

Cultural Influence on Plant Maintenance in Nigeria Electric Power Industry

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ABSTRACT: The purpose of this paper is to explore the influence of corporate cultures on the way maintenance practice in the Nigeria Electric Power Industry is carried out. Practical comparisons have been made between the modern maintenance practices in the developed economies and what are obtained in Nigeria. Great differences have been found. These are related to corporate culture, cultural theory and learning and of course strategic planning. The managerial implications of these differences are also noted and discussed here in this research. TPM is a systematic approach, supported by a robust process, needs to be adopted to allow for the cultural changes to be implemented at a rate commensurate with the organization evolving corporate culture.

KEYWORDS: Maintenance, maintenance culture, Nigeria electric power industry, organization, learning.

INTRODUCTION

Maintenance is about preserving physical assets to fulfilled specified function or functions, that is, it must be preserved to continue to do whatever its users' want it to do. The mission statement must recognize that maintenance depends on people-not only maintainers, but also operators, designers and vendors. So it should acknowledge the need for everyone involved with the assets to share a common and correct understanding of what needs to be done, and to be able to and willing to do whatever is needed right the first time and every time. The development and execution of maintenance strategy consists of three steps:

- (i) Development of a maintenance strategy for each asset (work identification)
- (ii) Putting the resources needed to execute the strategy effectively (people, spare and tools)
- (iii) Applying the strategy (acquire and deploy the systems needed to manage the resources efficiently [1]).

The need to improve equipment uptime at lowest cost necessitated a radical change in the way maintenance is practiced. At the very outset it must be realized that maintenance organization adopts a proactive profit-focused approach to narrow the gap between actual costs and ideal costs. Downtime has always affected the productive capacity of the Nigeria electric power plants reducing output, increasing operating time costs and interfering with customer service. The effect of downtime is being aggravated by the world wide move towards just-in-time (JIT), lean/total quality management (TQM). For this reason, the application of Total Productive Maintenance (TPM) as a company's wide improvement strategy process is highly advisable movement in the maintenance field. It is an

effective process that has operators and maintainers working together as a team to reduce waste, minimize downtime, improve product quality, and improve equipment effectiveness. This is accomplished by focusing on those things that prevent plant from running at optimal condition and sharing responsibility of equipment upkeep.

Maintenance is often the major employer of people and can account for up to 40% of total costs of power generation in the organization. According to the annual International Competitiveness Report; there are significant differences in maintenance effectiveness and individual output between various continents and individual countries. Consultants frequently use 15% as maintenance cost gap between field ladders and the world class average performance. In addition, the average potential for improving production has been estimated at about 6-8% [2]. Two strategies have increasing interest within modern industries, which offer a path to long-term continuous improvement rather than the promise of quick fix. These are reliability centered maintenance (RCM) and TPM.

RCM is a process used to determine what must be done to ensure that any physical asset continues to do whatever its users' want it to do in its present operating context [1]. In essence, two objectives are met, determine the maintenance requirements of the physical assets within their current operating context, and then ensure that these requirements are met as cheaply and effectively as much as possible.

TPM significantly reduces operational and maintenance costs by focusing on the root cause of failure through creation of sense of ownership by plant and equipment operators, maintainers and support staff to encourage 'prevention at source'. In essence, TPM seeks to reshape

the organization, to liberate its own potentials. TPM is concerned with the fundamental rethink of business process to achieve improvements in cost, quality, speed etc. It encourages corporate culture, team etc. It also places radical changes within a culture of betterment underpinned by continuous improvement monitored through use of appropriate measurement, the overall equipment effectiveness (OEE).

The Need for Maintenance Culture in Nigeria

Today's gurus of strategy urge companies to democratize the process—once the sole province of a company's senior officers'[3] by handing over to teams of line and staff managers from different disciplines.. Continuing, he maintained that to keep the planning process close to realities of markets, today's strategist say it should also include interacting with key customer and suppliers. That openness alone marks a revolution in strategic planning necessary if the process is to help produce what customers want.

It appears, however, that no real effort has been made to study how culture affects maintenance in Nigerian Industries. For instance, the global switch to lean management and TPM attracts a lot of interests and reflections to strategic planning. These new approaches in industries in order to keep global competitiveness are usually seen as a uniform concept to be used in the same way regardless of context in which the company operates. This is even more so in maintenance, since is now viewed as a profit centre.

It seems likely that introducing a proactive maintenance in any organization requires a culture transformation. If this is the case, it seems reasonable that lack of maintenance culture affects maintenance efforts in Nigeria. Hence, it becomes reasonable to find out how corporate culture affects maintenance efforts in Nigeria electric power industry. Although lack of culture has been identified in Nigerian industries maintenance systems, there have not been many efforts to improve or transform the culture for better. The effect of lack of corporate culture in all facet of management in Nigeria is also identified. All efforts by the Federal Government to resuscitate and improve availability and reliability of electric power supply in Nigeria are still elusive. However, the process of interest in alliance and integration taking place in the industrialized countries and the need for quality, customer satisfaction and low cost make this study more appropriate. There are three qualities that are fundamental prerequisites for quality maintenance: commitment, culture and leadership. A distinct shift in culture is needed to embrace its unique precepts that transcend the quality maintenance function into strategic maintenance management. Since management is responsible for directing the activities of the people within the organization, the control of the management process itself is necessary to implement an overall quality maintenance programme.

Managing people consists of more than controlling their activities—management provide appropriate leadership in demonstrating its commitment , must foster a culture commensurate with its vision and mission and must make available, the funds for implementation of the programme[4]. Without these aspects in place no quality maintenance and can withstand the test of time. The evolution of TQM, lean management and JIT, brought about TPM. But these concepts have not been embraced in Nigeria. Successful implementation of quality maintenance programme must include a recalibration of organization-wide thinking as well as training, teamwork and autonomous maintenance. In order to order to ensure success, the basic principles of quality maintenance must permeate the entire organization. Cooperation, teamwork and commitment are examples that synergy among coworkers from other functions. Factual approach to decision making, respect for all individuals, encouragement for innovation, and emphasis on improvement must not focus on blame for errors—are signs of learning.

Proactive maintenance in any organization requires a culture of transformation. If this is the case, it seems reasonable that lack of maintenance culture affects maintenance efforts in Nigeria. Hence, it becomes reasonable to find out how corporate culture affects maintenance efforts in Nigeria electric power industry. Although lack of culture has been identified in Nigerian industry maintenance systems, there have not been many efforts to improve or transform the culture for better. The effect of lack of corporate culture in all facet of management in Nigerian is also identified. All efforts by the Federal Government to resuscitate and improve availability and reliability of electric power supply in Nigeria are still elusive. However, the process of interest in alliance and integration taking place in the industrialized countries and the need for quality, and customer satisfaction and low cost makes this study more appropriate.

Cultural Problems in Nigerian Maintenance System

A developing society requires a departure, change and novelty, in language, in concept and in ways of doing things. There has to be creative movement, at least at fairly frequently intervals. A society in a changing environment is doomed if it does not produce managerial innovations which break inherent moulds of perception, old patterns of behavior and prior expression of beliefs and values[5].

The principal problems facing electric power industry in Nigeria include: how to organize efficiently, delegation of authorities and how to reward and motivate employees as well as how to control available resources to ensure good results. The way in which management solves these problems is a measure of the society itself. The principal difference between the industrializes countries and Nigeria is 'co-evolution and the business ecosystem that is, creating networks of relationships with customers, suppliers, and the rivals to gain greater competitive advantage. Every new

change forces all the companies in an industry to adapt their strategies to that change. When companies get their strategies wrong, the result could be dangerous. The advanced economies make use of value migration, strategic intent, game theory and core competent. White-space opportunities are also big. These potential areas of growth that often fall between the cracks because they do not naturally match skills of existing business units. The new strategists believe on what can be rather than what is. In a global market, companies should learn how to work in a world of business ecosystems where they can get other players to co-evolve with their visions of the future. Instead of reactive maintenance or fire-fighting, the management of electric industry in Nigeria should see this as an opportunity to transform the industry and change the rules of the industry to its advantage. The strategy should be to shape the emergence of the new opportunity areas. Hence, tortured as the lingo is, these approaches are not getting a welcome reception in Nigeria Industries, so have not found the idea of value of value migration to be a useful model for understanding its excruciating decline in uptime operations. There should be a value migration, from reactive to proactive maintenance. One thing is obvious; the management lacks focus on the customer and business strategies. The role of the management should be to encourage discussion of the white spaces, the overlap and gaps among business strategies of the organization.

A great deal of maintenance managers are influenced by beliefs, assumptions and perceptions about maintenance that unduly constrain them. They are challenged on the frontier of maintenance practice; where even much of what ought to be done well yields diminishing returns. The maintenance managers are challenged by shifting values within the society which lead the maintenance staff seeks different meanings from work itself. Managerial function is not an absolute; rather it is socially and culturally determined. Across all cultures and in all societies, human beings come together to perform certain collective acts encounter, common problems having to do with establishing direction, coordination, and motivation. Culture affects how these problems are perceived and how they are solved. Social learning also establishes horizons of perception. Hence, the prime task of this study is to point out how corporate culture has become a managerial blind spot in the electric power stations maintenance systems. Maintenance management in the organization still esteem the tough, individualistic, dominating leadership ideal that prevail in the past centuries. They hardly step out to see threats or opportunities. The world has changed, the society has changed and hence the assumptions about have changed. It must be acknowledged that management is the problem; that more effective management is pivotal to improving the lot. The ability to compete rests on ability to organize human begins in such a manner as to generate opportunity and results rather than

impasses, stagnation, bureaucracy, and wasteful friction. Maintenance culture seems a managerial scope that limits the potentials and availability in Nigeria electric power industry. The organization managers face a tough task in changing how they manage maintenance efforts because they are large Part of the problem. The must change who they are and what they do.

Organization Culture

It is generally believed that organization can influence the behaviour and values of the individuals, while organization itself is constrained or composed of these same individuals. They respond to an organization environment as result of a combination of positive and negative rewards. Organization also develop in respond to their environmental influence [6]. Continuing, he maintains that over a period of time, these phenomena contribute within an organization and similarly to a tendency toward uniformity of individuals within the greater environment. Each organization own internal culture or social system. An organization adopts values that reflect the people in change and the environment with which it has to cope.

People working in organization value system, either consciously or unconsciously, and guide their actions accordingly. These actions can manifest themselves as company policy or informal customs, etc. The culture of an organization comes about through the development of norms and values that help it to survive, given the environment in which it was created and in which it exists. Cultures may tend to change over time to adapt over the changing external environments in which they are embedded, but these environments themselves change constantly. Such environmental changes include the revolution of information technology, rapid technological changes, the dissolution of national boundaries and cultural barriers to communication, and changing values. Moreover, environments frequently changes faster than culture they contain, which results in the demise or replacement of the culture that do not keep pace. Hence, there is an increasing current in the problem of maintenance culture. Necessary preemptive actions have to be taken towards the external environment before its maintenance impact could be felt within the organization. The industrial leaders have discovered this and developed organizational cultures approach change, learning and reward to prolong the lifetimes of their plants and equipment. Since an organization is composed of the attitudes and behaviours of individuals.

Establishing a Cultural Foundation

Culture is the total of the inherited ideas, beliefs, values and knowledge which constitute the shared bases of the social action. Continuous business change is in a global economy and successful business environments need to reflect the way people live their lives. There is always a culture an organization, and whether this in a desired state or not will

be influenced by, among other things, the defined quality system. Organizations today exist in complex internal and external influence. Often top management goes great lengths to define their strategies through comprehensive business planning arrangements yet often there little about creating and maintaining the cultural aspects of this strategy. The culture, rather than being planned, can be emergent and drifts along developed by the individual and collective experience people in organization. Culture passes along acquired knowledge to succeeding generations. However, behavior only becomes part of the culture through learning and through validation as acceptable and desirable by majority of society. Learning is predicted on the availability of learning delivery system and upon the willingness of people to avail themselves of that system [7] . It is therefore the responsibility of the organization top management to provide a learning environment, to encourage the maintenance staff to actively participate in learning process, and to reward their demonstration of newly learned behavior and utilization of new knowledge culture is also predicted on a given pattern of acceptable behavior accompanied by socially uplifting rewards and the disconfirmation, through socially negative reinforcement of behavior that violates the established cultural norm,. The organization culture will have as its foundation the policies procedures, and objectives. The foundation of culture must be the creation the creation of learning system that fosters, and promotes the ideals and principles of TPM. The learning process which leads to a cultural foundation must begin with the entire employees is viewed not as indispensable cogs within a plant but a proactive participant in the management and decision making processes. It implies speedy reactions to changes in technology and techniques. However, there is some danger in the culture where the managers become isolated from the real world and tending to see production as an elegant solutions as an end in itself.

Maintenance Problems in Nigeria Electric Power Station

The numerous reports, statistics and personal experience relating to maintenance in all types of plants and equipment in power stations show that the following problems are encountered:

- (i) Maintenance is not treated seriously at board and local management levels;
Lack of business culture (no business plans ineffective or little budgets, unfocussed reports, etc.);
- (ii) Team leaders lack management skills;
- (iii) Little integration of maintenance with other departments;
- (iv) Low levels of planned preventive maintenance methods, which fail due to basic practices; and
- (v) Preoccupation with advanced maintenance methods, which fail due to basic maintenance practices.

Top management set the overall strategic direction, not in vague key performance areas but on the formulation of quantitative objectives in quality, control delivery, environment and people framework that must cascade down and agreed at each level of organization. Maintenance policies should be formulated by people closest to the plants or assets. The role of the management is to provide the tools to help them make the right decisions, and to ensure that the decisions are sensible and defensible.

The Nigerian electric power industry still uses the traditional maintenance planning to compile maintenance schedules for all equipment and plants. More often, the schedules die before they reach the shop floor due to the following reasons:

Technical Validity

The planning sections that make the schedules are usually out of touch with the plants and equipment and may not have participated in maintenance activities. Consequently, they often have less adequate knowledge of the functions, the failure mode, effects and consequences of the plants for which their schedules are being written. That is, the schedules are mainly generic in nature, hence irrelevant.

Ownership

People on the shop floor (supervisors, technicians and craftsmen) tend to review the schedules as unwelcome paper from the ivory tower, and do not receive the attention required. Production equipment management and reliability is a team effort in most plants. When it comes to production equipment management and reliability issues, maintenance and reliability, engineering, operations and plant management groups are involved frequently or all the time.

Maintenance effort in Nigeria electric power industry is reactive, which is fire-fighting in nature. Fire-fighting is concerned with solving the problem whatever it is quickly as possible and being in a state of readiness to deal with the next outbreak whenever it happens. The problems are therefore unexpected but not prevented. Indeed, the view within this maintenance culture is that problem occurs owing to factors beyond practical and resource control; it is accepted that something will always go wrong and nothing much can be done about it in advance. The occurrence of the problem is often coupled with reactive responses-once the failures occur, the fire- fighting team is brought into action. However because little is done in a fire-fighting culture to anticipate problems or seek long-term solutions, the whole exercise becomes self-fulfilling. Also because the effort and resources go into fire-fighting rather than prevention. Fires inevitably breakout. The basic approach is different in culture of long-term and continuous improvement. Electric power generating

plants are expensive- the consequences of breakdown or malfunction are more immediate and costly than traditional plants-high machine utilization is critical; productivity depends on keeping the equipment working at peak level, all the time. Total Productivity Maintenance (TPM) is appropriate for this type of maintenance function-integrated plants require integrated workers: highly skilled, flexible and committed-high levels of competence are consistent with management styles (high involvement, employee participation, self –managing teams, etc.) required for global market. In a TPM environment, the aim is to focus on equipment defects so as to eliminate the occurrence of failure and early deterioration.

TPM

TPM implementation is not a short-term fix. It is continuous one based on changing the work environment then the plants and equipment so as to achieve a clean, neat , safe workplace through a ‘pull’ culture as opposed to a ‘push’ change process. The challenge for today’s maintenance managers in Nigerian electric power industry is to capture these opportunities. This requires establishing standards for maintenance reliability practices creating appropriate information system to collect facts, measuring performance and building enthusiastic and initiating enabling environment.

Measuring and improving equipment performance is becoming a hot topic in many factories, manufacturing and processing plants [8].The basic performance measure associated with TPM is the overall equipment effectiveness (OEE). Three basic indicators are:

- (i) Availability (downtime, planned and unplanned)
- (ii) Performance efficiency
- (iii) Rate of quality output

[8]maintains that the design and installation of equipment as well as how it is operated and maintained affect the OEE. It measures both efficiency (doing things right) and effectiveness (doing the right things) with plant and equipment. The OEE rating for critical equipment provides a relative companion or ‘report card’ on equipment performance and how well maintenance and operations. OEE rating on critical plants and equipment should be tracked and trended to observe the performance. The factors of OEE should be tracked: availability measures, uptime; efficiency measure, flow rate, volume etc. quality rate measures start up pressure, temperature etc. OEE is just a number for relative comparison of equipment performance. The real benefits come from using the factors of OEE, which lead to root cause analysis and eliminating the causes of poor performance. It is all about collecting, trending and analyzing the right data on critical plants and equipment performance and reliability.

LEARNING TO CHANGE

To learn remain internationally competitive, firms must sustain a high rate of internal learning that both refines current practices and adopts new ones. Government agencies are continually being required to provide a broader range of services faster without extra resources [9]. External benchmarking programmes are popular way of identifying such practices and have the benefits of demonstrating what are popular way of identifying such practices and have the benefits of demonstrating, what is realistically achievable. The learning processes involved in establishing and implementing such programmes also provide benefits to those practicing it.[10] identified a number of areas of success from various forms of benchmarking, but also noted some potential barriers. [11]six stated that developments are the base of importance and popularity of organizational learning:

- (i) The shifting importance of factors of production
- (ii) The rapid pace of change in the business environment
- (iii) Knowledge seen as a source of competitive advantage
- (iv) Today’s customers that are more demanding
- (v) Misalignment with the existing management paradigm
- (vi) Intensity of competition

Learning needs time and patience, it is only the dielectrics, and between thought and action that makes it possible [12]. [12] studied concept on discipline and stated that discipline is a body of practice, based in some underlying theory or understanding of the world, which suggests a path of development. He gave the five disciplines as building, a shared vision, personal mastery working with mental models, team learning, and system thinking. The first step to create a learning environment should be new leadership that is based on teaching abilities, and assisting others to understand complex situations [13].

The learning organization also needs some broad organizational condition order to develop: clearly stated purpose, effective communications, and training about all aspects of business, flexible structure and systems, and an organization that facilitates innovation, creativity and risk taking[14].Also concrete practices and tools should accompany this effort: systematic problem solving, experimentation, learning from past experience, learning from others, transferring knowledge and measuring learning [15] .However, it is clear that any knowledge evolution needs the transformation of culture [12].[16]proposes three foundations for learning: enduring values; trust; and empowerment. [17]showed that learning in Japan is the work of everybody and forms part of the culture. [16]points out the advantage of learning organization; he said that it provides intrinsic motivation and that energy for change is

obtained through ‘creative tension’, stretch between vision and current reality. [18]maintains that the learning organization requires even more time than quality because it focuses more on system thinking, pursues a shared vision by the convergence of mental models in greater depth , and group problems - solving is developed more thoroughly.

However, quality could be considered as a foundation of the learning organization, and both as building blocks of excellence [19]. Excellence models are also strongly related to quality. The Deming Prize, the Lalcon Baldrige National Quality Award (MBNOA) and the European Foundation for Quality movement. Firms use these models to guide their efforts toward becoming ‘excellence organizations’. They represent a holistic framework of practices and help focus organizations on a variety of assessment and analytical criteria [20].In that sense it is important to recall the benchmarking and best approach. In fact, there is a clear link concerning the interest in other companies’ processes and practices, and the development of inter and intra-industry comparisons. Thus the excellent models have provided standards frameworks for comparisons and auto-evaluation [19].These models have been used extensively in developed countries in management practices. Failure in implementation has been as a result of bad management and weak strategies that are not easily recognized by the managers who are responsible for them [21].

[22] pointed out that lack of an integrated approach and misalignment of strategic planning, continuous improvement, and the transfer of knowledge could be some of the main causes of failure when trying to implement excellence models. A good dose of innovative and creativity may be also necessary to achieve those processes successfully [23]. It is therefore necessary to account both internal and external aspects for necessary sustainability. It is interesting, however, that those models have evolved into different versions that take into account some of the new learning in management and organizational excellence. Thus, foe the EFQM model there is increased focus on the following aspects. The customer other stakeholders, systems view, and learning and knowledge [24].Also the evolution of the ISO 9000 quality attendants that put emphasis on similar aspects. A recent focus on process management (EFQM model, [25] seems to establish some bases to establish some bases to facilitate implementation.

[9] reported on the use of learning by auditing to stimulate beneficial change and the reasons vehicle from engaging in internal audits, and the usefulness of the process to organizations. [26]maintains that for change processes to be effective in terms of strategy implementation and organizational adaptation there is the need to be systematic and to encourage open discussion of various groups to develop a sense of partnership among relevant stakeholders . They further maintain that strategic change is impeded in organizations by defence routines and internal politics.

Systematic change needs to incorporate elements of structure and systems as well as elements of values, leadership and competence. A lack or low levels of competence in initial questioning and inquiring dialogue makes it difficult for organizations to identify underlying causes and develop systematic solution the capacities and competences of a form is what it can do as a result of renounces put together. Competence involves complete patterns of organization of coordination between people and other. Resonance leads to differences in sustainable competitive advantage over the long period of time.

In maintenance system, OEE is often used as a tool to audit the performance and conformance to process. Thus, as employees understand and can completely use such tools, they can be expected to be understood and carry out learning audits. Debate and discussion associated with making audit assessment will make people thinking about new, innovative practices, as well as trying to improve the efficiency of existing practices. There is need for continuous organizational learning that must find easier focus on data capture and in some cases, data transfer. To stimulate within an organization, individuals need to convert data into information that can lead encoded and transmitted in ways that are useful to the organization. It needs to be easily retrieved and couched in the language and vocabulary of the organization and it needs to change in the way that organization operates [9].

METHODOLOGY

An objective study has been to gain an understanding of the subtle of maintenance and culture. Hence, qualitative methods of data collection are needed. One complication when studying maintenance and culture is the culture influence not only comes from national culture but also from organizational and corporate culture. In this case, the influence of cult lure on maintenance in electric power industry in Nigeria was carried out in these power stations- Afam, ogorode and kainji dam. These are gas, steam and hydro-power stations respectively and are situated in southern (Afam and Ogorode) and northern (Kainji dam)) parts of Nigeria.

What is needed was an organization that has federal character. In order to be maximum value to these stations under the National electric Power Authority (NEPA), which had been unbundled into generation, transmission and distribution companies. The facilities, personnel skills and organization structures and in-depth interviews were carried out. Current literatures on organization and corporate cultures, learning, TPM and RCM maintenance strategies were reviewed. Hence this paper argues that when maintenance is managed in a structured way and involves all concerned in the organization so as to cultivate a sense of ownership in the operator by introducing autonomous teams consisting of operators, maintainers, engineers and managers

to improve people and equipment performance. So it is the purpose of this paper to seek and to determine the impact of culture in the maintenance systems of the organization, comparing of course what obtains in the advanced countries using business excellence models and the ISO 9000: 200 standards.

CONCLUSIONS

This paper examined the impact of culture in maintenance in Nigeria electric power systems. The Nigeria electric power industry is significant for the study of maintenance culture in Nigeria because of numerous problems presently facing the organization. An important finding of this study is that maintenance functions in Nigeria; particularly in electric power industry lacks the necessary corporate and organizational cultures that have been adopted in world class leading plants. The culture of an organization comes through the development of norms and values that help it to survive, given the environment in which it was created and in which it exists. Cultures change over a time in the same way as economics and technology. A broader view of the problem of maintenance culture for course of action is to look at responses to similar problems at times in history. In particular, by examining how corporate culture develops, how the broad environment culture develop over time, how culture responds to broader environments, and organizations respond to these environments, some predictions can be made about appropriate responses to way maintenance functions in Nigeria.

The maintenance managers in Nigeria electric power industry need to be more proactive in their approach to maintenance functions. To do this they should develop a maintenance culture which has the following elements:

- (i) More knowledge sharing and learning
- (ii) Precise objectives of TPM and RCM
- (iii) Formulation of a comprehensive and easily accessible database systems for improvements, benchmarking, evaluation and analysis of the system
- (iv) Benchmarking methodologies and standardization perked at high level

Other conclusions that emerged from the study are the need to take into account human factors besides the economic ones; the importance of superior values than can form a guiding vision for organization. The Nigeria electric power industry is not able, at this time to deal with both aspects. Some of the ideas presented here make direct reference to the concept of ‘change’. Real change is the change that will be able to alter ‘ways’ people think. The passion for change may be regarded as the only way to approach excellence and thus becomes as possible cause of future unbalance. A ‘bottom up’ approach to problem. Solving is believed to be more natural and effective way for achieving continuous improvement, as it is the workforce who can understand,

constitute, generate and manage changes. The task open to the Nigeria electric power industry maintenance managers is to take the best from the industrialized nation maintenance management strategies and translate their areas of weaknesses. The proposed task may not be easy. Nigerian industrial managers have for granted a ‘natural’ way of interpreting organizational experiences which are in fact cast in their distinct cultural moulds. This study urges that they unlock these moulds. In doing so, they will certainly move from a world they know and ungainly, so less familiar but innovative and gainful. Along the way, some valued management ‘truth’ peculiar to them must come to be questioned and challenged.

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