

**ORGANISATIONAL DIAGNOSIS – A MANAGEMENT TOOL FOR CHANGE IN  
THE TELECOMMUNICATION INDUSTRY**

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**DECLARATION**

‘I hereby declare that this submission is my own work towards the Master of Business Administration (Human Resource Management option) and that, to the best of my knowledge, it contains no material which has been accepted for the reward of any other degree of the University, except where due acknowledgement has been made in the text’.

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## ABSTRACT

A critical success factor for organisations today is the ability to conduct proper diagnosis, implementing or adapting to change management. Organisations however, often fail in their change and improvement efforts because of their inability to conduct proper organizational diagnosis. It is an influential factor affecting the successes and failures of change management in organizations. It is for this reason that the study was conducted to explore organizational diagnosis as a managerial tool for implementing an ampler change process aimed at improving the effectiveness and overall performance of the telecommunication industry in the country. What role does diagnosing play in their change management processes? Do they copy blindly from their competitors or they actually diagnose to identify a problem. To achieve the aim of the study, the specific objective used to answer the research questions was: To diagnose these organisations to know the areas of change, to assess the telecom environments within which these organisations operate, to assess the enacted environment of each of the organisations in the case study, The study used both qualitative and quantitative method to collect data from respondents. Purposive and random sampling techniques were used to select the respondents. 124 respondents were used for the study. The study revealed that, leadership efforts were the direction of fulfilling company efforts. All the 3 telecommunication companies agreed to the fact that the introduction of new products and services was one major area that needed to be effectively diagnosed. It also came out that the organizations attached a lot of importance to diagnosis. From this, it was concluded that, diagnosis helps decision makers to develop workable proposals for organizational change and improvement

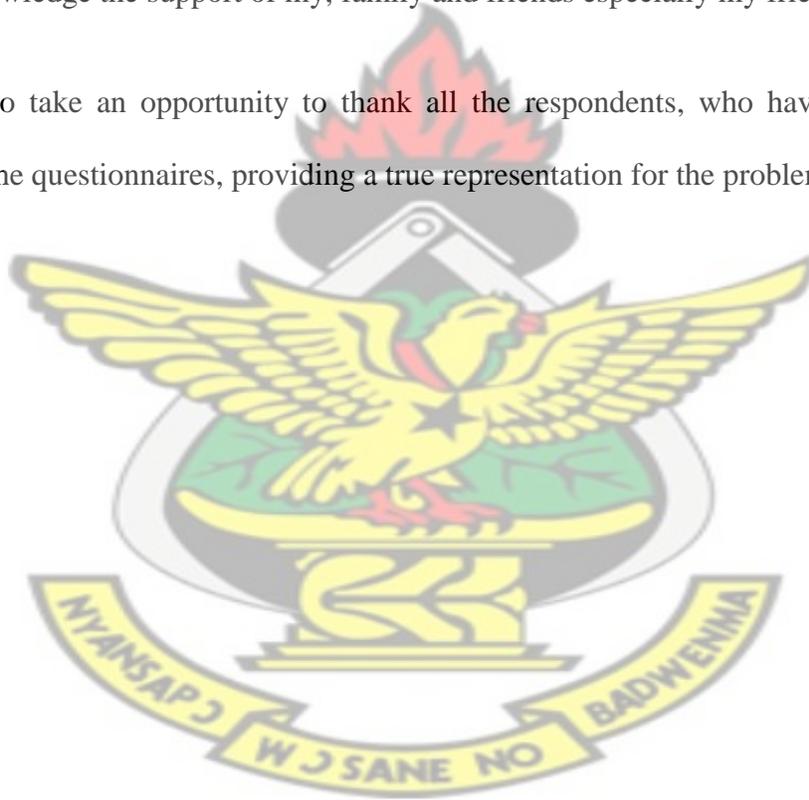
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**DEDICATION TO**

My lovely parents, Mr. and Mrs. Tetteh

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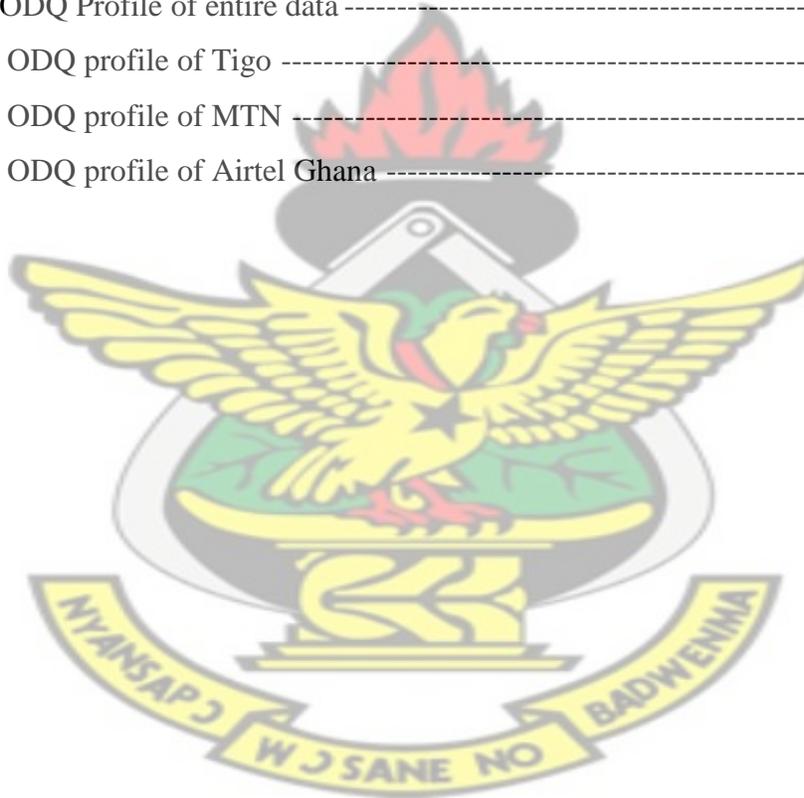
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## LIST OF ABBREVIATIONS

CPS	Cognitive Pharmaceutical Services
FTP	First Telecom Project
GLO	Global Communication
GoG	Government of Ghana
GSM	Global System for Mobile Communication
GT	Ghana Telecom
HI	Highly Informed
IT	Information Technology
KM	Knowledge Management
LK	Little Knowledge
MIC	Millicom International Cellular
MNP	Mobile Number Portability
MTN	Mobile Telephone Network
NCA	National Communication Authority
OD	Organisational Diagnosis
ODQ	Organisational Diagnostic Questionnaire
SA	Strongly Agree
SD	Strongly Disagree
SPSS	Statistical Package for Social Sciences
STP	Second Telecom Project
UK	United Kingdom
US/USA	United State of America
WMS	Weighted Mean Score
WTO	World Trade Organisation

# CHAPTEER ONE

## INTRODUCTION

### 1.0 Background of the study

Organizations do not exist by themselves in a vacuum; they are a part of an interactive and dynamic environment (Hassin, 2010). Modern organizations are faced with declining budgets, growing competition, change of laws, globalization and changing organizational alliances and missions with considerable pressure to meet or exceed stakeholder satisfaction.

No organization is in a particularly stable environment; even traditionally stable organizations have witnessed and will continue to experience turbulent change, such as in the case of Ghana Post. The dynamic and changing environments that organizations face today require adaptation, calling for deep and rapid responses (Robins and Judge, 2009). To respond effectively and avoid wasting resources, decision makers need to diagnose organizational conditions, plan changes carefully, and apply appropriate technologies and management techniques. By effectively doing this, organisations will gain the ability to compete on several dimensions in order to meet stakeholder satisfaction.

The purpose of organizational diagnosis is to establish the widely shared understanding of a system and, based on that understanding, determine whether change is desirable. Organization diagnosis applies behavioural science knowledge and practices to help organizations change to achieve greater effectiveness. It seeks to improve how organizations relate to their external environments and function internally to attain high performance and a high quality of work life.

The key to establishing an effective change and transformation in organisations lies in the early stages of assessment and diagnosis. It is just like medicine, if diagnosis is wrong, treatment will be ineffective (Bolton and Heap, 2002). Effective organizations align their design components to each other and to the environment. Design components include decisions about organization structure, work design, measurement systems, and human resources practices. A design component is composed of five major design components, namely; strategy, technology, structure, measurement systems, and human resources systems and an intermediate output culture.

In the process of diagnosing an organization, it is critical that the Organisational Development(OD) practitioner/consultant seek to discover the underlying values and ethical beliefs that may not be readily seen in most cases. Working to understand what these beliefs are will help to work towards solutions that support the belief. Many times, key leaders may be worried that diagnoses may point to them personally as the problem, thus threatening to put them in a bad light and even threaten their job. In these cases, it makes organizational diagnosing more difficult because the one diagnosing must gain the confidence and trust of management before he can provide interventions that will help the organization.

According to Hawkins (2011), an organization is considered an open system when it is impacted and influenced in many ways by the environment in which it exists. In order to function properly, the external environment must be taken into consideration at all times. The organization must understand the environment to respond to it effectively while accomplishing its mission. This type of organization can be diagnosed at three different

levels: Organizational, Group and Individual. For the purposes of this study, however, focus will be on the organizational level.

The Organizational level is looked at in three phases: Inputs, System Designs and Outputs.

The inputs make it possible to understand the general environment and industry structure.

### **1.1 Statement of the problem**

A critical success factor for organisations today is the ability to conduct proper diagnosis, implementing or adapting to change management. Organisations however, often fail in their change and improvement efforts because of their inability to conduct proper organizational diagnosis. Telecommunication is one of the fastest growing businesses in the world today. Over the past years, there has been a phenomenal growth in the number of mergers and acquisitions in the industry throughout the world and Ghana is no exception. The introduction of telecommunication in the country has seen such rapid changes mostly in the form of mergers and acquisitions. According to the National Communications Authority (NCA), the three reasons behind this development include; the introduction of sophisticated technologies (wireless land phone services), the introduction of innovative products and services (internet, broadband and cable services) and deregulation. Ghana as a country can boast of six telecommunication industries; namely, AIRTEL, VODAFONE, MTN, TIGO, EXPRESSO and GLO. All but one of the above has not undergone a takeover. Airtel started its operations in the last quarter of 2008 as a takeover from Westel Communications by Zain and it was taken over by Airtel; the present owners. Vodafone UK purchased Ghana Telecom and its subsidiary OneTouch. Millicom Ghana was the first cellular network to start operations in Ghana under the brand name Mobitel. Mobitel was then taken over by

Buzz mobile telecommunications and it is now Tigo. MTN started its operations in 1995 under the brand name Spacefon and had to undergo a lot of transformation over the years. It moved to Areeba and now it is MTN. Expresso started its operations in the country under the brand name Cell Tell. It moved to Kasapa and finally to Expresso (NCA).

The telecommunication industry is confronted with challenges and uncertainties in their operations and should therefore be capable of adapting to new strategies in order to survive in a competitive and rapidly changing environment. In situations like these, change is not only inevitable but it becomes necessary. The steps taken to plan and implement the change processes is however vital to the development of the telecommunication industry in the Ghanaian economy. (Cummings and Huse) 1985 defines organizational change as a state of transition between the current state and a future one, towards which the organization is directed. By this, change is being referred to as a process through which the organization goes; that is, from one stage to another stage, with the desire for improvement.

Organizations need to survive in a competitive and rapidly changing environment. They are confronted with challenges and uncertainty in their actions and need to be capable of adapting to new situations and environments in order to “survive” that is remain competitive and be effective.

Proper and effective change within organizations requires proper diagnosis. When done well, the diagnosis will point out what is needed in order to prepare the proper intervention

activities to make the necessary changes. According to (Weick,1979), environment must be perceived before they can influence decisions about how to respond to them.

It is believe that, diagnosing is a vital factor that needs not to be under estimated. Diagnosis is the process of understanding how the organization is currently functioning, and it provides the information necessary to design change interventions (Cummings and Worley, 2008). It is an influential factor affecting the successes and failures of change management in organizations.

Todnem (2005) reports that although there is an ever-increasing focus within the generic literature emphasizing the importance of and suggestions on how to approach change that there is very little empirical evidence around to support the current theories and approaches. It is for this reason that the study is conducted to explore organizational diagnosis as a managerial tool for implementing an ampler change process aimed at improving the effectiveness and overall performance of the telecommunication industry in the country.

The Ghana Telecom sector, like any other industrial sector in the country has gone through many phases of growth and diversification. Starting from Ghana Telecom (GT) now Vodafone, which was the only fixed landline, the industry has now expanded to make use of advanced technologies like GSM to the great 3G technology in mobile phones. Beginning from the year 1992, the private sector came into active participation in the telecommunication industry in the country as a result of industry deregulation by the government. This change has made the major players in the industry to experience fierce competition as each of them wants to be the leader in introducing innovative products or services, unique promotions, discount schemes and new tariffs. Not a day goes by without

the introduction of a new package to mobile phone users in the country. It is for this reason that this study seeks to find out how the telecommunication industry is responding to these change interventions; that is, what role does diagnosing plays in their change management processes? Do they copy blindly from their competitors or they actually diagnose to identify a problem.

## **1.2 Objectives of the study**

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The objective of the study is made up of general objective and specific objectives.

### **1.2.1 General objective**

The general aim of the study is to present organizational diagnosis as a management tool in a change process in the telecommunication industry in the country.

### **1.2.2 Specific objectives**

To achieve the aim of the study, the following specific objective will be used to answer the research question:

1. To diagnose these organisations to know the areas of change.
2. To assess the telecom environments within which these organisations operate.
3. To assess the enacted environment of each of the organisations in the case study.
4. To determine the importance that the organisations attach to organisational diagnosis.
5. To assess the effectiveness of these organisations within the telecom industry.

### 1.2.3 Research questions

1. What are the areas that need change in these organisations?
  1. What type of telecom environments do these organisations operate in?
  2. How can the enacted environment of each of the three organisations be measured?
  3. How important is diagnosing to these organisations?
  4. How can the effectiveness of these organisations be measured within the telecom industry?

### 1.3 Justification of the study

The study will help the management of the telecommunication industry in the country to acquire an effective way of conducting effective diagnosis for future change interventions.

This will enable them to be more effective in their operations, thus reducing downsizing, creating job security for existing employees and employment for the unemployed.

For policy makers, managers and OD practitioners in the telecom industry, it will enable them acquire an operative way of conducting diagnosis for future change interventions and improved quality of service and reduce industrial unrest.

The research will again serve as a source of information or reference for researchers, lecturers and students.

The research will also contribute towards knowledge on organisational diagnosing and change management and will contribute to the effectiveness of organisational diagnostic models as well as theories on diagnosing organisations for change.

#### **1.4 Methodology**

The study used mix method approach, that is, both qualitative and quantitative methods were used. Primary and secondary data was collected for the study. Primary data was gathered from self-administered questionnaires and interviews by the researcher. The interview was conducted to collect qualitative data while questionnaire was used to collect quantitative data. Secondary data on the other hand was collected from journals, books, articles, internet and other documents from the telecommunication industry.

Employees of three telecommunication industries in Kumasi and Accra constituted the population. The sample size of 240 employees (80 from each organisation) was used. With the aid of Statistical Package for Social Sciences (SPSS); data collected was summarized into chart, tables and statistics to make interpretation easier.

#### **1.5 Scope**

The study will be limited to three telecommunication industries in Ghana. Management, Staff, and employees will be contacted for the information for the study. The telecommunication industry was used because of its rapid change interventions from mergers and acquisitions to product and or services delivery.

#### **1.6 Limitations of the study**

A study like this needed to be studied from different organizations, but due to inadequate finance and time in collecting data, the study will be limited to the telecommunication

industry. Since the researcher is also a student and will be attending lecturers alongside the thesis writing, it will delay the process of the study.

Despite these limitations, the validity of the study was not compromised.

### **1.7 Organization of the study**

The study will comprise of Five (5) chapters. Chapter one is the introduction, which is made up of the background of the study, statement of the problem, objective of the study, statement of the problem, general objectives, specific objectives, research questions, justification of the study, scope of the study, limitation of the study and the methodology.

Chapter two provides a review of the literature related to organisational diagnostic models in change management. A theoretical and conceptual framework created from the review of the current literature, as well as an overview of the telecommunication industry in Ghana

Chapter three provides a review of the research design used throughout the research study which is comprises data collection, source of data collected and data analysis.

Chapter four provide an analysis and interpretation of the research data using the research questions as the main hypotheses and or approach.

Chapter five concludes the research study and provides the summary of findings and gives the recommendation.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

The theory of diagnosis in organizational development is used in a way that is similar to the medical industry. In the medical field for example, the duty of the physician is to conduct tests, collect vital information on the human system, and then evaluate this information to prescribe a course of treatment. The same principle applies to organisational diagnosis. The organizational diagnostician uses specialized procedures to collect vital information about the organisation, he/she analysis the information gathered, and then designs appropriate organizational interventions. Organizational diagnosis, in contrast with medical diagnosis, necessitates not only removing the problem but also making changes and taking new paths. Such changes can help improve the future performance and developments of the organisation (Cummings, 2005).

Organizational diagnosis requires defining and using a pattern for understanding organizational problems, data collection and analysis and drawing conclusions based on the findings with the purpose of making necessary changes and probable modifications (Hamid et al, 2011)

Senior (2002) argues that more research is required to develop methods or techniques of bringing about the necessary changes from one organisational phase to another throughout the organisational life-cycle. It is for this reason that a change framework needs to be

developed to diagnose the type of change situation prevailing at any given point in time, so as to accurately determine and assess the kind of change approach to be taken.

## **2.1 Definition of key terms**

To effectively diagnose any type of organization, it is critical to be able to get a clear understanding of what an organization is. Too often, the importance of organizational structure and systems is overlooked by managers and OD practitioners. The focus is only on the behaviour and events associated with the problems in the workplace, rather than on the systems and structures of that particular organization. (Senge, 1994), reasons that one of the most important aspects of a manager's role is the design of the organizational structures; however, this is often a neglected responsibility.

Organisations are viewed as an open system which influences and at the same time are influenced by the environment in which they operate. An understanding of the systems and structures provides a useful starting point for diagnosing organisations. An open system is said to be a system that frequently exchanges feedback with its external environment. "Systems are viewed as unitary wholes composed of parts or subsystems; the system serves to integrate the parts into a functioning unit... the organisation serves to coordinate behaviours of its department so that they function together in service of a goal or strategy" (Cummings and Worley, 2008). For the purposes of this study, the organization will be viewed using the system approach. That is, the organization is seen as an open system. When viewing organizations as systems, the OD practitioners direct their attention to those

activities and processes within the system that are considered to be vital to organizational life.

According to Robbins (1987), an open system is “a consciously coordinated social entity, with a relatively identifiable boundary, which functions on a relatively continuous basis to achieve a common goal or a set of goals”. This means that the organization is seen as a total system with inputs, throughputs, and outputs, connected by feedback loops. The feedback loops illustrate the idea that systems are affected by outputs (e.g., products and services), as well as its inputs.

The work of organizational diagnosis may require the professional to work with the organization as a whole including organization-environment relations, groups inside and outside the organization, and individuals whose lives are shaped by the organization and who in turn determine the nature of the organization. As a result, theory relevant to individuals, groups, and the organization as a whole is crucial to diagnostic work.

An important advantage of viewing organisations as an open system is that it eliminates the ‘Founder’s Syndrome’. The founder’s syndrome occurs when an organization operates primarily according to the personality of one of the members of the organization (usually the founder), rather than according to the mission (purpose) of the organization. When first starting their organizations, founders often have to do whatever it takes to get the organizations off the ground, including making seat-of-the-pants decisions to deal with frequent crises that suddenly arise in the workplace. As a result, founders often struggle to

see the larger picture and are unable to suitably plan to make more proactive decisions. Consequently, the organization gets stalled in a highly reactive mode characterized by lack of funds and having to deal with one major crisis after another. The best “cure” for this syndrome is developing broader understanding of the structures and processes of an organization, with an appreciation for the importance of planning.

### 2.1.1 Change management

Moran and Brightman (2001) defines change management as the process of continually renewing an organisation’s direction, structure and capabilities to serve the ever-changing needs of the internal and external customers. Senior (2002) and Graetz (2000) argue that organisational change and the management thereof is an essential management skill that is required throughout the world where there is increased deregulation, rapid technological innovation, a growing knowledge workforce and shifting social and demographic trends.

Van Tonder (2005, 2006) also argues that the subject of organisational change has received much attention largely because of the fact that more organisational change initiatives and or practices turn out to be unsuccessful; this is further supported by Mariotti (1998). Van Tonder (2006) proceeds to reminds us of recent historical corporate events such as the demise of Barings Bank, Enron, Parmalat, Saambou and WorldCom where the very concept of “change gone wrong” bears testimony to the limited value of the available change knowledge.

According to Bateman and Zeithaml, “Today, businesses are bombarded by incredibly high rates of change from a frustratingly large number of sources.... Inside pressures come from top managers and lower-level employees who push for change. Outside pressures come from changes in the legal, competitive, technological, and economic environments.” Organizational change can also be seen as a sort of innovation meaning a technology, a product or a practice used by the members of an organization for the first time, regardless of whether it has already been used by other organizations or not (Petigrew, 1985).

Studies of some scholars reveal the mistakes that are most commonly made in the research of Organisational Change as follows:

1. Limited empirical evidence has been provided to support the many different change theories and approaches (Guimaraes and Armstrong, 1998).
2. Lack of a critical review of the current change theories and approaches (Todnem, 2005)
3. Lack of consensus concerning a framework for Organisational Change to encourage the formation of a new and pragmatic change framework (Todnem,2005)
4. The need for or the existence of a stable environment (Lewin, 1947)
5. The separation of organisational change from organisational strategy (Burnes, 2004)

The idea that, change processes cannot be measured or reveal tangible results and or benefits is because there are faults within the processes themselves (Edmonstone, 1995 and Kaplan and Norton 2004). This study however seeks emphasis on the importance of diagnosis before implementing a change in any given organisation.

## 2.2 An overview of the telecommunication industry in Ghana

The history of telecommunications in Ghana dates back to the colonial era when the system was established by the British administration for one basic purpose – to facilitate control and exploitation of the colony (Allotey and Akorli, 1999; Noam, 1999). After independence from the British in 1957, there was a new dynamism in the telecom area. However, this positive development faded out and the telephone penetration rate lingered around 0.3% for many years - even with smaller decreases in periods (Frempong and Henten, 2004).

The form of state-run monopoly systems, focused mainly in areas of economic activity, thus established the basis for the structure of telecommunications after independence. This structure persisted in Ghana until the early 1990s when it was caught up in a wave of restructurings, deregulations and privatizations sweeping the continent (Sarbib, 1997).

The liberalization process was motivated by a combination of pressure from international finance agencies, WTO commitments, inefficiency in the existing system, the government's need for revenue, and a desire to promote universal service (Addy-Nayo, 2001; Bennell, 1996; Frempong and Henten, 2004; Noam, 1999; Noll & Shirley, 2002).

This was the situation until around 1994, where an actual expansion of the number of subscribers started. There had been development projects for the telecom system in Ghana before, referred to as the First and Second Telecom Projects (FTP and STP). Though these projects did not result in any major immediate growth in the number of users, they provided

the bases for the relative improvements in the sector, especially the STP (Frempong and Henten, 2004).

In 1975, Ghana Post & Telegraphy started a series of projects known collectively as the First Telecommunication Project (FTP) which aimed at rehabilitation, modernization and expansion of Ghana's national telecommunication network. The project which was sponsored by the Government of Ghana (GoG) and some international donor agencies from Canada, Japan and the Africa Development Bank totalled \$76million and was planned to last from 1975 to 1979. The FTP was delayed as a result of changes in government, economic recession, and other social factors, it was eventually completed in 1985. There were marginal accomplishments from this project (Tobbin, 2010).

A Second Telecommunication Project (STP) with an eight years plan was initiated in 1987. The project aimed to modernize much of the existing network and to expand network capacity from 56,000 lines to 76,000 lines. Some of the objectives were achieved, with the installation of a new international telephone exchange, the rehabilitation of the satellite earth station for international service and rehabilitation of various exchanges and external cable network (World Bank, 1995). The STP was funded by the World Bank, GoG and some donor agencies.

The aim of First and Second Telecom Projects (FTP and STP) was to build and improve the telecom system in Ghana with respect to the infrastructure and the services delivered as well as the organizational aspects and administrative procedures. As the telecom system in Ghana

until the beginning of the 1990s was a state monopoly, and as sufficient funds for the expansion of the system were not generated internally in Ghana, the FTP and STP were based on external funding from multi- or bilateral development assistance sources. However, with the liberalization of the telecom sector from the mid-1990s, the strategy for funding an expansion and improvement of the telecom system put more emphasis on attracting foreign investment capital, both for new operators (liberalization) and for the incumbent operator by way of privatization (Frempong and Henten, 2004).

The resultant telecommunications structure consisted of regulated competition for fixed and mobile telephony, and open competition for other telecom services (e.g., Internet services). Ghana essentially maintained an incumbent in fixed line telephony by granting exclusivity periods to the companies that took over the fixed line system, including the second fixed line operator (Westel), which enjoyed the same exclusivity period as the newly privatized incumbent (Ghana Telecom). Although the government had majority shareholdings in both companies, resistance to foreign ownership of privatized firms was particularly high in Ghana where the incumbent telecommunications operator was seen as a national asset, and symbol of national pride and sovereignty (Alhassan, 2003; Bennell, 1996). This can be attributed to the enduring influence of the colonial experience on perceptions of economic reform recommendations in developing countries (Noll, 2000; Stiglitz, 2000), although Bennell (1996) observed that opposition to foreign ownership of divested companies has been lower in French sub-Saharan Africa, than in English sub-Saharan Africa.

There has been less sensitivity to foreign ownership of mobile phone network providers, where investing companies have come from Sweden, US/Hong Kong, Luxemborg/UK and Ghana/Malaysia (Sey, 2008).

The decision to introduce a second fixed line operator, as well as to provide for a third (fixed wireless) network provider (Capital Telecom) for rural telephony, was a bold step, giving Ghana one of the most competitive telecommunications market structures in the region (two national mainline operators, one fixed wireless rural operator, and five mobile phone companies). Faced with a rapidly deteriorating system after independence, Ghana had to rush the telecommunications privatization process, facilitating mobile phone service introduction as early as 1991 and implementing what has been described as one of the fastest privatizations in the sub-Saharan region (Alade-Loba, 1997).

The telecommunications industry in Ghana has been on a very progressive journey and it has covered a great distance in a very short period of time. Not long ago very few people had private telephones that worked. As recently as 1996, the telephone density of Ghana was 0.26% meaning that there were 2.6 telephone lines for every 1,000 people including 35 payphones in the entire country out of which 32 were located in Accra. This was one of the lowest in Africa. Today there is one phone for every four Ghanaians (Amofo- Yeboah, 2007). The mobile networks have covered a lot of geographical area. It is now possible for people living in villages to own mobile phones, making mobiles a key contributor to bridging the urban-rural digital divide in Ghana.

Mobile operators got permissions to operate (Mobitel, Celltel (now Kasapa), Spacefon and later the incumbent affiliate One Touch); a second national operator (Westel) and a rural operator (Capital Telecom) were licensed; and the incumbent Ghana Telecom was partly privatized with the sale of 30% to G-Com Limited, a consortium led by Telekom Malaysia (Frempong and Henten, 2004).

The licence of Westel provides that, the company has a target of 50000 main lines in a five-year period, which it deployed less than 3,000 main telephones lines. One of the underlying factors of Westel's failure to meet its obligations is the company's inability to attract the necessary foreign capital. Westel blames the weak regulatory environment as contributing to its investment woes. According to Westel, the initial interconnection problems encountered with Ghana Telecom and the inability of the NCA to resolve the impasse negatively affected the sector in the capital market. The initial interconnection problems between Westel and Ghana Telecom were not strictly limited or related to the number of EIs that Ghana Telecom was prepared to release to Westel or the interconnection rates, but to a system which Westel had wanted to introduce into the country.

This impasse necessitated in strengthening the regulatory authority who has been accused of being weak because it has been unable to provide a level playing field for all telecom operators in the country to generate competitiveness. The seeming weakness of the regulatory authority is not wholly due to the inadequacy of the establishing law, but political interference and omissions have contributed to the weakening of the authority in Ghana. The NCA Act from 1996, Act 524, granted the authority wide ranging powers to regulate and

manage the sector. Section 41(1) of the Act granted the NCA the authority to make regulations in relation to rules and guidelines on tariffs, international accounting system, terms and conditions for interconnectivity, technical standards in the provision of telecom services, and general regulations for the sector, among others. In the same year the Government decided to privatize the incumbent operator Ghana Telecom.

In March 2003, after the NCA operated for five years without a set of rules and regulations to manage and regulate the sector, which made it difficult for the NCA to sanction operators for non-performance, anti-competitive behaviours and noncompliance of directives among others a Legislative Instrument (L.I 1719) was passed by Parliament to help the NCA to manage the sector. The main task of the NCA includes the licensing and regulation of telecommunications system operators and assigning or allocating systems frequencies.

(3G) Millicom Ghana, a subsidiary of Millicom International, UK/Luxembourg (now TIGO), started its operations in 1991 and was the first cellular network operator. CellTell, owned by Kludjeson International (now EXPRESSO), started its operations in Ghana in 1993 using the AMPS technology, with coverage in Accra and Tema. Onetouch is the cellular arm of Ghana Telecom (now VODAFON). The second national operator, trading under the name WESTEL (AIRTEL) has undergone the necessary preparations in order to operate a nation-wide GSM cellular service. Scancom (now MTN) started operating in October 1996 using GSM 900 technology. Globacom trading under the brand name Glo acquired the license to operate after fiercely contesting a bid to operate a cellular network in Ghana.

One other important regulatory issue in the country is facility sharing. This became necessary owing to the public uproar over the unplanned nature of mast construction in the country. As a measure to bolster fair competition, minimise cost and public inconvenience, and protect the environment. The policy stipulates that as far as possible, access to public rights-of-way, towers, telephone poles, underground conduits, international cable landing stations, and other physical support structures should be shared among operators (Ministry of Communication, 2004).

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To some extent, there is facility sharing in the telecom industry in the country. For example, there is a facility sharing agreement between MTN and Tigo to enable the latter use of MTN's infrastructure between Accra – Takoradi and Accra – Kumasi. There are similar agreements between Kasapa and Vodafone and Vodafone and Tigo. However, facility sharing is not a widespread phenomenon and this has led to the proliferation of masts.

A number of countries have introduced mobile number portability (MNP) into their telecom sector and Ghana is no exception.

Mobile Number Portability (MNP) is a process that enables consumers to change service provider whilst keeping their existing mobile number. It plays an important part in fostering consumer choice and effective competition by allowing consumers to switch their service provider without the costs or inconvenience of changing their telephone number. MNP also allows subscribers to retain their existing telephone number when they switch from one access service provider to another irrespective of mobile technology or from one technology to another of the same or any other access service provider. MNP implies that customers

can keep their telephone number—including the prefix—when switching from one provider of mobile telecommunications services to another. In the absence of MNP, customers have to give up their number and must adopt a new one when they switch operators. In the latter case, customers have to bear the switching costs associated with informing people about changing their number, printing new business cards, missing valuable calls from people that do not have the new number, etc. Based on these considerations, regulatory authorities typically impose mandatory MNP so as to reduce customers' switching costs, attempting to make mobile telecommunications more competitive (Reinke, 1998).

### **2.3 Importance of Diagnosis before a Change Management**

Organizational Diagnosis is an essential step in every initiative of change, and with ever changing environment in which flexibility and creativity are proving to be key values, most managers are interested in questions regarding the nature of organizational process and structure, human relations, and nature of change (Baba et al., 2009).

The purpose of organizational diagnosis is to establish a widely shared understanding of a system and, based on that understanding, to determine whether change is desirable (Alderfer, 1976).

Changing the goals (goal setting model) involves identifying the gaps between today (where the organization find itself now) and tomorrow (where it wants to be in the future). It also involves taking decisions in order to reduce these gaps. All this process is actually change.

In most cases, Organizational Diagnosis is seen as the first step taken in a broader organizational change attempt. It can be considered as a special branch of organizational research leading to a set of statements about design options and recommendations for change (Postma and Kok, 1998).

Research conducted within organizations is part of efficient management. These actions provide managers with useful information that represent a basis for informed and competent decision-making and organizational development and change. They can provide feedback to organizational members and have a critical role in assessing employee's attitudes, training needs, diagnosing organizational situations, and motivating organization members so that they constitute an important research tool in developing and maintaining effective organizations (Smith, 2003).

According to Baba et al (2009), organizational diagnosis is the conceptual framework which represents the core of the instrument. This conceptual framework represents a guide for the researcher in all the activities included in a diagnosis. "A conceptual model contains components (e.g. task, strategy, people, structure, culture, and technology) and their relationships. The components are directive for search activities. (Postma and Kok, 1998) observed that the relationships between these components can be grounded in chosen organizational theories, in the experience of a specific model or a combination of both". They further went on to state that since the adoption of the systemic definition of organizations, organizational diagnosis is seen as a general, whole system evaluation process rather than a specific sub-unit focused one.

In the words of (Senge, 1994), diagnosis helps decision makers and their advisers to develop workable proposals for organizational change and improvement. Without careful diagnosis, decision makers may waste effort by failing to attack the root causes of problems. Hence, diagnosis can contribute to managerial decision making, just as it can provide a solid foundation for recommendations by organizational and management consultants.

Again, diagnosis can also make a vital contribution to more technical and business oriented types of change management. Currently, even managers of not-for profit organizations pursue financial and business-like objectives as they respond to tight budgets and competition from other organizations.

Diagnosis can be used by change management consultants to help clients decide what changes in organizational features are likely to promote desired outcomes, how ready members are for these changes, and how managers can best implement changes and ensure their sustainability.

A 4-year study of downsizing among 30 firms in the automobile industry (Cameron, 1994; Cameron, Freeman and Mishra, 1991) showed that firms that planned and designed downsizing moves through systematic analyses of jobs, resource usage, work flow, and implications for human resource management were more likely to attain subsequent improvements in performance. Furthermore, these firms were more able to avoid common negative consequences of downsizing, such as loss of valued employees and declining morale among remaining employees.

The running of an organization must be built on some key variables; trust, respect, and positive work ethics, and must allow the employees to realize their personal development goals in order to be able to respond to a particular task best.

A new approach is needed if organisations and communities are going to prosper in today's world. Managers have to change the way they view the world, which for most of us (as a result of our education) is from a mechanistic standpoint. That is, if you do 'A' then you'll get 'B' and if you do 'B' you'll get 'C' and so on. According to Aughton and Brien (1999), the prophetic work undertaken by Fred Emery and Eric Trist in the 1960's at London's Tavistock Institute has provided much of the necessary knowledge and understanding required by organisations to move beyond mechanistic thinking. They described a concept they called the "contextual environment" or the "extended social field" which surrounds a system and influences its operation.

It is this environment that has become highly unstable and unpredictable. And as a result traditional, mechanistic approaches once used to effectively grow and sustain an organisation, are rapidly out-living their usefulness.

Organizational Diagnosis helps organizations identify the "gaps" between "what is" and "what ought to be." to know what state of health exists and whether it is getting better or worse.

## 2.4 Diagnostic models used in change management

Organizational diagnosis is extremely important as the organization faces new challenges in the global world. Diagnosis forms a part of the various organisation development strategies that exist for improving an organization's effectiveness. It involves diagnosing or assessing, an organization's current level of operations in order to design appropriate change interventions. The diagnosis helps to identify the most healthy organizational systems and organizational processes and recommends the developments as the organization increases its capability to reach its strategic goals. Organizations continually experience rapid and accelerating internal and external change and these changes, whether planned or unforeseen, may bring positive or negative impacts that the organization needs to either enhance or resolve. It is, therefore, necessary for organizations to be able to respond to the changing circumstances and act decisively to improve their present situations.

For an organization to do effective diagnosing there should be a model that will serve as a guide in the process. According to Leadersphere (2008), an organizational model is a representation of an organization that helps us to understand more clearly and quickly what we are observing in organizations. There are many ways in which organizational models are useful in organisations.

1. Models help to enhance our understanding of organizational behaviour.
2. Models help to categorize data about an organization.
3. Models help to interpret data about an organization.
4. Models help to provide a common, short-hand language (Leadersphere, 2008).

Several organizational diagnostic models have been conceptualized in the research literature and each model is unique in itself. This study seeks to review some of these models.

#### **2.4.1 Force field analysis (1951)**

Kurt Lewin in 1951 developed a model for analyzing and managing organizational problems which he has named Force Field Analysis. This model was developed to help understand how the change process works. Although Lewin did not receive much acknowledgement during his lifetime, his work remains an outstanding source to understanding group dynamics. The Force Field Analysis is probably Lewin's best-known development.

Lewin (1951), an expert in experiential learning, group dynamics and action research, assumes that in any situation there are both driving and restraining forces that influence any change that may occur. The driving forces, such as environmental factors, push for change within the organization while the restraining forces, such as organizational factors act as barriers to change. Lewin (1951) explains that equilibrium is reached when the sum of the driving forces equals the sum of the restraining forces. To understand the problem within the organization, the driving forces and restraining forces must first be identified and, hence, defined. Goals and strategies for moving the equilibrium of the organization toward the desired direction can then be planned. The model is widely used to inform decision-making, and in particular in planning and implementing change management programmes in organizations.

Wells (2006) acknowledged that the force field analysis is being used for many different applications in a wide variety of industries. He identified three main applications of the force field analysis tool as the following: Change management, productivity improvement and decision making. He further explained that change management is the primary application for force field analysis. Change, he said is a regular occurrence in the healthcare environment, specifically in the area of computerisation of nursing systems. Nurses have widely varying attitudes toward computers and change in the workplace. To help in the transition, managers are evaluating the forces that encourage and the forces that impede the change.

Productivity improvement is a universal application of how to increase employee productivity as it demonstrates a powerful need for the force field analysis tool. Instead of looking at factors promoting and inhibiting change, managers can look at forces promoting and inhibiting productivity. This analysis can shed light on methods, strategies, and systems that can promote long-term improvements in employee productivity.

The last application of the force field analysis is also a powerful decision-making tool. By evaluating the forces supporting and opposing a specific decision, managers can know the likelihood of acceptance and can also manage the influencing forces to maximize the potential for acceptance and success. Wells (2006) concluded that although the force field model is a valuable tool for use in these three applications, it is not limited to these forms of application. By understanding the principles of force field analysis, managers can customize the technique for use in a large variety of situations.

Al-Khouri (2010) in his study, emphasized that the force field analysis model can be used to analyze the driving forces and the restraining forces to the proposed change, in order to determine the magnitude of the gap between the organisation's present and desired states.

As a tool for managing change, force field analysis is used to identify certain factors that must be addressed and monitored if change is to be successful.

By identifying that every decision and every change has forces that promote the change and forces that impede the change, managers can make smarter decisions and can use force field analysis to effectively manage change in their organizations.

#### **2.4.2 Leavitt's model (1965)**

Leavitt (1965) developed a relatively simple model which he named Leavitt's Model. The diamond shaped model enables organisations to be viewed as interdependent systems. That is, a change in anyone of the components would result in a change in the remaining three. Leavitt suggests that the effectiveness of any change program, including diagnosis can only be achieved through a balance of four organizational subsystems: technology, structure, tasks and people.

Leavitt's model can be used for different purposes including planning organisational changes, diagnosing problems in the organisation and describing an organisation.

This model was developed fourteen years after Lewin theorized Force Field Analysis; Leavitt's model however specifies particular variables within organizations, rather than driving forces. These variables include: task variables, structure variables, technological variables, and human variables.

In the model, the structure variable refers to the authority systems, communication systems, and work flow within the organization. The technological variable comprises all the equipment and machinery required for the task variable; the task variable refers to all the tasks and subtasks involved in providing products and services. Lastly, the human variable refers to those who carry out the tasks associated with organizational goals (i.e., products and services). The existence of the diamond shaped arrows in the model emphasizes the interdependence among the four variables. Leavitt suggests that a change in one variable will affect the other variables. For example, with a planned change in one variable (e.g., the introduction of advanced technology), one or more variables will be impacted. Such interventions are typically designed to affect the task variable (e.g., to affect positive changes in products or services). The other variables would also likely change, as morale might increase and communication (i.e., structure) might be improved due to the new technology. This was however confirmed by Hurley and Green (2005). In their study titled; 'Knowledge Management (KM) and the Non-profit Industry: A within and between Approach' indicated that Leavitt's model of organizational change is presented as a framework for affecting culture change. He further stated that the model suggests that four subsystems (structure, technology, task and people) of the model need to be balanced and coordinated. That is, the introduction of technology, alone, is not sufficient for the development of effective KM programs.

Findings by Hoppettal. (2005) in their study on Implementation of Cognitive Pharmaceutical Services (CPS) in professionally active pharmacies reveals that the systems approach in Leavitt's model of an organization has brought about a new dimension to the

interpretation of the results. Beginning with Leavitt's variable, 'tasks', when the professionally active pharmacies wanted to implement a new task (e.g. CPS) in their organisation, it had implications for the other four variables in Leavitt's model. In relation to the variable, 'the environment of the organisation', the pharmacies established networks with specific actors and organisations with, for example, local GPs, professional organisations and patient associations. Implementation of the task also had implications for the technology variable, with a need for IT systems that supported CPS. For the 'participant' variable the task had to be prioritised, the staff needed competence for practicing the new task and thus it was necessary to have a degree of continuity of staff. Finally, implementation of the new task has consequences for the 'structure' variable, for example all staff needed to have skills to identify a customer's need for a particular CPS, and then refer to the expert in the pharmacy. Organising, structuring and planning the task, and creation of a good learning environment for the staff (for example, regular morning meetings) were also key. They concluded that the model was a good framework for understanding how the professionally active pharmacy can be described as an organisation.

The weakness of this model as identified by Hopp et al. (2005) is that, it was difficult to operationalise in practice. For example it is not possible to separate the 'technology' variable (e.g. guidelines) from the 'structure' variable (e.g. morning meetings). As a result the technology variable was not well developed from our data. Another weakness is that the definition of 'culture' is weak. Although they categorised the organisational culture into the 'structure' variable, they noticed that part of the culture could be categorised as related to the participants, the tasks, the environment or the history of the organisation. It was also

difficult to distinguish between social structure and physical structure. For example, should morning meetings be categorized as a social structure (a communication system) or a physical structure (permanently scheduled every week).

Kwon and Zmud (1987) augmented the model with concept of environment, Davis and Olson (1985) added the concept of organizational culture. Järvinen (2006) add that the Leavitt's model has the technical resource (technology) and the social resource in two forms (people and structure) but not the knowledge, information and data resource. When innovations are considered all three kinds of resources should be taken into account. The advantage of Leavitt's model is that it contains relationships between all its components (Hopp et al., 2005).

Although Leavitt describes the variables within his model as dynamic and interdependent, the model is too simple to make any direct causal statements regarding the four variables. Similar to the Force Field Analysis model, Leavitt suggests that a change in one variable may result in compensatory or retaliatory change in the other variables; this notion is similar to the opposing forces in Lewin's model. However, unlike Force Field Analysis, Leavitt does not address the role of the external environment in bringing about change in any of the variables.

Leavitt's model is appealing as it addresses organizational change and uncertainty in a general, but in a simple manner.

### 2.4.3 Open Systems Theory (1966)

According to Bastedo (2004), open systems theory refers simply to the concept that organizations are strongly influenced by their environment. The environment consists of other organizations that exert various forces of an economic, political, or social nature. The environment also provides key resources that sustain the organization and lead to change and survival. The development of the open systems theory was after World War II. It was in response to earlier theories of organizations, such as the human relations perspective of Elton Mayo and the administrative theories of Henri Fayol, which treated the organization basically as a self-contained unit.

Katz and Kahn (1978) identified that the premise of the theory is that organizations are social systems which are dependent upon the environment in which they exist for inputs. The open systems theory allows for repeated cycles of input, transformation (i.e., throughputs), output, and renewed input within organizations. A feedback loop connects organizational outputs with renewed inputs. Traditional organizational theories have viewed organizations as “closed” systems which are independent of the environment in which they exist (Katz & Kahn, 1978). In the organizational models reviewed in their paper thus far, there is an overemphasis on variables within the organization and an absence of any feedback from the environment Leadersphere(2008). Study by Aughton and Brien (1999) reveals that persons who think from a contextual standpoint know that an organisation does not operate in isolation, but in context with its social environment. Such persons understand that organisations (and the people who work within them) are open systems which have

known and evolving social relationships with the extended social environment. Contextualism is said to work as stated below:

- (i) we learn from the extended social environment which changes the system; and
- (ii) the system plans and when these plans are enacted, the extended social environment is consequently changed.

Pondy and Mitroff, (1979), however argued that the open system model, as illustrated by Thompson's book does not really satisfy the conditions of an open system. It is further argued that Thompson's model has directed our attention away from organizational dysfunctions at the macro level and from higher mental functions of human behaviour that are relevant to understanding organizations. An overarching framework of models is used to begin the development of a new set of assumptions, one that might be referred to as a cultural model of organization. The key elements of which include an emphasis on the use of a language and the creation of shared meaning. In this sense, the paper attempts to invent a future for organization theory.

Schrodinger (1968) identified that whereas a control system tends toward the equilibrium target provided to it and therefore produces uniformity; an open system maintains its internal differentiation (resists uniformity) by "sucking orderliness from its environment".

According to Pondy and Mitroff, (1979), some people have mistakenly branded open system as having the capacity for self-maintenance despite the presence of throughput from the environment, and therefore have recommended buffering the system against environmental

complexity. Quite to the contrary, it is precisely the throughput of non-uniformity that preserves the differential structure of an open system. In an open system, what we might call the Law of Limited Variety operates: A system will exhibit no more variety than the variety to which it has been exposed in its environment.

Although there is a great variety in the perspectives provided by open systems theories, they share the perspective that an organization's survival is dependent upon its relationship with the environment.

#### **2.4.4 Weisbord's Six-Box Model (1976)**

Weisbord suggested, in 1976, that there were six key areas in which 'things must go right' if an organisation was to be successful. The model provides a diagnostic tool for identifying the key areas. The components of the six boxes pattern are; purpose, structure, relations, rewards, leadership and helpful mechanisms. Weisbord's model is particularly useful when the OD practitioner does not have as much time as would be desirable for diagnosis.

Hamid et al. (2011) suggested that utilizing Weisbord's Six Box Model can help only if the provider acts upon the diagnosis. Having used the six boxes pattern, the problems of the organization are identified and their quality improved.

According to Weisbord, identifying and solving a problem must be done systematically by the same people, because by so doing, they learn from their own situation and then seek improvement.

In the model, the purposes box is the same as missions and perspectives of the organisation. These purposes must be clear for all the members and they have to abide by them even if they have totally different philosophies in comparison to that of the organization, they have to go along the same stipulated purposes and rules.

The structure box depicts the big picture of an organisation's levels of power and formal relations between functional groups of the organization. It is important for the structure to offer a true and appropriate picture of the legal power and also taken into account a formal way of facilitating things for getting the purposes of the organization.

Relations include individuals, groups, technology and other functional sections which effectively work together. Rewarding systems (official and unofficial) must be analyzed. Data must contain such information to create enough motivation in the individuals.

The helpful mechanisms box denotes the methods which help the staff coordinate their activities. Examples of such mechanisms include; description of organizational approaches, seminars, notes, reports or positions which are created with the purpose of making appropriate relations between sections of the organization.

In his study titled "the role of leadership and work environment in creativity and productivity improvement" Politis (2005) discovered a positive & significant relationship between leadership and motivational dimensions of work environment in productivity improvement. Motivational dimensions of work environment had a significant effect on

creativity and productivity as well. Leader in this point of view has the role of a provider. He provides the essential framework for creativity and productivity.

Izadi (2006) conducted study titled “analysis organizational structure in University of teacher training in which the findings indicated a significant difference between the current and the favorable organizational structures. Meanwhile the staff wanted a more formal and professional environment, these features were literally not visible in the structure as they expected the convergent structure to be changed with a professional bureaucratic one.

A study titled “the challenges, problems and obstacles in personnel empowerment” was done by Shahrani (2008) and the findings indicated a negative relationship between the ambiguity of purposes, lack of authorization and personnel’s levels of ability.

Another study was conducted by Bissel, (2008) titled “organizational assessment and organizational diagnosis” in which he found out that organizational problems put personnel under a lot of stress and if this stress continues, it can paralyze the whole organization.

Zali (2009) started working on organizational diagnosis in public company. This company had problems in the areas of purposes (mean: 2.78), leadership (mean: 2.78), structure (mean: 2.51), rewarding (mean: 1.94), coordination mechanisms (mean: 2.52) and organizational changes (mean: 2.46). The most problematic area was rewarding system whereas the least was company purposes.

Nikookar (2009) investigated the “components of organizational diagnosis in center of Iran carpet”. The findings of this study revealed that the most problematic area was rewarding, the components of useful mechanisms (software factors), organizational purposes, structure, relationships and finally leadership problems. Also, a significant relationship was found between carpet export and the problems of Iran national carpet center.

Tavakkoli (2009) worked on the diagnosis of human resource management toward improvement and development. The findings indicated that the priority of the problems of each component and the causes of each problem were structural problems, employment, assignments, promotions, performance analysis behavioral components, job motivation and satisfaction, organizational culture, job security respectively. The least problematic areas were consultants and architects.

#### **2.4.5 Congruence model for organization analysis (1977)**

Katz and Kahn (1978) observed that the Congruence Model by Nadler-Tushman is a more comprehensive model, which specifies inputs, throughputs, and outputs, which is consistent with open systems theory. Gill (2000) in his study on a diagnostic framework for revenue administration noted that the central idea of the Congruence Model is that the effectiveness of an organization in achieving its objectives depends on the Congruence or Fit between different parts of the Model. He further added that effectiveness is greatest when formal organizational arrangements, informal organization and individuals fit each other. That is, (a) the strategy fits the environment, resources and history, on the one hand, and the transformation process outputs and feedback mechanisms, on the other; (b) the

Transformation Process fits the strategy, desired outputs and feedback mechanisms; and (c) the four components of the transformation process i.e. Tasks. The absence of congruence between any of these elements, results in inadequate performance.

According Leadersphere (2008), the congruence model is very similar to Leavitt's model in that it retains the formal and informal systems of the Weisbord six-box model. The model is based on several assumptions which are common to modern organizational diagnostic models; these assumptions are as follows:

1. Organizations are open social systems within a larger environment.
2. Organizations are dynamic entities (i.e., change is possible and occurs).
3. Organizational behavior occurs at the individual, the group, and the systems level.
4. Interactions occur between the individual, group, and systems levels of organizational behavior.

In order to improve the effectiveness of an organization, there is the need to identify areas of non-congruence (lack of fit) and then, design corrective measures to improve the fit.

#### **2.4.6 Burke-Litwinmodel of organizational performance and change (1992)**

The Burke-Litwin Causal Model of Organizational Performance and Change (B-L Model) was developed by Litwin and others (Litwin and Stringer, 1968; Tagiuri and Litwin, 1968) and later refined by Burke in the late 1980's (Burke and Litwin, 1992). This model includes several key features which go beyond the models discussed earlier:

1. includes twelve theoretical constructs (i.e., organizational variables)

2. distinguishes between the culture and the climate of an organization
3. distinguishes between transformational and transactional dynamics
4. specifies the nature and direction of influence of organizational variables
5. is based on previous models, empirical studies, and OD practice

The twelve organizational variables in the B-L Model are external environment, mission and strategy, leadership, organizational culture, structure, management practices, systems, work unit climate, task requirements and individual skills, motivation, individual needs and values, and individual and organizational performance. With the representation of the external environment as a variable, it is evident that open systems theory underlies the B-L Model. The external environment variable is considered to be the input to the system with the individual and organizational performance variable representing the output. The feedback loops on the right and left sides of the model go in both directions. For example, the performance variable affects the external environment through its products and services, and likewise, the individual and organizational performance is affected by demands from the external environment. The remaining variables represent throughputs in open systems theory.

In a study titled ‘Necessary organizational changes according to Burke–Litwin model in the head nurses system of management in healthcare and social welfare institutions—The Slovenia experience’ by Filej (2009) findings revealed that, changes are needed in leadership and management of nursing in primary healthcare centres. In social welfare

institutions changes are only required in leadership. Organizational changes are not necessary for any element of the Burke–Litwin model for hospitals.

A longitudinal study of organizational change was conducted by Anderson-Rudolf (1996). The main focus of the study was to show how fundamental change in key variables affects organizational performance. The study represents an attempt to counter the paucity of theory based fundamental change models by testing the power of Burke-Litwin's model. The study clearly confirmed the central role of culture and leadership in the change in organizational performance and that leadership, climate and management practices showed greater change than culture. The Burke–Litwin model appears to be a functional tool for modeling fundamental organization change.

Burke does warn organizational diagnosticians about rigidly adhering to one model, despite evidence that the model may be appropriate for the organization (in Howard, 1994). He suggests that is possible to become trapped by one's chosen model. For example, "one particular viewpoint drives the diagnostic process; a consultant can easily miss important issues in the organization". In other words, the organizational diagnostician may frame the data collection procedures based on the limited variables in the model, thereby failing to collect important information on other possible variables.

Noolan (2004) was also of the view that, traditional diagnostic model can be group into two: descriptive and normative model. Her study grouped the various models proposed by other scholars into her proposed two groups. With descriptive models, the role of the OD

practitioner is to illuminate “what is” for the client, and “what could be”. Within descriptive models, contingency theorists would argue that the OD practitioner facilitates change only, not focus. The client determines the direction of change and the OD practitioner helps the client get there. With the normative model, the OD practitioner recommends specific directions for change, prior to the diagnosis – that is the “one best way of managing” (Noolan, 2004).

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## CHAPTER THREE

### RESEARCH METHODOLOGY AND ORGANIZATIONAL PROFILE

#### 3.0 Introduction to methodology

This chapter comprises of two sections. Section one consist of the various procedures by which data was collected. It covered the research design, data collection procedures, sample, sampling procedures and data analysis. The second section covers the profile of the telecommunication industry in Ghana.

#### 3.1 Research design

According to Saunders et al. (2009) research methodology is a general plan of how researchers go about answering research question(s). Primary and secondary data was used for the study. A mixed-method technique, thus both quantitative and qualitative techniques was used to collect primary data while books, journals and internet were used to collect secondary data for the study.

Combining qualitative and quantitative approaches within the same piece of research enabled the researcher to provide richer detailed analysis. Linking qualitative and quantitative data also ensured the overall effectiveness of the research process as one can enhance the findings of the other.

Qualitative data helped to assess in detail the way the telecommunication industry diagnoses its environment before any change management intervention and developed model from the data using interviews. Quantitative data helped to describe, and examine relationships in the data collected from the respondents using questionnaire.

This study adopted a case study strategy to answer the research questions. Case study was adopted because it helped the researcher to conduct empirical investigations into the phenomenon using some selected telecommunication companies as evidence. This helped to gain a rich understanding of the phenomenon to be investigated. It was also used because; case study approach has the capability to generate answers to the questions Why? What? and How?

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### **3.2 Source of data/data collection procedure.**

Data collected for this research was from two sources. The sources were both primary and secondary sources.

#### **3.2.2 Primary data**

Questionnaire and Interviews was used to collect the primary data to answer the research questions.

##### **3.2.2.1 Questionnaire**

The use of questionnaires by the researcher was that, it enabled the researcher to find views as they are in their natural setting. It also ensured quantifiable responses for the same items from all respondents. Furthermore, it saved both time and cost to distribute and analyse.

The questionnaire used to collect the data was closed-ended. This is because it has the advantages of being quicker and easier for respondents to answer and it is also easier to code and statistically analyse. The questionnaire was distributed to the respondents and it was

self-administered by them.

### **3.2.2.2 Interview**

Both telephone and face-to-face interviews was arranged to gather data from the general management staff of the telecom industry and the NCA. This helped to provide a deeper understanding of the issues being investigated, and it complemented and provided deeper insights into the findings of the quantitative data.

### **3.2.3 Secondary data**

Secondary sources of data were those that have already been collected from agencies and other sources which have been processed or analysed by other scholars. Secondary data was collected from the following sources: website of Airtel Ghana, MTN Ghana and Tigo Ghana, internet, articles, academic journals, and books to compare with the data provided in the questionnaires and the interview.

### **3.2.1 Target population**

The target population for this study was all departments in the three (3) selected telecom companies (Airtel, MTN and Tigo), in Kumasi and Accra offices in Ashanti Region and Greater Accra Region respectively. This group was targeted because the researcher believed that they could provide the necessary information to answer the research topic. These three (3) companies was considered because; firstly it was easily accessible to the researcher and secondly, each of them has experienced a of lot change management in recent years.

### **3.2.4 Sample size and sampling technique**

The selection of the sample was based on chance selection and the readiness and availability of respondent. This was because; it was not economically feasible, among other constraints to contact all the employees in the telecom industry. A sample size of eighty (80) respondents was drawn randomly from each of the three telecom companies.

This sample size was chosen because there is little variation in the target population; hence the outcome from this sample will be representative. This sample was also taken because of time, finance and the amount of data that needed to be collected.

The sample of the Managers and other administrative staff were selected using purposive and convenience sampling (haphazard sampling) techniques respectively. Managers in Branches were purposely selected. Thus the judgment of the researcher was used to select the managers that make the interview respondents. This method was employed because, it can be very useful for situations where you need to reach a targeted sample quickly and where sampling for proportionality is not the primary concern. The convenience sampling technique is to take a relatively small sample over a very short period of time. This technique makes generalization possible because, there is little variation in the population; hence representative.

### **3.2.5 Data collection instrument**

The researcher used structured questionnaire and interview as the tools for obtaining the necessary information for the research.

### 3.2.5.1 Questionnaire

Structured questionnaire was adopted from a study titled, The Organizational Diagnosis Questionnaire (ODQ) by (Preziosi, 1980) who based the study on Weisbord's practitioner-oriented theory. According to Preziosi (1980), the ODQ generates data in each of Weisbord's suggested six areas as well as in a seventh, attitude toward change. The item was added as a helpful mechanism for the person involved in organizational diagnosis. The researcher added another box which is task, which when added to relationships can be used to access organizational culture. Hämmal and Vadi (2010) in their study titled 'Diagnosing Organizational Culture through Metaphors and Task and Relationship Orientations', highlighted on the fact that task and relationship orientations are suitable for the research of organizational culture as they highlight the most general aspects in social groups.

The model was edited to suit the environment of Ghana. It was done to increase validity and reliability while semi-structured questionnaires were developed by the researcher and administered to respondents one by one. The questionnaire was made up of closed-ended questions. The questionnaire was divided into six (6) sections with the breakdown as follows:

Section 1: Specific areas that needs diagnosing

Section 2: Ways of Diagnosing before Change

Section 3: Importance of Diagnosing before a Change Management

Section 4: Assessing organizational effectiveness

Section 5: Assessing the environment of the organization

Section 6: Assessing the enacted environment

### **3.2.5.2 Interview**

The head of all the departments were also interviewed. The interview was in the form of conversation and discussion in which respondents were asked questions in connection with the researcher topic. The researcher used that opportunity to explain the objectives of the researcher.

### **3.2.6 Data analysis**

The nature of the study required both qualitative and quantitative analysis of data gathered. In this study, forty-six (46) items were rated on a Likert scale 1 – 7, where 7 was strongly agree (SA) and 1 was strongly disagree (SD). Three of the items were rated on a scale 1 – 3, where 3 was little knowledge (LK) and 1 was highly informed (HI).

To enable the researcher to make better analysis, data collected were summarized into statistical tables and charts to make interpretation easier with the help of statistical package for social sciences (SPSS, Version 20). Mean and standard deviation were used in order to establish relationship between the data collected to make meaning out of it. Discussion, conclusion and recommendation were made out of the summarized data analysis.

### **3.3 Company profile**

This section consists of the profile of the selected telecommunications used for the study.

### **3.3.1 About Airtel Ghana**

Airtel was launched in Ghana in November 2010 as one of the 16 operating countries of Airtel International. As Ghana's most affordable telecom operator, Airtel Ghana is driven by the vision of providing affordable and innovative mobile services to all, evidenced by the genuinely low tariff and incentive offered to customers. Airtel has African operations in: Burkina Faso, Chad, Democratic Republic of Congo, Republic of Congo, Gabon, Ghana, Kenya, Malawi, Madagascar, Niger, Nigeria, Seychelles, Sierra Leone, Tanzania, Uganda and Zambia. Airtel takes the lead with innovative services including the Airtel One network which is currently available in 16 countries in Africa and the award-winning Airtel Money (e-Commerce) service.

Airtel is a socially responsible corporate entity and this is reflected in their way of giving back to their host communities through the provision of quality education at the basic level. Airtel Ghana is currently assisting the government of Ghana in the area of education by adopting and running select deprived basic schools in rural communities. The adoption of Himankrom Methodist Primary School in the Ahanta West District of the Western Region of Ghana will provide an improved learning environment for the students through a total refurbishment of the facility, supply of learning aids and the provision of school uniforms and sandals/shoes.

### **3.3.2 About Tigo Ghana**

Millicom International Cellular S.A. ("MIC") portfolio of assets currently comprises 17 cellular operations and licenses in 16 countries in Asia, Latin America and Africa, covering

a population under license of approximately 392 million people. Millicom Ghana Limited, operators of Tigo cellular network is one (1) of six (6) mobile voice services providers licensed to operate in Ghana. It was the first mobile cellular network branded under the name “Mobitel” incorporated in Sub-Saharan Africa in March, 1990 and provision of service commenced in April, 1992. In 2002 it introduced GSM service and in 2006, it rebranded to Tigo. The brand name was launched in 2006 and the company adopted her vision and mission as follows:

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### **Vision**

Our objective is to provide people in emerging markets the freedom to access today's world. To make this happen we create 'A world where mobile services are affordable, accessible and available everywhere and to all mission:

We provide services for people who want to stay in touch, to belong to communities and to be informed and entertained, enabling them to express their emotions and enhance their lives. We deliver the 3 A's, Affordability, Accessibility and Availability; providing affordable services, good coverage and ease of purchase and use. We focus on consistently meeting and exceeding customer's expectations and developing an inspirational brand.

### **3.3.3 About MTN Ghana**

MTN is truly committed to maximizing productivity and efficiency by delivering uniquely designed communication solutions. As the leading telecommunications company, MTN is

focused on providing excellent telecommunications services across the African continent. We believe that through access to communication comes economic empowerment.

MTN has a wide variety of network services as well as segments. These are specially designed for different kinds of people to enhance their mobile experience, while others add value to their subscription with us. Our cost-effective solutions will bring a smile to your face. MTN understands that the best way for you to gain a competitive edge in a local market is to offer different segments which suits people's life styles and economic situations whilst allowing you to enjoy the best solutions and offerings available. We invite you to migrate into your preferred segment and enjoy truly amazing offerings.

Leading through Innovation and Partnerships: MTN is a household name throughout much of Africa with a presence in 21 countries in African and the Middle East. It is rare today to go to an African capital and not see the presence of MTN from the cities to the most rural areas. This is evidence of a company that has truly brought a great service to millions of Africa's entrepreneurs and citizens.

Equipped with a proven record of technological innovation and a corporate culture that thrives on understanding telecommunications in emerging markets, MTN continues to consolidate its leadership position in the country. For MTN, innovation means understanding the needs of our customers and finding solutions that best meet their needs. MTN is therefore poised to provide great customer experiences and to further enrich its service offerings to its millions of subscribers by providing a better network with even better technology, an obligation to changing our customers' lives, and a commitment to giving back to the communities we operate in. MTN recognises the rapid increase in its subscriber

base as a result of its superior value proposition and is clearly the network of choice for the overwhelming majority of new subscribers. With this, MTN looks forward to the future with great hope and wish to reaffirm its commitment to the provision of World Class Telecommunications services to the good people of Ghana.

MTN is the market leader in the increasingly competitive mobile telecommunications industry in Ghana. It offers subscribers a wide range of exciting options under Pay Monthly and “Pay AsYouGo” Services. After one year of rebranding Mobile Telecommunications Network (MTN) in country, the organization is focused on consolidating its position as the leader in the market and to fulfil its commitment of bringing world class telecommunication services to the country. In this regard, MTN has invested substantially in a Network Expansion Initiatives meant to enhance speech quality, improve coverage intensity and to extend coverage to new areas.

MTN has integrated mobile telecommunication services into the development of a brand that has become a lifestyle. This fact is clearly demonstrated by its active involvement in various marketing initiatives that are close to the hearts of subscribers. MTN has responded to these needs by introducing a number of exciting products and services including the GPRS roaming, WECA tariffs, Blackberry phones and services and the recent MTN Zone which gives fantastic discounts to our pre-paid subscribers.

MTN acknowledges its responsibility towards its stakeholders to sustain long term mutual value. In this regard, MTN Ghana has established relationships with governments and

community groups to enable us work together to achieve profitability. We are also extremely proud of the fact that MTN Ghana has launched a foundation (MTN Ghana Foundation) which is driving its Corporate Social Responsibility Programs.

Delivering with Excellence: The company, driven by five key values of Leadership, Innovation, Integrity, Relationships and Can-do, is poised to provide a variety of innovative, customer-focused products and services offering superior customer value propositions for the various market segments. Equipped with the right human expertise and technological know-how, MTN will continue to excel to enable the organization become the leading telecoms provider in emerging countries.



## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 4.0 Introduction

This chapter is a presentation of the data collected from employees of 3 different telecommunication networks working in different departments of their respective companies. As stated earlier, a sample size of 240 employees (80 from each organisation) was used for the study of which the total number of responses was 124. The chapter also presents analysis and discussion of key factors raised in this research with respect to addressing the objectives in this thesis.

The presentation of the data in this research is done by way of frequency tables, bar charts, pie charts and component bar graphs. There are also tests of significant differences in certain parameters.

Most of the questions were asked with responses based on the level of agreement scale. Therefore the Weight Mean Score (WMS) system was used in analysing them. This system allocates weights to the frequencies of the responses as follows: Strongly agree = 100%, Agree = 83%, Slightly Agree = 66.5%, Neutral = 50%, Slightly Disagree = 33%, Disagree = 16.5% and Strongly Disagree = 0%. A weight mean using this scale returns a percentage indicative of the general response. A value close to 100% is a general agreement while a value close to 0% displays the disagreement. Before this however, a Chi-Square Goodness of Fit is performed to establish significant differences in the levels.

The following is a presentation of the data collected.

## 4.1 Source of data

This section presents source of the data collected from the various offices and the different departments from the respective telecommunications.

### 4.1.1 Telecommunication networks

Table 4.1.1 shows the summary of the information on the individual companies that contributed to this project via respondents.

**Table 4.1.1: Telecommunication networks**

Network	Frequency	Percent	Cumulative%
Airtel	73	58.9	58.9
MTN	20	16.1	75.0
Tigo	31	25.0	100.0
Total	124	100.0	

There were two different offices of Airtel Ghana involved in the research (one from Accra and the other from Kumasi) altogether contributing 58.9 percent of the respondents. The other telecommunication networks involved were from MTN and Tigo represented by 16.1 percent and 25 percent respectively. Altogether, there were a total of 124 individual responses from the four different offices.

#### 4.1.2 Department of respondents

A total number of 124 respondents were from different departments within each telecommunication network.

Table 4.1.2 of the responses were from the Sales departments representing 34.7 percent followed by the Customer Service (including client services) representation of 25 percent.

**Table 4.1.2: Departments of respondent**

	Frequency	Percent	Cumulative %
Customer Service	31	25.0	25.0
Human Resource	9	7.3	32.3
Finance	6	4.8	37.1
Sales	43	34.7	71.8
Information Technology	6	4.8	76.6
Marketing	6	4.8	81.5
Freelancer	17	13.7	95.2
Shop Supervisor	6	4.8	100.0
Total	124	100.0	

The other departments are Human Resource (including general Administration), Finance, Information Technology (including Engineering), Marketing, Freelancer, Shop Supervisor (including agents) represented by 7.3, 4.8, 4.8, 4.8, 13.7 and 4.8 respectively.

#### 4.2 Diagnosing the companies

This section deals with the analysis of questions which investigate the current state of the companies within which respondents are working with. There is therefore an analysis of specific areas that need diagnosing, ways of diagnosing before change management, the essence of the overall diagnosing procedure, an assessment of organizational effectiveness,

assessing the environment of the organization and assessing the enacted environment of the organization.

#### 4.2.1 Areas that need diagnosing

There was a general overall agreement within the levels with respect to the Weighted Mean Score (WMS) calculation for the variables in question.

Table 4.2.1:

Factor	Weighted Mean Score (%)	p-value
Clearly stated company goals	74.63	0.0000
Supportive immediate supervisor	76.04	0.0000
Harmonious relationship with supervisor	77.52	0.0000
Company not resistant to change	68.40	0.0000
Personal agreement with working unit goals	77.00	0.0000
Division of labour helpful in company goal achievement	79.93	0.0000
Leadership norms aid progress	76.84	0.0000
Assistance with work-related problems	76.31	0.0000
Fair treatment of employee on salary scale	63.29	0.0000
Availability of information on the job	73.08	0.0000
Understanding of company's purpose	77.60	0.0000

Table 4.2.1 shows some of the factors and their computed Weighted Mean Scores (WMS) of respondents concerning each factor together with the p-values associated with respective Chi-Square Goodness-of-Fit test at a 0.05 level of significance. The results for the test shows that there is significant differences within each of the factors and the WMS complements this difference as due to agreement since the values are close to 100%.

The information in Table 4.2.1 means that respondents agree that the companies have clearly stated goals, the companies are not resistant to change, norms of the leadership aid the

general progress of work, employees are treated fairly as far as the salary scale is concerned and there is enough available information on the job being done. Also for employees, they receive support from immediate supervisors, they have a fair understanding of the purpose of the company and there is a cordial relationship between working units because an employee can always seek assistance on work related problems. The p-value shows that this agreement is statistically significant.

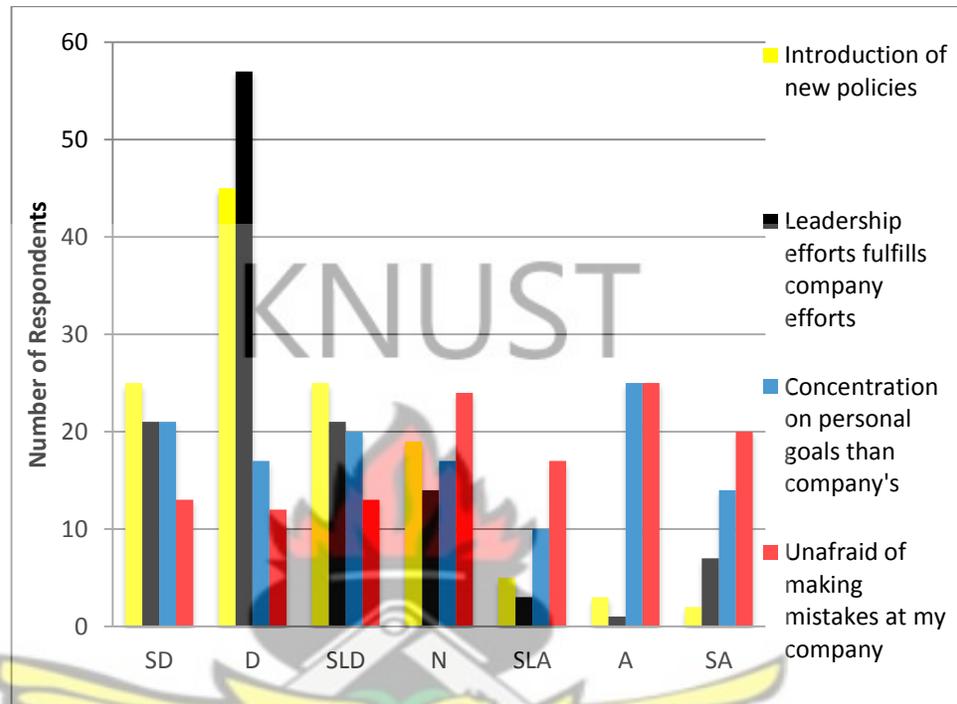
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There was also an agreement on the following factors; existent opportunity for promotion (Weighted Mean Score = 69.04%), well designed working structure (Weighted Mean Score = 72.00%) and occasional working personal changes by employees with the job (Weighted Mean Score = 68.51%). The agreement of the employees with regards to a well-designed working structure confirms to the thoughts of Senge (1994). He reasons that, one of the most important aspects of a manager's role is the design of the organizational structures; though, it is often a neglected responsibility.

Very importantly observed was the fact that responses from the employees were weakly agreed on concerning incentives connected to tasks (Weighted Mean Score = 61.93%). This is a very important factor that serves as a motivator for employees and therefore needs to be improved together with positive changes that constantly occur at the work place (Weighted Mean Score = 68.79%).

There were factors on which respondents disagreed on or were almost neutral on as far as specific areas of diagnosing were concerned. These factors are shown in Figure 4.2.1. The

bar chart displays the pictorial view of the level of agreement concerning the indicated factors.

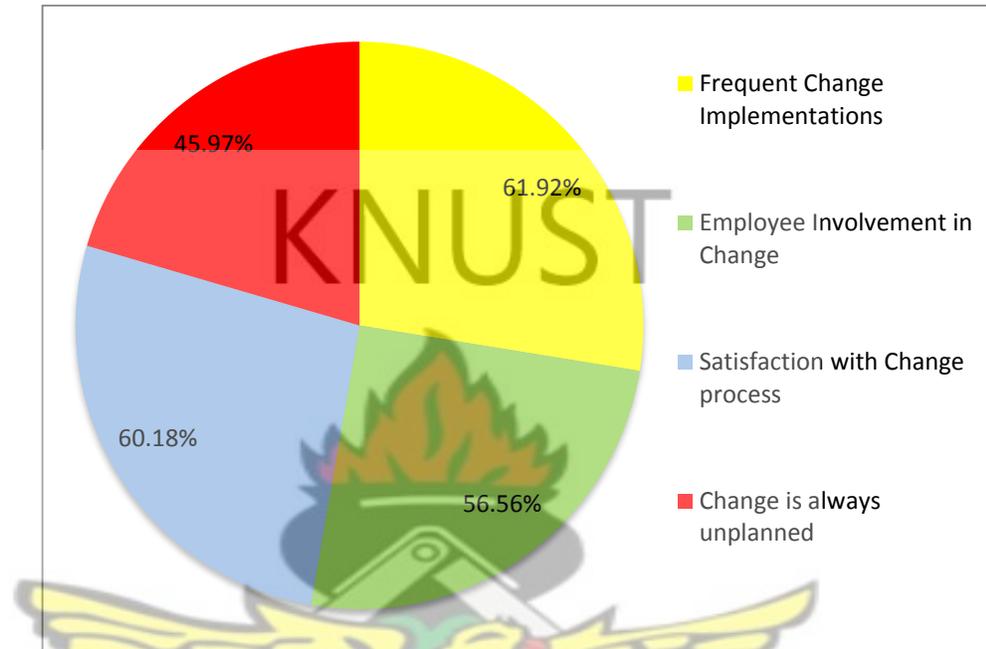


**Figure 4.2.1: Factors that respondents disagreed or were almost neutral on**

Respondents generally disagreed that the company's leadership efforts results in the organization fulfilment of its purposes. (Weighted Mean Score = 26.74%). Also there was a strong disagreement on introduction of new policies by the various companies considered (Weighted Mean Score = 26.60%). Employees also disagreed on the fact that they concentrate on their own needs than on the goals of the organization (Weighted Mean Score = 47.83%). The respondents were almost neutral on being afraid of making mistakes in their respective places of work.

#### 4.2.2 Diagnosing before change

The characteristics of the company right before change management is very key. This is the preparatory platform on which change is made.



**Figure 4.2.2: Issues within company before change**

Figure 4.2.2 shows the Pie Chart distribution of the computed Weighted Mean Score for factors that exits before change is implemented. There was a weak agreement on the frequency of the change implementation (Weight Mean Score = 61.29%). Employee responses suggest that they are generally neutral of their involvement in change implementation in their various companies (Weight Mean Score = 56.56%). For agreement or disagreement on the satisfaction of change process in the respective companies of respondents, employees weakly agreed (Weight Mean Score = 60.18%).

There was a slightly disagreement (almost neutral) on the unplanned nature of change implementations with the individual companies (Weight Mean Score = 45.97%).

#### 4.2.3 Importance of diagnosing before a change management

Majority of the respondents were in favour of the fact that it was necessary for their companies to be diagnosed before change management. This majority represents 75 percent affirmative responses. 4 percent responded No with 21 percent not responding at all. The result is summarized in Table 4.2.3.

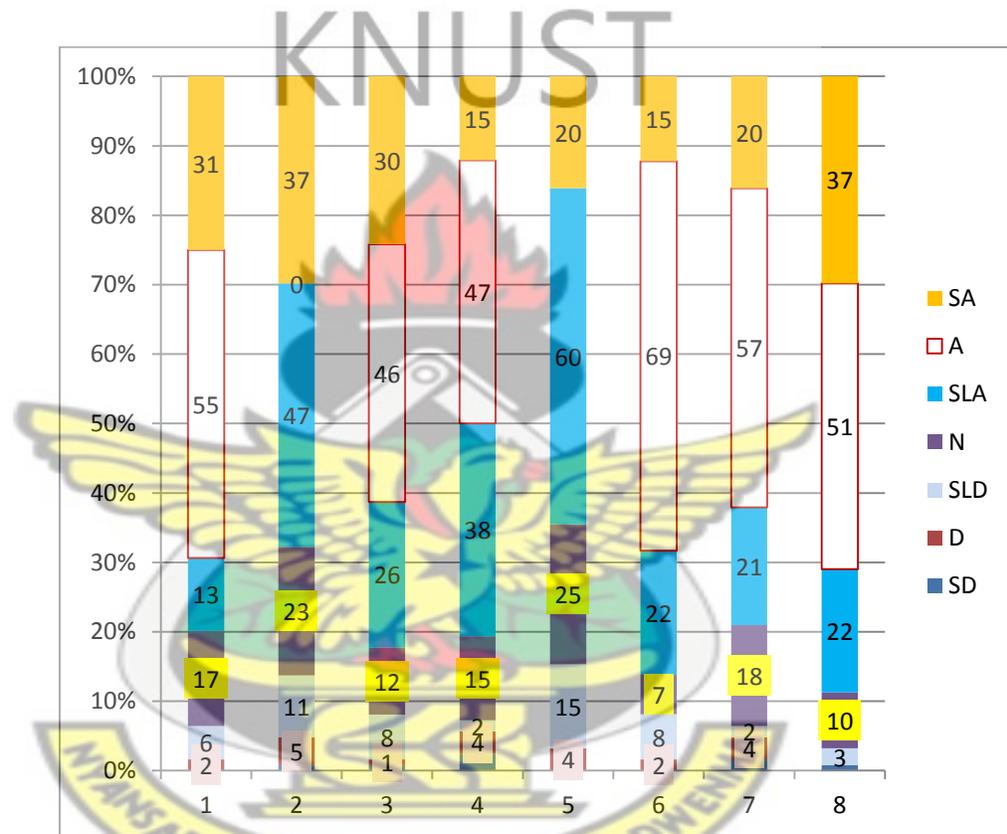
**Table 4.2.3: Do you think it is necessary to diagnose your company before change management**

	Frequency	Percent	Cumulative %
Yes	93	75.0	75.0
No	5	4.0	79.0
No response	26	21.0	100.0
Total	124	100.0	

Within this part of the research, eight key issues were brought up and respondents were asked to state their level of agreement pertaining to these issues.

The component bar chart in Figure 4.2.3 displays the responses for the issues raised up as follows: 1 – Ability to identify a problem helps increase the success of implementation (Weight Mean Score = 77.50%), 2 – it is important to establish fact before taking action, 3 – Together the company develops a vision that motivates with its staff (Weight Mean Score = 76.07%), 4 – We treat each other the same as external customers (Weight Mean Score =

71.05%), 5 – Employee knowledge of measures and standards that apply at work (Weight Mean Score = 62.91%), 6 – Knowledge of company’s priorities and their effects (Weight Mean Score = 75.30%), 7 – Finding the right time to do things (Weight Mean Score = 73.87%), 8 – Ability to identify a problem aids in decision making (Weight Mean Score = 80.60%) which is the highest mean score value.



**Figure 4.2.3: Weighted mean scores of importance of diagnosing**

#### 4.2.4 Assessing organizational effectiveness

To establish the level of effectiveness of the companies considered, there were questions for respondents on factors such as acquisition of raw materials needed and minimal satisfaction of demand of key interest groups. In an interview with the general manager of one of the

three companies, it was revealed that change interventions in terms of new products or services are usually accompanied by the formation of new departments. Competent employees are picked based on their performance and then trained to handle this new change and this way of going about change has always been a success.

**Table 4.2.4: Assessing organizational effectiveness**

Factor	Weighted Mean Score (%)
Consistent achievement of goals	<b>76.82</b>
Smooth functioning of company with minimal internal strain	<b>69.29</b>
Acquisition of Resources needed	<b>71.60</b>
Demands and expectation of interest groups met	<b>66.22</b>

Table 4.2.4 shows that there was an overall agreement of all the stated factors. Prior to this however, the Chi-Square Goodness-of-Fit test was performed to determine if the frequencies in any one of the levels was preferred by respondents. All the variables returned significant differences in the levels. This is due to the general agreement by respondents.

#### **4.2.5 Assessing the environment of the organization**

After investigating the assessment of organizational effectiveness the research takes a turn at assessing the environment of the organization.

**Table 4.2.5: Assessing the environment of the organization**

Factor	Weighted Mean Score (%)
Production/Service delivery undergone changes	<b>71.17</b>
Introduction of new products/services	<b>79.63</b>
Demand for products are unstable	<b>76.56</b>
Unpredictable customer taste and preferences	<b>76.32</b>
Legal regulators in the industry are uncertain	<b>66.24</b>
Tariffs on imports keep changing	<b>76.45</b>
Competition in the industry	<b>73.80</b>

Table 4.2.5 which displays the weighted mean scores for various factors shows that there is a fairly stronger level of agreement within this assessment field compared to other forms of assessment performed.

The weighted means score ranges between 66.24% for legal regulators in the industry to 79.63% for new products being constantly introduced into the respective companies. This is practically fundamental since most telecommunication networks have new products and services every now and then.

Another implication here is that demand for products is unstable and customer taste and preferences in the industry are unpredictable together with massive competition existent in the industry.

#### 4.2.6 Assessing the enacted environment

There are three main areas considered here in assessing the enacted environment within which employees were working. These are changes in technology, changes in government regulations and changes in customer preferences.

##### 4.2.6.1 Assessing the enacted environment

Table 4.2.6.1: Changes in technology

	Frequency	Percent	Cumulative %
Highly Informed	80	64.5	64.5
Moderately Informed	28	22.6	87.1
Little Knowledge	16	12.9	100.0
Total	124	100.0	

Probably due to the nature of the telecommunication industry job description, there was significant percentage of individual respondents informed with changes in technology. Table 4.2.6.1 shows that up to 87.1 percent of the responses were either highly informed or moderately informed on changes that took place in technology. There were only 16 respondents representing 12.9 percent who had little knowledge with respect to changes that took place in technology. During the interview section, management in all the 3 companies attested to the fact that there was a rapid rate of change in the area of technological advancement. It was generally agreed that the introduction of 'sms', 'facebook' and other internet softwares such as 'whatsapp' might have a negative effect on voice call rates in the near future.

#### 4.2.6.1 Changes in government regulations

The responses for the level of information regarding changes that occurred with regards to government regulations were similar to the level of information on changes that take place in technology.

35.5 percent of the respondents were highly informed while the majority representing 49.2 percent were moderately informed. Table 4.2.6.2 shows the trends in the level of information on changes in government regulations. There was representation for respondents with little knowledge of 15.3 percent of the total number of respondents. Management responses in this area is however positive. The telecommunication industries have taken advantage of a new government regulation on facility sharing as another area of generating revenue. In an interview with management, it was revealed that it is expensive to maintain a communication tower. When a tower is built, a security officer would have to be on duty always to guard it. This among other expenses has necessitated the need for the telecoms to rush in implementing this new government regulation. This however explains the reason why; Airtel is doing all it can to get government's approval in securing its own tower.

**Table 4.2.6b: Changes in government regulations**

	Frequency	Percent	Cumulative %
Highly Informed	44	35.5	35.5
Moderately Informed	61	49.2	84.7
Little Knowledge	19	15.3	100.0
Total	124	100.0	

#### **4.2.6.1 Changes in customer preferences**

The trend for the level of information remains the same for changes in customer preferences as it was for changes in technology and for changes in government regulation. Table 4.2.6 shows that 54 percent of respondents are highly informed on changes in customer preferences and tastes. 32.3 percent for individual respondents who were moderately informed. Only 13.7 percent had little knowledge on changes in customer preferences. Table 4.2.6.3 is a summary of this information. Much was not commented on with regards to the MNP since all 3 companies confirmed that their position as far as the customer share was involved has not changed since government introduced the MNP.

#### **4.3 General assessment based on ODQ profile**

The research in particular investigates also the standing of the industry and individual companies using the Organizational Diagnosis Questionnaire (ODQ). This involves using some questions within the questionnaire administered to make informed judgments on seven key areas of the organization. The seven areas include Purposes, Structure, Leadership, Relationships, Rewards, Helpful Mechanisms and Attitude towards Change.

The following sections are presentations and analyses of the entire organization, and individual companies involved in the research.

#### **4.3.1 ODQ profile of the telecommunication industry**

The data from all the telecommunication networks involved in this research namely Airtel Ghana, MTN and Tigo is used to generate the ODQ profile representing the entire telecommunication industry.

**Table 4.3.1:ODQ Profile of entire data**

Factor	Average	Coef.of Var. (%)
Purpose	5.43	10.82
Structure	5.54	4.37
Leadership	4.78	25.45
Relationship	5.66	1.57
Rewards	4.90	4.64
Helpful Mechanisms	5.22	3.52
Attitude towards Change	5.10	4.69
Task	4.77	10.75

Table 4.3.1 shows the summary of the average and standard deviation of the ODQ profile computation. Considering the neutral point of 4 and deviations from the neutral point, there is a generally stable system (a system without any severe problem) within the telecommunication industry.

The industry is however not functioning in an optimum environment in all the areas considered. All the factors registered scores above 4 with leadership being the lowest. This was particularly because respondents generally disagreed on the fact that Leadership efforts result in the organization's fulfilment of its purposes with wide variations. Relationship was the area with the highest score with a deviation of 1.57 percent displaying how stable it was as an indicator.

#### 4.3.2ODQ profile of Tigo

**Table 4.3.2: ODQ profile of Tigo**

Factor	Average	Coef.of Var. (%)
Purpose	5.65	15.15
Structure	5.89	1.38
Leadership	5.92	3.54
Relationship	5.97	3.24
Rewards	5.30	10.04
Helpful Mechanisms	5.77	4.37
Attitude towards Change	5.43	5.69
Task	1.37	4.59

The ODQ profile for Tigo is shown in Table 4.3.2 with an overall highly marked performance for all the areas. There is also a generally consistent response for all the areas registered by the variation in views of below 16 percent.

The summary indicates that Tigo puts premium on Relationships with Leadership and Structure following in terms of priority. The company's style of Rewarding although registered as the lowest scored area is above average.

### 4.3.3 ODQ profile of MTN

**Table 4.3.3: ODQ profile of MTN**

Factor	Average	Coef.of Var. (%)
Purpose	5.13	14.07
Structure	5.32	5.51
Leadership	5.17	2.96
Relationship	5.35	5.61
Rewards	4.37	12.61
Helpful Mechanisms	4.84	10.18
Attitude towards Change	4.98	6.91
Task	0.65	14.93

Table 4.3.3 displays the ODQ profile for MTN. Again every area with this telecommunication network is above the neutral point of 4 implying that there is a problem-free environment within MTN.

As with the overall assessment and with the assessment on Tigo, the company is noteworthy on Relationships with regards to the MTN ODQ profile. All the views from the respective areas are with 14.07 percent or less of variation.

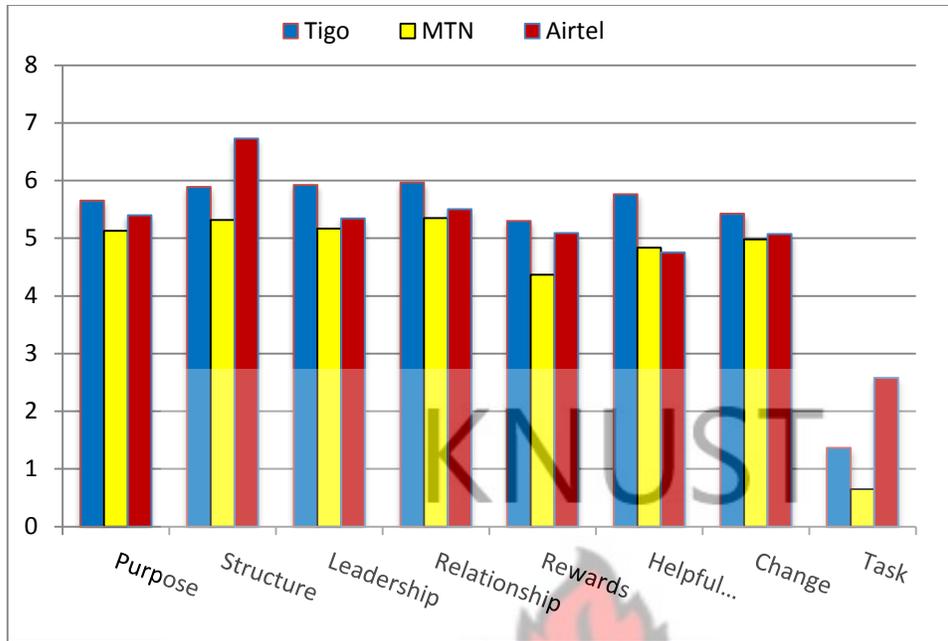
The employees are however almost neutral on the subject of Rewards. Most employees disagreed with the pay scale and benefits of MTN treating each employee fairly.

#### 4.3.1 ODQ profile of Airtel Ghana

**Table 4.3.4: ODQ profile of Airtel Ghana**

Factor	Average	Coef.of Var. (%)
Purpose	5.40	8.21
Structure	6.73	33.72
Leadership	5.35	2.91
Relationship	5.51	3.91
Rewards	5.09	8.96
Helpful Mechanisms	4.75	9.10
Attitude towards Change	5.08	3.26
Task	2.58	3.98

For Airtel Ghana, the trend is a bit different from Tigo and MTN. The ODQ profile suggests that Structure is of prime importance although the views are widely varied with almost 34 percent. The rest of the areas also have comparatively higher relative variations. The tool that is comparatively lacking is Helpful Mechanisms. Figure 4.3.1 shows the bar chart for the all the telecommunication networks and their ODQ profile.



**Figure 4.3.1: Organizational diagnosis questionnaire for telecom companies**

#### **4.4 Results of Unstructured Interviews with Management of the Three Telecommunication Industries**

As part of data and information collected for this research, the researcher conducted unstructured interview with Management personnel of the three Telecommunication Operators. The responses they provided are summarised under this section.

The telecommunication industries have taken advantage of a new government regulation on facility sharing as another area of generating revenue. In an interview with management, it was revealed that it is expensive to maintain a communication tower. For example, when a tower is built, a security officer would have to be employed to be on duty always to guard it. However, with the facility sharing, this cost would not have to be borne by only one

organization. In this regard, management of all three telecommunication industry sees this as a profit making venture and so this regulation is no threat to the industry.

Much was not commented on with regards to the Mobile Number Portability (MNP) since all three companies confirmed that their position as far as their customer share was involved has not changed since government introduced the MNP. Though they were a bit sceptical, they could agree that the normal Ghanaian mobile phone user is yet to embrace the realities of MNP.

The industry is gradually branching into other profit making areas. These among others include the mobile money service and mobile business services. Whiles these offered opportunities, it was perceived that the introduction of innovative ways of communicating introduction of 'SMS', 'FACEBOOK' and other internet chatting software packages such as 'WHATSAPP' might have negative effects on voice calls and voice call rates in the near future.

In an interview with the General Manager of one of the three companies, it was revealed that change interventions in terms of new products or services are usually accompanied by the formation of new departments. Competent and potential employees are identified based on their performance. They are then trained to handle this new change. This way of going about change seems acceptable since it has always proven to be successful.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

#### 5.0 INTRODUCTION

This chapter is a summary of the findings and analysis of the data collected, conclusions and recommendation concerning the telecommunication networks considered in this research. This will aid in structuring the process of identifying the specific areas that needs diagnosing, actual ways of diagnosing, assessing organizational effectiveness and a proper assessment of the particular environments of the organization.

#### 5.1 SUMMARY OF FINDINGS

##### 5.1.1 Overview

This research used the Weighted Mean Score (WMS) for analyzing the variables in which responses were given based on levels of agreement. There were four different offices of three different individual telecommunication networks considered for this research namely: two offices from Airtel Ghana (one in Accra and the other in Kumasi), MTN and Tigo.

The parameters investigated included specific areas that needed diagnosing by examination of factors like the clarity with which company goals are stated, relationship with supervisors, assistance from co-workers, etc., ways of diagnosing before change, importance of diagnosing and assessing the effectiveness of the organization.

Apart from the Weight Mean Score, the researcher also used significance tests like the Chi-Square Goodness-of-Fit, percentages and frequencies (including cumulative frequencies).

### 5.1.2 Findings

The following findings emerged from the study. These are primarily the key findings that seek to answer questions raised from which the objectives of this thesis take foundation:

1. Based on the Organizational Diagnosis Questionnaire (ODQ) profile there was the absence of sever problems in the telecommunication industry or within the individual companies
2. The order of priority for Tigo in its organizational functioning is Relationship, Leadership, Structures, Helpful Mechanisms, Purpose, Attitude towards Change and Rewards
3. The order of priority in MTN's organizational functioning is Relationship, Structure, Leadership, Purpose, Attitude towards Change, Helpful Mechanisms and Rewards
4. For Airtel Ghana, the order of priority in organizational functioning according to the ODQ profile is Structure, Relationship, Purpose, Leadership, Rewards, Attitude towards Change and Helpful Mechanisms.
5. Almost all areas considered to have general agreement need significant improvement because the weight mean scores were all less than 81 percent. The highest was 80.60 percent
6. There is a general agreement on the fair treatment of employees on the salary scale although this needs significant improvement.
7. A similar general agreement but needing significant improvement is the fact that all tasks by the company are connected to incentives. This acts as a motivator for employees

8. Respondents disagreed on the introduction of new policies by respective companies. Management of all 3 companies stated that little can be done about the introduction of new policies since most of their products and services is a cash cow to them. If information goes out earlier than it should, employees might disclose it to their competitors unknowingly.
9. Also disagreed on was the fact that leadership efforts were the direction of fulfilling company efforts.
10. Respondents were neutral on being afraid of making mistakes in their respective places of work
11. Under the ways of diagnosing before change, respondents disagreed that there were frequent change implementations at their work places
12. Majority of the respondents confirmed there was a need to diagnose their respective companies before change management. For factors concerning importance of diagnosing before change management, employee agreed on all stated options except for a weak agreement on the knowledge of the measures and standards that apply to work.

## 5.2 CONCLUSION

Irrespective of the companies involved, the key areas that need change within the organization are the introduction of enough new policies and procedures. This factor together with the respective company's leadership efforts resulting in the organization's fulfilment of its purposes need to be addressed in all the companies involved in this research. Again probably because of the nature of the work in the telecommunication

industry, employees are generally abreast with information on technological changes, changes in government regulations and changes in customer tastes and preferences. The latter variable being customer preferences is probably due to the keen competition existent in the telecommunication industry that was agreed on by respondents. Apart from the importance on the knowledge of the measures and standards that apply that was weakly agreed to. There seems to be a fair agreement of the importance of diagnosing in change management.

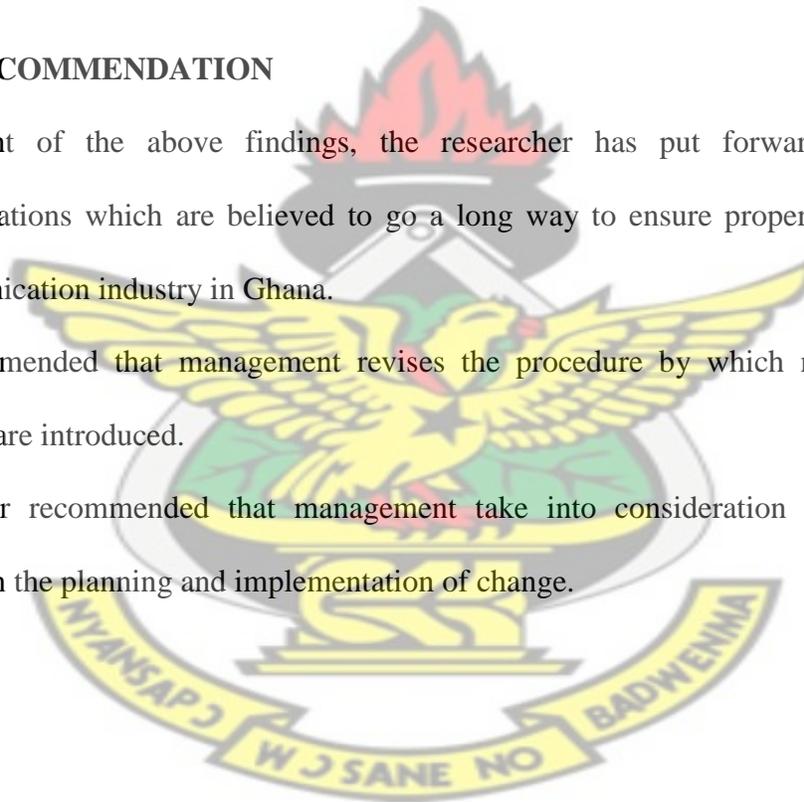
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### **5.3 RECOMMENDATION**

In the light of the above findings, the researcher has put forward the following recommendations which are believed to go a long way to ensure proper diagnosis in the telecommunication industry in Ghana.

It is recommended that management revises the procedure by which new policies and procedures are introduced.

It is further recommended that management take into consideration a well-structured procedure in the planning and implementation of change.



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## APPENDIXES

### APPENDIX A

#### QUESTIONNAIRES FOR EMPLOYEES

#### KWAME NKURUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY MASTER OF BUSINESS ADMINISTRATION (HUMAN RESOURCE MANAGEMENT) QUESTIONNAIRE

I am Vida KorkorTetteh, a final year MBA student at the Kwame Nkrumah University of Science and Technology. I am undertaking a research on the topic: **Organisational Diagnosis – A Management Tool for Change**. Diagnosing is the process of assessing or understanding an organization's current level of operations in order to design appropriate change interventions.

Your survey responses will be strictly confidential and anonymous hence no names are required. All answers are going to be used for academic purposes only.

This questionnaire is to diagnose your organisation and to suggest effective change intervention

#### PLEASE SPECIFY:

Department: .....

Job title: .....

#### Section 1: Specific areas that needs diagnosing at your company

Rate your answer with the scale 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Slightly Disagree (SL D),

4 = Neutral (N), 5= Slightly Agree (SL A), 6 = Agree (A), 7= Strongly Agree (SA)

		SD	D	SLD	N	SLA	A	SA
1	The goals of my company are clearly stated.	1	2	3	4	5	6	7
2	My immediate supervisor is supportive of my efforts.	1	2	3	4	5	6	7
3	My relationship with my supervisor is a harmonious one.	1	2	3	4	5	6	7
4	My company is not resistant to change.	1	2	3	4	5	6	7
5	I am personally in agreement with the stated goals of my work unit.	1	2	3	4	5	6	7

6	The division of laboratmy company is intended to help it reach its goals	1	2	3	4	5	6	7
7	The leadership norms of my companyhelp its progress.	1	2	3	4	5	6	7
8	I can always talk with someone at work if I have a work-related problem	1	2	3	4	5	6	7
9	The pay scale and benefits of my company treat each employee fairly	1	2	3	4	5	6	7
10	I have the information that I need to do a good job.	1	2	3	4	5	6	7
		SD	D	SL D	N	SLA	A	SA
11	My company introduces enough new policies and procedures.	1	2	3	4	5	6	7
12	I understand the purpose of my company	1	2	3	4	5	6	7
13	My company's leadership efforts result in the organization's fulfillment of its purposes.	1	2	3	4	5	6	7
14	My relationships with members of my work group are friendly as well as professional	1	2	3	4	5	6	7
15	The opportunity for promotion exists at my company	1	2	3	4	5	6	7
16	The structure of my work unit is well designed	1	2	3	4	5	6	7
17	Other work units are helpful to my work unit whenever assistance is requested	1	2	3	4	5	6	7
18	Occasionally I like to change things about my job.	1	2	3	4	5	6	7
19	The division of labour at my company actually helps it to reach its goals	1	2	3	4	5	6	7
20	All tasks to be accomplished are associated with incentives	1	2	3	4	5	6	7
21	At my company, employees concentrate more on their own needs than on the goals of the organization.	1	2	3	4	5	6	7
22	At my company, I am not afraid of making mistakes	1	2	3	4	5	6	7
23	Positive changes constantly take place at my company.	1	2	3	4	5	6	7

**Section2: Ways of Diagnosing before Change**

**Which of the following do you agree as being a way of diagnosing before change management at your company? Rate your answer with the scale 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Slightly Disagree (SL D), 4 = Neutral (N), 5= Slightly Agree (SL A), 6 = Agree (A), 7= Strongly Agree (SA)**

		SD	D	SL D	N	SL A	A	SA
24	There are frequent change implementations at my company	1	2	3	4	5	6	7
25	Employees are involved before any change is implemented at my company	1	2	3	4	5	6	7
26	I am satisfied with the change process at my company	1	2	3	4	5	6	7
27	Change at my company is always unplanned	1	2	3	4	5	6	7

**Section 3: Importance of Diagnosing before a Change Management**

28. Do you think it is necessary to diagnose your company before change management? Yes  
 No

**Which of the following do you agree as being an importance of diagnosing in change management? Rate your answer with the scale 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Slightly Disagree (SL D), 4 = Neutral (N), 5= Slightly Agree (SL A), 6 = Agree (A), 7= Strongly Agree (SA)**

		SD	D	SL D	N	SL A	A	S A
29	The ability to identify a problem helps to increase the success of implementing change at my company	1	2	3	4	5	6	7
30	It is important to establish a fact before taking action on it	1	2	3	4	5	6	7
31	At my company, together, we develop a vision of the future that inspires and motivates us towards excellence	1	2	3	4	5	6	7
32	At my company, we treat each other internally the same way we treat our external customers.	1	2	3	4	5	6	7

33	At my company, we know the measures and standards that apply to our work.	1	2	3	4	5	6	7
34	At my company, we all know what the organization's priorities are and how they affect us	1	2	3	4	5	6	7
35	At my company, we find the time to do things "right" the first time rather than having to correct mistakes later.	1	2	3	4	5	6	7
36	The ability to identify a problem aids in decision making	1	2	3	4	5	6	7

**Section 4: assessing organizational effectiveness**

**Which of the following is a variable in assessing organizational effectiveness? Rate your answer with the scale 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Slightly Disagree (SL D), 4 = Neutral (N), 5= Slightly Agree (SL A), 6 = Agree (A), 7= Strongly Agree (SA)**

		SD	D	SL D	N	SL A	A	SA
37	My company consistently achieves its stated goals.	1	2	3	4	5	6	7
38	My company functions smoothly with the minimal of internal strain	1	2	3	4	5	6	7
39	My company acquires the resources it needs. (raw materials, labour capital etc)	1	2	3	4	5	6	7
40	The demands and expectation of key interest groups are at least minimally satisfied	1	2	3	4	5	6	7

**Section 5: Assessing the environment of the organization**

**Rate your answer with the scale 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Slightly Disagree (SL D),**

**4 = Neutral (N), 5= Slightly Agree (SL A), 6 = Agree (A), 7= Strongly Agree (SA)**

		SD	D	SLD	N	SLA	A	SA
41	The production/service delivery process in my company has undergone a lot of changes	1	2	3	4	5	6	7
42	New products/services are constantly being introduced in my company	1	2	3	4	5	6	7
43	The demand for our products and services are unstable as they keep on changing	1	2	3	4	5	6	7
44	Customers taste and preferences are highly unpredictable	1	2	3	4	5	6	7
45	Legal regulators in my industry are uncertain	1	2	3	4	5	6	7
46	Tariffs on imported goods keep on changing	1	2	3	4	5	6	7
47	What is the extent of competition in your industry?	1	2	3	4	5	6	7

**Section 6: Assessing the enacted environment**

**Rate your answer in the section below with the scale:**

**1= Highly Informed (H I), 2 = Moderately Informed (M I), 3 = Little Knowledge (L K)**

	How informed is your company to	H I	M I	L K
48	changes in technology	1	2	3
49	changes in government regulation	1	2	3
50	changes in the taste and preferences of customers	1	2	3

**THANK YOU**

## APPENDIX B

### INTERVIEW GUIDE

1. What areas do you diagnose?
2. How do you diagnose?
3. What are the challenges in diagnosing?
4. How are you planning on diagnosing in future?
5. How uncertain is the company's environment in terms of the following:
  - a. Economy
  - b. Government regulation
  - c. Technology
  - d. Customers
  - e. Suppliers
6. What is the rate of change; how often does change occur?

