

**PROCUREMENT, TENDERING
AND CONTRACTS
ADMINISTRATION IN
DEVELOPING COUNTRIES.**

(A case study of East and West Africa)

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PREFACE OF THE FIRST EDITION:

There is an acute shortage of specialist personnel or practitioners in the area of procurement and supplies management in African countries. This book is a contribution in this specialized management by a pioneer practitioner in this discipline with over 25 years of practice. This leaves the African countries to rely heavily on the same people giving the funds to also manage the procurement projects and activities suiting their conditions more and compromising the ethics of good professionalism in procurement project management and development programme's functions. This book will in one way help to narrow the identified gap. The book is written by a qualified, experienced and skilled professional in supplies, materials and procurement management. The contents are based on a very high degree of professional understanding and acumen.

The writer is a multi discipline professional and specialist skilled manager in areas of Human Resource Management, Business Administration and Management (BAM), Training and Management Development, Marketing as well as supplies and Supplies Management. He is also knowledgeable and experienced in Project Management with many years of experience and practices. He was the chairman of the Board of Directors on behalf of Rev. Fr. Dr. Joseph A. Turay for Salone Micro Finance Trust in Makeni and a senior lecturer and Dean of Academic Studies at The Fatima Institute. The Fatima Institute is currently the University of Makeni, (The first private university run by Diocese of Makeni, Catholic mission in Sierra Leone, West Africa).

The writer therefore believes that this book is important for business management and procurement project planning practitioners at middle and senior management levels and can be used for both undergraduate and graduate university education as well. It will benefit other students in other academic disciplines by reading it and especially the African procurement management practitioners and specialists. It is valuable to lay people who might want to know or study the discipline area of procurement in developing countries. This book might be the first on procurement and supplies management written by an African practitioner with practical experience in procurement and supplies management.

Dr. Silas Gachanja Kinyeki

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ACKNOWLEDGEMENT

Procurement is a new area of learning in developing countries especially when it specializes in Tendering and Contracts Administration in developing countries. Contracts administration is still a problem in developing countries as it involves both international and national firms. Most of the organizations involved into international tendering needs to understand the World Bank tendering and contracts management systems in which most of them are to some extent ignorant. This is why international tenders are mostly awarded to outside organizations and not the local organizations.

In this case, issues of ethics, technical Know-how and project management again come in as they are important in procurement ethics, techniques, principles, procedures and systems.

I would like to thank Dr. Jeff Wooller of Irish University Business School- (UK) and his academic team for rendering a great help in supervision of my thesis for both my masters and PhD programmes. I do appreciate the help that has in a way changed my life to be what i am by the grace of God. I would also like to thank a Dr.Fr. Joe Turay- Vice-Chancellor of the University of Makeni) for his all assistance accorded to me while was lecturing at the University of Makeni (UNIMAK) as well as my work as the Dean of Academic Affairs in Sierra-Leone.

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May God bless you all in a mighty plan.

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Dr. Silas G. Kinyeki

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Author's comments

It is with great pleasure that I recognize the efforts and guidance of a few people who have helped towards the completion of this book. I am obliged to thank God for the strength and grace of doing all this work. Secondly, I do sincerely thank Dr. Jeff Wooller of Irish University Business School and his efficient team for useful guidance and corrections that were necessary in making this book to be a very good document any readers.

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Dr. Silas G. Kinyeki

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CHAPTER I

1. **Introduction:-**

The study of logistics operations management looks at wider areas of management functions by getting the right thing to the right place at the right time and at the right cost. It will be futile efforts to try to get the readers of this book to understand procurement management without first getting them to appreciate the values of logistics operations management which embraces wider roles of learning within the same course areas.

The Processes Involved in a Logistics Operation Management Function Includes: -

1. Assessment of requirements and budget
2. Detailed specification of goods, services or equipments needed
3. Choice of supply sources for the goods
4. Communication of the requirements to the chosen supply sources / vendors.
5. The procurement Process.
6. Transport and supply process.
7. Delivery and storage including re-ordering and stock control and inspection
8. Distribution

A Logistic System Will Be Composed of:

1. A communication network
2. A Transport system for people and goods by land, air and water.
3. Warehousing / storage facilities, procurement and control systems for the operations
4. Personnel to monitor the system and conducting; to provide management with supervision at key control points; to drive and unload vehicles; to operate machineries, pack and warehouse and distribute.

It is important to note that before specifying goods or equipments, first consider process and system and how it might affect the timing in the plans.

The Key Terms Commonly Used In The Logistics Management Function Include: -

a) **Purchasing: -**

This is defined as the process of accruing materials for production / re-distribution and services from outside supply sources.

b) **Procurement: -**

This is wider meaning because it includes the purchasing functions, warehousing, receiving and issuing as well as stock control. It is the process of designing, specifying, sourcing, issuing, ordering and, disposing of materials, services and equipments within an organization.

c) **Stores Management: -**

This is a process that deals with planning, coordinating and control of various activities pertaining to effective, efficient and economic storage and stock control. The functions of store-keeping are an essential aspect of materials control and is concerned with physical storage of goods.

Storage on the other hand is holding custody of all kinds of items while stock control is basically the operation of continuously arranging receipts and issues in such a way as to ensure a stock balances in value and quality and to numerically and adequately to support the current rate of consumption at all times with due regard to considerations of various ordering economic factors.

d) **Supply Management:**

This is a process which is responsible for the design, development, organization and management of both internal and external components of the organization's supply system. Supply refers to the acquisition of goods and materials to be used in the production / Manufacturing or selling functions within an organization or trading system.

e) **Materials Management: -**

This is the process of grouping management functions which support the complete cycle of materials flow from the purchase including control of production materials to the planning, control of work in-progress, warehousing, supplying, and distribution of the finished products.

Logistic operations is a management function which ensures that the purchasing and supply involve the functions of getting work done by encompassing planning, controlling, coordination, leading and motivating the workers in procurement, stores, stock control, distribution and transport of goods, services and materials to the consumers. The managers of this noble process require space, time, money, materials, manpower and technology to improvise on their level of efficiency, productivity and effective service delivery.

f) **An overview of the next Chapter – Logistics System:**

- An assessment of supply requirements and the budget.
- Detailed specification of goods and equipments needed.
- Communication of these requirements to suppliers.
- Procurement functions.
- Transport and supply functions including documentations.
- Delivery and storage including the re-ordering process.
- Distribution.

g) **A logistics System will comprise of:**

- A communication network.
- A transport system.
- Storage facilities.
- Control and procedure / systems.
- The personnel (manpower)

CHAPTER II

Logistics Operations Management:

This area is attracting great attention in modern business management and organization development, accounting for 60 – 70% of the expenditure budget in manufacturing and construction industries.

Strategic Nature of logistics operations:

Organizations which are serious in controlling this area very well ensures a saving of one thirds of their annual costs and thereby improving their manufacturing / construction budget with approximately not less than 60% which should be deployed to assist in approaches to the management of systems and procedures for effective control of the inputs and outputs as well as customer satisfaction. Advent of leading edge concepts which puts into practice integrative ideas based on strategic and integrated roles of logistics and management functions involving ethical procurement practices must be also enhanced and encouraged. The approaches and concepts that can be considered include: -

- Best practice bench marking
- Total quality management
- Supply chain management concepts / customer care and focus.

Advancement in Technology:

Procurement management is a specialized and skilled field in logistics operations that needs to be dealt with by specialist personnel to ensure multiplication and realization of every dollar spent.

This is why technology and associated complexity has meant that most organization specialize in a narrow range of activities and are compelled to buy a greater proportion of their requirements from those who have specialized expertise, patents, intellectual property or design and quality manufacturing standards which are certified.

Government Policies: -

Logistics functions which include procurement management process can not be developed free from the independence of external influences and regulations. These influences are forces of the things we know and the things which cause problems to us everyday. We should deal and be careful with the things we know so as to control and manage them as the things we do not know remain far from us as the unknowns.

The government regulations and procurement systems and practices have a great impact on organizational processes, and this has necessitated a certain level of professionalism within government procurement functions in some government organizations while majority of them lack ethical practices and conduct.

Finite Resources: -

Natural resources have always been finite and their use and consumption needs to be therefore properly planned for sustainability of future operational functions. This is why planning is a necessity.

This planning process has: -

Increase in revenue proportion spent: -

Organizations are spending a great proportion of the income externally in procurement processes and this has increased the responsibility of logistics functions and management within multi-national and international organizations as well as calling for more responsible attitudes and work ethics.

Fewer but Larger Number of Suppliers: -

The supply market has concentrated with a small number of large organizations due to failure of small and less viable business units. This has posed problems for procurement management calling in for more strategic role of the function and especially, where the current vendors operate in cartels, lowering the negotiation intelligence of the professional buyers.

This is worse for the experience in Sierra Leone (case study) supply sources are limited and the vendors are extremely monopolistic due to fewer supply source establishments after the ten year's civil war that left the country's infrastructure devastated including the business sector / academic institutions.

Increased Environmental Awareness: -

The need for organizations to recycle materials causes a greater concern for the use of returnable packaging or effects of waste and by products, as they have a quality implication on procurement management and do affect quality production within organizations as well as customer level of satisfaction due to sometimes high level of rejects from the finished products.

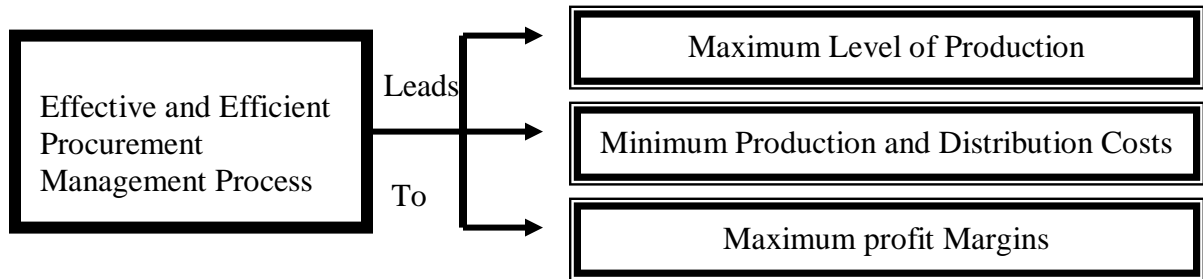
The concept of logistics operations Management and procurement Perspective include:

A process by which operation comprises of supplier's management functions which are essentially an activity of the organizations procurement and utilization of human skills, labour and materials and production of high quality finished goods from quality raw materials input for the manufacturing process.

The supply management functions which is part and parcel of logistics functions comprising of procurement processes ensures economical and timely acquisition of materials from right sources at the right place, at the right price and of right quality for utilization and to ensure maximum reduction of production wastage, quality distribution and low cost and maximum profit margins.

This eventually ensures and also leads to higher levels of customer satisfaction, improved Los (logical Levels of Service) and higher productivity as well as higher profits for the organization which helps in supporting growth and development. This also helps to improve the employee's welfare and benefits.

This is because of the fact that good procurement and inventory control will lead to reduced operational costs in areas of holding cost, obsolescence, dead stocks and production hold-ups due to stock-outs and dormant stocks.



The main areas for management Control Involves: -

- Materials costs
- Materials Supply
- Materials Utilization

The scope of a good procurement management under the umbrella of effective logistics management system should cover the following: -

1. Supply planning and programming
2. Purchasing and inventory control
3. Receiving warehousing and storekeeping
4. Transportation and materials handling
5. Disposal of scrap and suppliers rating, including utilization of products sourcing information.

Objective of Procurement Management under the Umbrella of Logistics Function: -

This includes the following activities which are supposed to facilitate effective achievement of organizational objectives by minimising the cost of production and maximising the marginal profit: -

1. To strive for reduction in the production and distribution costs.

2. To help the organization in achieving its objectives mainly by maintaining the continuity of production or service delivery.
3. This is also done through the purchase of materials of the right quality at the right time, from the right source on the right terms and conditions of procurement procedures and at most cost effective and competitive price.

Materials Control:

Inventory control forms the basis of materials control and is extremely important in logistics functions as well as in procurement functions. The process refers to the investments in supplies, materials and parts carried in stock, whereby they are regulated for use within some pre-determined stock level limits set in accordance with the lead time and inventory control policy which is established by the senior management.

Procurement as Part of Supply and Materials Management:

Procurement as a function of supply management has the role of acquiring materials and parts as rightly requisitioned by the users and with the aims of meeting supply demands of the right quantity, quality, time, price, place and specifications.

It enlarges to become part of logistics functions by including the purchasing, receiving and distribution as well as disposal.

The purchasing functions as part of procurement management plays a key and vital role and can make a difference by ensuring an efficient and cost effective acquisition of materials and parts with no production hold-ups due to materials or parts shortages – (minimized nil stock issues).

The purchasing department maintains a close link with all user and service areas of the entire organization.

The principal responsibility of a purchasing department which enhances the efficiency of procurement management functions is to secure sufficient and suitable raw materials, components, other goods and services to ensure that manufacturing process is fully supplied with all of its materials requirements and to achieve this responsibility in an economic and cost effective manner.

The purchasing functions therefore include: -

1. Appraisal and selection of suppliers
2. Operating collation of suppliers details including price, vendor rating, distribution methods and delivery schedules.
3. Negotiating the purchase of goods and services and parts which represent the best value to the business in the long term and merit rating of supplier performances.
4. Ensuring that suppliers are familiar with, and adhere to the organizations' policy, quality standards, ethics, systems and procedures of doing business together.
5. Maintenance of adequate stock / inventory levels. This is in order to provide an uninterrupted flow of materials, suppliers and services required to operate the organization and to ensure production continuity.
6. Establishing and maintaining effective working relationship with relevant departments.
7. Development of an effective team work and linkages with existing suppliers and maintaining good relationship with potential suppliers.
 - a. **The purchasing process is a cycle which makes it different from procurement.**
 - b. The main key areas of the process involve: -
 8. Recognition of need which is done by user departments.
 9. Description of the need. This is done with an accurate statement of the characteristics, specification or desired items.
 10. Determination and analysis of supply: - After receiving a requisition from user with approvals by the relevant authorities, purchasing approaches some selected suppliers or calls for bidding quotations from known supply sources or vendors who quote for quantity, quality, price and delivery time as per the bid / quotation specifications.

This is in pursuit of having to ensure procurement standards are maintained as part of the purchasing process in which case a higher level of specification must be maintained to ensure acquisition of materials and services through application of right systems and procedures as well techniques, ethics and within laid down policies and guidelines.

The purchasing mix elements are as follow: -

1. The purchasing mix - quantity
2. The purchasing mix -quality
3. The purchasing mix – price
4. The purchasing mix – delivery
5. The purchasing mix – place / source.

A good purchasing agent or buyer would need to be concerned with:

- **Sourcing:** - comprising of identification or development of suitable sources of supply – (supplier development) investigation and comparison of source of suppliers credibility as well as intelligence information gathering on suppliers past performance records.
- **Negotiations Terms:** - Comprising of negotiating for favourable supply terms and conditions and development of partnership linkages for annual supply contracts, quarterly delivery terms, improvement of materials specifications and bulk purchase and blanket order discounts and credit terms for payment of supplies.
- Placing the Purchase Order – This involves placing orders for new and repeat order materials and services and parts and delivery terms.
- Delivery times to meet scheduled production dead lines and ensure to meet inventory economic level requirements must be agreed and clearly stated on the Purchase Order – (PO)
-

Source:

Research activities to help in keeping abreast with new supply sources, materials specifications, revised operating standards, new technology, materials publications and journals which all give information to aid and support the buy or make decision.

The Other Areas of Logistics Operations Include: -

Receiving and stores: -

- a. This involves receipt of materials and parts, verification of quality, quantity and preparation of goods received note: (GRN)
- b. Storage of goods in accordance with efficient warehousing practices, systems and procedure for use of identification, binning ordering and ease of storage picking and issuing.
- c. Insurance of materials, supply of parts through authorized stores requisitions by users, drawn by user and authorized and countersigned by issuing stores or department authority.
- d. Quarantine absolute stocks, materials rejects and unserviceable parts for further disposition.
- e. Stock-taking and stock valuation exercises.

b). **Product Distribution and Cost Control: -**

- This function is involved with receiving, stores, picking orders, packing and arranging transportation of in-bound and out-bound shipments according to the customer orders.

The area of cost control involves: -

- Development of production planning cost factors including economic work in progress stock orders.

Development of inventory cost factors.

- This includes acquisition costs, economic order quantities as well as costs of both overstocking and under stocking and obsolescence, dead and dormant stocks.

NB: Effective and efficient practices of procurement systems, techniques and procedures would help an organizations to save a maximum of up to 30% of their total stock-holding value: -

- Costs Involved with overstocking – 5%
- Dormant Stocks - 5%
- Pilferage – 5%.
- Obsolescence – 5%.
- Emergency / Spilt Orders – 5%.
- Under stocking / nil-stock – 5%.

Total saving if proper procurement methods are deployed in organizations to avoid incurring the above costs would amount to a total saving of = 30%. This is very huge savings especially in construction industries which deal in huge amounts of money in form of materials and stocks. Other areas which need to be managed well and ethically include: -

- a) Development of purchase order cost factors. These include receiving, processing and storage of materials, selecting and issuing of materials, and maintenance costs.
- b) Development of cost centres and their related costs for their operations.
- c) Apportioning costs saved to reduce prices of products to create an edge in markets and in competition.

c) Disposal: -

This area involves facilitating the converting of any unwanted materials of an organization into cash. Materials may become unwanted because of short comings in the procurement/production process like: -

- In the procurement cycle
- During the subsequent processing

- During the subsequent usage.
 - Change in technology
 - Change in demand patterns / production design.
- d) Other areas that can render materials / stocks to become unserviceable are technological changes / productions and design changes

Every organization should have effective and efficient procedures which aims and controls as well as preventing creation of unwanted materials / stocks / tools and equipments.

Items become available for disposal because of: -

- a) Poor design or inadequate specification
- b) Acceptable of faulty materials
- c) Change in the production programme because of reduction in demand
- d) Excessive build-up – of suppliers due to ordering or incorrect stock levels
- e) Obsolescence
- f) Deterioration or damage in the organization manufacturing designed set up
- g) Poor usage or lack of proper maintenance hence rapid tear and wear before shelf-life period.
- h) Change in technology.

The options for utilization of unwanted materials or stocks within organizations involve the followings: -

- Alternative internal use.
- Use by associated company
- Use as spare parts internally.
- Annual offers for sale as serviceable stock.
- Offer for free disposal
- Pay for disposal as garbage.

The benefits of disposal within organization involves: -

- Conversion into cash
- Space utilization
- Accident prevention
- Defray storage costs.

CHAPTER III

PROCUREMENT IN DEVELOPING COUNTRIES

(A Case study of Makeni in Sierra Leone –West Africa)

Developing countries have their own peculiar problems related to culture, traditions, ethnicity, beliefs and practices which are affected by other factors like social, economic, political, cultural and religion.

It is in this context the writer is trying to analyse the relationship of procurement in developing countries and developed world as practical overview based on past and current experiences.

Analysis cites in a case whereby the writer has witnessed in many organizations, cases of procurement systems, techniques, procedure and ethics being compromised and in which it might sound strange as the malpractices are done at the top management levels involving the executives and senior managers at some times. The malpractices involve manipulating the systems and procedures to ensure, favours for survival / or for individual benefits.

In the lower levels, malpractices are coupled up with other factors like:

- Poor Remuneration
- Lack of effective systems techniques and operating procedures
- Lack of specialist procurement staff
- Poor focus by management on cost controls
- Self interests and lack of integrity

- Lack of professional development in the area of procurement management.
- Poverty.

Procurement management is still underdeveloped area and is still developing within developing countries.

The Legal Framework of procurement Management and Principles

A quotation from the National Public Procurement Authority – Sierra Leone in their Procurement News magazine of the quarterly bulletin vol. 2. No.1 of April 2008 pp 2 says that, a good public procurement is usually governed by legislation with comprehensive regulatory instruments. The public procurement Act Of 2004 establishes the relevant structures and provides the rules and procedures to be followed by entities and service providers involved in the procurement process.

The following regulatory instruments govern the public procurement in Sierra Leone:

- Public procurement Act ,2004
- Public procurement Regulations, 2006
- Public Procurement Manual for the guidance of procurement officers in the public service
- Standard Bidding Documents for goods, civil works and services

Purpose and Objective:

The purpose of the public procurement law is to provide an efficient and transparent system and procedures to ensure that public procurement is conducted competitively and contracts are awarded and managed in a manner that promotes the paramount objective of value for money in government expenditure.

In this perspective there should be a monitoring and evaluation team for public procurement activities. The main focus of procurement monitoring and evaluation should include:

- Routine compliance monitoring (procurement audit)

- Random investigative monitoring
- Development of monitoring systems
- Development of monitoring instruments
- Documentation monitoring
- Baseline analysis monitoring

I do agree with the contents contained in magazine of the National Public Procurement

Authority - (NPPA) as they have it right in writing and in principle.

However, the challenges are in the area of implementation and practices, which not only is a problematic case of Sierra Leone, but all nations both in developing countries and developed nations. The only observation in this case is the fact that, malpractices in developing nations are more than in developed nations.

Improvement in the public procurement system therefore has direct impact on good governance. Experts in this area say that corruption can be reduced or add up by 25% of the total cost of government procurement budget. This therefore leads us to note the reason as to inter-relationship of the immense savings that can be made through practices of professional procurement systems within government sectors and other private sectors as the saving in private sectors is also huge amounts of money.

Contributions of professional procurement systems, policies and procedures towards organizational short and long term budgets:

- It contributes immensely towards fighting corruption and improving good governance
- It introduces efficiency and transparency in the public financial management systems.
- It ensures value for money through competitive bidding, thus saving finances that could be used to fund other priority and needy areas.
- It encourages and promotes private sector growth and investment.

A quote from the NPPA, Procurement News quarterly bulletin of April 2008, pp 5, by Mr. Ferdinand Tsri Apronti says that a review by the World Bank group in the country which includes IBRD, IDA, IEC, MIGA and ICSID realized that 78 % of the projects were affected by aspects of inefficient procurement except the water and energy power projects which received a good review from the Bank.

The big lesson to learn here is the dire need of total commitment by all practioners in this field of procurement serving in public positions to fight corruption like a devil who should not be given any rest anywhere for the good name of the profession in Sierra Leone and change the 22% to an acceptable percentage in the eyes of those who judge what we do and practice..

Malpractices of under the table deals are common both in public and private organizations as can be witnessed from various cases being prosecuted in Court of laws from time to time. Majority of the cases involving malpractices especially with international organizations are dealt with silently and within the organizations as a way of avoiding bad publicity and lack of support.

The other effects of malpractices within procurement in developing countries involve:

- a) Poor quality work
- b) Unfinished Projects
- c) Pro-longed or delayed projects
- d) Exorbitant costing
- e) Poor funds accountability
- f) Compromised supply of poor quality materials.
- g) Abuse of system and operating procedures governing the procurement for projects and construction management activities.
- h) Abuse of ethical practices for procurement functions.

- i) Lack of transparency
- j) Poor finishing and design for agreed work.
- k) Poor planning approach methodologies.

A procurement case study involving the writer is as follows: -

The company – A power, and lighting company limited had employed the writer as a buyer and later as a procurement superintendent – (PS)

The writer being a very good professional in this area carried on his duties very well and emphasized on all departments interacting with procurement to ensure maintaining ethical standards, procedures, systems and techniques to ensure successful implementation of procurement principles and functions. happened that I had a trip to go to U.K for an exchange programme with Crown Agents. Majority of the supplies amounting to 70% of the materials used by the powerlighting organization were sourced from the UK manufacturers.

This meant that most of the suppliers were in U.K. and they helped the company to get

quality materials taking into account the fact that electricity activities cannot be compromised in terms of quality standards. The interesting experience is when the chairman asked me to talk to the suppliers to buy him a television set and a DVD to

bring to him when coming back. I was bothered by this request for I did not know how to handle it or what to do bearing in mind the fact that it was an unethical

request from the chairman of the company.

The practical experience is created the desire to study for this masters degree with a hope of sharing my experiences and case histories with modern procurement management

practitioners, and also to help them to improve the standard of the profession by upholding a high degree of integrity and ethical practices even when it means having to sacrifices the employment for refusing to be compromised.

The right decision of not accepting to be compromised would go well for a professional as it is a safeguard the practices of procurement procedures , techniques and standards.

Professional will look for another employment even if he loses the previous one by refusing to entertain corrupt and unethical practices.

I did not know how to approach the suppliers and then, start asking them to buy things for me, or for the Chairman or for any body else and even for myself. However, I decided to maintain my professional integrity and ethics by observing the procedures, policy and procurement guidelines and therefore refused to be compromised.

This i did by refusing to do what I had been asked to do regardless of the fate of my job which I could easily loose through victimization. Job security in organization within African set ups is extremely fragile and quite often depends on how good and close you are to the big bosses rather than the issue of qualification and performance standards.

I did not last for long in that job as I resigned later for more greener pastures / opportunities. I had no regret in my mind for the decision I took even to this date.

This is a good lesson for some of these organizations to employ qualified professionals

as they are not easily compromised and in most cases will up hold their integrity, professional values, ethics, procedures and systems at a high cost.

The majority of many professionals are always ready to pay the dear price by refusing to be compromised Do not forget the compromising factors which are common in African countries and affect adversely procurement practices and principles.

These factors are: -

Poverty in developing countries

Poor Remuneration

Economic hardships.

Traditional and Cultural ties

Greed for get rich quick

Others are:

- Lack of professionalism, integrity and ethical standards.
- Lack of effective and efficient procurement procedures and systems
- Nepotism and loyalty.
- The extended family syndrome.

These factors require a man or a woman of high integrity to refuse to be compromised and to resist temptation of malpractices within the area of procurement functions. This case analysis is a true experience of the writer who has a wide professional experience and skills, knowledge and practices of procurement and management functions at various organizational levels in East, West and Central Africa, and South Africa including an exchange in procurement and supply management with crown agents in UK

CHAPTER IV

SUPPLY CHAIN MANAGEMEN

A supply chain is the collection of steps that a company takes to transform raw components into final products and deliver them to customers. Supply chain management (SCM) is the process that is used by a company to ensure that its supply chain is efficient and cost effective. This typically is comprised of five stages: planning, development, manufacturing, logistics and returns. During the planning stage, a strategy must be developed to address how a given product will meet the needs of the customers. A significant portion of this strategy often focuses on planning a profitable supply chain. The development stage involves building a strong relationship with suppliers of the raw materials that are needed in making the product the company delivers. This phase involves not only identifying reliable suppliers but also creating methods for shipping, delivery and payment.

In the next stage, the product is manufactured, tested, packaged and scheduled for delivery. Then, at the logistics phase, customer orders are received, and delivery of the goods is planned. The final stage of supply chain management is when customers can return defective products. The company also must address customer questions during this stage.

Another model for supply chain management groups all management activities into three categories: strategic, tactical and operational. Strategic activities include building relationships with suppliers and customers and integrating information technology (IT) within the supply chain. Studying competitors and making decisions regarding production and delivery would fall under the tactical category. The operational category includes the daily management of the supply chain, including the making of production schedules.

Companies use forecast-distribution models to have the appropriate inventory that is needed to meet fluctuations in customer demand. Forecast-distribution models help companies maintain more efficient — and therefore more effective — supply chain management strategies. Under this model, participants in the lower end of the supply chain, rather than those nearest to the customer, increase their orders frequently when there is a rise in demand. Conversely, when there is a decrease in demand, they decrease or stop their orders to prevent excessive inventory.

This greater variation in demand that can be seen in the supply chain as one moves away from the customer is known as the whiplash or bullwhip effect. A possible solution to this effect is

Kanban, a demand-driven method of supply chain management. Using this method, which originated in Japan, the participants in the supply **chain would react to actual customer orders, not forecasts of them.**

Another definition of supply chain management is production planning and coordinating the flow of products, services and information among connected firms focussing on creating and delivering value to the end user.

The supply chain management also refers to the part of study that relate to operating and controlling the systems that produce goods and provide services. Another definition refers to supply chain management, as management of all functions, facilities and activities, both within and externally to a business organization that make up a value chain.

Inventory management is apart of supply chain management and is concerned with determining how much to order, and when to order. Aggregate planning involves intermediate planning to balance capacity and expected demand. Materials Requirement Planning (MRP) is part of inventory control management and involves inventory and order planning for assembled goods. Enterprise Resource Planning (ERP) concerns integrated computerized record keeping for the purpose of better coordination of the operations of a business organization for just-in-time process which is part of materials planning and control.

(JIT) is a lean production approach that serves to coordinate activities and movement of goods to achieve a balance operating system in production management. Scheduling is concerned with short-term planning of the timing of the operations. Supply chains are sources referred to a value chain, a term that reflects the concept that value is added as goods and services progress through the chain. Supply chain or value chains are comprised of separate business organization, rather than just a single organization.

The supply or value chain has two components, namely: The supply component and demand component. The supply component starts at the beginning of the chain and ends with internal

operations of the organization. The demand component of the chain starts at the point where the organization's output is delivered to its immediate customer or the end user or final consumer in the chain process.

Self Test Questions:

1. Will a diploma in supply chain management help me become a carrier in air or sea cargo industry?
2. Why is SCM required for any business?
3. SCM is planning to boost the earning by satisfying the customer, so even a shop keeper is also doing so. tell me what's new in SCM
4. What technologies are best for handling SCM?
5. What computer technology enables me to have an efficient and effective SCM?

ELEMENTS OF SUPPLY CHAIN MANAGEMENT: -

1. **Customers:** - This involves determining what products and or services customers want.
2. **Forecasting:** - This is predicting the quantity and timing of customers' demand.
3. **Design:** - This involves incorporating customers' wants, manufacturing and the type to market.
4. **Processing :** - Involves controlling quality and scheduling the work.
5. **Inventory Control:** - This is meeting the demand requirements while managing the costs of holding inventory.
6. **Purchasing:** - This involves evaluating potential suppliers, supporting the need of the operations on purchases of goods, services. and materials.
7. **Sourcing:** - This involves monitoring suppliers' efficiency, quantity, quality, on-time delivery and flexibility, as well as also maintaining supplier / buyer relationship and acquisition.
8. **Location:** - This is determining the location of facilities for warehousing.

9. **Logistics:** - This involves deciding how to best acquire materials, services and goods, stored and distribute to the end users.

Supply chain management also involves considerations and analysis of tactful issues like:

-

1. Inventory polices
2. Purchasing policies
3. Transportation policies
4. Quality policies
5. Tendering and construction procedures.

One other important area which needs to be considered is the (DRP) – Distribution requirement planning, which is a system for inventory management and distribution planning.

The global supply chain management which integrates DRP is another area getting a wider recognition as many international trade barriers continue to collapse. This area will dictate achievements in the area of procurement, tendering and contracts management as a world wide supply management deserving in the future due to the need for collaboration and partnership in procurement functions.

Effective supply chain management should involve all the key elements which

include:

1. Suppliers
2. Warehouses
3. Factories
4. Distributors
5. Retail and wholesale outlets.
6. Material supply contract
7. Tendering committees management.
8. Delivery schedules / contracts.

This is only achievable through the cooperation of supply chain partners in planning and coordinating of activities and information sharing as well as agreeing on common goals and objectives. This may even call for strategic partnering which calls for two or more business organizations that have complementary products, roles and services to join together so that each may realize a strategic and mutual benefit..

Designers in this case of strategic planning should address performance driving forces which are in most manufacturing organizations include:

- Quality
- Cost
- Flexibility
- Velocity of inventory
- Customer service.
- Performance contract.
- Price
- Negotiation

The procurement management philosophy:

The procurement management philosophy involves the existing relationship between seller and the buyer. The philosophical belief in organizations may have different types of effects on supply and demand factors within procurement supply sources.

In this area of procurement philosophy, three types of system are considered. These are:

1. Adversarial Procurement Philosophy
2. Partnership procurement or preferred supplier system.
3. Single sourcing.

The adversarial procurement philosophy refers to the traditional purchasing philosophy which advocates having several vendors for each product. This philosophy was developed in order to increase competition in business. It is believed that the competition would lower prices while increasing the level of service and more attention paid to the account - (LOLOS) – (Logistic Level of service is enhanced).

To-date, a lot of companies engage in procurement practices guided by the adversarial philosophy. This philosophy places the suppliers as the opposition party instead of considering them as partners in business relationship. Partnership procurement or preferred supplier systems (PSS) seeks to maximize the benefits of collaboration between buyer and a few suppliers. Close relationship is developed with genuine suppliers by the buyers and the suppliers are developed as future business partners.

This creates reliable suppliers, stable prices and economic batch or single supply or just-in-time procurement management. This scenario is important for all types of users and buyers including construction and fast moving consumer goods manufacturing industries.

Vendors in this category provide one or all of the followings:

1. High quality materials, components, or products of strategic importance to specialized manufacturing firms e.g. military and defence equipments.
2. Specialized product requiring information and training for effective use.
3. Services that require specialize knowledge for cost reduction or performance conformity
4. Materials that no other supplier can provide.
5. Mass materials production for mass consumption.

Single Sourcing: -

This occurs when a company selects one supplier to satisfy all needs in all given area of organizations manufacturing / consumption needs.

The difference between single sourcing and partnering is that, buyers make investments related to the partner needs. Single sourcing if not properly controlled can lead to higher costs e.g. cases in the department of defence in very many African countries where single sourcing procurement is preferred than competitive bidding or tendering system and procedure.

Supply chain management needs to recognize various attributes of the procurement management like the buyer process model which helps to evaluate the right suppliers for right quality products with right delivery schedules.

The steps covered by the model includes:

Supplier / Vendors Evaluation: -

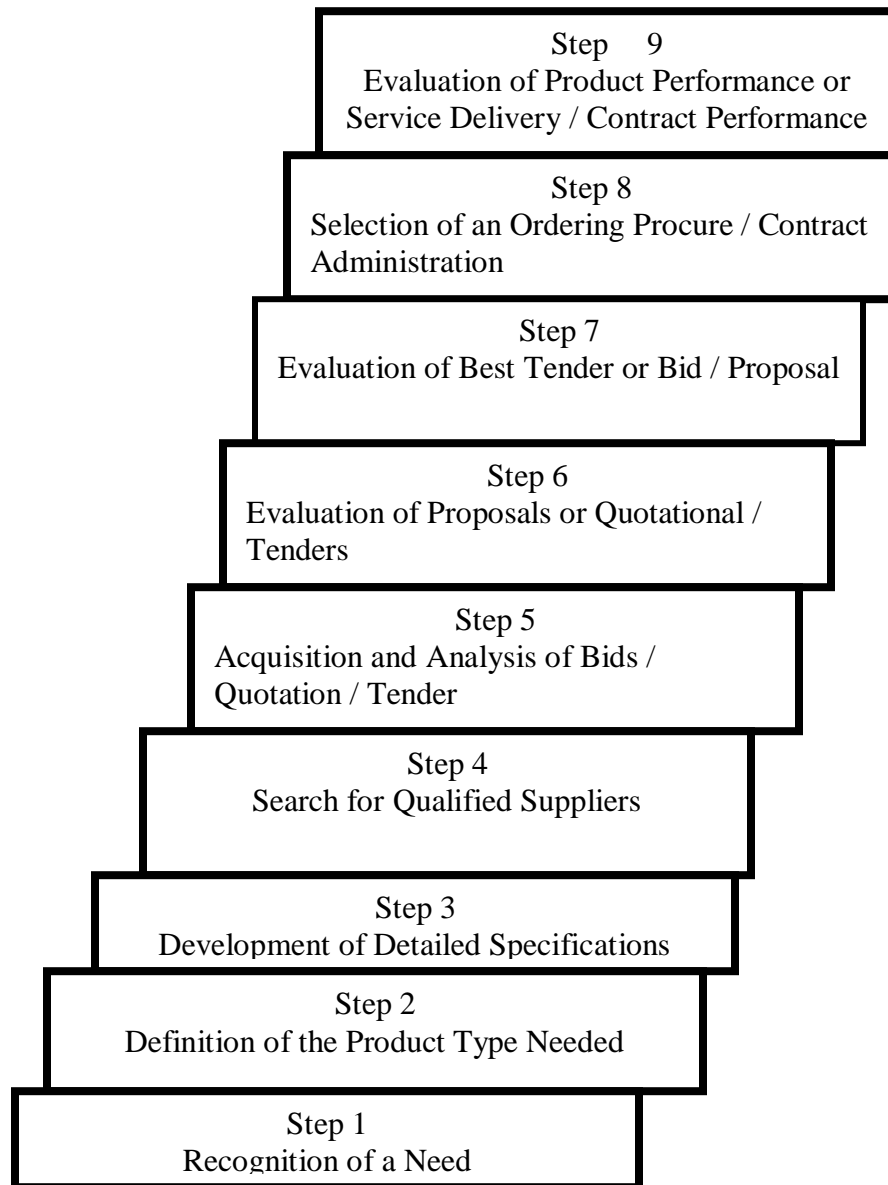
The buyer phase model is important in management as the rational or extensive problem solving model or in consumer behaviour as a high involvement model. This buy phase model suggests that, people go through a series of steps (or phases) when making a decision, beginning with the area of problem recognition.

They then search for alternatives and select a solution, which is then implemented and evaluated on basis of cost and benefit analysis.

An example is when an organization needs a new office space, as a crowded condition helps to force the need recognition and solving mechanisms.

Then, you define the product or type needed in the next step. In this context, a decision has to be made based on a buyer or model. e.g. does the organization want to build a new office building or add onto an existing building or simply find a larger place to rent or buy? This drives the organization to examine its needs more critically as well as detailed specifications such as the size and number of offices to be created. Plans are drawn on this basis. Then suppliers are contacted to bid / tenders are invited as steps necessary in the procurement process or a tender advertisement is made.

The buy phase model:



(The Buy Phase Model)

In case of construction industry, suppliers including those ones recommended by the architect are contended to bid or tender and then acquisition and analysis of proposals involving receiving reviewing bids from each contractor follows as the next action plan.

In this case, the architect and the executives would meet, finalise on bid evaluation or tender opening and go to the next step of selecting a supplier or a contractor.

This involves the final stages of the procurement process involving the creation of a contract specifying when the building will be completed, how it will look like (design), and when payments will be made including the retention fees. Evaluation begins as the project begins and continues in the future improving and making better the process of the project management.

Project management committees or teams continue meeting on monthly or quarterly basis to discuss the progress of the projects and the programme manager or co-ordinator continues to ensure smooth flow of the programme's functions.

CHAPTER V

TENDERING SYSTEMS, PROCUREMENT TECHNIQUES, ETHICS, POLICY AND PROCEDURES.

Professional tendering, systems and procedures codify the principles of good practices relating to the selection of suppliers / contractors and should cover the following:

1. Suppliers' listings on the basis of commodity or product lines / specialized areas for materials, goods, parts, tools and equipments supply.
2. Tender invitation listings if tendering is on selective basis
3. Tender qualification procedure
4. Tender documents including specifications, submission date, closing date and opening date.
5. Tender period
6. Tender assessment and evaluation.
7. Tender result notification
8. Award of the tender
9. Contract agreement and signing for acceptance.
10. Policy systems, ethics and procedures regulating the tender

Tendering systems and procedures from practical experiences and for most organizations from various developing countries are different in practices and management. However, the concept and objective from a professional management perspective is the same. The tenders start with pre-qualification of suppliers; a process which evaluate supplier's capacities and performance capabilities before invitation to tender. This process helps to deal with qualified supply sources saving on time, canvassing and money from professional and ethical perspectives.

The essence here is to deal with pre-qualified and component suppliers adding values to procurement management techniques which allow effective competition among organizations which are specialized in their areas of materials stocks or spare parts supply.

Selective Tendering: -

This system is commonly used in procurement with known suppliers who are specialized in various products supply functions and has a long time partnership with the buying organization and are experienced in supply activities for specific terms and for specific functions.

In this case, tender invitation of not less than five known and reputable partner suppliers are invited to tender or quote for required services, materials or spare parts. This system helps to avoid the costs of advertising and delays. Selective tendering can be abused if not properly handled and controlled and procurement specialists are forewarned to avoid selective tendering unless for cases which are unavoidable.

Repeat Order Procurement System: -

This system is simple, cost saving and effective for procurement of small amount quantity of items / materials. Suppliers' records are maintained with historical supply data including orders sizes, period's dates of supply, product specification, previous prices and brief details of supply performance. There is a product supply data record card maintained for all items by purchasing department.

A repeat order confirmation request is sent to the supplier to confirm whether he can supply the current order under the same previous terms and conditions. His / her acceptance immediately helps the buying department (buyer) to prepare and repeat order for supply. This system is effective and the writer has witnessed it working in many organizations which he has worked for and even now uses it in setting up procurement systems, techniques and procedures as a consultant for various organizations, in areas of procurement management.

This system is effective and efficient with very close monitoring as it can also be abused for individual benefits / gains as it is not an open tender system and comprises of simpler and easy procedure that helps in ensuring effective and efficient routine practices in procurement.

Tender Procurement Committees: -

The companies and organizations which maintain ethics, systems, techniques and procedures apply various procurement policies based on the procurement and materials manual to ensure smooth operations. Some of these systems, policy and procedures are:

Tender Committees which include:

- Central Tender Committee (CTC)
- Divisional Tender Committee (DTC)
- Bids Quotation Purchases (BQP)

These are some types of procurement operational oversight committees which act like watchdogs for the buyer's procurement functions within organizations. These are good systems and techniques from an operational and practice point of view as they also act as checks and balances for any obvious actions that may undermine ethical and procedural practices for the benefit of the organizations and the procurement profession.

The ceiling for various committees level for purchases approval and authority limits:-

The committees are vested with powers and authority by policy and procedures approved by the board of directors to approve;

1. Central Tender Committee maximum approval ceiling = US 5000. This committee is headed by the managing director or his appointee.
2. Divisional Tender Committee maximum approval ceiling = US 3000. This committee is headed by the divisional head who happens to be a senior manager
3. Sections Tender Committee Maximum approval ceiling is US 500
4. Bids and Quotation are approvals of up to US\$ 499 which the procurement manager can approve using his discretion especially for purchases of consumable items and urgent small value requirement.

These committees meet regularly to vet and evaluate on recommendation papers written by the procurement manager in liaison with the users for their requirements including materials for direct use and stock materials and spare parts. The stock materials are ordered by the inventory control or warehousing departments through inventory control management systems and procedures.

There may be urgent requirements for urgent purchases which are required within different ceilings of the mentioned committees. The purchase due to their urgency can be purchased and recommendations for CTC / PTC submitted to the appropriate committee for approval and ratification during the next meeting. The approval must be authorised by the appropriate committees chairman / head. This is only done in emergency cases which cannot wait for meeting dates.

The operation of this committee is flexible and can be called frequently depending on the user's needs. The procurement manager sits in all these committees and acts as the committee's secretary. The other members of these committees include the financial controller or accountant, company secretary, technical manager and production manager.

The financial controller or Accountant and company secretary and the user are involved in opening of tenders / quotations and bids documents before they are handed over to the procurement offices or department for analysis, assessment and evaluation. Tender box is used for putting tenders and is allocated at a convenient place for tenders / quotations and bids placement. It is always opened by two people as the company's secretary and procurement manager have got the keys for the tender box for accountability and transparency.

These procedures ensure checks and balances for ethical procurement techniques and operational practices and techniques as well as maintaining systems and procedures.

Make or Buy Decision: -

This is a system decision as a buying procedure or make process or services rental / hire are required to facilitate the acquisition process of professional procurement managers at all times in which they are required to be cost effective and conscious by saving any single dollar, through

prudent buy practices. To qualify in being a real professional buyer or procurement specialist needs very good understanding of procurement management functions including wide experience in supply and materials functions as well as some practices in positions which expose you to interact with both other buyers, sellers, marketers, and users. Ethics is an important area in procurement management and even in other business and academic sectors. Professionals must be seen and understood to act differently from lay people in areas of their professional disciplines.

Some of the important points to be noted in maintaining ethics and which could be used as guidelines for ethical behaviour in purchasing are .Principles / Key areas are:

1. Loyalty to the employer
2. Ensure justice to those you deal with and yourself.

Have faith in your profession standards of procurement practices and ethics: -

These include:

- Avoid appearance of unethical or compromising practices.
- Follow the lawful instructions of your employer.
- Refrain from private activity that might conflict with interests of your employer.
- Refrain from soliciting or accepting gifts, favours, even services from present or potential suppliers.
- Handle confidential employers or suppliers information with care.
- Practice courtesy, and impartiality in all aspects of your job.
- Know and obey to the letter and spirit laws of good and ethical procurement management behaviour and conduct.
- Refrain from reciprocal agreements that constrains competition
- Demonstrate support for small disadvantaged and minority owned businesses.
- Discourage involvement in employer sponsored programs of non-business, personal purchases.
- Enhance the profession by maintaining current knowledge and the highest ethical standards as a buyer.

- Conduct international procurement in accordance with the laws, customs and practices of the foreign countries, but consistent with ethical practices, policies, systems and procedures of your organization and guidelines.

Value Analysis: -

This is important area in procurement management functions and practices. Value analysis is defined as the examination of the function of acquired parts and materials in an effort to reduce cost and / or improve performance. Naturally, the purchasing cannot perform an investigation each time materials are ordered and received. However, it should conduct value analysis exercise periodically on larger value items to ensure potential savings and make suggestions to the user.

Overview of Value Analysis: -

- Value analysis involve selection of a high annual value cost item and its usage and performance analysis.
- Identify the function of the item
- Obtain answers to:
 - Is the item necessary, what is its value in relation to the output of its production line, can it be eliminated?
 - Can the item be provided internally (make or buy decision)
 - What are the advantages and disadvantages of its usage in present arrangement?
 - Can it be substituted?
 - Can its design / specification be altered / or redesigned in terms of saving cost, time and increased efficiency?
 - Can two or more parts be combined with lesser cost?
 - Can some of production line or processing do without the part or the material?
 - Do suppliers / service providers have alternative suggestions or improvement?
 - Do employees / specialist designers have suggestions for improvement?

- Can the packaging be improved or made less costly to ensure affordability to the customers?

This analysis is important in arriving at a decision of make or buy. The procurement procedures, systems, and techniques, should improve for a value analysis input.

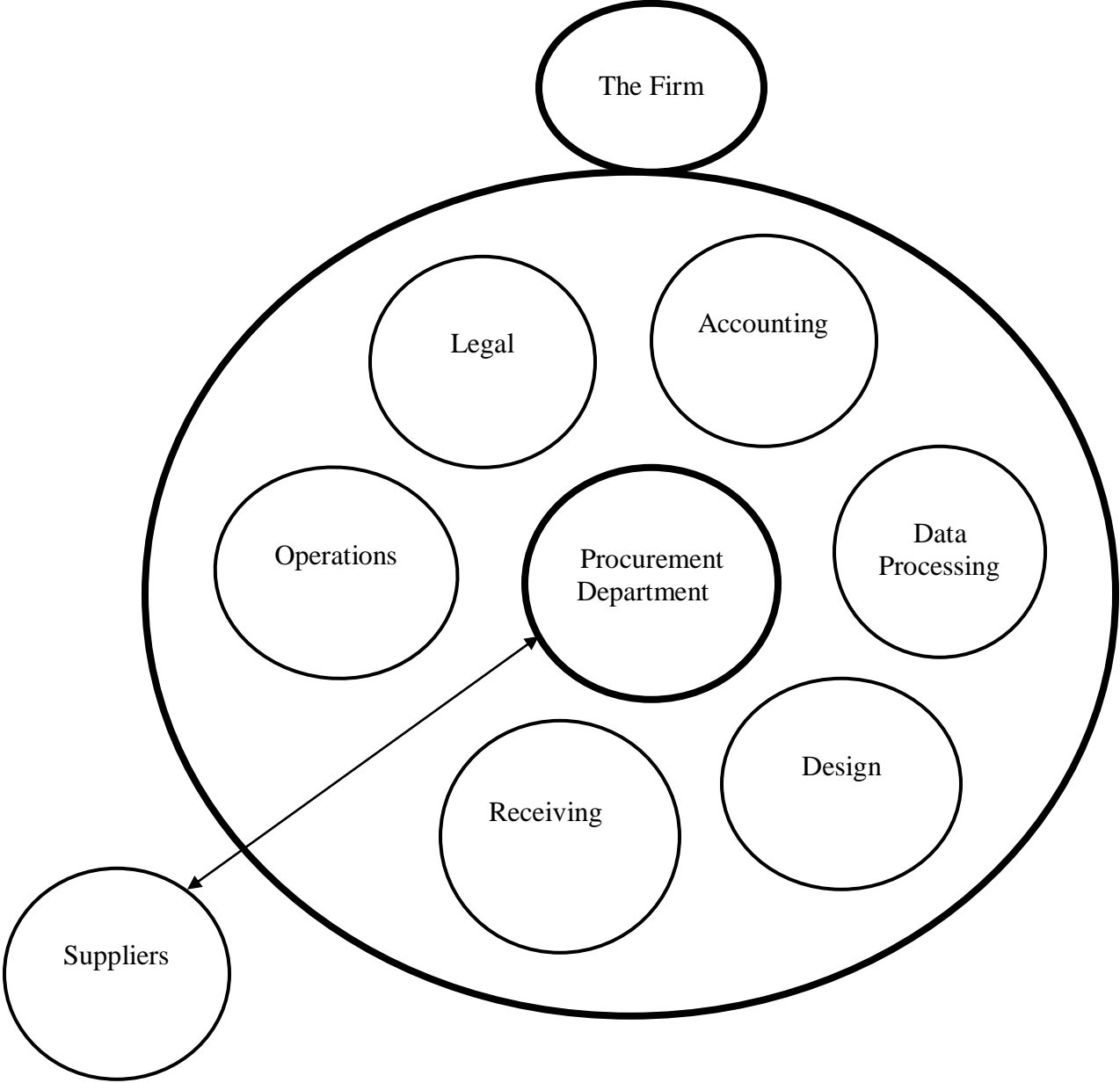
Vendors Rating / Suppliers Audits: -

Periodic audits of suppliers are important as means of keeping suppliers or service providers, capabilities, quality and timely delivery as well as performance checked and updated through a check list system. This would also help in awarding suppliers' orders and contracts on basis of merits and demerits for their supply performance functions as a merit rating system through agreed standards of service delivery with annual or quarterly evaluation exercise.

Procurement Interface: -

The procurement department being a necessary service provide for the organizations services, parts and materials requirements would be incomplete without some procedures or systems that link it with the other departments.

The interface is as per this diagram below:



Inventory Control Systems and Procedures as Part of the Procurement Functions and Process:-

NB.Inventory is stock or store of goods.

A manufacturing Organization Carries Different Kind of Inventories: -

- Raw materials and purchased parts
- Partially completed goods, called work in progress (WIP)
- Replacement Parts, tools, consumables and suppliers
- Goods-in-transit to warehouse or customers – (pipeline inventory)

The Functions of Inventory: -

- To meet anticipated demand
- To smoothen production requirements
- To de-couple components of production / distribution system
- To protect against stock price in creases or take advantage of quantity discounts
- To permit operational functions run smoothly

Requirements for Effective Inventory Control management: -

A good inventory system should ensure keeping track of all items in the inventory as well as making economic decisions on how much to order / re-order levels and when to place orders.

The system should also ensure cyclic or periodic stock taking counting or perpetual counting system.

An effective inventory management control system should ensure: -

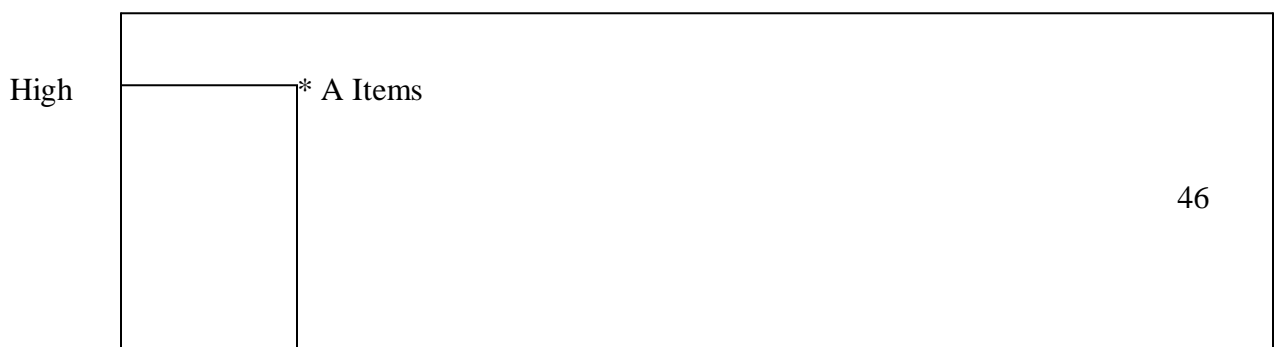
- A system to keep track of the inventory on hand and on order.
- A reliable forecast or demand pattern that includes and indication of possible forecast errors.
- Knowledge of good times and lead time variability.
- Reasonable estimate of inventory holding cost, ordering costs, and shortage costs.
- A classification system for inventory items.
- A record of stock holding value in classification identity.

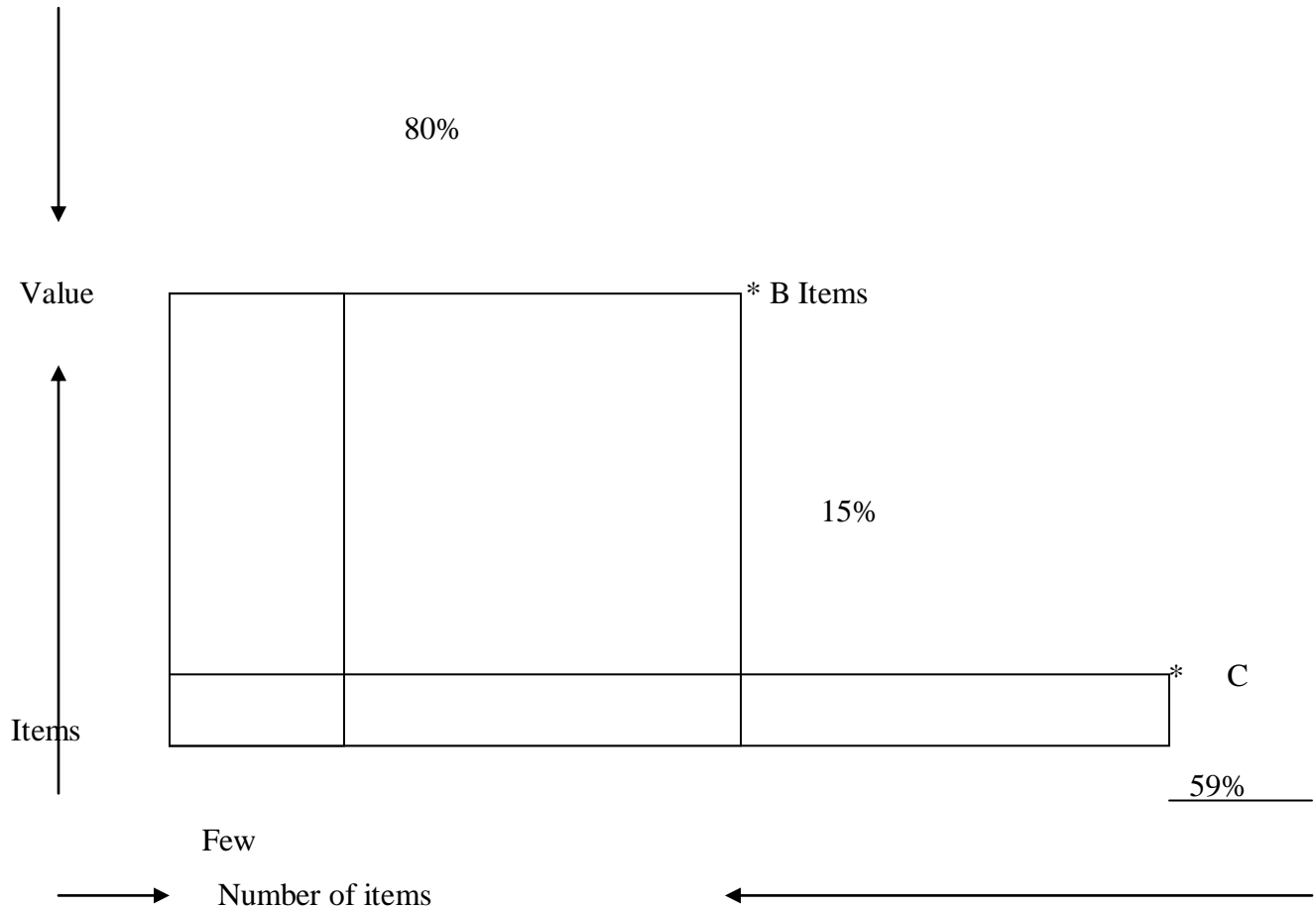
It is important also to consider the effects of areas associated with inventory like point of sale system, two tier system of stock replenishment, two bin system, universal product code (UPC), holding or carrying costs, lead time, ordering costs, shortage costs as well as the A-B-C approach system which is based on value analysis system.

The A-B-C approach; refers to classifying of inventory according to some measure of importance, and allocating control efforts accordingly. It has a relationship with the 80/20 rule. This is a rule where majority of the stocks is in the 20% category in terms of value and fewer items are in 80% category due to their value. This includes critical items which can stop production at any moment.

The areas are explained in the terminologies appendix

The A-B-C Analysis: -





*C Items (non-significant items in value- bolts, nuts, pins, clips washers etc.).

The quantity to order is determined through various economic quantity models.

The most common and known model is “EOQ” – Economic Order Quantity.

The model identifies the minimizing sum of certain annual costs that vary with order sizes:

-

1. The basic economic order quantity
2. The economic production quantity
3. The quantity discount model

The Economic Order Quantity (EOQ) refers to the order size that minimizes total cost of ordering.

Economic production quantity model is similar except that instead of orders being received in a single delivery, units are received incrementally during production. Quantity discount model refers to price reductions for large orders offered to customers to induce bulk purchases.

Other models include the fixed order system. In this model, orders are placed at fixed time intervals. This system buys in bulk shipment while taking less consideration of stocking level.

Single-Period Model: This is a model for ordering perishables and other items with a limited useful life. Stocking control levels are important tools in inventory control functions. They cannot be ignored as they are effective and efficient models for inventory control management functions.

NB: - The writer was one time employed by an airline for two years as Material / Inventory controller. He managed to re-engineer the inventory control systems and ensured timely provisioning of consumables, materials, air craft parts and other supplies for use with the air line industry. He managed the second target stock holding inventory in that country at that time worth over 2.5 billion Shillings.

CHAPTER VI

PROCUREMENT PLANNING, WORK SCHEDULING, MANAGEMENT AND ADMINISTRATION – (A Comparative case study and Analysis)

Procurement Planning: -

This area deals with materials requirement planning (MRP).

It is very responsible for ensuring that the right quantity and quality of materials is available when and where it is required. It also ensures that capital is not to be tied up unduly nor should there be loss from deterioration, obsolescence, shortages and stock-outs which may caused production hold-ups due to lack of materials.

Efficient and effective procurement planning system which supports materials control requires the following: -

- Centralization of purchasing functions under procurement department for smooth operation and control.
- Departmental coordination in purchasing inspecting, receiving, storing and issuing of materials spare parts and supplies.

Others areas include:

1. Simplifying and standardizing procurement systems and operational procurement functions whenever possible.
2. Proper and efficient warehousing, storing with safeguards against pilferage deterioration and obsolescence.
3. Planning and scheduling materials requirements and preferably controlling purchases through budgets.
4. Efficient and effective stock-taking systems and procedures.

Pre-Production Planning: -

The pre-production planning is supposed to be part of the procurement planning processes. The production department plans their materials requirement based on required production outputs or sales budget. The procurement department is able to project the purchases requirement for all departments and prepares a purchase plan budget, as per the user department's estimates.

The pre-estimate materials requirement helps the procurement manager to engage continuous research activity into new acquisition methods and design, explore new markets and also decide on make or buy actions. The procurement planning and acquisition of materials is useful in determining volume limitations of production capacity which help in reducing order intakes when production cannot be met in time.

Work Scheduling: -

Scheduling is a way of establishing the timing of the use of equipments, facilities and human activities in an organization. Work scheduling tasks are largely a function of volume activities and require approaches substantially different from those required by job shops, while project scheduling requires different approaches.

Types of Scheduling include: -

Flow-shop scheduling; this is scheduling, which caters for the flow system.

High volume systems require automated or specialized equipment for processing and handling. They also perform best with a high uniform output.

The success of a high volume scheduled system depends on:

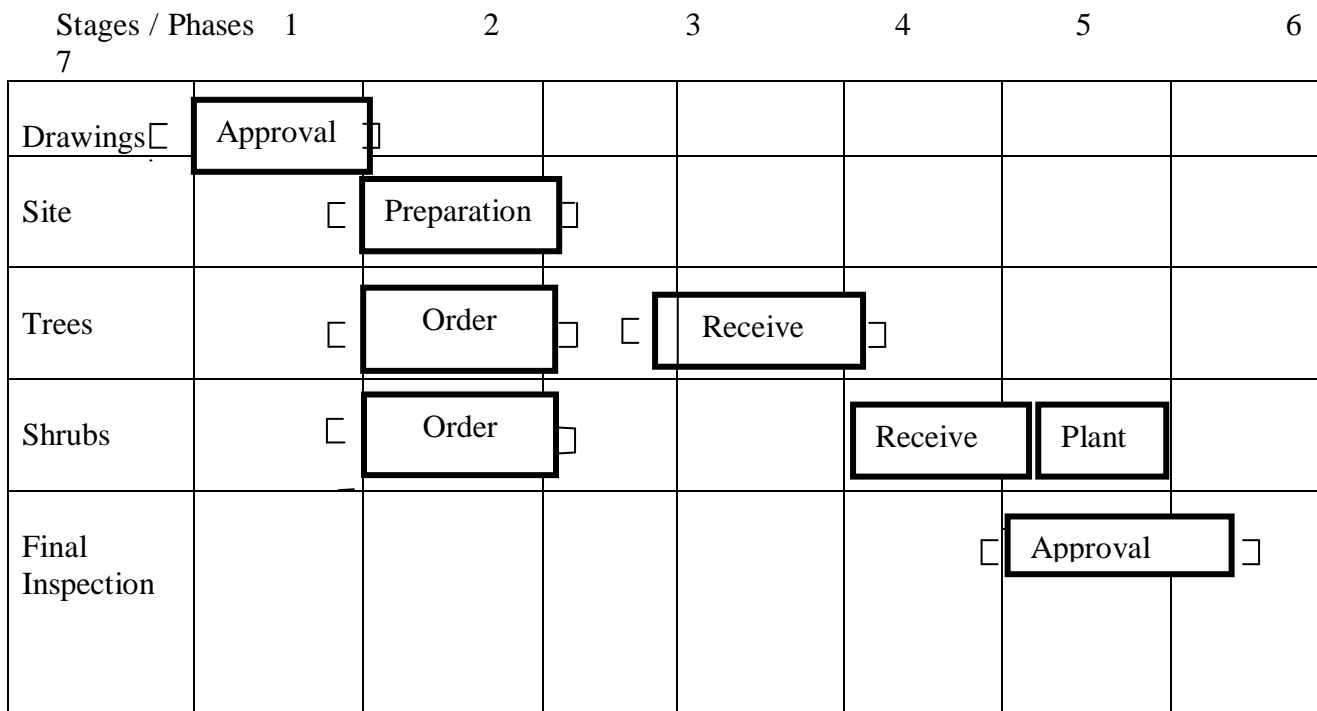
1. Process and product design.
2. Preventive maintenance
3. Rapid repair when breakdown occurs
4. Optional product sizes
5. Minimization of quality problems
6. Reliability and timing of supplies

Scheduling in Low Volume Systems: -

The characteristic of low volume systems (job steps) are considerably different from those of higher volume systems. Product are made to order and usually differ considerably in terms of processing sequence and set ups. Job shop processing gives rise to two basic issues for schedulers including how to distribute the workload among work centres and what process sequence to be used.

Gantt charts are used as schedule charts. The chart shows the orders or job in progress and whether they are on schedule. The manager uses the Gantt schedule chart to monitor the progress of the jobs. The chart indicates which jobs are on schedule, and which ones are behind schedule or ahead of schedule.

Progress Schedule Gantt chart: -



Key: - Actual Progress.

Despite the obvious benefit of Gantt scheduling charts, they possess certain limitations like the need to repeatedly update the chart to keep it current. They also do not reveal alternative,

loadings. Job processing time may vary depending on the work centres. Certain station or work centres may be capable of processing some jobs faster than other stations.

This situation may increase alternative schedules. Gantt schedule charts are the most widely used work scheduling tools.

Sequencing: -

This is used in scheduling to determine the order in which jobs at a work centre will be processed. The effectiveness of any given sequence is frequently judged in terms of one or more performance measures.

These are: -

1. Job Flow Time
2. Make Span
3. Average Number of Jobs

Make span is total time needed to complete a group of jobs from the beginning of the first job to the completion of the last job.

Average number of jobs = Total flow time / make Span scheduling can be difficult due to a number of reasons;

1. An operation must deal with availability in set-up times, processing times, interruptions, and challenges in the set of jobs.
2. Except for very small problems there is no method for identifying the optimal scheduling. It is impossible to sort through the vast number of possible alternative to obtain the best schedule.
3. However computer technology reduces the burden of scheduling and makes real time scheduling a possible and positive task.

Good scheduling results for an effective manager include the following:

- Setting realistic due dates

- Focussing on bottleneck operations.

NB: - First try to increase the capacity of the operations if that is the bottleneck operation and then schedule the non-bottleneck operations considering lot splitting for large jobs. This probably works best when there are relatively large differences in job times.

The Theory of Constraints: -

Scheduling problems can be avoided by focussing management efforts on bottleneck operations. Eli Goldraft by developing the theory of constraints reasoned out that, the output of the system was limited by the output of the bottleneck operations. It is therefore necessary to schedule bottleneck activities by focusing on reducing the idle time of the bottleneck operations. This was able to put bottle neck into project's output.

Scheduling the mark-force for customers needs is demand management while scheduling the workforce is capacity management. Consideration should be made for the extent to which variations in customer demands can be met with appropriate scheduling of the workforce flexibility.

Thus capacity can be adjusted by having cross trained workers who can be temporarily assigned to help out on bottleneck operations during period's peak demands.

Various constraints can effect workforce's scheduling behavioural technical e.g. workers' qualifications to perform certain operations as well as budget constraints, scheduling can wider or help the project's operations strategy depending on the way it is done. This is because of the fact that scheduling involves the timing and co-ordination of operations. Gantt load charts are frequently employed to help managers visualize workloads and they are useful for analyzing sequencing alternatives. This in turn helps the procurement department to do the necessary materials procurement planning on the workloads.

CHAPTER VII

CONTRACTS ADMINISTRATION AND MANAGEMENT

“The need for collateral warranties stemmed from the English law doctrine of privity of contract which provides that a person who is not a party to a contract cannot enforce that even if the obligations under the contract are for their benefit.” This is a quote from the Aqua Group

Guide to Procurement, Tendering and Contract Administration edited by Mark Hackett, Ian Robinson and Gary Statham – Davis London LPP.

The quote continues “ On 11th May 2000 the contracts (Rights of the Third parties) Act 1999 came into force and referred the law relating to privity of contract by providing a person who is not a party to a contract with a right to enforce a contractual terms. A third party may enforce a contractual term if the contract expressly provides that they may do so or if a term purports to confer a benefit on the third party by reference to membership of a class or answering a particular description, even if not in existence when the contract is enforced into”

The act is now part of English law and contracts governed by English law are bound by the contracts. “Many of the standard forms, whether consultant apartments or construction contracts, do opt out of conferring third party rights. However, JCT in the SBC offer users the opportunity to choose either third party rights or collateral warranties.” (JTC – Joint construction tribunal and SBC).

The collateral warranties are still there in the construction industry in spite of the act due to problems related to third party liabilities and the insurance covers as well as lack of the industry not being familiar with the new law.

Therefore the construction industry has yet to input the construction projects in developed countries to be strictly governed by contracts that are binding for performance as in comparison with the contracts governing the industry in developing countries today are like friendly agreements and not contracts (A case in reference is the writer’s current experiences and some observations / research findings on construction industry in Sierra Leone (A Makeni observational case study in the Northern Province of Sierra Leone in West Africa.).

The standard format, although published by the British property Federation in 2005, may be unfamiliar in Sierra Leone and many other African countries like Kenya, Tanzania, Uganda, Rwandan, Burundi, DRC, West Africa and South Africa and not used to engage consultants in the construction industry. The main fact is that most consultants in the construction industry

within developing countries are semi-qualified professionals and an observational survey done revealed the facts that, majority of them rely heavily on the past and local experience. (An observational survey was conducted involving visitations to construction sites and holdings discussions).

There are lapses in this area of professional management of construction activities within construction industries in developing countries and requires to be addressed as an issue of greater importance for safety and security reasons of building standards in less developed countries especially in Africa.

Collateral warranty agreement is important as they are normally used to create direct contractual relationships between parties, other than the employer e.g. (the funding institutions, purchases, tenants mortgages) who might suffer economically because of losses arising from the contractors or consultant's negligence.

The terminology collateral is hereby used to denote a side agreement to the warrantor's main contract with the employer.

Contracts management functions, styles, and structures: -

The main job of a manager, whether procurement manager, operations manager or project manager / general manager is to organize resources such as people, money, materials and time so as to turn plans and activities or concepts into reality.

This involves five key areas:

1. Planning
2. Leading
3. Organizing
4. Controlling
5. Communication.

Planning: -

Planning involves a number of key activities like: -

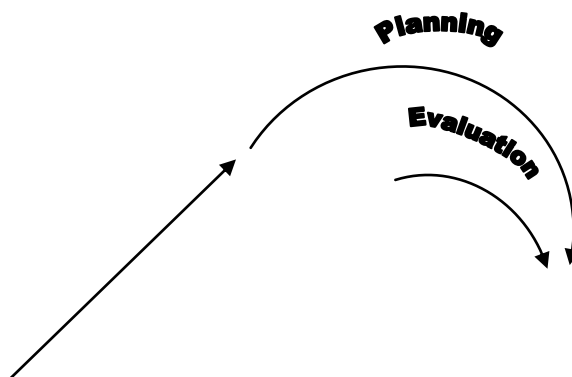
- Anticipating future conditions and events
- Setting objectives and priorities
- Programming the sequence of actions to meet the objectives
- Allocating realistic times for each activity
- Financial budgeting
- Identifying, staffing and identifying resource requirements
- Developing methods and procedures of working.

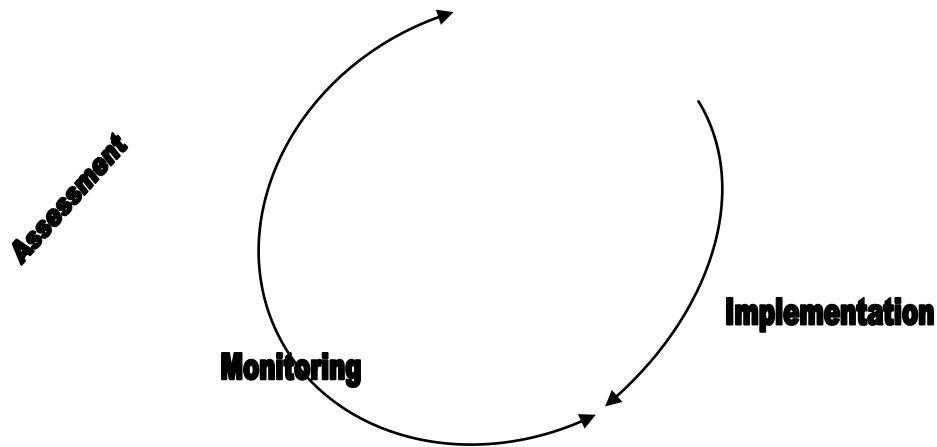
One main thing and important to be noted is the fact that planning in all areas including construction industry is related to management.

Planning Frame Work: -

When planning whether for contracts administration and management, keep in mind the various phases of the cycle of a construction project activity from the initial assessment of the design through implementation with monitoring and evaluation.

The planning Cycle Design: -





Logical Framework Planning Tool: -

It is important to use a logical planning framework when developing a plan. However, this requires an understanding of the aims, objectives and priorities of the response.

A knowledge of the planning cycle is important. It involves;

- Assessment
- Planning
- Implementation
- Monitoring
- Evaluation

1. A focus on the people for whom the response is intended.
2. A co-ordinator with multi- sector approach.
3. Knowledge of people oriented planning approach system. The people oriented planning approach is important as it focuses on the context analysis, activities analysis and the analysis in relation to use and control of resources which are important and useful areas in performance and of contracts management and administration.

These are key areas of people oriented planning techniques which in practise helps to ensure participatory process and team work management.

CHAPTER VIII

ILLUSTRATION OF OWN EXPERIENCES AND UNDERSTANDING OF THE SUBJECT FROM A PROFESSIONAL PERSPECTIVE: -

This is an important area although short, as it has various implications of the writer from different perspectives. The writer has extensive working experiences spanning for a period of over thirty years including junior positions, middle level management positions as well as senior management positions in different organizations.

Personal experience illustrates the writer having worked extensively in areas developing of policy, systems, procedures, and techniques and ethics in more than twenty (20) organizations for over thirty (30) years in different positions. The writer is a multi-discipline skilled professional manager in various disciplines which include: -

- Business Administration and Management.
- Human Resources Management.
- Purchasing and Supply Management.
- Training and Management Development.
- Sales and Marketing Management.
- Project Planning and Proposal Writing.
- Lecturer and Business Management and Administration adviser.
- Consultancy and research worker.

Working Experience -

The writer in one time – (1986) as a Purchasing Superintendent for a power lighting organization. to reviewed systems, procedures, techniques and policies within the organization making the supplies department to become effective, efficient and professional unit within the whole organization. The department lacked professional management before the writer re-engineered it to practice ethical procurement and stores management.

In 1978, the writer was a buyer with a tyres manufacturing organization which had good systems and procedures. However, the most interesting activity was industrial buying for the factory parts and raw materials. Out of over twenty suppliers, who were pre-qualified, only five were local indigenous and the rest were foreigners.

The five indigenous suppliers could not compete with the foreigners as the foreigners had overseas linkages and well stocked warehouses. They were also very well organized. They were able to meet their delivery schedules with ease. The same case of the indigenous or local suppliers struggling to meet their delivery schedules was common even in West African countries

This case analysis brings me to point out that the systems and procedures as well as the techniques and the organizational policies used by firms should have a way of empowering the indigenous supply sources for growth and development of the local materials resources and suppliers. This imbalance exists up to now in developing countries especially Africa and Asia, and is even worse in a country like Sierra Leone which has had conflicts and wars for over a decade.

The writer in 1980 worked in an airline as a materials / inventory controller. This was a very heavy task as it involved having to review and overhaul the entire inventory control system of the airline including some purchasing systems and procedures so as to ensure a more sound and professional materials control operating system. A very good work was completed in nine (9) months but under very strenuous situation and conditions. One lesson learnt in that organization was the quality concerned aspect of the parts and materials used in aircraft industries which is first class and never compromised.

The other experience well noted was the limited quality supply sources which included the Boeing and Fokker friendship companies in UK. It was also noted that, the supply sources are well organized in terms of meeting supply delivery schedules. This is not common with most vendors who keep on changing delivery schedule dates in developing countries affecting the production planning.

The writer also in 1982 worked as a supply manager and later logistics operations manager with a frank Xerox East and central Africa Co. Ltd. where he gained professional experience in

procurement management. Adequate training was very well provided by the employer facilitating a very high level of learning including on job training.

It is in this company where I came to believe that “Knowledge is the only asset that no man can steal and education is better than silver and gold.” It is also widely said that .a man will always let you down, but education will never let you down and in most cases will uplift your status. It is only God who has the control of any man’s destiny on earth. This is why education is better than gold and silver.

The author has worked for many years with many organizations in East Africa as followings:

In 1972-Clerical staff- Port and Cargo handling organization

In 1975-Stores Control Assistant- Milk sales and processing industry

In 1978- Buyer- Tyres manufacturing industry.

In 1979- Materials Controller- Airline industry.

In 1982 – Supply Manager/ Logistics Operations Manager –Xerox machines

In 1985- Purchasing Superintendent-Electricity supply firm

In 1987- Parts sales and Warehouse Manager –Agricultural and Health equipments firm

In 1994-General Manager – Motor Vehicle Industry.

In 1995- National sales and Marketing Manager- Tyres and accessories and Batteries sales firm

In 1998-General Manager- Health and Herbal products- Mombasa.

In 2005-Parts and Dealers Relationship Manager-Motor Industries.

2007 – VSO volunteer at the Fatima Institute in Sierra Leone – In 2001-National Sale and Marketing Manager – for a fast moving consumer goods and beauty products industry.

In 2003-General Manager - for fast moving consumer Goods Industry in Uganda.

In 2006 Operations / commercial manager with a manufacturing industry

In 2007 Senior Lecturer / Dean of Academic Studies, project management coordinator, outreach programme co-ordinator and lecturer for human rights and good governance (Sierra Leone – West Africa.)-University of Makeni

2011 –Doctoral Programme with Irish University Business School,UK. in Development Economics and project management in Developing countries.

2012- Associate Professor for Commerce and Management studies DMI-St,Eugene University, Lusaka, Zambia

The work history and experience of the writer may look interesting. However, it accounts for the greener pastures which the writer has enjoyed besides the extensive level of wide knowledge and practical experience and skills gained in various fields of different professionalisms. One case history and study involves a wife of the Managing Director and company in Kenya, who happened to be working for the same company manufacturing beauty and skin care products, perfumes and detergents where the writer worked as a commercial manager and part-time consultant.

She one time remarked, “The problem with you Silas is the fact that, you are too much professional” I smiled and answered her, “Madam, that is what makes business move” and contributes to what I am today. I later thought about the remarks and concluded that professionalism must be learned, practiced, implemented and enjoyed by all managers as it makes business to move forward and ensure sustainability. Professionalism can only be worth its salts if professionals have loved for it.

The lack professionalism in many cases within East and West Africa affects adversely, development and growth of Africans businesses and especially areas like construction industries which are still owned and managed by foreigners while the African indigenous people are left to do most of the sub-contractor’s manual jobs and own minority companies in the construction industries in Africa whereby even holding contracts simple construction work may not be honoured at the last minute as they may have been there as verbal arrangements but not yet confirmed as binding contractual agreements.

Adequate training and skills sharing has not been properly or appropriately passed to the indigenous people or prepare them to take up those jobs which make huge money like large construction projects of electricity dams, roads construction, large housing project schemes etc.

The excuse for excluding them is the fact that they lack experience and this is after 20 or more years after gaining their independence. The question is, “When and how and from whom will they acquire the experience?”

The transfer of technology from the Western developed countries must be done on package deals and not usually selective piece needs which continues to leave the recipient worse than before due to high expectations of development and personal growth. It is important at this juncture to advocate the common saying of give John Sam a fishing rod and not the fish as the rod will enable him to do his own fishing, where as if you give him fish, he will continue coming to you everyday for fish.

CHAPTER IX

PROCUREMENT UNDER RELIEF AND EMERGENCY CONDITIONS

Procurement planning principles and management in emergencies and relief situations should consider factors like:

1. A staged approach
2. Participation and self reliance
3. A long term view
4. Flexibility
5. Appropriate technical support
6. Review of properties
7. Skills availability and training
8. Standardization
9. Local procurement systems and procedures.

A staged approach calls for procurement planning on the basis of having to identify priority actions and ensure to get going. Develop easy, procurement plans as the situation becomes clear and time allows as at other time you may be forced to bypass some procedures to save life if it is necessary to do so.

Participation and Self Reliance: -

Some procurement activities done under emergency or for relief may call for participation from all people. This may require having to mobilize the community's own resources, skills, knowledge, adaptability, fortitude or offloading trucks after delivery of food stuffs and other activities. Community participation can be invaluable to the relief effort, and can restore some measures of hope, confidence and dignity to the displaced people or those who need the relief assistance.

In some cases the need for rapid response to procurement under emergency can be a constraint, whereas it is important to encourage community participation and self reliance at all times and where possible. This may help to avoid a creation of a situation of dependency syndrome which is too common in relief and emergency situations. The procurement manager must be very sensitive to all issues relating to the “rapid response” procurement needs - (RRPN) which must be treated as emergency cases.

Flexibility: -

Procurement planning under relief or emergency requires strict planning as it has to forecast on increasing and decreasing number of people in a settlement or displaced camps as more people come and others go depending on situations at their home countries.

Appropriate Technical Procurement Support: -

This is procurement planning in areas relating to technical field activities to ensure timely and adequate humanitarian relief support like buying / providing free imported pre-fabricated housing instead of building permanent structures which are expensive and time consuming. The intervention strategy would be to give some comfort to the people by providing a safe and secure shelter for sleeping and not for luxury as in cases of permanent buildings / permanent homes.

Skills availability and training on procurement planning should explore many areas so as to utilize locally available skills in situations of make or buy decisions for some of the camp requirements e.g. tables and household furniture can be made locally by local carpenters and paid cheaper than, buying them at exorbitant prices from furniture shops or suppliers including fencing, digging wells and latrines, roofing, gardening etc. some activities should be introduced to keep the people busy and occupied.

Standardization: -This calls for having to ensure that the equipment used in emergency is matched to the equipment locally used and available within local sources. Some equipments imported work well for sometimes and may bring problems due to lack of spares for maintenance or repair in case of breakdown. This calls for standardization of equipments and machineries and is part of procurement planning processes and techniques.

Local Purchases: -

The purchase of locally available equipments, materials and consumables, can have various advantages like:

1. Quick purchase and installation
2. Local operation and technical functions familiarity
3. Ancillary fittings, spare parts, and replacement units available at relatively short notice.
4. Minimization of problems associated with keeping the equipment running when the emergency is over.
5. Benefits to the local community.
6. Alleviation of production strategies associated with parts, or materials non-availability.

Local expertise and parts availability must be evaluated as well as local supply source's efficiency before buying the local equipments to avoid disasters after the procurement including quality standards and specifications.

CHAPTER X

COMPARATIVE BASE FOR GOVERNMENT PROCUREMENT IN INDUSTRIALIZED COUNTRIES, VERSUS PRIVATE SECTOR IN DEVELOPING NATIONS.

(Analysis and Case Study)

Procurement: -

Procurement is an area that has taken various changes within organizations in developing countries especially in East and West Africa. The area of professional procurement management needs to mature so as to match the level of professional standards of the developed world and has a longer way to go.

Most governments in Africa states have lost colossal amount of money through unprofessional practices of procurement managers who are called supplies officers, senior supplies officers or chief supplies officers and principal supplies officers called by different titles.. The officers do procurement for government and parastatal organizations and are required by policy and ethics to act professionally although this happens sometimes not to be the case with some of them.

The government has well established procurement systems and procedures guideline. The practices of these systems and following the procedures are what remain questionable in most government organizations.

The writer is trying to relate the value of the systems and procedures in relationship to practices and implementation. An experience from East Africa and West Africa reveals the lack of strict professional practices in most government sector organizations. This has undermined the enormous savings the government would have gained through proper procurement tendering and bidding systems and procedures which are only strictly practiced for areas of donor funding, World Bank and UN contracts.

Local purchases are not strictly done in accordance to the laid down policies and procedures and this is the area that needs to be properly scrutinized and procedures effectively enforced to follow the systems without deviation.

In some cases, external forces exert pressure on procurement activities, thereby undermining the value and essence of systems and procedures that would otherwise ensure gains for the organizations. These cases are more common with defence procurement whose purchases for specialized items have continued to be acquired from one source through traditional buying practices without allowing competitive tendering for new vendor listing and vendor product's development.

A very common clause in the bidding for contracts during invitations for bids is "Bid security of not less than 2.5% of the total bid price from a reputable bank must be drawn to accompany the bid documents the bid security are supposed to be purchased for mostly 100 – 150 US\$ and is non-refundable.

This logically is unprofessional as the bid purchasers end up losing money if they are unable to meet the bid or the pre-qualification requirements. The writer pre-supposes from a professional and logical point of view, the fact that the bid security should be included as part of bid quotation value / amount for those who wins the tender.

The question is "why does a person who can not raise or show bank evidence of having at least 10% of tendered value before award of the tender be expected to lose 100 dollars or more simply because he was interested in the tender and only happens to be one of the indigenous upcoming contractors or construction companies who have not amassed a lot of wealth like other foreign and established construction companies be taxed to pay the bid document prices which he may not be able to afford in spite of the vast experience he may be having on construction activities. This disqualifies him right from the starting point and is extended from tendering.

This type of practice does not anger well in supporting and developing the upcoming indigenous citizens but only creates a class of privileged businessman who have the opportunities of getting most contracts due to their position of power and wealth. This is a very common case in East and West African as well as South African states.

The experience of this case is the fact that it does not help in promoting fair play in procurement management as a profession that also calls for development of supply sources and suppliers especially in the area of partnership and strategic supply chain management. This area of practice underlines ethical practices in procurement and needs a review.

The private sector has a different case analysis and history. The practices of the private sector procurement management are different from the government for the fact that it is organized with good discipline and practices in most organizations. There are some malpractices in some private organizations which have been prosecuted in court.

The private sector is therefore pro-active in maintaining systems, procedures and policies which has been their backbone for higher productivity, profits and organizational sustainability. The private sector procurement management has also helped to develop the professional standards and ethics and should be congratulated for a job well done.

Some of these private sectors and international organizations include firestone, Xerox, IBM airlines like KLM, BA South Africa Airways etc. the writer has worked with some of these organizations and has practiced procurement within them. It is from these organizations the writer gained his experience and practice which is a big help and contribution for writing this thesis.

CHAPTER XI

PROCUREMENT, TENDERING AND CONTRACTS ADMINISTRATION

General Overview: -

Contracts in most African countries continue to be vague e.g. procurement contract No. 01 for National Competitive Binding calls for bidders who must be performing similar contracts. You will find in sometimes cases of verbal contracts which are not enforceable by law.

The procurement bid also fails to make proper invitation for submission of specification, catalogues and brochures. This undermines conformity to prescribe specifications which are paramount and guide to proper bid completions and submission with supporting documents in some cases it is assumed that the bidder knows about bidding and should do right things.

The main question is why do we see sub-standard procurement bids advertisement?, and the simple answer is due to lack of professional and qualified procurement specialists heading various procurement departments or functions in most countries within African organizations who prepare incomplete bids / tender documents and sometimes cause confusion to the bidders or tenderers.

The bid advertisement in the first place fails to disclose the approximate value of the tender amount within the advert as a guide for the would be bidders so as for them to decide whether they would be interested with the tender or not, considering a bid amount of 10% of the total tender amount that has to be paid upfront to accompany the tender documents.

It is at this point the tenderer has to be given an opportunity to decide to tender or not and if he or she tenders can afford to pay the 10% upfront bid amount and the other required securities. .From a professional point of view, the procurement department together with the technical / engineering or consultants should first of all and before going to tender do their estimates of the

jobs they want to be done, and make that as the reserve bid approximate price plus or minus 5%. This would serve as a good guide for the willing bidders and encourage professional contracts tendering and bidding management.

The reserve bid approximate price will help to attract qualified category of bidders as others will disqualify themselves even before wasting their money in buying the tender documents due to the quoted total tender reserve bid amount..

This equally helps the parent organization floating the tenders or bids from wasting a lot of time and many on evaluating very many suppliers who may not qualify as well as making the whole exercise to be extremely professional. The newspapers in East Africa, West Africa as well as South Africa and Uganda had part of what the writer observes as having these type of bids and tender advertisements which fail to contain all the necessary details that should be disclosed in the area of pricing and specification. The papers can not be blamed as they advertise on behalf of client organizations.

I am not in any way advocating for the tender companies floating the tenders to reveal details that may create or give undue advantage to the bidders or tenders. I am only saying that an approximated or an estimate may be indicated as guide in the tender documents as total bid or tender amount reserve and specifically to be noted “Provided as a guide to the bidders and tenderers who must support all the figures they give for the work they are quoting for.” A properly worked out tender estimate gives a guide towards the prices quoted by the tenderers and the estimated bids prices would be a plus or minus 5% or 10% of the total estimate amounts.

(Newspapers for reference)

1. Premier News
2. The Spark
3. The News
4. The Monitor
5. Daily Nation
6. Kenya Times
7. Awareness Times
8. The People

9. The East African standard.
10. The vision

11. Concord Times

These are few of newspapers in East and West African countries which carry most of tender and bids advertisements in which the writer is accustomed to reading them regularly.

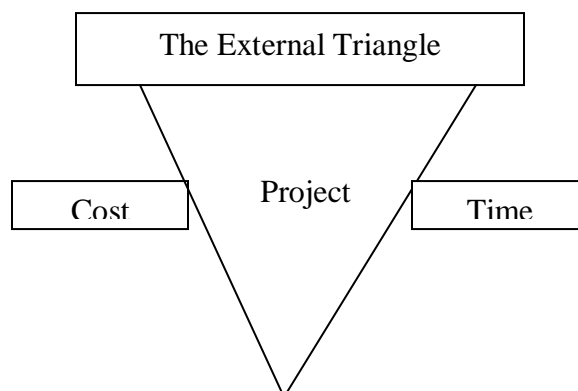
Procurement in Construction Industries: -

Procurement is designed as the process of obtaining goods materials and services from vendors for some consideration, and is the oldest transaction ever known to man as per the Aqua Group Guide to Procurement, Tendering and Contract Administration text book edited and updated by mark Hackett, Ian Langdon LLP – Published in 2007.

Construction in the old days were simple transactions but today's construction involve projects which are often vast in size and scope, involving several designers, specialist contractors, architects and consultants as well as taking a considerable time to complete.

The complexity of the construction industry arises from the need to accommodate numerous regulations involving all the terms and parties who are bound together by contractual agreements to perform in order to achieve a timescale largely dictated by specific business objectives. The key player should observe the elements of the procurement triangle.

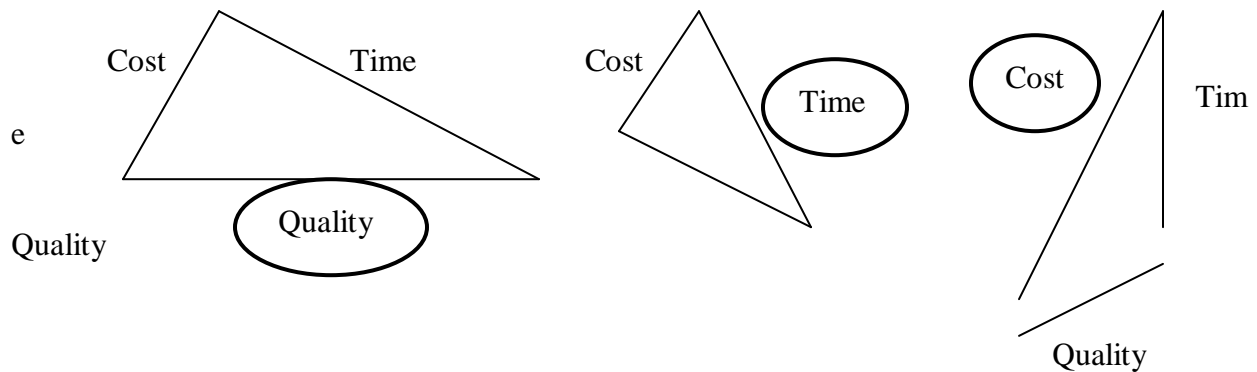
The Procurement Triangle.



Quality

The procurement triangle looks at the client's perspective in terms of the cost, quality and time paradigm which might be considered as the highest quality at the lowest cost at the shortest time.

Variations on the triangle have different priorities: -



A key decision when selecting a procurement strategy is based on the manner in which the detailed design affects the various components of the eternal triangle. It must be stressed that the particular circumstances of each project may result in different conclusions as to the procurement route that best satisfies the priorities of time, cost and quality.

Even the best procurement strategies, once established having regard to a client's priorities, can be undermined by such things as:

“Overly prescriptive briefs which give little flexibility to the design team.”

- Unnecessary high standards.
- Delays in decision making
- The use of one-off solutions rather than standardised products.

- Scope changes beyond those considered at the time of selecting the initial procurement route.
- Poor communication in the supply chain.
- Conflicting agendas and objectives.
- Doubling up of professional resources as between the client and the contractor.
- Fixed mindsets and recycling old solutions.
- Issue of design information which is late and or inadequate and or incomplete.

NB: - Reference to page 23 of Aqua Group Guide to procurement Tendering and Contract Administration edited and updated by Hackett, Ian Robinson and Gary Statham – Davis Langdon LLP has the following;

Other considerations which can influence the procurement strategies in construction industry include the design methodology, accountability and the risks involved in having to accomplish the job. However, the contractor is wholly responsible for health and safety of the workers during the construction phases or phase of the project and not the employer. This acts is contained in the construction (design and management) regulations 1994.

Items that affect indirectly the procurement strategies in construction work include: -

- Management of the project
- Nature of the project and the available information
- Contractor selection procedure and his supply chain management
- Activity with high risks to health and safety.
- The employer's rules for site operations.

Making The Contract: -

This area involves three parts as follows: -

- Terms and conditions of service and decisions related to the type and nature of the contract.
- The process of selecting and appointing the contractor.
- Determining the contract's price and payment mechanisms.

The most widely used contracts are: -

- SBC – Standard Building Contracts
- IC – Intermediate Building Contract
- DB – Design and Building Contract

These types of mainly used contracts give a space for further flexibility to the chosen procurement strategy as well as supporting the contract's contents and details.

The Tendering Procedure: -

This is the most commonly and professional method widely used in the procurement world for selecting the contractor. The purpose of any tendering procedure is to help in the selection process for a suitable contractor at an appropriate time with the required qualifications and experience ready to accept and to conform to the tender or offer details upon which a binding contract is drawn.

It is not possible to bid or to tender unless you are given the tender contents and the specifications as a guide towards what is required of you to follow and to submit. From my experience, tender contents, details and specification are very important in contracts and must be revealed as part and parcel of the tender documents at the time of tendering as they later do form the contract. Their omission in the tendering process could be interpreted as concealment of important details or materials / information and therefore make the final contract if drawn to be null and void.

The Dynamics of Tendering: -

The dynamics of tendering include the procedures and systems of the appropriate tendering structures and requirements.

These are: -

1. Contractual agreement documents.
2. Fixed price contracts.
3. Main contractor and sub-contractor arrangements.
4. The client's roles and responsibilities.
5. The client and the consultant's roles.

6. The inputs of all these subjects must be considered while making the initial tender documents as they contribute a lot towards successful completion of the construction.

Tendering system, procedures and the contractual agreements if badly drawn can cause the contractor to utilize the available resources ineffectively. This calls for contracting an effective and efficient team that is devoid of the traditional practices of the construction industry. The traditional practice involve: -

- Ineffective teams
- Uncompetitive work system and methods.
- In efficient and expensive work teams, management and wrong work systems techniques and procedures.
- Lack of use of procedures or following design work strictly and professionally.

Projects should offer opportunities for the introduction of new work techniques and methods especially in the area of procurement procedures which calls for the design team to review, and consider the followings as a modern way of managing construction work: -

- The economic use of resources – (labour, materials, plants the capital and manpower).
- The contractor’s contribution to design and the contract programme.
- Production cost savings.
- Continuity and work flow
- Work breakdown scheduling
- Risk, assumptions and accountability

Understanding the project: -

There is an English saying that “Nothing ventured and therefore nothing gained” supports the fact / principle that taking risk is necessary in order to gain rewards. The risk management is not therefore a process of eliminating risks and threats but having to contain and control them as well as managing them so as to minimize the degree of their impact in order to maximize on the expected benefits from the projects. Effective control and management of procurement functions

can only be done successfully if we fully understand the objectives and essence of ethical practices and integrity obligations.

Some key questions need to be asked and answered for the procurement project coordinators to be fully aware of what is expected from them in terms of the project's implementation and success.

The key questions are: -

- Why is the project being taken?
- What are their interests?
- What are the benefits that are expected to flow from it?
- Who is involved?
- Within what business environment is it being undertaken?
- What are the financial parameters? Relating to this project?
- What is the project's timescale?
- What are the factors that are critical to its success?
- What design solutions are being proposed?
- How much is the project expected to cost?
- Are there enough funds to cater for it?
- What are the possible risks / risk management plans?

The other factors which can affect the full realization of the projects benefits and success are: -

1. Risks – (Threats to project success)
2. Opportunities – Assumption made should be evaluated and utilized so as to increase the project value
3. Consequence – The risk can remain as a threat as it has to be controlled and managed throughout the period of the project.
4. Livelihood – probability level of unexpected things happening must be assessed and managed as well as controlled
5. Severity – this generally has to sufficiently identify which risks require active management and control and activity prioritization.

Some contracts need to be negotiated instead of dealing with them as fixed cost contracts or on cost re-imburement basis for the payment terms.

A fixed price contract needs not to have a finite sum attached to it at the beginning of the contract whereas in the re-imburement system, payment is based on a predetermined contractual estimate of cost with the project at phases.

The target cost contracts call for apportionment of the risks between the employer and the contractor and this affects the payment and at times favouring the employer. Payment is made partly on an estimated fixed price and partly on the actual prime cost.

The employer's position in contracts management and administration involve: -

- The employer financial position
- The employer's time requirements for building work
- The employer's corporate restrictions
- The building market in work scarcity situations.

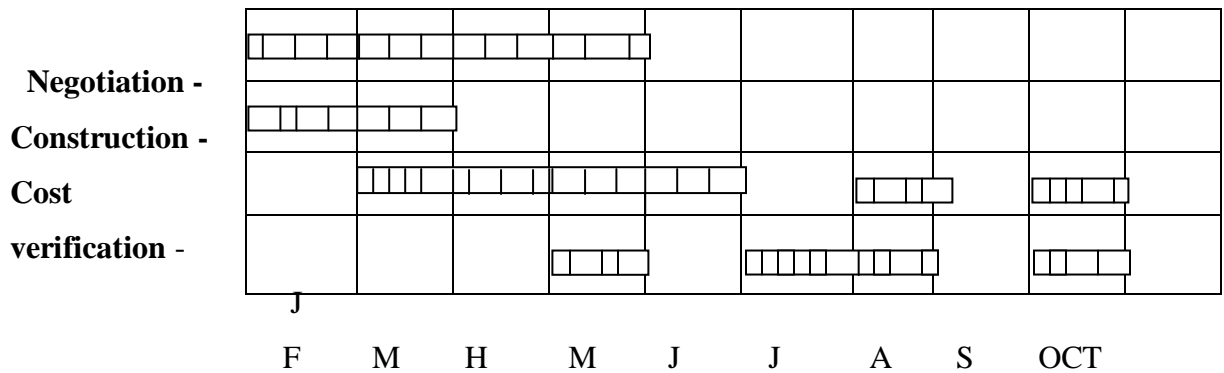
The contractor's position whose criteria should be considered during the evaluation includes:

- The contractor's financial position
- The contractor's financially acceptable risks level.
- The extent to which work is defined.
- The building market depending on the job market

Diagram for sequence of events in a construction project.

Some activities are done together at the same time

1 2&3 4&5 6&7 8 & 9 10&11
12&13



Payment can be negotiated to be made on the basis of the work breakdown schedule as per the diagram. This can be for work done as per the work break scheduling and sequencing.

Contract Administration: -

The definition of prime cost is crucial as in general, what is not specifically included in the definition is deemed to be included in the fee. Understanding must be created to all parties with regard to the contents and details of the contract and some consensus reached before the start of any work. The quantity surveyor must agree with the contractor on a working method of keeping the prime costs competitive while maintaining quality work as per the design and materials specification.

The following areas of construction work must be discussed and agreed by the contractor:

- Labour resources
- Materials acquisition
- Plant and machineries
- Creditors
- Sub-letting
- Defective work
- Cost control
- Final account

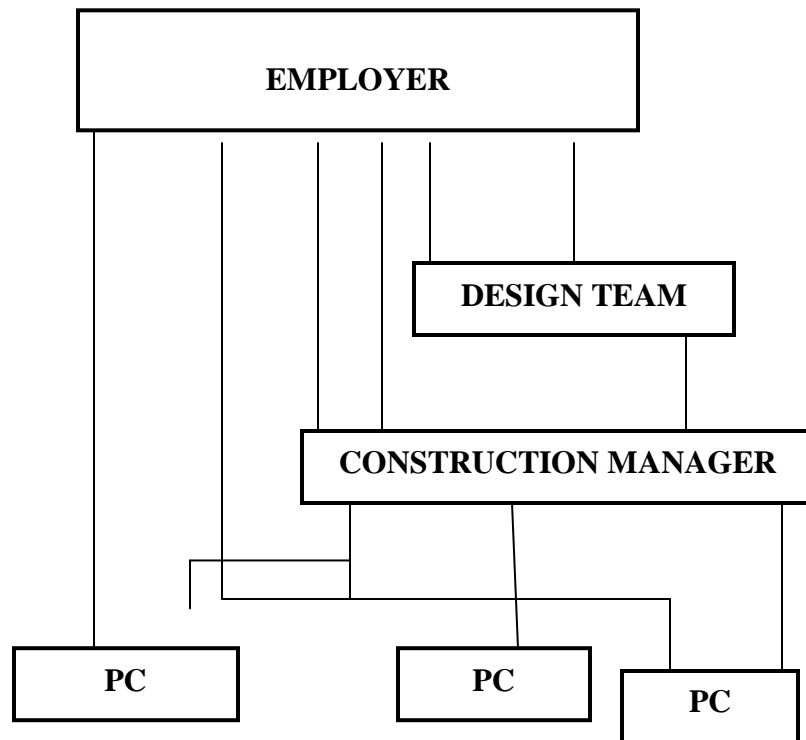
Management of Construction Contracts and administration: -

“Management and construction are forms of contractual arrangement whereby the contractor is paid a fee to manage the project on behalf of the employer. They are therefore contracts to

manage, procure, and supervise, rather than contracts to building” Quoted from the Aqua Group Guide. Under this arrangement, the contractor assumes some of the employer’s responsibilities as well as becoming a team member including the construction consultant.

This system derives some benefits for the success of the project as the contractor works in harmony with the remainder of the construction team instead of the adversarial, which is perceived in most traditional construction methods and arrangements as dealing with a stranger in the partnership procurement activities. In management constructing, the works contractors, or package contractors, are in contract with the management contractor while in construction management they are in contract with the employer on behalf of selection and appointment of a contractor;

A Diagram of Contractual Arrangement



Construction Organ Chart

KEY: -

- PC – Package Contractor
- Other Lines – Contractual Linkages

Contract Conditions: -

JCT (Joint Contract Tribunal) has published standard forms for construction management and management contract, although there are individual private forms used for same purpose of drawing out contracts. The main contracts comprise a series of sub-agreements. The construction management contract includes:

- Construction management agreement.
- Construction Management tender contract
- Construction management tender collateral
- Construction Management guide
- Management building contracts
- Management works contract tender and agreement
- Management works contract condition
- Management works contractor / employer agreement.

Contracts Administration: -

One of the management team's tasks is to draw up a detailed programme and procurement schedule. These shows the date by which design information is required by the quantity surveyor for the production of tender documents for each package. This also includes full preliminaries, a works contract programme and other details such as safety and quality control procedures. The quality survey needs to change and audit the package of the contractor's contents.

Professional Adviser: -

The employer will need some professional advisers whether the design includes them or not. Sometimes the advisers are hired as consultants.

Construction Management: -

The construction contracts are all with the employer. The advantages for this are:

- Increased commitment
- Failure of construction management.
- No sanctions
- Additional involvement

Design and build contracts: -

This is a contract in which the contractual arrangement calls for the contractor to undertake both design and construction of the project for a single contract team. However design and build contracts have emerged to be cost effective and most frequently used in procurement methods today. The design and build contracts are certainly useful for:

- Standard building types
- Buildings using proprietary systems where the manufacturer of the system might well become the main contractor.
- Building types which some contractors have become specialist.

Post Contract Administration: -

The employer will be well advised to monitor the contracts performance to ensure that the specifications are adhered as set in the contract documents and workshop and the performance is up to date for the required standards.

Financial Administration: -

The contractor must be paid the correct amount for both interim and final payments.

Programme: -

The main driving forces behind the use of design and build contracts is the desire to probably have a single point of responsibility closely followed by the hope of a reduced risk of rising costs

Continuity Contracts: -

The three types of contracts are:

- Serial Contracting
- Communication Contracts
- Term Contracts

The purpose and use of serial contracts are that they are ideally suited to a programme of work where the approximate number and size of projects to be constructed is known at the time of going to tender. This involves the quality of work which varies rather than the quality of specification in continuation contracts which differ from a serial contract in that they result from an ad-hoc arrangement to take advantage of an existing situation. Thus, if a contract is already going ahead on a particular phase of a business park site, the opportunity may arise at the point to commence a further phase with similar requirements.

The term contract differs from both serial and continuation contracts in that they envisage a contractor doing certain work for a period of time or term. In this case, the contractor agrees a contract to do all the work that he is asked to do within a certain framework and during a given period. Term contracts are generally set to run for a period of 12 months, but a longer period is likely to result in better tenders.

The purpose and main use for these continuity contracts involve:

- A faster start on site, resulting from the shorter pre-contract period.
- A competitive basis for pricing resulting from the initial tender.
- An experienced contractor who has solved the previous contract problems in the area of cost and time benefit.
- In continuation contract, the sum for the contract is notified on the basis of the original contract but with two substantial adjustments.

This may sometimes increase the cost of labour and materials to take and allow the time difference between the two tenders unless and if the two contracts was made on a fluctuation basis which in either cases can affect the decrease or increase in costing.

Proper timing of continuation contracts can ensure benefit of cost saving resulting from increased productivity. There could also be further saving arising from the economics inherent from the same contractor having to do a similar job and work for the same architect and employer.

An important factor to be noted is that productivity in construction measured in terms of performance. This area still continues to be reserved as a lot of analysis is required and is also dependant on the available information and the analysis capability and skills as the information equally available to the quantity survey or would have to be used during negotiation with the contractor in agreeing charges of various costs centres and contractual works.

Partnering in Construction Industry with reference to Procurement Management

Functions: -

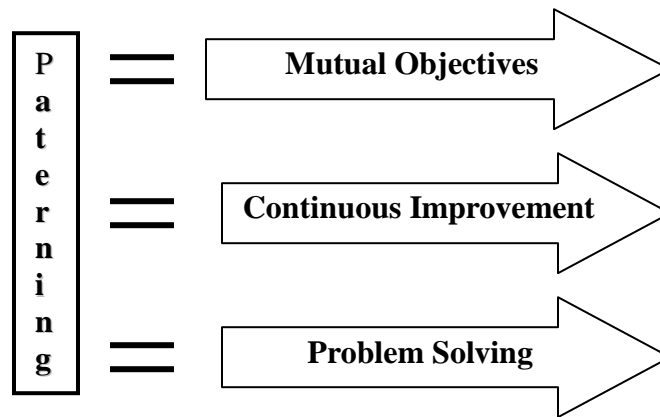
This is relatively a new area in procurement Management processes. Partnering is therefore a process in which an attempt is needed to improve the relationships and performance for the benefit of clients and other members of the team. Creating a “win-win” situation, while clients are concerned and dissatisfied with the results of individuals competitively tendered projects. These contracts because of stiff competition to win the tenders have failed to perform satisfactory in terms of:

- Time
- Cost
- Quality
- Pricing

The lack of satisfactory performance has let down all the parties concerned.

Fundamental Characteristics of partnering include:

- Formalized mutual objectives which may be binding or non-binding of improved performance and least reduced budget costs.
- The active search for a continuous measurable improvement system or procedure which can be measured against the construction industry key performance indicators.
- An agreed common approach to problem resolution in areas of conflict amongst the teams involved in the construction and contracting management.



A diagram for the three main fundamental characteristic of partnering

NB: - (Diagram from the Aqua group text)

Partnering is essential and is applicable to all projects in terms of supply chain management functions in construction industry and even in other organizations.

A partnering agreement should contain:

- a. The formulation of a statement outlining the philosophy of the parties
(e.g., that of working in good faith and trust.)
- b. The setting of realistic and achievement targets with a combination of procedures and systems to monitor and review the process.
- c. The agreement of a method where costing on budgets can be analysed, established and agreed and the savings can be shared by all participants
- d. A procedural framework including the definition of the parties' roles and responsibilities and lines of communication.
- e. An agreed procedure for the reduction of the parties disputes, disagreements without affecting or even damaging the original objectives of the partnering agreement.

The JCT has provided two framework agreements which are important in construction industry in relationship to the area and functions of partnering for mutual benefits.

NB: - A quote from the Aqua text book on procurement tendering and contracts administration says “The aim of this frame work agreement is to provide a supplements and complementary framework of provisions designed to encourage the parties to work with each other and with all other projects’ participants or partners in an open co-operation and collaborative manner and trust, and respect.”

The framework agreements contain ten core framework objectives which advocates mutual benefits for all the parties

These are:

- Participatory processes and environment of all parties.
- Team working and consideration of others
- Create predictability of out turn cost and programme.
- Improvement in quality, productivity and value for money.
- Improvements in environmental performance and sustainability, and reductions in environmental impact.
- Right first time with zero defects.
- The avoidance of disputes.
- Employer satisfaction with product and quality service.
- Enhancement of the service provider’s reputation and commercial opportunities.
- Tolerating each other and seeking arbitration where necessary.

Benefits: -

A properly set up and effective partnering agreement should seek and strive to achieve benefits in terms of time, cost, and quality for each of the partners.

These benefits can be achieved through:

- Reduced learning curve.

- Reduced abortive tendering cost.
- Administrative efficiency
- Improved communication and decision making procedures.
- Improved quality and the process of programming.
- Economics of scale.
- Continuity of work and personnel welfare.
- Risk management and analysis.
- Problem solving and decision making
- Tolerating each other and seeking arbitration where necessary.

Partnering needs commitment at all levels of the organization so as to ensure accrued benefits. However, risks persist in partnering which include:

1. Potential lack of accountability
2. Unrealistic targeting
3. Commercial pressure
4. Cost attitude
5. Change of personnel.
6. Benefit slow to materialise
7. Programme amendments
8. Dissolution on failure

This future partnering needs a lot of commitment, dedication, trust and flexible attitude and approach than has been the traditional practice in the construction and contracting management function, as well as accepting and understanding the fact that individuals are entitled to receive a reasonable return for their efforts and contributions and work.

Case analysis / Experience of the writer:

Developing countries experience problems related to very poor remuneration for their workers and lack of job satisfaction causing a serious migration of brain power for, greener pastures and mostly to the developed countries who can afford reasonable and better remuneration.

The fact that individuals are entitled to receive a fair and reasonable return for their efforts being not recognized or understood in most cases leaves them with no alternative. An observation even at most work situation in developing countries supports this case very strongly.

The salary structure and grading is poor and not consistent with the qualifications and professionalism or output of the people doing the jobs.

The main problem in this case based on the writers lengthy work experience and observation is the fact that:

- There is lack of recognition of professional expertise as quality output is compromised.
- Inability to match the qualification or professionalism with same level of monetary and non-monetary benefits due to poor productivity and low income.
- Low income for most organizations in African countries, due to non-professional inputs, lack of skilled labour, sub standard production.
- Exploitation of manpower by foreign as well as African employers / organizations due to availability of cheap labour.
- Lack of organized marketing systems and structure for services and products offered.
- High level of poverty.

The above are the main areas that mostly affect the labour market especially in the construction industry in African countries set up. Other includes:

- Low performance and output.
- Lack of motivation and teamwork
- Lack of career development and growth.
- Manpower wastage
- Cases of misappropriation
- Increased levels of corruption practices
- Too many failed or uncompleted projects

Partnering in Africa organization set-up has yet to be it inclusive as a new area as it has to be introduced and clearly understood. The writer who is a buyer and procurement specialist by

profession witnessed difficulties in supplier development and evaluation as any attempt to get closer to suppliers was construed to be for bribery. Cases of vendor rating and evaluation were difficult for fear of avoiding to be accused of being compromised.

This area has not developed in most African states from the traditional practices of viewing a supplier as a totally different person whose role is to supply goods and services as per the quotation and tenders. Negotiations are minimal in most cases as they are also construed to mean some “underhand dealings” for the buyer or the procurement officers/ managers who have to work under strict conditions which at times become business unfriendly.

The area of mutual trust and confidence is lacking within many African countries. This affects the profession adversely as it is not easy to develop supplier relationship for mutual benefits. The functions of supply chain management are not there in most organizations leading to stock-out and low production levels whereas these are areas which could be improved through adequate professionalism to induce efficiency in procurement management functions within organizations.

The writer was lucky to improve procurement systems and procedures in many organization within the Africa set-up especially in Kenya context due to support given by the chief executives, professionals in either Accounting, Secretarial, Management or Administration as they had a positive view of procurement management.

The area of procurement management was corrupted in African countries by unqualified people who were engaged in buying jobs with no professional or procurement background, knowledge in systems, procedures, techniques and even ethics. This scenario is slowly changing as per the writer’s observation of various African organizations today as most countries have even now enacted procurement bills which have been passed as law as well as employing qualified and procurement professionals. Unfortunately, qualified professionals in this field of procurement have been few for a long time.

However, the implementation of the bills and practices of ethics and procedure guidelines will still take time. The change is a commendable trend towards enhancing the values of the

procurement management functions within organizations and private companies including government ministers and parastatals.

Preparation and Invitation of Tenders: -

This process starts with the initial belief. The initial belief contains:

- Employer attitude.
- Environment
- Operational Factors
- Site
- Timescale
- Finance
- Market
- Costs
- Development control

The next step is the design process which starts with the sketch / scheme.

The quantity surveyor at the sketch, scheme stage will be required to prepare an initial cost estimate for further discussion. This is then followed by a procurement route method to suit the agreed design. A detailed development plan is necessary after agreeing on the procurement method. This includes:

- Floor layout plans
- Typical section showing relationship of the proposal to other building orientation, access, parking standards and other features.
- Detail of the materials and colours.

These details must be presented accurately to minimize criticism from third observer's opinions and views.

Programming: -

The purpose of the detailed pre-contract element of the programme is to set out a sensible and logical sequence of all the various pre-contract operations appropriate to the members of the design team and the required level of their input, together with any external factors which might be peculiar to the project or may affect the project.

Design Team Materials: -

The project leader should hold regular design team meetings to review:

- New and revised information.
- The detailed design
- The integration of the structural and services elements
- Specialist design inputs
- Health and safety principles and standards.
- Programmes progress.

Requirements should be translated into written format as the performance requirements plus the qualitative details of the selected materials, goods and workmanship comprises the area of specifications. The decisions on specifications are made by the design team and the employer from the basis of the written contract documentation.

One way of presenting this information of the specification from a traditional procurement route is to provide the bills of quantities. This is a process by which the quantity surveyor analyses: the drawings and specifications, and by following a standard set of rules of quantified descriptive items building up the constituent parts of the proposed project.

The primary purpose of the bills of quantity is to provide a uniform basis for competitive lump sum tenders and a schedule rates for pricing variations

Specialist Sub-Contractor and Suppliers: -

The use of certain materials, and goods or installations requires specialist knowledge and skills that are likely to be beyond those possessed by the main contractor. When this occurs, the design team will normally approach specialist suppliers or the sub-contractors for the provision of design and quotations for the work.

Quality Assurance: -

ISO 9000 is a series of standards for quality management systems overseeing the production of a product or service. ISO 9000 was originally published by the British standards Institution.

under the guide of BS 5750 but is now maintained by the International Organization for Standardization (ISO) The ISO 9000 focuses on a number of principles:

- Focus on the customer
- Sound leadership practices
- Involvement of people / workers at all levels
- A process approach
- A systematic approach to management
- A continuous improvement.
- A factual approach to decision making
- A partnership or mutually beneficial supplier's relationships.

An acceptance system / way for an organization to get up her own quality assurance system is to design a quality control manual involving;

1. The overall policy of the firm as regards quality of services.
2. Policies on such matters as information services, staff training, resource control and documentation
3. The preferred methods of running projects such as those based on the architect plan of work or other procedural manuals.

Other quality assurance standards include, ISO 1400, ISO 2000 which in all support various activities which are supposed to achieve various quality standard levels to satisfy the customers' expectations.

The quality standards are important within the construction industry as everything surrounds doing the right thing to avoid some future catastrophe of buildings falling on people or getting some sub-standard work finished at an expense of colossal money. Quality controllers in

construction industries must be strict and avoid being compromised as some activities in this industry involve human lives.

Pre. Contract cost control Chart: -

The pre-contract cost control entails the plan of work.

A Appraisal	B Strategic Briefing	C Outline Proposals	D Detailed Proposals	E Final Proposals	F Production Information	G Tender Documentation	H Tender Action	I Mobilization	J Condition To Practise Completion	K After Practical Competitive
Cost Aspect fore site Approach	Whole life costing	Assessment of Economic Gains	Assessment Economic Contract	Further Cost Studies						
Cost Aspect of Design Shares	Target Costs and Cash Flow Constraints	Cost studies of Design	Cost Schedules Of designs And Energy Opinion	Elemental Cost Plan	Cost Check of design Against Plan	Pre-tender Estimates	Up Date of Cash Flow Projection			
Initial Capital Cost Shares				Update Of Cost Plan as Design Develops	Update of Cost Plan and Cash flow Projection					
Nature of Mgt. and Cost Benefit Studies			Initial Cost Plan and cash Flow Projection	Cost Effects Compliance With Regards to Regulations		Update of cash flow Projection				
Cost of Preferred Solution				Firm Cost Plans					Post Contract Reports	

Cost Plan: -

This is a document that brings design and cost together at the pre-tender stage. When properly prepared and used, it can assist the design team in both controlling the total building cost and spreading that cost between the various elements of the building in the most efficient manner, and thus enabling the best use to be made of the employers money.

Life Cycle Costing: -

The design team must ensure that the building will satisfy the users requirements economically, and not only initially but also for the whole life of the building.

The Writer's Experience and Case Study: -

Life cycle of the building is an interesting area in less developed countries: Two actual cases cited here. One is from the writer's current residence and work in Makeni – Sierra Leone West Africa and the other one is from Kenya – (Past experience).

This Makeni case is for buildings that started showing cracks on the walls and corners within a period of less than seven months after completion and handing over.

The contractor is not ready to do any thing, as he handed over the buildings to the employer. Due to lack of concrete agreement, there is no way you can enforce or demand the contractor to re-do the job especially the cracks. Payments have been made and the contract seem to have been awarded on friendly basis and not through professional tendering and bidding system which considers price experience and similar previous work done before the whole buildings depict poor structure and design work as well as very poor finishing in the interior.

The situation is pathetic as you ponder on what could be the actual cause of the poor workmanship and why should it be allowed just for the sake of maintaining friendliness.

A thorough observation and investigation revealed as follows with regard to poor workmanship of the contractor:

- Lack of professional experience could be a major factor from the contractor.
- Lack of professional team of architects, designers, and consultant for the employer to get advise and value for money.
- Compromise due to the construction of the building.
- Lack of competitive bidding for the construction work.
- Lack of Quality inspectors at the site to check on quality of work being done.
- Favouritisms of contract awards based on friendship and not professionalisms
- The contractor is the designer architect, quality inspector and sub-contractor.
- Deals that compromise quality of work and materials.

Plan of work should properly analysed to include all details and to ensure inclusion of all clauses within the construction contracts so as for it to be binding on what exactly is to be done between the employer and the contractor. Clauses covering work to learn is of other parties' activities in the construction should also be well covered in the contract.

Contract performance for all parties must be enforced to full completion strict evaluation and supervision should be ensuring to activities of all parties. Pre-contract cost control for all construction work should also be undertaken.

The consequences of these poor quality works were experienced in Kenya, during 2005 and 2006 when several buildings collapsed, while construction was on going clamming lives of a number of people who were carrying on trade business on the ground floor. The other one was an old existing building which collapsed due to poor structure. These are actual cases which happened in Nairobi, Kenya.

The government and the architectural association took measures as per the laws. The point and lesson the fact that poor work caused deaths of innocent people as a matter of some carelessness from the construction builders whether action was taken, the fact remains that some people lost lives.

This is likely to happen from time to time in the future unless the building and construction industry laws are very strictly followed and enforced through use of professional bodies and the application of professional tendering and procurement systems procedures in the developing countries.

Drawings and Schedules: -

The role of drawings and structures:

Project risks management for the employer, the architect and design team in achieving a set level of quality in the design documentation and by all parties using quality management process is very useful and important.

Other areas helping drawings now includes Computer Aided designs (CAD). However, computer aided design has its own problems besides the good job it does in facilitating quick formulation of designs for various projects.

The other important area is the quality control procedures costs which need to be estimated and reviewed, checks for audit corrective and prevention action which in all provide internal feedback and records for performance of work and satisfaction.

This area of quality control and costing involve: -

- Management review.
- Internal audit
- Corrective and preventive action
- Risk Assessment
- Audit
- Design review and verification
- Feed back
- Post project review on selected projects.

The types and uses of specifications have changed dramatically in the past decade. They are no longer seen as documents that supplement the drawings or bills of quantities but as the key documents that define the scope and quality requirements in any construction contract.

In today's complex disarray of procurement, design and contractual methods, which seek to utilize the expertise of many contributions; the specification is the document that confirms precisely what one party agrees to provide to the other in respect of scope and quality.

Specification Writing: -

The following five processes are important in the production of a good specification. These are:

- Decide on format
- Collect information for input.
- Input information.
- Check and test.
- Deliver services or products.

Bills of Quantities: -

Tender and contract documents:

Bills of quantities are documents that describe the quality and give the quantities of the constituent parts of proposed building works.

The bills of quantities have two primary functions: Initially they are used as tender procurement documents to provide a uniform basis for competitive bidding. Lump sum tenders are contract documents serving as schedules of rates for the pricing of variations of tendered documents and the estimated / proposed cost of work to be done.

Sub-Contractors: -

In this area, we have both domestic sub-contractor and listed sub-contractor.

There are also specialist sub-contractors who actually handle complication building construction work / tenders.

The sub-contractor is required to exercise reasonable skills and care in:

- Design of the sub-contract works

- Selection of materials and goods for the sub-contract works
- Satisfaction of any of the contractors requirement performance criteria for selection of contractors should include:
 - Adequacy of available resource
 - Adequacy of technical and management structure
 - Financial stability and insurance cover.
 - Health and safety records.
 - Quality of work and adequacy of quality control
 - Performance records.
 - Work breakdown schedules preparation

The tender documents should be comprised of:

- A check list of all tender
- Instructions to tenderers.
- Copies of drawings, schedules and specifications.
- Copies of the bills of quantities and pricing schedules.
- Copies of health and safety plan
- Copies of the form of tender
- Suitable addressed envelops for returning tender documents.

Notification of the result: -

All tenderers should be notified that they were unsuccessful except the first three who may have tendered the lowest. The three should be informed and advised in writing of the fact that their tenders were successful for the final interview to determine the best out of the three.

The second and third lowest will be advised of further contact in case of non-response from the first lowest tender.

Contract Administration: -

Placing the contract:

The contract documents will normally comprise:

- The Articles of agreement
- The conditions of contract

- Drawings showing work to be done
- The priced bills of quantities or the priced documents and any other post-tender negotiation documentations
- The form of performance bonds and securities.

Collateral warranties are necessary and would need to be provided all tenderers / bidders. The two types of collateral are:

- Contractor collateral warranty for a funding agent.
- Contractor collateral warranty for a purchaser or tenant.
- The tenders / bidders collateral documents.

Third parties rights are contained in the third parties Act 1999 which enjoins parties to a contract as a viable alternative to collateral / warranties.

Articles for the contractor include:

- Duty to carry out and complete the work.
- Rights, duties and liabilities in respect of regulation irrespective of whether is the principal contract.
- Rights to refer a dispute to adjudication
- Right to refer dispute to arbitration if the parties have agreed on specific method or finally determining disputes.
- The clerk of work clause includes:
 - Duty to act solely as an inspector on behalf of the employer under the direction of the architect.
 - Right to give instructions to the person in-charge.
 - Right to be informed by the contractor of any discovery on site and precise location of any valuables and other object of interest

The person in-charge has duty to receive instructions of the architect / contract administrator and directions of the clerk of works.

Meeting for Construction Work: -

Construction meetings should be attended by;

- Employer
- Project Manager

- Planning Supervisor
- Architect
- Contract Surveyor
- Structural Engineer
- Building services Engineer
- Contractor
- Clerk of Works.
- Consultant.

It is suggested that the agenda of the meeting include:

- Introduction
- Factors affecting the carrying out of the work
- Programme of the construction work
- Sub-contractors and suppliers
- Lines of communication
- Bonds, collateral warranties, and insurances
- Financial matters
- Procedure to be followed at subsequent meetings.
- Periods and time of meetings
- Chairing of meetings.

Site Duties:-

The site duties include:

1. The Architect site visits for checking that the quality of completed work conforms to the agreed standard.
2. Checking that, the contractors work progress conforms to the programme.
3. Checking that, designs are being completed according to plan

Site Safety: -

Health and safety policy;

Health and safety at work Act 1974 calls for all employers who employ five or more employee at any one time to prepare such a statement of health and safety issues as the main purpose of which is to

identify risks involved at work, and to identify the precaution and to show who is responsible for carrying out those safety precautions.

A good policy should contain;

- Statement of employers' general policy with regard to health and safety.
- Details of the organizational or managerial hierarchy for carrying out the policy.
- Details of the practical arrangements for carrying out the policy.
- The name of the person in authority who is responsible for fulfilling the policy.

Instruction for the construction site.

The instructions from the architect should be distributed to all concerned parties including;

- Contractor
- Employer or project manager or employer's representative
- Planning supervisor
- Quality surveyor
- Other members of the design team
- Clerk of works
- Any sub-contractor affected by the instructions.
- Consultant

Variation as part of the post –contract cost control should be done for necessary review.

The variation means any alteration or modification of the design quality or quantity of the works.

Interim Payment: -

The Housing Grants, Construction and Regeneration Act 1996 (England & Wales) allows for instalment payments, stage payments or other periodic payments to the contractors for any work under the contract unless the duration of the work is less than 45 days. It is also the responsibility of the architect / contractor / or the administrator's responsibility to issue the interim certificates at the correct times while the employer is supposed to pay the contractor on time.

Completion, Reflect and Final Account: -

Completion of work can take three stages:

1. Practical completion
2. Sectional completion or partial possession

3. Completion of making good the defects

The ISB - (Clause 4.5) set out the responsibilities of the contractor, the Architect / Contract Administrator and the quantity surveyor in connection with the final account. This relates to the following;

- All matters relating to the contract must be dealt with, in a period of six months.
- Assessment of loss or expenses for the construction work must be done and finalised within a period of three months.
- When everything is completed, the architect / contract administrator has to send a copy of the final account to the contractor.

SBC – (clause 15) requires the architect / contract administrator to issue the final certificate within two months depending on completion of other areas of activities.

Delays and Disputes: -

All delays will fall into one of the following categories:

- Delays caused by the contractor.
- Delays caused by the employer or his representative.
- Delays caused by events out side the control of both employer and the contractor, referred to as natural events / calamities

NB: Delays and / or cost overruns during implementation stage are some of the construction serious attention for the management. The other one is the quality of the personnel who will do the work so as to ensure quality / service delivery.

CHAPTER VII

RECOMMENDATIONS AND CONCLUSION

The recommendations are based on the writer's working experience and observations for this thesis and many years of work with reputable industries, organizations, companies and institutions, and involving activities which include similar nature of work in the areas subjects discussed in this thesis.

Procurement in developing countries is still new and undergoing a metamorphosis change with comparison to industrialized nations. The need to nurture this metamorphic process carefully is very important.

Industrial organization and economic supply chain approach for the construction industry: - (refer to www.informaworld.com). A publication for construction management and economics has the following abstract – (December 2001 pages 777 – 788 by Kerry A. London; Russell Kenley) states:

A Reference from Industrial Organization Economic Supply Chain Approach for the Construction Industry: -

Author: Kerry A London; Russell Kenley

Published in: Construction Management and Economics, Volume 19, issue 8 December 2001, pages 777 -788

Subjects: Construction Industry; Construction Management; Economic

Abstract(I) States as follows

Understanding industries in terms of the concepts of chains and networks is becoming increasingly important in economies around the world, supply chain management and individual organization is an imagining field of research especially in the construction industry and their management disciplines although less attention has been devoted into investigating the nature of the construction supply chain and their industrial organizational economic environment.

This selected review of construction and mainstream management supply chain

literature is organized around four themes; distribution, production, strategic procurement management and industrial organization economics, and highlights the need to develop an industrial organization economic supply chain and construction framework for construction industry. The merging of the supply chain concept with the industrial organization model as a methodology for understanding the firm's conduct and industry management structure and performance is an important contribution to both construction supply chain literature has tended to focus upon manufacturing industries, where typically firms are permanent organizations.

This raises the differences between industries founded upon temporary basis compared with those which are permanent organizations. There is potential for the development of an industrial organization methodology applicable to the project management based industry. Industrial organization research seeks to have direct implications for the management construction industry's performance and government policies.

Keywords:Supply; Chain; Theory; Critical; Review; Construction; industry; industrial; organization; Economics” publication has Group of 77 and Chain statement on UN agenda 126: - review of efficiency of the Administrative and financial functioning of the UN: UN procurement: resumed session of 62nd session of the fifth committee of the Geneva Assembly (new York, 11th March 2008) states as follows: - (Personal Observation of the discussion notes) states :-

“The Un in previous negotiations has made proposals aimed at increasing efficiency, transparency and cost-effectiveness of the UN procurement. There is strengthened accountability to the Secretary General as an important area for full implementation of legislative mandates on procurement. The UN has also supported the training in ethics and integrity of procurement staff including senior levels.”

The question is this; what global programmes are there for least developed countries to address procurement management? Laws with regard to procurement are enacted by various governments but lack the supportive mechanisms to ensure professionalism practices as a development agenda for the UN procurement activities in partnership with government organizations for developing nations.

The UN procurement application of the best value for money principle can not be practiced in vacuum, unless procurement principles, systems, procedures, Ethics and techniques are embodied as part and

parcel of UN conventions on procurement in partnership with the developing nations to draw out strategies that will address procurement principles and Management for the 21st century and beyond.

“Equal, fair, and non-discriminatory access must be given to the companies from developing countries” – yes a good statement from the UN; but how will this be done? A clear outline of the methodologies and strategies to be adopted must be spelt out for the statement to have any value or benefits to the least developed nations. Congratulations! to the UN for the statement “No procurement reform will be complete or effective without a significant increase in the procurement for vendors from developing countries.”

Another statement worth of appreciation states “ The UN group strongly affirmed that increasing procurement opportunities for vendors from developing countries is an integral and fundamental part of the United Nations procurement reform” The reform strategy focused mainly on strengthening internal controls and optimization of acquisition and procurement management.

Other areas to be addressed in the future as per the UN Assembly include:-

1. Governance
2. Internal Controls
3. Procurement Management
4. Procurement opportunities

These areas need to be addressed for the sake of vendors in developing countries and countries with economies in transition both by host countries and in the areas of field operations and for effective implementation of procurement process, systems and procedures within UN agencies.

The UN needs to put some mechanisms and proactive strategies to support and empower the vendors in developing countries so as to ensure completion of the supply chain management.

The big question which I need to repeat and has been posed to the UN Assembly is; why there has there been more business seminars in industrialization countries than in developing countries in 2006 and 2007? In which way would this help the development of procurement practices in developing nations?

Strategies for the 21st Century Procurement Management Functions:

The answer to this question may lead us to understand the need for creating meaningful strategies and mechanisms of procurement practices and strategies in developing countries for the 21st century and beyond. The new breed of 21st century procurement practitioners will need different procurement strategies with different procurement methods and philosophy that entails:

- Partnership management and development in procurement activities.
- The philosophy of procurement management includes participatory process of developing countries for the 21st centuries and beyond.
- Procurement interface (developing countries versus industrialization nations)
- UN interventions in procurement management activities for developing nations
- A development of the millennium procurement development goals and strategies which will cater for interfaces between developing, and industrialized nations.

It has been said that the percentage of UN procurement from developing countries and countries with economics in transition approximates to 53%. The main question again as posed for the Un Assembly is “UN faces difficulties in accurately reflecting the developing countries actual benefits from the procurement opportunities”? The UN Assembly also posed the question “ Could the UN secretariat provide information on the impact or direct link of business seminars with regard to vendor registration and the increase of participation of vendors from developing countries in UN procurement”?

The concept of “green” or environmentally friendly procurement approved by the UN Assembly will chart a new beginning for a participatory process in procurement management forums and seminars which should involve all partners for development of the 21st century and beyond, procurement management strategies with focus on third world developing countries.

Further readings on procurement / supplies management are available from the following websites.

- <http://www.ppg.com>
- www.att.com
- [Htt//webdir.net/default](http://webdir.net/default)

APPENDIX 1

SURVEY QUESTIONNAIRE ON PERCEPTION AND RESPONSE FOR THE NEED AND ACHIEVEMENTS OF PROCUREMENT MANAGEMENT IN ASSISTING FASTER DEVELOPMENT (A CASE STUDY OF DEVELOPING COUNTRIES)

Education: -

B.A M.A MBA Others

Personal designation:

Accountant Marketer Designer Others Engineer

Doctor Lawyer

Occupation: -

Sole Proprietor

Partner

Manager

Director

Director

Investor

Buyer

Number of years in business / professional experience in procurement

L 5 yrs 5-10 yrs 10-15 yrs 15-20 yrs 20 and over

Questionnaire 1

How often do you do ?

	Regularly	Occasionally
➤ Advertise tenders	<input type="checkbox"/>	<input type="checkbox"/>
➤ Call for tender	<input type="checkbox"/>	<input type="checkbox"/>
➤ Advertise contract for construction of building	<input type="checkbox"/>	<input type="checkbox"/>
➤ Consult with design, architect, Clerk of works	<input type="checkbox"/>	<input type="checkbox"/>
➤ Hold site meetings	<input type="checkbox"/>	<input type="checkbox"/>

Questionnaire 2

Are you satisfied with operating systems, procedures and guidelines for the construction industry in Sierra Leone?

5

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very satisfied	Satisfied	Moderately Satisfied	Dissatisfied	very Dissatisfied

Questionnaire 3

	Strongly Agreed 5	Agree 4	Uncertain 3	Disagreed 2	Strongly Disagreed 1
➤ Lack of professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Poor quality work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Time consuming and delays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Lack of standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Lack of government intervention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Lack off strong professional institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questionnaire 4

What do you recommend to be done to reduce poor work in construction industry?

	Strongly Agreed	Agree	Uncertain	Disagreed	Strongly Disagreed
	5	4	3	2	1

- Advertise Construction and
Other tenders / work
- Use quality materials
- Enforce regulations / Laws
- Very heavy fine for defaulters

Questionnaire 5

Hoe are contracts awarded by government / private institutions / international institutions

	Strongly Agreed	Agree	Uncertain	Disagreed	Strongly Disagreed
	5	4	3	2	1

- very professionally
- very Poorly by either (Govt) (Private)
- Too much Malpractices
- Education on Contracts Administration
& Management is necessary

Questionnaire 6

What are the expected advantages which would potentially result from the adoption of new standards / enforcement of existing standards through empower of professional institutions

	Strongly Agreed	Agree	Uncertain	Disagreed	Strongly Disagreed
	5	4	3	2	1

- Simplicity
- cost reduction
- delay reduction
- Increased relevance to the profession
- Others (specify)

APPENDIX 2

SURVEY QUESTIONNAIRE ANALYSIS AND EVALUATION

1 **Introduction:-**

- a) The questionnaire was distributed to 14 organizations in Sierra Leone including construction industry companies.

- b) The distribution was as follows:
 - The Fatima Institute
 - Ideas Construction Co. Ltd
 - ALCom Constriction Co. Ltd
 - SALWACO Construction Company
 - Narrc Reconstruction Co. Ltd
 - Zaina Business Enterprise
 - Salone Micro-finance Trust
 - Centre for Democracy and Human Rights Organization
 - Future in Our Hands Organization.
 - Madam Organization
 - Youth for Development Organization
 - Woceger – (Women for Good Governance) Organization
 - Care – Sierra Leone
 - Concern International (Sierra Leone) Organization.

2. **Analysis:-**

List for the fourteen different organizations include:

- a) 5 Construction Organizations
- b) 7 NGO Organizations
- c) 2 International Organization

Out of the fourteen organizations eleven responded and returned Their questionnaires, these were:

- 4 Construction companies
- 5 NGOs
- 2 International Organizations.

3. Evaluation: -

- a) Majority of the respondents were others
- b) 50% did not indicate their professional designation
- c) Occupation of 50% of the respondents were sole proprietor 30% were directors and the rest (20) were managers.
- d) Most of the respondents have more than 5 years experience in business and no professional experiences of the people who render services to their organization

4. Question's Evaluation: -

- a) Question I; 50 of the respondents answered that tenders are advertised occasionally
- b) Question II; 30% of the respondents are satisfied, 50% are moderately satisfied and the rest 20% are dissatisfied.
- c) Question III; 60% of the respondents indicated lack of professionalism, 20% indicated poor quality work and 20% lack of government intervention.
- d) Question IV; 70% of the respondents advocated to advertise the construction and other tenders or work while 30% advocated use of quality materials.
- e) Question V; 50% advocated very poorly by government and private sector and 30% advocated for too many malpractices and 20% advocated education on Contracts Administration and Management.
- f) Question VI; 60 % advocated for cost reduction, and 30% advocated simplicity and 10% advocated for delays reduction.

5. Interference: -

Three classes can be noted in the summary of the evaluation:

- a) Lack of expertise in procurement management might be affecting the development of the profession in both construction industry and the others areas.
- b) Use of quality materials and lack of professionalism in advertising tenders is affected costs which would other wise be reduced drastically through competition in most cases only the international and some NGOs do advertising for their procurement requirements.
- c) Lack of adequate construction and building standards as well as government intervention might create a lapse within the operations causing people to undertake low quality construction work in terms of saving cost.

6. **Conclusion:** -

The Government and the professional institutions are suppose to act as the safeguards of the industry's good work and prstices.

Any lapse would mean the actor compromising standards at the cost of the peoples' lives and properties.

QUESTIONNAIRE FOR SELF TESTING AND UNDERSTANDING

1. What is the need of managing procurement in organizations and what are some of the potential benefits of doing so?
3. Explain the increasing importance of procurement management in modern organizations
2. What are the strategic tactical and operations in supply chain management?
4. Explain strategic patterning in procurement management activities within organizations.

5. What are some of the trade offs that might be factors in determining successful planning of procurement management, Tendering and Contracts Administration?
6. Why is work break down scheduling important projects which involves procurement management activities?
7. What is materials procurement planning (MRP) and how does it affect the procurement process within organizations?
- 8 Ethical Behaviour and practices is very important in all aspects of business and especially in procurement management functions. Define and explain the scope of ethics issues in procurement.
9. Computer-Aided –Design (CAD) technology is important component and product design work comment and explain the statement that “ CAD increases the productivity of designers from 3 times to ten times.

10. Make or buy decision is very important in procurement management functions why the decision is important especially to manufacturing or construction industries

11. Further Reading on supply chain management can be accessed through the following websites;
www.apl.com
www.campbellsoups.com
www.obermeyer.com
www.walmart.com

APPENDIX 4

The public procurement Act 2004 of Sierra Leone cited here as an important document within the implementation and practice principles of procurement management in Sierra Leone by both private and public civil servants who are vested with the responsibilities of materials, services and procurement of goods for utilization within their organizations.

The public procurement Act applies to the procurement of good works and services including any procurement financed in whole or in part from public or donor funds by the following bodies or organizations:

- a) central government ministers, departments, commissions and agencies.
- b) Local councils;
- c) Subverted agencies
- d) State-owned enterprises which utilize public funds.
- e) Public universities colleges, hospitals and all companies which are wholly owned by the state or in which the state has majority interest; and
- f) Any entity in the private sector which is given the responsibility for carrying out activities using public funds.

The Anti corruption Commission (ACCA) and the National Public Procurement Authority (NPPA) calls on all public entities to fully comply with the provision of the Act, section 33 of the public procurement Act provides that any public officer involved in requisitioning, planning, preparing and conducting the procurement proceedings and administering the implementation of contract, shall:

- a) Discharge his duties impartially so as to assure fair competitive access to the public procurement by bidders.
- b) Always act in the public interest, and in accordance with the object and procedures set out in this Act, in the regulations and in accordance with the public service codes of ethics, if any and where applicable, the local government Act, 2004.
- c) At all times avoid conflict of interest and the appearance of conflict of conflict of interest in carrying out his duties and conducting himself and immediate disclose any conflict of interest and excuse himself from any involvement of the matter.
- d) Not commit or abate any corrupt or fraudulent practices, Coercion or collusion, including the solicitation or acceptance of any inducements.

- e) Keep confidential information that comes into his or her possession relating to procurement proceedings and to bids, including bidders proprietary information;
- f) Not take up a position of any authority in any private concern with which he or she undertook procurement activities for a period of three years after departure, in addition, public entities are required in section 18 of the public procurement Act to report all procurement activities on quarterly basis to the National Public Procurement Authority. Contravention of the provision of the Act will render the public officers liable to administrative and civil sanctions as well as prosecution action; under the anti corruption Act 2000 as amended.

APPENDIX 5

Professional Challenges:

Professional challenges of the procurement Act from the writer's professional perspectives and long service career practices in procurement suppliers and materials management include:

- a) while it is prudent professional management to ask a person who has been in procurement services not to join organizations after departure in one organization and especially those ones the person was involved within procurement activities.
- b) Does the clause realize the damage that can be inflicted on a person's professional career as one is denied looking for employment in the company's of his or her profession's specialization and what are the professional remedies for this clause which seek to keep a professional out of job for 3 (three) ? (Those could be the only organizations or companies which could employ him or her due to the level of specialization).

On the other second challenge, it relates to the clause which talks on the person of public procurement officer using the requisitions and the clauses treats him as procurement officer or manager with some level of ignorance as to who actually is supposed to raise a requisition and what is a requisition and what does it facilitate in the procurement process.

The requisition is raised by the user's for demand of stock replenishment or for purchase of or services or supply of required stocks. Acquisition of supplies, which is part of the procurement management processes, is handled by the procurement officers who should be held accountable and responsible of the purchasing / contract or procurement process.

How would a store keeper or stores manager or warehouse, supervisor or materials controller come to be involved in the acquisition process unless he receives into the warehouse poor quality stocks or other malpractices that involves ware house or stock management and inventory control? This mix up can pose problems which could unless checked clearly and revised create issues of professional negligence and put some officers to share blames unnecessarily.

However, these are common fallacy in many countries with regard to Acts which touch on professional practices as they in most cases lacks adequate professional inputs and consultancy management and experience.

The challenges are not big areas of concern as the Acts have been drawn and enacted in very many countries. The challenges lie in the areas of upholding the values of management of professional and ethical practices and standards in procurement activities for all organizations which believe and care

for cost effective performances, transparency and accountability professional integrity whether in public, private or government related organizations.

APPENDIX 1 (E)

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APPENDIX (1F)

TERMINOLOGIES:

1. **Logistics: -**

A management function which ensures coordination of procurement, storage, stock control, distribution and transport of goods, materials, parts and services to customers / consumers.

2. **Procurement: -**

A wider perspective of the purchasing functions, including stores, receiving, issuing and stock control.

3. **Purchasing: -**

The process of acquiring materials and services from outside supply sources.

4. **Stock-taking: -**

Periodic counting of goods, materials and parts to determine their worth as part of assets.

5. **Stock-holding: -**

The values of goods, materials and parts held in a ware house at any given time.

6. **Lead-time: -**

The time taken to order and receive goods into the warehouse.

7. **Supply Chain Management: -**

Pro-active planning and coordinating the flow of products, services and information among connected supply sources focusing on adding value by all parties to the end user.

8. **Inventory Control Management: -**

The process of determining how much to order, when to order e.g. involvement of ROQ, ROL, minimum, maximum and safety/ buffer stock levels.

9. **Vendor: -**

Supplier of goods, parts or materials / services.

10. **Model (Buyer Phase Model): -**

A model of procurement that explains the necessary steps in buying.

11. Inventory Control: -

Analysis for demand patterns for stock which includes ROL, ROQ, and minimum, maximum and safety stock.

12. Work Break Down Scheduling: -

Planning and organization of how work should be done and when, including timing and supervision for completion of different phases.

13. Logical Frame Work Planning:

A statement of aims / narratives and objectives as well as priorities used to ensure a multi-sectoral approach for coordination of work activities in project management including construction industry.

14. VSO – Volunteer: -

Volunteer services oversees – (Volunteer). A person offering to volunteer his services, experience sharing and exchange of ideas for the benefit of others and particularly to foster partnership in development without consideration of pay benefits.

15. KLM / BA : -

These are Dutch and British Airways air lines.

16. Partnership: -

A process whereby shared values and benefits profits all the players.

17. JCT : -

Joint contracts tribunal

18. Lolos: Logistic level of service which is a measure of efficiency in materials availability and procurement performance in terms of stock outs. Stock- requests availability versus nil stock. Reports of average stock-outs should be less than 95%. Acceptable stocking levels should satisfy 97% of the total user demands.

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