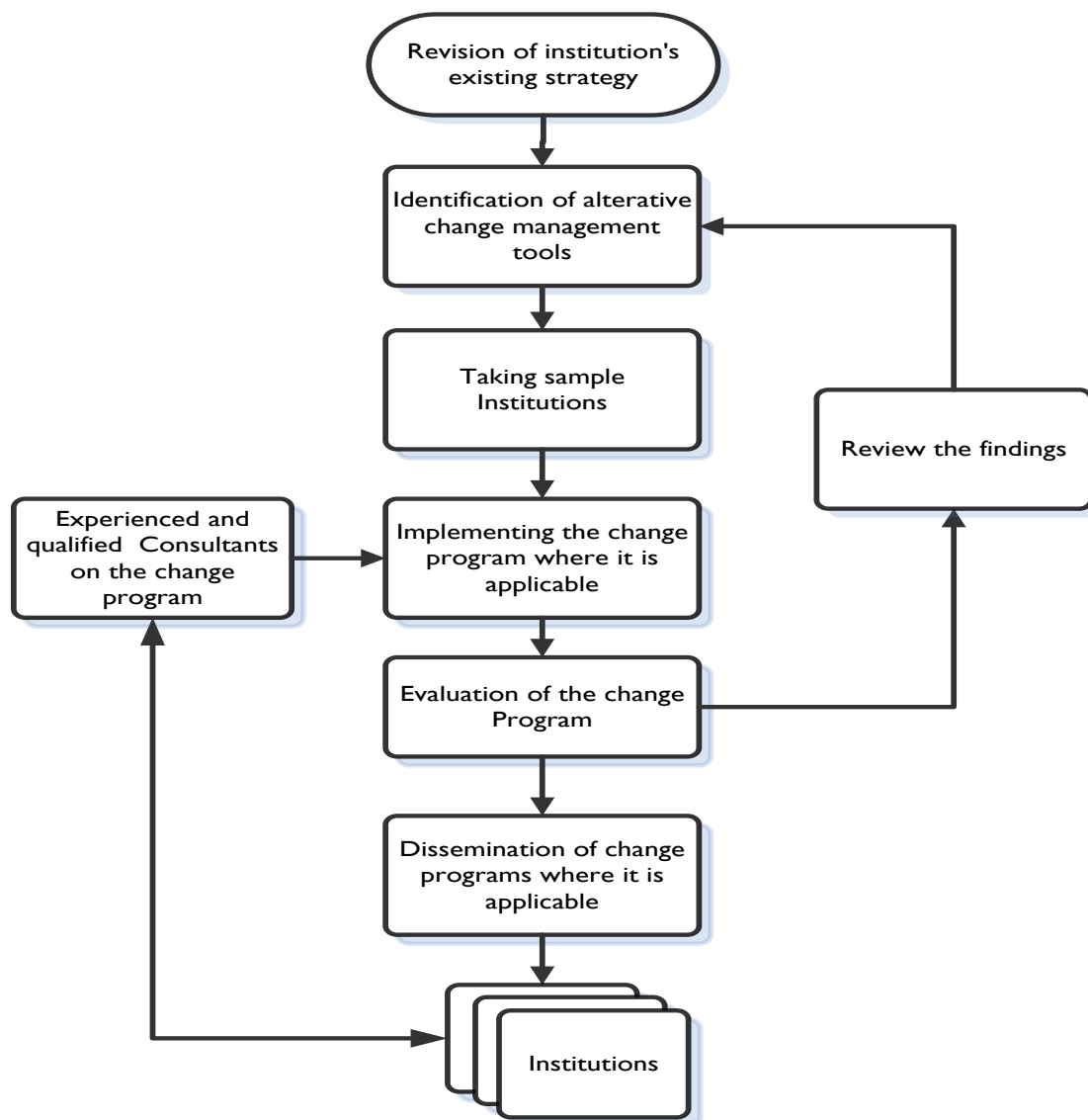


Figure 5.2: Civil Service Reform Model

5.3. IMPLEMENTATION PLAN FOR INTEGRATING BPR AND TQM

5.3.1. PROJECT DURATION

The duration for implementation of BPR ranges from 6 to 10 months. Similarly, the implementation duration of QMS – ISO 9000 is not longer than that of BPR. Hence the duration for the implementation of both BPR and TQM varies from 6 to 10 months. This implementation duration is for organization having a maximum of 200 employees. This variation relates to the kind of business type and extend to which the integrated quality system is going to be implemented. The time schedule (table 5.1) for implementing the model took an average 10 months.

Table 5.1: Project schedule for implementation of BPR and TQM

BPR Project Phases	Months									
	1	2	3	4	5	6	7	8	9	10
Preparation	■									
Design Improvement		■	■	■						
Integrating the Designed/redesigned processes with QMS – ISO 9000					■	■				
Development of Process based organizational structure and salary scale							■	■		
Implementation									■	■
Conducting Internal audit										■

5.3.2. IMPLEMENTATION PROCEDURE

An integration of BPR and TQM model contains four phases as mentioned in mentioned in section 5.2. The activities to be performed at each stage will presented in detail below:

Table 5.3: Detail implementation plan for integrating BPR and TQM

<i>Phases</i>		<i>Objective</i>	<i>Action taken</i>	<i>Participants</i>	<i>Duration</i>
<i>Preparation</i>	Revision of strategic plan	<ul style="list-style-type: none"> ▪ To revise the objectives and goals ▪ To create share vision ▪ To indentify critical success factors (CSF's) ▪ To identify critical processes 	<ul style="list-style-type: none"> ▪ Shared vision ▪ Business goals and objectives are revised ▪ Critical processes are identified 	Top management	5 days
	Awareness creation	<ul style="list-style-type: none"> ▪ To establish a strong management support ▪ To explain to the members of the implementation team the implementation details of the project and their role in the successful outcome in the integrated quality system effort. 	<ul style="list-style-type: none"> ▪ Explain to the top-level management the necessity to commit to the integrated quality system project. ▪ Allocate the most capable employees to the integrated quality system implementation team and assign roles for each one of them. ▪ Run an 8-hour workshop having as participants the members of the implementation team. The consultants will present the project step by step, as well as, the role of the implementation team in the success of the project. 	Implementation team members, Top management, consultants	2 days
	Training	<ul style="list-style-type: none"> ▪ To enable implementation team have basic knowledge basic on BPR, TQM, ISO 9001 	<ul style="list-style-type: none"> ▪ Provide training on BPR concepts, principles, implementation procedures ▪ Provides on training on TQM concepts, implementing procedures ▪ Provides training on ISO 9001 concepts, principles, requirements, ▪ Difference and similarities among BPR, TQM and ISO 9001. ▪ Explain how to integrate BPR and TQM ▪ Discussion 	Implementation teams, consultants	10 days
	Current process analysis	<ul style="list-style-type: none"> ▪ To diagnose and identify problematic areas in the current processes ▪ To measure the performance characteristics of the current processes based on measurable factors such as average cycle time, delays, number of mistakes or number of customer complaints. 	<ul style="list-style-type: none"> ▪ Diagram each process using a process management tool such as MS Visio. ▪ Record physical on the site measurements for each step of a process related to time, resources spent or efficiency. ▪ Input all measurements in the process management tool for further evaluation and analysis. 		6 weeks

<i>Phases</i>	<i>Objective</i>	<i>Action taken</i>	<i>Participants</i>	<i>Duration</i>
		<ul style="list-style-type: none"> ▪ Identify added value processes that have a major impact on customer service. 		
<i>Design Improvements</i>	<ul style="list-style-type: none"> ▪ To create a portfolio of process to decide radical or incremental improvement for each processes ▪ To redesign and model the selected processes ▪ To automate designed or designed processes using network. 	<ul style="list-style-type: none"> ▪ Set the criteria to prioritizing the process that need radical/incremental improvements ▪ Redesign processes based on the characteristics that serve the organizational goals, and BPR and QMS principles. ▪ Establish network connections between process team members. 	Implementation teams, consultants	12 weeks
<i>Integrate the Designed or Redesigned Processes with QMS</i>	<ul style="list-style-type: none"> ▪ To integrate the designed/redesigned processes with QMS ▪ To develop management and measurement system ▪ To develop process based organizational structure and salary scale 	<ul style="list-style-type: none"> ▪ Quality policy, objectives, manual, procedure required by ISO 9001 and the organization, forms and checklist. ▪ Performance measurements for each processes and employees, and recognitions and reward systems are developed. ▪ Develop process based organizational structure based on designed/resigned processes ▪ Revise the existing salary scale 	Implementation teams, consultants, senior management	10 weeks
<i>Implementation</i>	<ul style="list-style-type: none"> ▪ To establish a positive attitude for the change between employees ▪ To minimize the resistance to change between employees by empowering their position based on performance appraisal and reward systems ▪ To set the time and date of operating under the new processes, emphasizing the fact that working under the old processes is not an acceptable practice 	<ul style="list-style-type: none"> ▪ Establish executive management determination for change and determinate any attempts of resistance to change ▪ Allocate necessary resources (employee, IT infrastructure) ▪ Disseminate all relevant documents (process, procedures, work instructions, forms to concerned one) ▪ Prepare and test all background resources (IT, documents, equipment) ▪ Set time and date for operating under the new processes. 	Implementation team, consultants, process teams, executive management, all employees	4 weeks
<i>Continuous improvement</i>	<ul style="list-style-type: none"> ▪ To incorporate the implemented integrated quality system with continuous improvement ▪ To conduct internal audit at a predefined time interval 	<ul style="list-style-type: none"> ▪ Periodically evaluate the performance of business processes ▪ Identify and measure any variations ▪ Take corrective action and preventive actions procedures 	Management representative with selected implementation teams	Dynamic

CHAPTER SIX – CONCLUSION AND RECOMMENDATIONS

6.1. CONCLUSION

This study assesses implementation of BPR in public organizations, implementation of QMS – ISO 9000 in governmental enterprises and private companies, and organizations implementing BPR and QMS – ISO 9000 at different times. The implementation analysis is mainly focused on implementation plan for the change program, problems and challenges, critical success factors, implementation methodology, and impacts of the change program.

Based on the analysis and findings, the following are concluded:

- ☑ Even though organizations implementing BPR and QMS – ISO 9001 have implementation plan for the change program, there was a grate time variation between the plan and actual time frame, i.e. an average of 1 ½ years for BPR project and an average of 1 year for QMS project.
- ☑ All the surveyed BPR implementing institutions did not complete the four aspects of business diamond, hence it can be concluded that these organizations did not successfully implemented BPR as the four interrelated business diamond are not fitted together.
- ☑ All the surveyed public organizations have fully implemented without development of management and measurement system, and new salary scale for the new process. This leads employee’s dissatisfactions for their new assignments. This in turn resulted to employee’s turnover.
- ☑ The level of employee’s job satisfaction for organizations implementing BPR is low due to increased work load with existing salary scale, however the level of employee’s job satisfaction for private organizations is high due to fact that they paid for what they deserve. Due to this most organizations are suffering from lack of qualified employees as they leaving their job.

- ☑ All the surveyed BPR implementing organizations did not develop recognition and reward system as all public institutions were lately started implementation of BSC after implementation of their redesigned processes.
- ☑ The main challenges of BPR implementation are:
 - New rules and regulations especially on human resource and finance are not implemented during the implementation of new processes.
 - implementation team fear of loosing their job,
 - IT infrastructure could not support the redesigned processes,
 - Fail to consider socio-technical capability during redesign phase,
- ☑ The performance baseline (quality, cost, cycle time, service level) are all above the mean value (for a scale ranging from 1=very low, 5=very high) for BPR implementing organization, where performance baseline except product/service quality, are all below the mean value for QMS implementing organizations.
- ☑ The GoE of perceived that BPR was the only ready made change program which should be implemented in all public institution in order to bring breakthrough improvement on service delivery, however some institutions like governmental financial institutions opposing of implementing BPR.
- ☑ Top management commitment, effective change management, sufficient financial resources, early involvement and participation of employees, teamwork and culture, QMS and reward system were seen as important or critical for the BPR implementation in Ethiopian organization. 100% of the respondents (for BPR and QMS) believed that top management commitment is critical for successful implementation of BPR as well as QMS.
- ☑ Most ISO 9001 certified organizations were implemented the change program for the sake of market competition not as improving their business performance. Due to this almost the surveyed organizations perceived that ISO 9001 have no benefits rather it increases bureaucracy, paperwork, increased cycle time, etc.

Based the findings, the researcher developed an integration of BPR and TQM implementation model which includes four phases: *preparation, design phase, integrates the designed/redesigned processes with QMS, Implementation and continual Improvement*. This model includes radical redesign of critical processes as a means of achieving breakthroughs in performance. These breakthroughs build on the moderate improvements that are frequently experienced with traditional continuous improvement efforts. The breakthroughs require more of a top-down view of the organization's activities. The key to successful integration is to conduct top-down and bottom-up approaches simultaneously and to fully utilize key personnel to be involved and communicate at both levels.

6.2. RECOMMENDATIONS

Based on above conclusions, the following are recommended:

- ☑ Implementation of BPR and ISO 9000 have their merit and draws backs. The developed integration model therefore, will optimize their benefits and solve their drawbacks.
- ☑ Organizations should develop strategic plan prior deciding to implement of any change program. Hence implementation of BPR or TQM should be the result of organization's plan. That's why revision of strategic plan come in the first phase of the implementation plan for integrate BPR and TQM model.
- ☑ Management and performance measurement was found crucial in the implementation of BPR as well as QMS to empower and motivate employee. Hence organizations implementing an integration of BPR and TQM should develop recognition and reward system prior implementing the integrated quality system.
- ☑ The developed implementation model will not necessary results in success, unless the change management is strongly supported by top management commitment. Hence the likelihood of success of this integrative approach is greatly enhanced by the top management leadership, commitment to, and support of the efforts.
- ☑ Like to ISO 9000 certifying organization, there should an organization/agency that is responsible which certifying and conduct follow-up for organizations that implement BPR. In addition to this ECAO should monitor other ISO 9000

certifying enterprise found in Ethiopia in order to control corrupted certifying conditions.

- ☑ FCSA should quickly revise salary scale based on institutional proposed salary scale in order to minimize employee turnover.
- ☑ Adequate preparation and testing (in selected institutions) of change program should be done prior deciding to implement in all institutions in order to evaluate the results and its application of institutions.

FUTURE RESEARCH AREA

The main objective of this study is to develop an implementation model which integrates both BPR and TQM in order to gain a competitive advantage of both tools. The developed model should be validated on selected organizations based on the developed implementation plan. Due to time and budget limitation, the researcher could not validate the proposed model. The researcher, therefore, recommended that validation of this model (*An Integration of BPR and TQM Implementation Model*) as future research area.

APPENDIX

A. LIST OF INTERVIEWEES

Table A: List of Interviewees

<i>No.</i>	<i>Name</i>	<i>Organization</i>	<i>Position</i>	<i>Address</i>
1	Dr. Behailu Kasaye	DBE	Change Management Bureau Manger	Tele: +251-0115-517728 Mobile: +251-911-804571 Email: bah_kas@yahoo.com Addis Ababa
2	Ato Mulugeta Shifera	DBE	Change Management Officer	Tele: +251-0115-517728 Mobile: +251-911-789771 Email: shiferaw.mulugeta@yahoo.com Addis Ababa
3	Ato Eshetu Damtew	MoLSA	Senior Training Officer	Mobile: +251-911-635915 Email: eshetudamtew@yahoo.com Addis Ababa
4	Ato Tsegaye Fantahun	Addis Ababa Tegbare-Ed TVET College	Process Owner of Finance, Procurement and Material Management Support	Tele: +251-0115-525662 Mobile: +251-911-447438 Email: ----- Addis Ababa
5	Ato Mebrehtu Zerabruk	San-Mech Consult PLC.	Quality Manager	Tele: +251-0116-624077 Mobile: +251-911-941931 Email: mebre_z@yahoo.com Addis Ababa
6	Ato Tesfahun Alamirew	Ethiopian Plastic	Quality Management Service Head	Tele: +251-0116-454086 Mobile: +251-912-151160 Email: tes.slam@ayhoo.com Addis Ababa
7	Ato Wendirad Gedlu	MoTC	Head, Reform Affairs	Tele: +251-0115-510349 Mobile: ----- Email: wenfiradg1@yahoo.com Addis Ababa
8	Ato Derisa Fafa	EQSA	Team Leader	Tele: +251-0116-460101 Mobile: ----- Email: deres@eqsa.org Addis Ababa
9	Ato Behailu	EQSA	Head of Training and Promotion	Tele: +251-0116-4161630 Addis Ababa

B. LIST OF GOVERNMENTAL AND PRIVATE ORGANIZATIONS ASSESSED

Fully BPR implementing organizations

Sample organizations which implemented BPR are:

1. Ministry of Communication and Transport (MoTC)
2. Ministry of Labour and Social Affair (MoLAS)
3. Ministry of Trade and Industry (MoTI)
4. Ministry of Capacity Building (MoCB)
5. Ministry of Education (MoE)
6. Ethiopian Customs and Revenue Authority (ERCA)
7. Ethiopian Quality and Standard Authority (EQSA)
8. Development Bank of Ethiopia (DBE)
9. Commercial Bank of Ethiopia (CBE)

List of ISO 9001 Certified organizations that are assessed

1. Awash Win share company
2. Ethio-platic Share Company
3. Tegebare-Ed TVET College
4. Entoto Technical College
5. Maichew Technical College
6. MH Engineering Consulting
7. San-Mech Consulting PLC
8. Sur Construction PLC
9. Flint Stone Engineering
10. Meta Brewery Share Co.
11. Saba Engineering
12. Ethiopian Pharmaceuticals Manufacturing Share
13. Selet Hulling PLC
14. Excel Plastics PLC
15. Muger Cement Factory

C. QUESTIONNAIRES AND INTERVIEW QUESTIONS

I. Questionnaire for Reengineering Team

Part I: Your personal/professional profile

1. Your Current Job Title: _____, Your previous Job Title if any _____
2. Gender: Male Female
3. Age? (Tick the range)

18-30	<input type="checkbox"/>	30-40	<input type="checkbox"/>	40- 50	<input type="checkbox"/>
50-55	<input type="checkbox"/>	55-60	<input type="checkbox"/>	60 and above	<input type="checkbox"/>

4. Education level:
 TVET certificate Diploma PH.D
 BSc./BA Degree MSc./MA
5. What was your participation during the reengineering effort? (It is possible to select more than one item)
 - a. Reengineering team member
 - b. Steering team member
 - c. Czar
 - d. Implementation team member
 - e. Process owner
 - f. Other _____

Part II – General question about BPR implementation

6. Training is provided for BPR team for about:

Leas than one week <input type="checkbox"/>	one week <input type="checkbox"/>	
1 – 2 weeks <input type="checkbox"/>	2 – 3 weeks <input type="checkbox"/>	one month <input type="checkbox"/>
7. Implementation statues of BPR project:
 - a. The date at which your organization stared full implementation BPR project: _____ E.C
 - b. The planned time frame of BPR project: _____ (years)
 - c. The actual time it took to fully implement the change. _____ (years)
- 7.1 Please rate the degree of change/improvements sought by the organization after implementation of BPR project.

No.	Change management tools	No change at all	Moderate (Incremental)	Radical Change
1.	BPR			

8. In the reengineered process, is there a complaint handling mechanism for customers?
 A) Yes B) No

11. What are employees' feelings after implementation of BPR? (You can skip this question if your organization is under implementation)

No.	Feelings	Very low			Very High	
		1	2	3	4	5
1.	Negative feelings about organization					
2.	Negative impact on service					
3.	Positive feeling about the organization					
4.	Others, please specify					

Part V – Change Management Process for BPR Project

12. How was the change management elements carried on in your organization during the implementation of BPR?

No.	Dimensions of change	Very low			Very High	
		1	2	3	4	5
1.	Roles and responsibilities					
2.	Organisational structure					
3.	Management systems					
4.	Skill requirements					
5.	Shared values and beliefs					
6.	Reward and recognition systems					

13. How was the BPR implementation process in our organization (Please rate them)

No	Questions	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
1	Issues Related to process design					
1.1	Regarding Leadership, change management and communications at Corporate Level					
	There was a clear and dynamic change strategy/plan					
	There was a clear BPR methodology set in advance					
	Reengineering teams were adhering to the BPR methodology					
1.2	Regarding capacities for process design					
	The composition of the reengineering team was balanced with respect to varieties of qualifications					

No	Questions	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
	The composition of the reengineering team was balanced with respect to the mix of insiders and outsiders					
	Responsibilities were clearly pinpointed before pilot testing					
2	Issues related to Preparation and Implementation					
2.1	Pre-Implementation preparation					
	The employee deployment process was transparent					
	Employee complaint on deployment decision were properly handled					
	Office layout design was supported with the required facilities for the process					
	Awareness creation and training programs to employees were adequate					

Part VI – Challenge and Success Factors

14. What are the major problems and challenges faced during BPR implementation in your organization? (please level them)

No.	Problems and challenges	Very low			Very High	
		1	2	3	4	5
1.	Lack of Top management commitment					
2.	Lack of involvement of people					
3.	Fear of losing their/job position					
4.	Lack of understanding of the implementation requirements					
5.	Information systems infrastructure unable to support BPR					
6.	Downsizing but keeping the old organization structure					
7.	Not enough employee training to implement BPR					
8.	The BPR process was much larger than anticipated					
9.	Others, please specify					

15. What are the critical success factors for the implementation of BPR from your organization practice? (please level them)

No.	Critical Success factor	Irrelevant	Useful	Important	Critical
1.	Top management commitment				
2.	Early involvement and participation of all employees				

No.	Critical Success factor	Irrelevant	Useful	Important	Critical
3.	Appropriate Methodology				
4.	Effective change management				
5.	Information technology infrastructure				
6.	Sufficient financial resource				
7.	Quality Management System and Satisfactory Rewards				
8.	Teamwork and Quality Culture				
9.	Benchmarking				
10.	Reengineering Team composition				
11.	Others, please specify				

Part VII – Impact of BPR

16. Please rate the impact of BPR after implementation in your organization

No.	Result of BPR	Very low					Very High				
		1	2	3	4	5	1	2	3	4	5
1.	Change in reduced cost										
2.	Change in reduced cycle time										
4.	Change in improve quality of services										
5.	Rate of change after implementing BPR										
5.1	In behavioural and attitudinal change										
5.2	In skill ,knowledge										
5.3	In incentive and reward system										
5.4	In culture, value and believe										
5.5	In team coordination, organizational and management										
6.	Organizational structure change after BPR										
7.	Decision making authority of employees after BPR										
8.	New rules and regulation as part of BPR process										
9.	Measurement to evaluate performance.										

Part VIII – Integration of BPR and TQM

17. Please rate the integration of other change management tools with BPR.

No.	Change management tools	Very low					Very High				
		1	2	3	4	5	1	2	3	4	5
1.	continuous improvement – TQM/QMS										

18. Please rate the integration approach of BPR and TQM.

No.	Factors	Very low			Very High	
		1	2	3	4	5
1.	Combining both BPR and TQM/QMS – ISO 9001 at the same time.					
2.	Making continuous improvement (TQM/QMS – ISO 9001) come after radical process change (BPR)					
3.	Making radical process change (BPR) comes after continuous improvement (TQM/QMS – ISO 9001)					

19. Finally, what do you recommended for BPR project in order to be successfully accomplished (from your organization experience)?

II. Questionnaire for employees of BPR implementing organization

Part I: Personal Information

1. Your Current Job Title: _____, Your previous Job Title if any

2. Gender: Male Female

3. Age? (Tick the range)

18-30	<input type="checkbox"/>	30-40	<input type="checkbox"/>	40- 50	<input type="checkbox"/>
50-55	<input type="checkbox"/>	55-60	<input type="checkbox"/>	60 and above	<input type="checkbox"/>

4. Education level:

TVET certificate Diploma PH.D

BSc./BA Degree MSc./MA

Part II: General Questions

5. Do you think that the implementation of BPR in your organization will bring organizational transformation (positive change)?

Yes No I am not quite sure

5.1. If your answer is **No**, what are your reasons? (multiple choice is possible)

A. It is not better than the previous system

B. Top management lacks commitment

- C. I suspect/guess that some process owners do not want the change
 - D. Employees have not accepted the change due lack of awareness creation
 - E. State if there is any other reason
-

- 6. What was the degree of employee participation during BPR project in your organization?
A) High B) Medium C) low
- 7. Have you taken any training that was thought to help you perform your new job:
A) Yes B) No
- 8. To what extent did the training help you to do your new assignment efficiently and effectively A) High B) Medium C) low

Part III: Motivation

- 9. Your satisfaction on your current job is: A) High B) Medium C) low
- 10. Are you earning (e.g. salary) what you deserve for the job you are doing?
A) Yes B) No
- 11. Do you prefer the current job title than your job title before BPR?
A) Yes B) No
- 12. Have you heard any of your colleagues complaining about the new system and consequently looking for another job in another organization?
A) Yes B) No
- 13. The degree of cooperation among team members is:
A) High B) Medium C) low
- 14. What is the level of knowledge/skill gap you have in carrying out the job?
A) High B) Medium C) low
- 15. What is your skill of IT utilization among employees in your process?
A) High B) Medium C) low
- 16. The level of unnecessary interference of my supervisor in my job is high.
A) High B) Medium C) low
- 17. Is there a documented procedure for the process I am performing?
A) Yes B) No

Part III. Employee's empowerment

18. Please rate your comment based the following criteria

S. N.	Criteria	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
A	Empowerment					
1	I know my duties and responsibilities (job description)					
2	I have given the full authority to perform my duties and responsibilities					
3	There is recognition and reward system					
B	Work monitoring					
4	I get timely information on the status of the performance targets that I achieve					
5	I get accurate information on the status of the performance targets that I achieve					
6	My process owner uses the system to identify performance gaps in the team/process					
C	Team culture					
7	My process owner properly coaches me whenever I have problems in performing my job.					
8	The team is encouraged to suggest further improvements on the process.					

19. Finally, what do you recommended for BPR project in order to be successfully accomplished (from your organization experience)? _____

III. Questionnaire for Management Representative

Part I: Your personal/professional profile

1. Gender: Male Female

2. Age? (Tick the range)

18-30		30-40		40- 50	
50-55		55-60		60 and above	

3. Education level:
- TVET certificate BSc./BA Degree PH.D
- Diploma MSc./MA
4. What was your participation during the TQM/QMS?
- a. Implementation team member
- b. Management Representative (MR)

Part II – General question about TQM/QMS implementation

5. Did your organization get certified to ISO 9001 standard?
- Yes No
- If your answer is Yes, please answer question 6 up to 8, otherwise go to question 9.*

6. Training is provided for implementation(workforce) team for about:
- Leas than one week one week
- 1 – 2 weeks 2 – 3 weeks

7. Implementation statues TQM/QMS:
- a. The date at which your organization stared full implementation TQM/QMS project:
_____ E.C
- b. The planned time frame of TQM/QMS project: _____ (years)
- c. The actual time it took to fully implement the change. _____ (years)

7.1 Please rate the degree of change/improvements sought by the organization after implementation of TQM/QMS.

No.	Change management tools	Negative change	No change	Moderate (Incremental)
1.	TQM/QMS			

8. The documentation status in your organization, (please rate them)

No.	characteristics	Strongly disagree	Disagree	Agree	Strongly agree
1	Work Authorizing Documents are better understood as a result of the ISO certification				
2	The documentation structure now better supports doing quality work				
3	We are now better able to firm-up requirements and better support our customers				

9. Did your organization participate to Ethiopian Quality Award (EQA)?

Yes No

Part III – Top management commitment and Leadership

10. How was top management commitment in your organization?

No.	Criteria	Very low					Very High				
		1	2	3	4	5	1	2	3	4	5
1.	The extent of the leadership continuously monitoring and motivating the implementation team										
	Established the quality policy and ensure it meets prescribed criteria										
2.	Established quality objectives and ensure they are established at each relevant function and level										
3.	Communicated the importance of meeting customer requirements										
4.	Customer needs and expectations are determined, converted into requirements and fulfilled to achieve customer satisfaction										
5.	Employees recognitions and rewards system										
	Performance top management										
6.	Knowledge on how to manage the change process										
7.	Overall performance										

Part IV – Employees opinions towards TQM/QMS

11. Do you think that the implementation of TQM/QMS in your organization brought organizational transformation (positive change)?

Yes No I am not quite sure

11.1. If your answer is **No**, what are your reasons? (multiple choice is possible)

- A. It is not better than the previous system
- B. I do believe that the TQM/QMS was not conducted appropriately
- C. Top management lacks commitment
- D. Employees have not accepted the change
- E. State if there is any other reason

12. What are employees' feelings after implementation of TQM/QMS? (You can skip this question if your organization is under implementation)

No.	Feelings	Very low			Very High	
		1	2	3	4	5
1.	Negative feelings about organization					
2.	Negative impact on service					
3.	Positive feeling about the organization					
4.	Others, please specify					

Part V – Challenge and Success Factors

13. What are the major problems and challenges faced during TQM/QMS implementation in your organization? (please level them)

No.	Problems and challenges	Very low			Very High	
		1	2	3	4	5
1.	Lack of Top management commitment					
2.	Lack of involvement people					
3.	Lack of financial and human resources;					
4.	Limited time for implementation					
5.	Not enough employee training					
6.	Employees resistance to change					
7.	Others, please specify					

14. What are the critical success factors for the implementation of **Total Quality Management (TQM)** from your organization practice? (please level them)

No.	Critical Success factor	Irrelevant	Useful	Important	Critical
1.	Top management commitment and leadership				
2.	Customer focus				
3.	Training				
4.	Supplier management				
5.	Strategic planning				
7.	Employee involvement				
8.	Teamwork and Quality Culture				
10.	Benchmarking				
11.	Employee empowerment				
12.	Quality assurance				
13.	Social responsibility				

No.	Critical Success factor	Irrelevant	Useful	Important	Critical
14.	Quality improvement and measurement system				
15.	Others, please specify				

15. What are the critical success factors for the implementation of **ISO 9001** from your organization practice? (please level them)

No.	Critical Success factor	Irrelevant	Useful	Important	Critical
1.	Top management commitment and leadership				
2.	Effective internal audits and corrective action follow-up				
3.	Well-organized documentation (by ISO element)				
4.	ISO training				
5.	Final audit readiness verification				
6.	Quality ownership transition (established areas of responsibility)				
7.	Strategic planning alignment				
8.	Employee involvement				
9.	Others, please specify				

Part VI – Impact of TQM/QMS

16. Please rate the impact of TQM/QMS after implementation in your organization

No.	Problems and challenges	Very low			Very High	
		1	2	3	4	5
1.	Change in reduced cost					
2.	Change in reduced cycle time					
3.	Change in retain employment schemes					
4.	Change in improve quality of products/services					
5.	Rate of change after implementing TQM/QMS					
5.1	In behavioral and attitudinal change					
5.2	In skill ,knowledge					
5.3	In incentive and reward system					
5.4	In culture, value and believe					
5.5	In team coordination, organizational and management					
6.	Organizational structure change after TQM/QMS					
7.	Decision making authority of employees after TQM/QMS					
9.	Measurement to evaluate performance.					

Part VII – Integration of BPR and TQM

17. Please rate the integration of other change management tools with continuous improvement.

No.	Change management tools	Very low		Very High		
		1	2	3	4	5
1.	BPR – break though improvement					

18. Please rate the integration approach of BPR and TQM.

No.	Factors	Very low		Very High		
		1	2	3	4	5
1.	Combining both BPR and TQM/QMS – ISO 90001 at the same time.					
2.	Making continuous improvement (TQM/QMS – ISO 90001) come after radical process change (BPR)					
3.	Making radical process change (BPR) comes after continuous improvement (TQM/QMS – ISO 90001)					

19. Finally, what do you recommended for TQM/QMS in order to be successfully accomplished (from your organization experience)?

IV. Questionnaire for employees of QMS implementing organization

Part I: Personal Information

1. Your Current Job Title: _____, Your previous Job Title if any

2. Gender: Male Female

3. Age? (Tick the range)

18-30		30-40		40- 50	
50-55		55-60		60 and above	

4. Education level:

TVET certificate Diploma PH.D

BSc./BA Degree MSc./MA

Part II: General Questions

5. Do you think that the implementation of BPR in your organization will bring organizational transformation (positive change)?
Yes No I am not quite sure
- 5.1. If your answer is **No**, what are your reasons? (multiple choice is possible)
- A. It is not better than the previous system
 - B. Top management lacks commitment
 - C. I suspect/guess that some process owners do not want the change
 - D. Employees have not accepted the change due lack of awareness creation
 - E. State if there is any other reason _____
6. What was the degree of employee participation during BPR project in your organization?
A) High B) Medium C) low
7. Have you taken any training that was thought to help you perform your new job:
A) Yes B) No
8. To what extent did the training help you to do your new assignment efficiently and effectively. A) High B) Medium C) low

Part III: Motivation

9. Your satisfaction on your current job is: A) High B) Medium C) low
10. Are you earning (e.g. salary) what you deserve for the job you are doing?
A) Yes B) No
11. Do you prefer the current job title than your job title before BPR?
A) Yes B) No
12. Have you heard any of your colleagues complaining about the new system and consequently looking for another job in another organization?
A) Yes B) No
13. The degree of cooperation among team members is:
A) High B) Medium C) low
14. What is the level of knowledge/skill gap you have in carrying out the job?
A) High B) Medium C) low
15. What is your skill of IT utilization among employees in your process?
A) High B) Medium C) low
16. The level of unnecessary interference of my supervisor in my job is high.
A) High B) Medium C) low
17. Is there a documented procedure for the process I am performing?
A) Yes B) No

Part III. Employee’s empowerment

18. Please rate your comment based the following criteria

	Criteria	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
A	Empowerment					
1	I know my duties and responsibilities (job description)					
2	I have given the full authority to perform my duties and responsibilities					
3	There is recognition and reward system					
B	Work monitoring					
4	I get timely information on the status of the performance targets that I achieve					
5	I get accurate information on the status of the performance targets that I achieve					
6	My process owner uses the system to identify performance gaps in the team/process					
C	Team culture					
7	My process owner properly coaches me whenever I have problems in performing my job.					
8	The team is encouraged to suggest further improvements on the process.					

19. Finally, what do you recommended for BPR project in order to be successfully accomplished (from your organization experience)? _____

V. Structured interview questionnaire for change management officers/CZAR

Part I – For organization that implemented BPR

1. What are the challenges faced in BPR project from your experience? (List in order of their effects). And what actions should be taken to minimize these challenges?
2. Please explain the critical success factors for the successful implementation of BPR from your experience? (Put in order of their importance).
3. Does your company have an implementation plan for BPR Project? (please attach hard copy or soft copy)

4. Did your organization really gain the benefits of BPR after their implementation? If so explain some of the benefits – quantitatively or qualitatively.
5. What are the consequence for BPR project for not having standard requirement as that of ISO 9001 or Quality Award (e.g. Ethiopian Quality Award)
6. What steps did you take to convince employees about the necessity of change in your organization?
 - a. The number of awareness programs conducted and your role in these programs?
7. What was the resistance level? From which sections of employees did you face stronger resistance? (Employees? middle level management?)
8. How was the resistance handled?
9. How often did you conduct steering committee meetings, what percentage of the meetings did you attend?
10. Have you involved key stakeholders at the time of the As Is study and at the time of implementing the new system? What methods did you use to involve those key stakeholders?
11. What capacity gaps do processes have in terms of the following? (please rank them)
 - a. ____ Most/All process are suffering from insufficient number of employees
 - b. ____ Most/All process are suffering from lack of qualified employees
 - c. ____ All processes are not provided with sufficient office facilities
 - d. ____ All/most processes have not yet equipped with ICT equipments gaps
 - e. ____ All systems identified at the end of the design are in the process of being put in place (reward system, Performance Management Systems, career path)

Part II – For organization that implemented TQM/QMS ISO 9001

1. TQM/QMS – ISO 9001 implementation status in organization
 - 1.1. The date at which your organization started TQM/QMS – ISO 9001 implementation. _____
 - 1.2. The panned time frame of the change programs: _____
 - 1.3. The actual time it took to implement the change: _____
2. What are the challenges and problems faced in the implementation of TQM/QMS – ISO 9001 from your experience? (List in order of their effects). And what actions should be taken to minimize these challenges?

3. Please explain the critical success factors for the successful implementation of TQM/QMS – ISO 9001 from your experience? (Put in order of their importance).
4. Does your company have an implementation plan for TQMBPR Project? (please attach hard copy or soft copy)
5. Did your organization really gain the benefits of TQM/QMS – ISO 9001 after their implementation? If so explain some of the benefits – quantitatively or qualitatively.

Part II – For organization that implemented both BPR and QMS ISO 9001

1. Which change management tool did your organizations first implement, BPR or QMS – ISO 9001? It is the result of strategic plan?
2. What was the reason behind to implement one change management tool after the other?
3. What challenges did your organizations face during the implementation of one after the other change management tool?
4. What benefits does your organization really gain by implementing both BPR and ISO 9001?
5. What are the critical success factors for the implementation of both change programs at the same time? (from your experience)
6. Which change management tool should be implemented first in order to achieve the effective and efficiency of an organization? What about an integration of both BPR and QMS?

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