COMPUTERIZATION OF BUDGETING AND FINANCING OF CAPITAL PROJECTS: CASE STUDY OF NIGER STATE BUDGET AND PLANNING DEPARTMENT.

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A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, SCHOOL OF SCIENCES AND SCIENCE EDUCATION.
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CERTIFICATION

This is to certify that this project work was carried out by Abdul Ganiyu Bello PGD/MCS/2000/878. In the Department of Mathematics and Computer Science, Federal University of Technology, Minna. Niger State.

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PROF. K.R. ADEBOYE, Date
(PROJECT SUPERVISOR)

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DR. S.A. REJU, Date
(HEAD OF DEPT.)

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(EXTERNAL EXAMINER,) Date

ACKNOWLEDGEMENT

This in fact will be an additional achievement in my lifetime academic pursuit. But "Wallahi", all these could not have been possible without Allah's guidance and protection. Whom therefore should I express my gratitude to first and foremost other than Allah? I therefore said "Alhamdulillahi".

"A tree however, (they said) can not make a forest". For the successful completion of this project work therefore, first I extend my gratitude and appreciation to Professor K.R. Adeboye my able supervisor whom despite his Deanship schedules devoted his time to supervise this project work. Secondly, for the successful completion of the entire program itself, I, am grateful to the Head of Department Dr. S.A. Reju and his entire members of staff.

I will indeed not forget my able Unit's head in the Department of Budget and Planning (Niger State) Mal. Usman A. Liman Mokwa. I thanked him very much for his co-operation and guidance to secure my release to attend this course. To my colleagues and friends both in the Department of Budget and Planning and during the course, I said thank you very much for your support and understanding in one way or the other---"United we stand divided we fall." May Allah therefore keep us together and crown all our efforts with resounding success-Amin.

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CHAPTER ONE.
GENERAL INTRODUCTION

1.1 BACKGROUND TO THE STUDY:

Budgeting is a process by which resources are mobilized and allocated for the purpose of executing programmes and projects based on certain priorities and objectives for a given period of time. Thus budgeting for capital projects is a process by which the resources are allocated for the purpose of executing capital development projects such as construction of schools, Roads, purchase of equipment e.t.c.

Budgeting and Planning are however inseparable because budgeting without elements of planning results in "budget" that lacks focus. On the other hand, plans that do not have a realistic recognition of the budgetary constraints will have little functional value. Therefore, effective budgeting of capital project is derived from a very sound planning that depends on qualitative and reliable data (information) on the project. Such information will includes: i) the need for the project itself, examining the cost and benefits accruing to such a project, and with the acceptance of this,

ii) Stage by stage information on level of project's completion. This is achieved through monitoring of projects by professional planners.

iii) Records on previous funding of similar project and

iv) Availability of resources in terms of fund at disposal. This information could serves as budgetary constraints.

Funding of Capital project as a result of problems associated with

Planning however has been a major source of concern to the Government. Thus we now have series of projects' contracts inflation, improper utilization of funds and priorities not well placed, improper record keeping of project's financing and worst of all is the manual method used in Budgeting, leading to abandoned projects all over places.

1.1.2 Projects' Planning Problems in Nigeria.

Project's planning in Nigeria is associated with series of problems. These problems in most cases hinder the realisation of project's objectives.

These problems range from:

Quality of Projects' submission: The selection of project for incorporation in a plan has been hampered by poor quality of projects' proposals submitted to Central Planning offices. For instance a large number of projects submitted by Federal and State ministries and agencies for inclusion in plans were mere projects' ideas which lacked the necessary preliminary appraisals to establish not only their feasibility, but to define their scope and estimated costs.

Also projects were known to have been submitted which bore no relation with the policy objectives underlying the plan and which did not reflects the established priorities in the plan document. Thus a reasonable number of ideas were admitted in the plan as "projects" with cost estimate which became grossly unrealistic when projects were property studied prior to implementation. This shortcoming is known to have affected the implementation of such projects in that more time is wasted in undertaking the necessary preliminary studies prior to project implementation.

Besides, there is also the issue of Financial Constraints: In many instances, expected Budget surpluses, which constitute the primary source of finance for capital project execution, have been much smaller than expected. These are the problems underlying the country's present financial picture. Therefore, greater efforts must be made to raise more revenue from both existing and new sources, and we must be more frugal in the management of available funds.

Lack of Plan Discipline: Greater plan discipline is obviously required all round to achieve more thorough planning; because poor plan discipline constitutes one of our serious implementation problems. For instance a development plan is not supposed to be so rigid that reasonable changes cannot be made especially to take account of unforeseen contingencies. This is recognized by the planners who have usually incorporated in the plan document procedures for affecting variations in approved projects. As soon as a plan has been launched, however, many of the executing agencies frequently proceed to introduce new projects which compete for resources with those in the plan and to change the scope of some of the plan projects in ways which usually cause their estimated costs to increase sharply. The effect of all these is to distort the plan and national priorities.

Related to this problem however, is the issue of: Paucity of Data: The supply of adequate and reliable statistical data is no doubt indispensable for good project's planning and programme formulation. Nigeria today has shifted from "planning without facts" although neither the facts nor the capacity is adequate. This phenomenon

therefore calls for an improvement on the database for planning purposes for ensuring better quality of the project plans.

One other problem is that of: Mass Commitment: The plan, like "the General Theory" is often more quoted than read. Although the objectives of the plan could be published, they are tucked away in a plan document but cannot be achieved. One way of ensuring mass commitment for the objectives and programmes in a project's plan is through mass education. The objectives underlying the project plan should be explained to the people through existing media in order to obtain mass support for their realisation.

There is the need to finally mention the problem of: Shortage of professionally trained and experienced personnel to undertake planning duties at both the Federal and State levels. For instance, planning duties have been undertaken by administrative officers and other professionals who are given ad-hoc training organized by professional institutes prior to the commencement of plan preparation. The implication of this arrangement is the discontinuity in the planning process when officers trained to undertake planning duties are redeployed on the completion of every planning exercise.

1.2 AIM AND OBJECTIVES OF THE STUDY.

This project work will focus on the application of computer to the process of Capital projects' Budgeting and financing. It will indeed help replace the manual system thereby enhancing efficiency, making reference to accurate and effective record kept on previous project and thus ensuring positive outcome and accuracy of fund disbursement. The aim of the project study will therefore be " How capital Project Budgeting and Financing can be computerized. With the following objectives:-

i) To improve the efficiency and effectiveness of Budgeting exercise in general. With computerization, capital project budgeting will have a positive and reliable focus and will be completed within a short period of time.

ii) Enhancing the capability of handling high volume of data, calculations and complex computations, thus solving the problems of in accuracy that hitherto Characterised manual method.

iii) Security:- Through storage of previous allocation (funding), changes that could leads to gross mismanagement can easily be detected.

1.3 SCOPE OF THE STUDY:

Among the responsibilities of the Planning Division in the Department of Budget and Planning Niger State, is the Monitoring and evaluating the performance of undergoing Capital projects (Under the jurisdiction of the state Government) spread all over the twenty- five (25) Local Government Areas of the state. Besides, they are also responsible for the preparation of state and Local Government Rolling Plans of Capital Projects.

These responsibilities will therefore serves as bases to which the study will restrict itself and is specifically intended to serve as guide in Budgeting process for ongoing and subsequent Capital projects and thus ease the work of the planning Division in the Department.

1.4: METHODOLOGY.

This refers to steps or process to be employed to accomplished the study. Thus various methods and techniques will be used. This will include:

i) Review of documents: this relates to secondary information obtained from records relating to the study. Especially on problems relating to Capital projects Budgeting, which calls for the study.

Extracting information through this source is not expected to pose any difficulty. The Department has a library, which is mainly concern with publications relating to various Divisions in the Department; and access to official documents within the Department will be granted provided they are not Confidential Document meant for the management only, since the researcher is an employee of the organization.

Another method is ii) Interview:-This method will involve formal contacts with professionals on the field of study and asking them question pertaining to the study. This will not only help understand how the Department through the planning Division relates with other government organizations, but how these organizations submits proposals and how funds are allocated to projects. Since the interview might involves the use of questionnaire or oral interview, the information so obtained is therefore going to be primary information.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION:

This chapter contains a description of Niger State Department of Budget and Planning and its activities. There is also the description of General Budgeting Process as well as the operation of the existing system.

2.1 THE DEPARTMENT OF BUDGET AND PLANNING:

Niger State Department of Budget and Planning is the organisation charged with the responsibility of preparing the state Government's annual Budget. This annual budget is a way of estimating how much money will come into government account as income (revenue) and how much money government is expected to spend (expenditure) within a period of time (preferably one year). However, the preparation of annual budget is not only the function of the department, as it is also responsible for: planning and coordination of the implementation of development plans of the state, and producing and disseminating relevant socio-economic data needed as inputs to development planning; policy formulation; decision making and sound economic management.

The department is one of the numerous departments under the Niger state Ministry of Finance and is under the directs supervision of the Commissioner of Finance via the Director of Budget and Planning.

2.2 STRUCTURAL/ ORGANIZATIONAL SET-UP OF THE DEPARTMENT

Niger State Department of Budget and Planning consists of Four Divisions, namely:

i) Administrative Division;

ii) Budget Division;

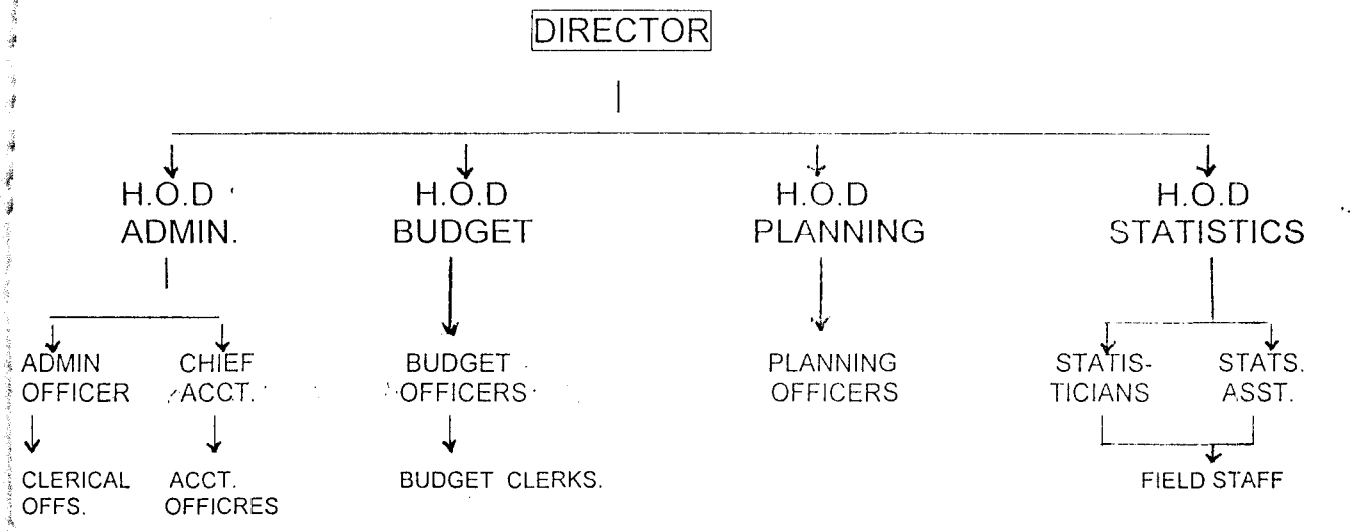
iii) Planning Division;

iv) Statistics Division.

The Department is headed by a Director who is directly responsible to the Finance Commissioner via the Ministry of Finance Permanent Secretary. Each of the division is headed by a Divisional Head.

The Divisional Heads reports directly to the Director.

ORGANISATIONAL CHART OF THE DEPARTMENT



2.3 DUTIES: BASED ON ORGANISATIONAL SET UP.

2.3.1 DIRECTOR: The Director of Budget and Planning is the head of Department and is directly responsible to the Honourable commissioner of Finance via the Permanent Secretary to the ministry. The Director takes charge of the day to day running of the Department.

The Director's functions are as follows:

(i) Overseeing the activities of all Divisions in the department,

(ii) Coordinating planning and budgeting process,

(iii) Preparing and writing budget speech,

(iv) Preparing report on budget performance;

(v) Issuing budgetary measures and control; and

(vi) Advising Government on fiscal policy and developmental issues.

2.3.2 ADMINISTRATIVE DIVISION: - The divisional head of the Administrative Division is directly responsible to the Director.

(I) Is responsible for the general administration of the department; staff matter and welfare.

(ii) Serves as a link between the Director and staff of the department;

(iii) Keeps up – to – date report on staff and all aspects of office management.

2.3.3 PLANNING DIVISION: The divisional head of planning division is directly responsible to the Director. The division has the following functions.

(i) Advising Government on policy matters.

(ii) Planning and Co-ordination of the implementation of development plans of the state.

(iii) Preparing Capital budget and rolling plan;

(iv) Co-ordination of the state's technical training programs and

(v) Monitoring and evaluation of Capital Projects.

2.3.4 BUDGET DIVISION: The head of this division is directly responsible to Director. This division's functions are;

(i) Authorization of expenditure

(ii) Preparation and presentation of the state's Annual Budget and supplementary Budget.

(iii) Monitoring performance of budget and controlling expenditure to ensure that they are in accordance with budget policies and magnitude.

(iv) Making advances from unallocated funds and the stabilization fund of the state.

2.3.5 STATISTICS DIVISION: As in other divisions, the head of statistics Division is directly responsible to the Director. Functions of the division includes;

(i) Coordinating statistical activities in the state.

(ii) Liaising with the Federal Office of Statistics (FOS); Planning, Research and Statistics Department (PRSD) of the State's government organization and Local Governments.

(iii) Producing and disseminating all essential statistics needed for policy formulation and decision and

(iv) Developing formats for data collection and harmonizing statistical concepts and definitions within the state.

2.4 BUDGET IN GENERAL

In general, Government Budget is a financial Plan that covers the outlays and Receipts of the government or the state as described in monetary terms; prepared and approved to a defined period of time (Preferable one year). It therefore indicates how government proposes to raise money (revenue) and somehow brings in to some kind of relationship the revenue it intends to generate with the expenditure it intends to incure.

Thus Government Budget estimates consist of two major components: Revenue and Expenditure. The former is subdivided into two sub-components; recurrent revenue and capital receipts, while the later also has recurrent expenditure and capital expenditure.

Recurrent Revenue:- Refers to income generated through (i) taxes, fines and fees, licenses, earnings and sales, rents, re-imbursement and miscellaneous items, and (ii) Statutory Allocation from the Federation Account.

Capital Receipts:- Income generated through loans and grants either from internal or external sources.

Recurrent Expenditure:- Money spent by Government on personal emoluments (Salaries and Allowances) of workers (personnel cost) and the running cost of Government activities (Overhead cost).

Capital Expenditure:- This implies expenditure on capital development projects. For example expenditure on construction of Dams, Government Quarters, Hospital, Procurement of Agricultural Machinery, equipment etc.

2.4.1 Source of Fund to Capital Development Projects.

The main Government source of fund to capital projects is the Net Budget Surplus. By definition, Net Budget Surplus is the total recurrent revenue less recurrent expenditure. It represents an amount from recurrent revenue that is available for capital investment. Thus the higher the Budget Surplus, the higher the resources available for capital investments.

One of the ways to maximize the development fund is to maximize the recurrent revenue and minimize recurrent expenditure.

Presently, the main Financial Resources to state government includes the following:-

Finance Resources

1. State Internal Revenue
2. Statutory Allocation of Revenue from Federal Government
3. Non statutory Recurrent Grant
4. Total Recurrent Revenue (1-2-3)
5. Total Recurrent Expenditure
6. Budget surplus/Deficit (4-5)

From above the Budget Surplus/ Deficit, which is the sixth item, is obtained by deducting the Total recurrent expenditure from Total recurrent revenue, which is also obtained, by deducting both statutory allocation of revenue from Federal government and Non Statutory recurrent Grant from State Internal Revenue.

It is therefore (i) the Net Budget Surplus/Deficit obtained as indicated above including: (ii) Opening balance in the Development Fund at the start of the year.

(iii) Federal Government Capital Grant;

(iv) Federal Government Loans (Loan stock);

(v) Any other Internal Grant/Loan;

(vi) External Loans/Grants.

(vii) Miscellaneous.

That constitutes the main bulk of Capital Project Development Fund. Having obtained enough of this, the Capital Budget, along side the Recurrent Budget will be carried out.

2.4.2 Capital Budget process in Niger State

The capital budget preparation begins via a circular from the National Planning Commission (NPC). This circular highlights the guidelines to follow, the ceiling and Core project's priority areas.

- It is this circular that is endorsed, summarizing details and policy issue that will be sent to all government ministries, departments/parastatals urging them to adhere strictly to the laid down guidelines from the Planning Commission.
- The planning personnel in each ministry or Department responsible for coordinating the estimates of their organization (based on the circular), compiled all the capital projects, proposed estimate and actual expenditure of each project in an approved manner and submit it to the Department of Budget and Planning.

- The Department critically examines the submission by analyzing the economic of each, evaluates the supporting Documents and suggests any alteration it considers necessary. This analysis will be carried out by the Department of Budget and Planning considering the available fund reserve for capital projects normally the Net Budget Surplus earlier spelt out.
- The Budget and Planning Department now organizes budgetary Discussions with the various organizations at different levels. The earlier submission form each organization needs to further pass the tests of successive stages, after which the Budget and Planning Department prepare a comprehensive compilation and recommendations which will be submitted to the state government for consideration and them submitted to the state House of Assembly for deliberation and final approval.
- Every Ministry will now apply to the chief executive for release of fund for the implementation of their stipulated projects; and with the commencement of the project, there will be monitoring on quarterly bases by the planning officers from the Department of Budget and Planning.

All these processes are carried out between July/August of each year through to the middle of December before the Budget announcement late December or early January.

At each stage of the budgetary process, a lot of paperwork is involved as all budgetary work is manually carried out.

CHAPTER THREE

ANALYSIS OF THE PRESENT SYSTEM AND DESIGN.

3.1 INTRODUCTION.

With the continuous advancement in Information Technology, new Systems are not only created but existing ones are experiencing tremendous improvement. In any organization, however, the process of System Analysis involves a number of steps that has to be followed or applied to any study of an existing system.

These steps include:-

(a) Problem definition.

(b) Feasibility study.

(c) System Analysis.

(d) System Design.

(e) Acquisition/programming.

(f) Implementation/performance of evaluation.

3.2 PROBLEM DEFINITION:-This refers to the process of determining the nature and scope of existing system's problems. In this study therefore, the process of Capital Project Budgeting and Financing as carried out by the Department of Budget and Planning is associated with problems mainly emanating manual processing.

Recently the Niger State Government having realized the need for computerization of all its organizations (Ministries, Department/Parastatals) purchased some computers, which are distributed to these organizations and among the beneficiaries of these, was the department of Budget and Planning.

But besides word processing activities, these computers are only being used to key in and produce hard copies of documents manually processed from the initial stage. Besides, Data collected on projects as submitted by various Government organizations are again collected in files, crossed- checked and kept in table trays pending Budget discussion with the concerned government organization. This will even be before the processing commenced. Thus all these will indeed not augur well as they are steps associated with problems.

The Problems definition associated with the existing system is further categorized & discussed below:

3.2.1: Collection of project's Data:-This information which usually comprises all the necessary information on project such as location of project, stage of on-going project's completion, amount expended at that stage, balance expenditure , amount expected to be spent if project is new e.t.c. are normally sent in by Ministries, Departments and Parastatals and thus form the basis for capital Budget preparation.

3.2.2: Processing the data:- This is where the present system has lapses. The information sent in by concerned organization is processed manually by the planning officers who are responsible for capital Budget. Calculators are used to processed figures when the proper budgeting commences, and this again is where the Budget Surplus meant for capital project are spread. These figures are thereafter sent to the computer center for keying-in and production of Hard copies of the Documents.

3.2.3: Data storage, Retrieval and Updating:- Although on producing Hard copies of Capital Budget, Data relating to it are stored in computer, but hardly could reference

be made to it unless if the figures need be changed or there is subsequent need for reproduction of Hard copies within the Budget period. But if not the whole process is revisited again with subsequent years' Capital Budget.

Below therefore, are problems associated with the existing system defined above.

i) Accuracy: Due to manual processing adopted, the final output is often prone to errors, and the accuracy of document is not guaranteed. Thus the final total figure obtained is more often than not subjected to series of crosschecking.

ii) Security:- The project's information said to be sent in by organizations and figures allocated to various projects after screening are valuable documents but are said to be kept in File jackets on office trays, thus not secured. They could easily be tempered with before they are processed by the planning officers and to be keyed in to the computer.

iii) Manpower requirement:- The planning division is responsible for capital project Budgeting. Presently, the Division is understaffed. Thus the issue of Duplication of efforts needs not be emphasized considering the facts that, the whole process will require Budgeting for Capital projects spread all over the Local Government Areas in the state. Closely linked with this is the issue of:

iv) Timeliness:- Because of the shortage of staff, a long period of time will be involved considering the number of projects.

v) Cost of Stationeries:- Stationeries are needed by organizations to submit project's report to the Department of Budget and Planning; these stationeries are also needed during the processing by the planning officers and during the Budget Analysis, up to the printing stage. At every stage therefore, there is need for stationeries thus make the whole process uneconomical.

3.3 : FEASIBILITY STUDY :-

The Feasibility study generally described the study of the existing system of Capital Budgeting process in sufficient depth, thereby determining whether there are solutions to the problems identified above.

It further has the advantage of allowing concrete criticisms of the present system against the principles of procedure after which the strengths and weaknesses of the existing system are apparent. The principles of procedure used are:

a) Work flow:- The process of capital project Budgeting and Financing is Characterized by series of linkages between the planning Division of the State's Department of Budget and Planning, concerned Ministry, Department/ Parastatals and the Finance Ministry. There are tend to be lapses as in many cases projects not Budgeted for are undertaken in the Financial year and this tend to affect the whole job and thus causes delays and mismanagement of resources as supplementary Budget has to be considered as alternative solution.
b) Reliability:- This has to do with the security of the information on projects sent in by concerned organization. In most cases, the information could be tempered

with by unauthorized persons as data are kept open. Furthermore, information on papers could be misplaced; all these make the whole system unreliable.

c) Purpose:- The current system of Capital Project Budgeting does not conform with the following purpose below.

   i) Protection of information against unauthorized users.

   ii) Elimination of data redundancy.

   iii) Speedy retrieval of information on project.

   iv) Limited storage space.

d) Economic:- considering the cost of stationeries, manpower requirement to carry out the various stages of the capital project's Budgeting, the present system is not economical.

e) Flexibility:- Any slight change in a particular capital estimate will affect the whole Capital Budget. This has been the situation in many occasions making the system not flexible to changes.

f) Timeliness:- With all the above experiences in the present system, time is seriously wasted.

3.3.1 Testing Project's Feasibility: (Evaluating Proposed Project)

"If a problem can be solved, it may be so complex and expensive that it is not Feasible, hence the name feasibility study". The feasibility carried out must have some testing project, which should include the following: -

a) Operational Feasibility:- Paramount to this project study, is the applicability of the proposed system of computerization of Budgeting and Financing of capital projects

by the Department of Budget and Planning. Despite the fact that, the Department has obtained additional Computers from the State Government in addition to the existing ones, Capital Budgetary preparation is still being carried out manually thus shows that there is every need for personnel development of the planning officers in form of training. These crops of professionals are responsible for the capital Budgeting process and non-is computer literate.

b) Technical Feasibility: - This seeks to clarify if the proposed system can be done with current equipment, software and resources in place within the Department.

c) Economic Feasibility: - This aspect is taken into consideration to assess cost of implementing a proposed project alongside the benefit to derive from implementing it. There is little to be said here; this is because with the purchase of additional machines by the state Government, little is needed to be done in terms of Hardware acquisition. What is now require mostly is in terms of training the planning officers on how to operate and maintain both the software and the system. For instance from the Cost-Benefit Analysis of the proposed project, the following will be expended:

3.3.2 Cost- Benefit of the new system:

i)Cost Analysis of the System

The cost Analysis is generally divided into the following:

a) Development Cost and b) Operating Cost.

a) Development Cost:- This will include the cost of equipment and installation (e.g. New Building or office if necessary); Software development cost and Personnel Costs (staff training).

b) Operating Cost:- This has to do with consumables materials (such as Stationeries); maintenance cost; utilities; Miscellaneous etc.

But with the acquisition of most of the Hardware through the State Government as already pointed out, and an already existing Computer Center, the cost Analysis is partially completed. Emphasis to the Department will be on Operating Cost, which will mostly comprise:

i) Training of Professional planners responsible for Capital Projects' Budgeting (at least 2 planners for 6 weeks)=N=3,000:00 per week	=	=N=36,000: 00
ii) Consumables for one year:	=	=N=52,000: 00
iii) Maintenance Cost:	=	=N= 40,000: 00
iv) Utilities and	=	=N= 25,000: 00
v) Miscellaneous	=	=N= 60,000: 00
		=N=213,000: 00

3.3.2: c) Rationale for Training and Maintenance:

Training: It is necessary to provide an extensive training to the planning officers to overcome their computer Phobia. This training is also necessary to even the present staff in the Computer Unit of the Department. The degree of training required for various categories of personnel will depend upon the complexity of the system and skills presently available. It is therefore pertinent to ensure that all the persons to be involved with the new system are capable of making it an operational success.

Maintenance:- Closely related to this, is the issue of maintenance. Programs do inevitably have errors that must be corrected when they appear. The planning officers who will be new to the system (more often than not) may not have communicated accurately, so that certain aspects of the system must be modified as operational experience is gained, a maintenance expert and a programmer ought to be employed permanently so that as users work with the system, they will continue to learn more and should there be any question or confusion stage, there will always be somebody available to assist and as time passes by, they (staff) will be developing an idea for change and enhancement will be made by them.

ii) Benefit Analysis of the System

With the above cost Analysis, which is only reflected on the operation Cost, the benefit of the system will therefore outweigh the cost.

The following however will be the expected benefits:-

a) Productivity of the planning officers (with their expected computer literacy) will therefore be enhanced.

b) The system will also be multifunctional. With the participation of professional Planners, the computers will be put into different uses rather than just word Processing.

c) Therefore flexibility of data manipulation.

d) It is too economical. No purchase of Hardware.

e) Efficiency ensured and reference to accurate and reliable data enhanced.

f) Data security.

3.4 SYSTEM ANALYSIS.

This refers to the process of analyzing a system to see if computerization would be a useful, productive and more profitable way of performing an organization's operations. As already pointed out, computer system in the Department are employed for the purpose of keying in and printing out of Hard copies of Budget after manual processing of project's data by the planning officers. This is achieved with the help of computer personnel in the Department.

In system analysis however, the first step normally involved enquiries to be made about the system's requirements because this cannot be overlooked when introducing a new system. Under the requirement we have requirement determination, which has the following:

i) Requirement investigation

ii) Requirement specification.

3.4 :i) Requirement Investigation

The associated problems in an existing system would serve as a guide to investigating the requirement to be incorporated in the new system. For instance the problem associated with the manual system of processing project's data and budgetary allocation in the Department of Budget and Planning need not be investigated. It is no doubt time wasting, inefficient, leads to improper documentation and a host of other disadvantages.

3.4 ii) Requirement Specification

This will involve question on weather the new system can be developed in a sensible amount of time given the available resources.

In the case of Budget and Planning Department Niger State, the above question has been solved since there is an existing computer center already and all the needed Hardware is available. What is now require is introduction of software and personnel development with regards to training as already pointed out in the economic feasibility.

But despite this, the new system requirement will be as follows:

a) HARDWARE

i) Compaq compatible PC

ii) Main memory: 64MB.

iii) Hard Disk.

iv) Packets of 3.5' Diskette (Floppy).

v) Visual Display Unit (VDU)

vi) Printer: Laser Jet (preferably-HP1100)

vii) Stabilizer: 1000V

viii) UPS: 500V

b) SOFTWARE

i) Disk (DOS): MS-DOS.

ii) DBMS Package: D-base V

iii) Windows 2000.

3.5: SYSTEM DESIGN:

Output- Input Specification:

These constitute parts of the design elements of the new system; because having reach this stage, the new system now has to be designed; but what is the out-put specification?

3.5 i.) Output Specification

It is always necessary to consider what is required from the system before deciding how to go about producing it. To therefore determine the out put requirement, we consider the Form, types, volumes and frequency of reports and documents.

The main concern of this project study is the Computerization of Capital Projects' Budgeting process and Financing. For this reason, there is need to produce a breakdown of Budget on Capital Project thus on Annual Basis and the performance of the budgetary allocation to project. The study is therefore going to have a report file for the preparation and review of the Capital Budget.

The report files will be structured based on the contents of the Formats from the National Planning Commission which all Government organizations abide with.

The structure will therefore indicate Project Number, Location, Sector, Sub sector, Preceding year Project's estimate, Actual expenditure e.t.c.

3.5 ii.) Input Specification

This will greatly be influenced by what is required as the output. In determining the Input of a system, consideration will be given to:

a) Data collection method and validation.

b) Types of Input Media available.

c) Volumes of Input Documents.

d) Design of Input layout.

Having seen the four factors above, the report file for the preparation and review of Capital Projects spelt out as the output specification above, will also serve as the input specification.

CHAPTER FOUR

SOFTWARE REQUIRMENT

4.1 INTRODUCTION

Having reach this stage, the study through this chapter, will now focus on the software required and its features to accomplish the proposed Capital Projects' Budgeting Computerization.

4.2 THE CHOICE OF SOFTWARE AND PROGRAMMING LANGUAGE

Since the study will contain information on projects spread all over the state, Database would therefore be more favourable to accomplish the said Capital Project Budgeting and Financing Computerization. Dbase is a set of programs, which deals with Dbase management activities. It permits access to any or all data quantities with equal ease through a set of programs known as the Database Management System.

A database is an organized and integrated collection of data, structured in other than ordinary multiple form such that duplication of data is minimized if not eliminated entirely. This database with regards to this study will, be a pieces of information on Capital Projects. The information will be put together for use and will be available to number of users in a number of ways, so that users can find out many information on capital projects by making enquiring of the database.

Some Databases may be accessed using User – friendly query languages on Visual Display Units (VDUs). Access may also be made via user programs written in a

conventional Programming language such as Common Business Oriented Language {COBOL} or PL/1, which acts as, host languages.

Due to the importance of database especially in providing data resources of an organization, it has been adopted in the world of computer today and as such used by many organizations.

There were number of reasons for this. Example to :-

1. Increase data independence:- Data independence is the ability to change the format of the data or the medium on which the data is held or the data Structure without having to change the programs, which uses the data. Conversely, it also means that it is possible to change the Logic of the programs without having to change Files.
2. Provide a Management view:- Corporate view of organizations can not be gained if files are established on an application basis and not integrated as in a database.
3. Reduced data duplication:- If data is collected only once, and verify only once, there is little chance of inconsistency. With conventional files, the data is often collected at different times and validated by different validation routines, and therefore, the output produced by different systems could well be inconsistent. With reduced data duplication, data can be shared but it is essential that good integrity and security features operate in such system.

4. Increase speed of implementing system:- System ought to be implemented in less time. Thus Database Management System (DBMS) which constructs, expands and maintains the database provides the user with the services needed. It also provides the technicalities and the inter-phase between the user and the data in the dbase.
5. Increase data integrity:- With so many users accessing database, there must be some control to prevent failed transactions leaving the database in an inconsistent state. Although, these aspects represent challenges, they also represent an opportunity to increase data integrity and security significantly. These requirements will be easier to effect in a database environment than one where each application sets up its own files, because of the possibilities of Central Administration.
6. Improve standard:- It is difficult to impose standard where applications are developed piecemeal. With a central database, it is possible to impose standards for file access and update and to impose good privacy and security features.
7. Data could be centrally controlled: In database environment, data and options on data are centrally controlled and this can lead to better management of database users.

4.2.1 Types of DBASE.

Dbase3^{+}(plus) from Ashton-Tate is one of the leading database programs. It has the following facilities:-

1. It can create simple dbase applications, such as keeping names and Addresses or inventory records.
2. It can also be used to create complex applications such as general Ledger, account receivable, account payable, payroll etc.
3. Because Dbase 3^+ is a relational dbase file, it is organized in the form of a table made up of rows, which are records. These records must have the same fields and the corresponding fields must have same structure and must contain same type of information.
4. Many database files could be made in a dbase III plus.
5. It can be used in a very simple manner either through a menu facility called the Assistant or through Dbase Commands (called Dot Command) without using menu facility.
6. It offers a programming language that enables one to construct a Database application.
7. A large number of built- in structure are provided including mathematical functions and string manipulating functions.
8. A screen design facilities is provided for one to custom input and output screens and to perform error checking and editing on input.
9. It provides a Local Area Network (LAN) operating mode, permitting multi-users to access the same database on a Local network system.

Besides the Dbase III is another advance version Dbase i.e. Dbase IV. This provides a full relational database environment to users, which is an added advantage

over the Dbase III. Instead of the menu Assistant, the D-base IV Control Center allows all forms of manipulation, edit records and files, generate report, design database etc.

Perhaps, the most significant improvement of Dbase IV over Dbase 3^+ is the full relational database capabilities using Structural Query Language (SQL) that is compatible with IBM Machines.

The SQL command Language is far more powerful than D-base command language can provide.

Oracle however is a relational dbase management from the corporations and is one of the most advanced dbase program in the market for PC – Dos today. As a relational dbase system, it keeps information in table also known as Flat- File. Access to Oracle D-base is achieved through an English – like query language i.e SQL.

It provides an extensive audit trail and facilities to audit Dbase operation. But everyone tying to use Oracle to construct application must be properly trained in on relational database design concept, dbase administration functions as well as the use of SQL.

FoxPro another dbase software developed by Fox software offers a host of features along the speed and ease that the end-user demands. It is a living package invention, power and speed. The presentation of menu and command is completely simplified in this package. The handy end-on-screen calculation and even the ASCII chart the standard menu. One important feature of FoxPro is its interphone with windowing application.

Finally however, D-base V for window is the most advanced and improved Database application package thus adopted for this study. In addition to other facilities, it has all the facilities available in D – base III plus PV NOS.

The D – base V, is complex and flexible software, which construct, expands and maintain the database. Just like others, it also provides a full relational database environment to users. In additional to file maintenance program, which allows the DBMS to maintain the data in the pool by adding new records detecting "need" records and amending records, it provides an interference with user's programs.

This mean that, with D – base V for windows, user can develop and run his own application programs. In this case, the programming language will be D – base-programming language.

Another advantage of this software package is that a large number of built in functions are provided including mathematical functions and string manipulations functions. The programming language includes command to perform conditional branding, looping, calculations, soft record, format input screen, output records etc.

It also provides security for data by :-

a. Protecting data against corruption.

b. Protecting data against unauthorized access and

c. Providing recovery and re-start facilities after a Hardware or software failure.

4.3 PROCESSING SPECIFICATION

The choice of input, output and computing Hardware to use for processing the Database will depend on the kind of data to be use for the computerization. What

therefore should be the size of the CPU and its needed speed? What kind of peripheral devices are needed? The answers to the above questions will provide guidance on the processing specification required.

But as earlier spelt out in 3.3 (ii), the hardware requirement will be as earlier pointed out. This will therefore include:

i. Compaq compatible PC

ii. Main memory: 64MB

iii. Hard Disk

iv Package of 3½ Diskette {floppy)

v. Visual Display unit (VDU)

vi. Printer: Laser Jet {preferably – HP 1100)

4.4 SOFTWARE REQUIREMENT AND IT'S FEATURES

Software for a system will depend on what is available on processing needs, on compatibility with Hardware and on ease of modification. Thus a new system requires careful thinking about matching software.

The software that will be required for this project work can be grouped in to application package, and (b) Home – made package.

The former is a collection of fully documented programs designed to perform a particular data processing task in more than one organization or installation. It is made up of pre – written and tested programs that are designed by experts to perform one or more specific purposes. Example of such package includes word processing packages, spreadsheet packages, database Management packages, etc.

Home – made package on the other hand, are programs written to solve a local problem within a particular organization. Such programs are designed to suit what is obtainable within the organization. As earlier pointed out therefore, the software needed for this study are the Database Management, and word processing package.

4.5 SOFTWARE DEVELOPMENT AND TESTING

Very paramount to the development of software to suit the project study, is the data structure of the database file. Already, Database has been chosen to be the software required with D – base V in windows as the chose version.

Data structure however, refers to arrangement of data into fields and from common data elements, a field refers to grouping of characters such as the grouping of alphabetical characters for instance in names. We therefore have field name, the field type (such as Character, Numeric, logical and date), the field width and decimal.

It is important to however point out that, in- put and out- put information will be kept in Files and one of the basic requirement for creating a file is data structure explain above. A File as already known is a collection of items organized into records in such a way that specific items of data or record may be retrieved and accommodated into the main storage when required for processing. Thus the purpose of input and output information (which is said to be kept in file) is to make data entry into and out of the computer to be easy and as accurate as possible, and to achieve this, is understanding how fields are allocated, and how each field is to be organized. The data structure should therefore be logically organized and easy to understand.

For the purpose of this study, two (2) files will be created. One will be an input/ output File, while the second will be a transaction File, which is a File that contains data about activities taking place in an organization within a specific period of time. This type of File will therefore be relevant to this study as it will contains information on approved capital expenditure on a project, the actual monthly capital expended on a project. It is also, used to produce the quarterly and yearly report on actual capital expenditure.

The input/output file on the other hard contains information on details about a capital project, approved capital estimate for previous and current financial year as well as the actual expenditure (Jan – Sept) of the previous year.

From the above description of the contents of the files, the input/output File will therefore mainly be use for the preparation of Capital Budget estimates BCAP.DBF; while the transaction file will be for the review of the Capital Budget to guide in the finances of project – CAPEXP. DBF.

The data structures for the 2 files will therefore be as follows:-

1. The input/output file – Data structure for BCAP.DBF.

Field Nos.	Description	Field name	Field type	Field width	Decimal
1.	Sector	Sect	c	20	-
2.	Sub-Sector	Subs.	c	20	-
3.	Project No	Head	N	6	
4.	Previous year Estimate	PYAEST	N	12	2.
5.	Actual Exp. (Jan-Sept.)	PYEX	N	12	2.

6.	Approved Cap. Budget Current year.	CYAEST	N	12	2.
7.	Details of project	Detap	c	80	-

2. The transaction file for the review of the Capital Project Budget (CAPEXP. DBF) will also be as follows:

Field No.	Description	Field name	Field type	Field width	Decimal
1.	Head	Head	N	6	-
2.	Sector	Sect	C	18	-
3	Sub-Sector	Subs.	C	18	-
4.	Approved. Cap. Exp est.	Aest	N	14	2.
5.	January Exp.	Jan	N	12	2
6.	February Exp.	Feb.	N	12	2
7.	March Exp.	Mar.	N	12	2
8.	1st Quarter Total	FQtr.	N	12	2
9.	1st Quarter Balance	FBal.	N	12	2
10.	April Cap. Exp.	Apr.	N	12	2
11.	May Cap. Exp.	May	N	12	2
12.	June Cap. Exp.	Jun	N	12	2
13.	2nd Quarter Total	SQtr	N	12	2
14.	2nd Quarter Balance	SBal.	N	12	2
15.	July Cap. Exp.	Jul.	N	12	2

16.	August Cap. Exp.	Aug.	N	12	2
17.	Sept. Cap. Exp.	Sep.	N	12	2
18.	3rd Quarter Total	TQtr.	N	12	2
19.	3rd Quarter Bal.	TBal.	N	12	2
20.	October Cap. Exp.	Oct.	N	12	2
21.	Nov. Cap. Exp.	Nov.	N	12	2
22.	Dec. Cap. Exp.	Dec.	N	12	2
23.	4th Quarter Total	FTQtr	N	12	2
24.	Total Cap. Exp.	Tot Exp.	N	12	2
25.	Balance	Bal.	N	12	2

With the file structure above i.e the Budget preparation file BCAP.DBF given by the input/output structure above, and the Budget review file structure (CAPEXP.DBF) given by the transaction file above, stage by stage completion of project and financing is given.

CHAPTER FIVE

PROGRAMMING AND PROGRAM.

5.1 INTRODUCTION

Programming is a process of producing set or sequence of instructions, which informs a computer of the steps required for achieving a defined task. Each instruction defines a basic operation to be performed, identifies the address of the data to be processed, the peripheral device (input or out-put device) to be used.

With regards to this study, the program designed conformed to the requirement for the proposed capital Project Budgeting and finance computerization. For the program to be effectively executed by the computer however, it is expected to posses the following qualities.

i) Correctness: With the determination of the program's objective, the most essential after this, is to see that all instructions are carried out correctly, and the program work with all range of numbers required.

ii) Understandability: This refers to the ability for the programs to be quickly understood by another programmer in terms of how and what it does. This is achieved if a program is clearly written and well documented.

iii) Maintainability: A good program, is that which permits modifications when need arises, to achieve this, it should be constructed with modular Modular sub-program and a Logic flow.

iv) Efficiency: The target of a programmer is not only writing the program that accomplishes a task, but accomplishing the task efficiently. A good program is that which has these qualities.

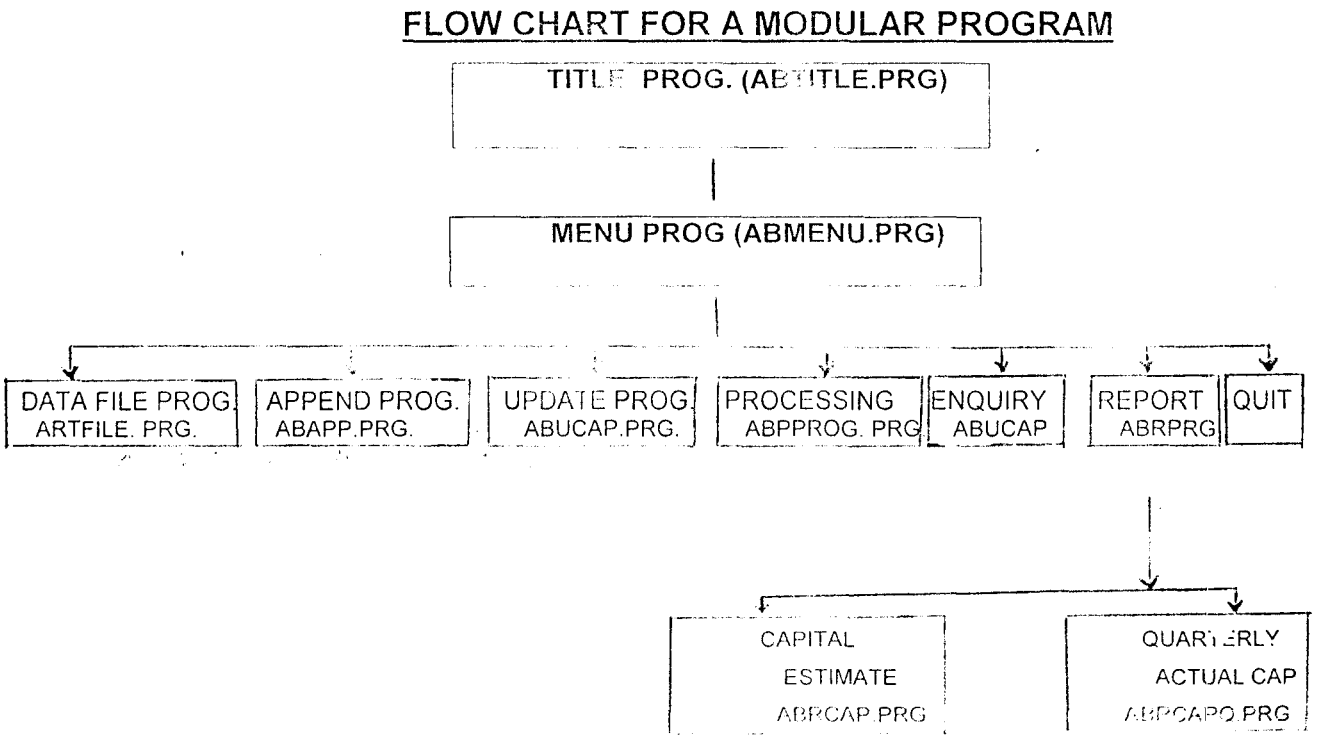
v) Portability: The program should be implemented under more than one Computer/Operating system configuration.

vi) User Friendly: Users should be able to learn easily how to use the program.

vii) Reliability: Reliable programs require given the right answer if the right kind of data is entered and whenever any unusual or erroneous data is entered, the program should fail either by producing incorrect out-put or by generating a run-time error.

Having discussed the above qualities, there is the need to build a model of some information processing procedure in such away that, it can be viewed as a system. The most favorable design is the Flow- chart.

A Flow –chart consists of series of symbols and connections among them. The diagram below shows a simple Flow –chart of the modular program written in the process of Software development for this project.



i) TITLE PROGRAM: Enhance the display of the title program, which includes the programmer's name and the Supervisor's name on execution. It also links the user to the main Menu.

ii) MENU PROGRAM:- Enhance the computer to display the main menu or the various task or command that can be performed by the software. The main menu contains the following command. File; Append; Update; Processing; Enquiry; Report, and quit. The main menu linked the user to any of the modular program that will perform any of the command above, and for the command them selves, we have;

a). The FILE PROGRAM:- This enable the computer to display the various data base files that are being used for this project work.

b) APPEND PROGRAM:- This modular program is used to enter new data or new record into any of the master file.

c) UPDATE PROGRAM:- This modular is used to update the record on a monthly basis.

d) PROCESSING PROGRAM:- The processing program is used for computing the quarterly actual capital expenditure and also the balance on quarterly bases

e) ENQUIRY PROGRAM:- This serve as a view program which is used to display the monthly, quarterly and yearly actual capital expenditure of each sub-sector.

f) REPORT:- Generate all the reports required in this project and to produce the corresponding hard copies of the report, and to achieve this, the program leads the user to the following sub-program Actual capital estimate (ABRCAP.PRG) and Quarterly Actual Cap (ABRCAPQ.PRG).

g) ABRCAP.PRG:- This enable the computer to print out the report of the approved capital estimate of the current year.

h) ABRCAPQ:- Used to printout the Review Budget on quarterly bases or the actual Capital expenditure on quarterly Bases.

5.2 OPERATION MANUAL

As earlier pointed out, D-base V in windows, is the software that is used for this project. All programs contained in this project are written in dbases programming language.

But to gain access to the developed software of this project, the under listed steps or instructions are to be followed.

Step I :- The system should be booted from the Hard disk.

Step II :- Select start and click it, start menu appears and program is chosen on the series of menu that appears.

Step III :- On the program sub-menu on the screen, move and select Dbase for windows, click it to activate the environment.

Step IV :- On the Dbase V command menu bar, Select menu file, click it to get a sub menu, on it chose and open "selected". Click it to give you menu for D-bases file and program base file.

Step V :-Here, select program source file (File type) to list all the program, chose and click tittles program (abtittle) and select do & click O.K.

Step VI :- This will display the tittle screen, showing the tittle of the project, the developer (programmer) and the supervisor. And the instructions on the screen are followed strictly to further manipulate the program.

5.3 CHANGEOVER PROCEDURE

This refers to change over from the old to the new system of computerization of the capital project Budgeting and financing as prepared in this project.

The change over may be achieved in a number of ways. There are however 4 common methods which are:-

1. Direct Changeover
2. Staged Changeover
3. Parallel Running
4. Pilot Running

Direct Changeover: - This is the complete replacement of the old system by the new, in one move. It is the least expensive but the most risky. It should therefore be undertaken when all that will see to its success are planned in detail.

Staged Changeover: - This will involve introducing the new system piece by piece, otherwise a gradual system conversion. Here a complete part, or logical section is committed to the new system while the remaining parts or sections are processed by the old system, and only when the selected part is operating satisfactorily, is the remainder transferred. Thus gradual introduction of new system and gradual phasing out of the old system.

3. Parallel Running:- This involves processing data by both the old and new system in order to cross-check or compare results. Its main attraction is that, the old system is maintain until the new system has been satisfactorily proved for at least one system cycle, using full line data in the real operational environment.

Another changeover procedure is the (4) Pilot Running:- It is similar to the above procedure. Here data from one or more previous periods for the whole or part of the system is run on the new system after results have been obtained from the old system, and the new result are compared with the old.

Any of these four methods can be considered when changing over from the old to the new system, depending on the organization involved.

5.4 RECOMMENDATION AND CONCLUSION:

i) RECOMMENDATION:- Considering the fact that the present Government wants to fulfill its promises made to electorate, the state government therefore embarked on Capital projects spread all over the state. Thus the need for computerization to aid the Budgeting and financing of these projects cannot be over emphasized; along with this computerization is the need for a reliable computerization system. In the light of this, the following recommendations are made.

i) The new system proposed should be adopted by the Department of Budget and Planning.

ii) Considering the information required by the new system, all organization involved in capital project should be made to forward all necessary information (with regards to project) especially on quarterly bases to the Department of Budget and Planning.

iii) The need for training of planning officers specially to be computer literate needs not be emphasized. They are mainly involved in the preparation of the capital project Budgeting.

iv) If the proposed system is accepted, Stage Changeover procedure should be adopted as it will be most suitable and appropriate to the department.

ii) CONCLUSION

After detailed analysis of the present system involve in capital project Budgeting which led to identification of problems there-in, and based on the result of the feasibility study carried out, a more favorable system which was designed, developed and tested was proposed by this study. This system is computerization of Capital projects' Budgeting and Financing.

The new system proposed will in no small measure:

i. Replace the manual system which hither to dominate the whole process.

ii. Enhance accuracy of fund disbursement by facilitating reference to accurate record.

iii. Provide efficiency, as there will be easy and fast mean of processing data, which will again be accurate.

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APPENDIX

```
*****************************************
* PROGRAM NAME: ABTITLE                 *
* FUNCTION: Display project title       *
* AUTHOR: Abdulganiyu Bello             *
*****************************************
clear
@ 0,10 say "NIGER STATE BUDGETING AND FINANCING OF CAPITAL PROJECT SOFTWARE"
  DO WHILE .T.
  Set color to w/b+
  @ 4,30 say "A SOFTWARE FOR BUDGETING"
  @ 5,39 say "AND"
  @ 6,28 say "FINANCING OF CAPITAL PROJECT"
  @ 7,36 say "TO BE USED"
  @ 8,40 say "BY"
  @ 9,31 say "MINISTRY OF FINANCE"
  @ 10,39 say "AND"
  @ 11,32 say "ECONOMIC PLANNING"
  @ 12,35 say "NIGER STATE"
  @ 14,40 say "BY"
  @ 15,31 say "ABDULGANIYU BELLO"
  @ 16,30 say "PGD/MCS/99/2000/878"
  @ 18,35 say "SUPERVISED"
  @ 19,40 say "BY"
  @ 20,30 say "PROFESSOR K.A. ADEGBOYE"
  @ 2,26 to 22,56 double
  ch = space(1)
  @ 23,5 say "TO CONTINUE WITH THE MAIN PROGRAM (Y/N)"
  @ 23,60 get ch pict "@!"
  Read
    Do case
      Case ch = "Y"
        do Abmenu
      Case ch = "N"
        cancel
    Endcase
  ENDDO
  RETURN


*****************************************
* PROGRAM NAME: ABMENU                  *
* FUNCTION: Displays Main menu          *
* AUTHOR: Abdulganiyu Bello             *
*****************************************
clear
  DO WHILE .T.
  clear
  @ 2,31 say "M A I N  M E N U"
  @ 3,31 say replicate ("=",10)
  @ 4,5 say "FILE" + space(3) + "APPEND"
  @ 4,22 say "UPDATE" + space (3) + "PROCESSING"
  @ 4,44 say "ENQUIRY" + space(3) + "REPORTS"
  @ 4,64 say "QUIT"
  ch = space(1)
  @ 20,10 say "PRESS FIRST LETTER FOR CHOICE OF TASK"
  @ 20,50 get ch pict "@!"
  Read
     Do case
       Case ch = "F"
```

```
          do Abfile
         Case ch = "A"
          do Abapp
         Case ch = "U"
          do Abucap
         Case ch = "E"
          do Abvcap
          Case ch = "P"
          do Abpprog
         Case ch = "R"
          do Abprg
         Case ch = "Q"
          cancel
        Endcase
    ENDDO
      clear
    RETURN


*********************************************************************
* PROGRAM: Abapp                                                    *
* FUNCTION: Display Data Entering Screen for the prepared capital budget *
*********************************************************************

    clear
        mfile = space (7)
     @ 3,5 say "Enter file name" get mfile
     Read
     If mfile = "ABCAP"
       Use abcap.dbf
      Else
       @ 2,17 say "Wrong file name"
     Endif
     DO WHILE .T.
      Clear
      @ 3,17 say "DATA ENTERING SCREEN FOR CAPITAL BUDGET"
      Append blank
      @ 4,17 say replicate ("=",41)
      @ 5,5 say "PROJECT NO.:" get head
      @ 7,5 say "SECTOR:" get sect
      @ 9,5 say "SUBSECTOR:" get subs
      @ 11,5 say "PREVIOUS YR ALLOCATION:" get pyaest
      @ 13,5 say "ACTUAL EXP. (JAN. - SEPT.):" get pyex
      @ 15,5 say "APPROVED CAP. BUDGET FOR CURR. YR.:" get cyaest
      Read
      ch = space(1)
      @ 17,10 say "Any other data to be entered (Y/N)"
      @ 17,50 get ch pict "@!"
      Read
      DO CASE
         case ch = "Y"
          loop
          case ch = "N"
          exit
        Endcase

     ENDDO
       Close database
       RETURN
```

```
*************************************
* PROGRAM: Abfile                   *
* FUNCTION: Display Database files  *
*************************************

clea
@ 6,20 say "ABCAP.DBF"
@ 7,20 say "ABCAPEXP.DBF"
Wait
Return

Use abcap.dbf
    Store 0 to mhead
      DO WHILE .T.
      clea
        @ 3,7 say "Enter head" get mhead
        Read
      Go top
      Locate for head = mhead
        if found()
      @ 3,5 say "MONTHLY DATA ENTERING SCREEN FOR CAPITAL EXP."
        @ 3,5 say replicate ("+",45)
        @ 7,5 say "SUBSECTOR:" get subs
        @ 9,5 say "JAN. EXP.:" get jan
        @ 9,43 say "FEB. EXP.:" get feb
        @ 11,5 say "MAR. EXP.:" get mar
        @ 13,5 say "APR. EXP.:" get apr
        @ 13,43 say "MAY EXP.:" get may
        @ 15,5 say "JUNE EXP.:" get jun
        @ 15,43 say "JULY EXP.:" get jul
        @ 17,5 say "AUG. EXP.:" get aug
        @ 17,43 say "SEPT. EXP.:" get sep
        @ 19,5 say "OCT. EXP.:" get oct
        @ 19,43 say "NOV. EXP.:" get nov
        @ 21,7 say "DEC. EXP.:" get dec
        Read
        Else
          @ 10,7 say "HEAD NOT FOUND"
        Endif
         ch = space(1)
         @ 23,7 say "Enter another record (Y/N)"
         @ 23,40 get ch pict "@!"
         Read
          If ch = "Y"
            loop
          Else
            Return
          Endif
      ENDDO
        Close database
        Clear
      RETURN

*************************************
* PROGRAM: Abpprog                  *
* PUNCTION: Displays Processing Menu*
*************************************
```

```
DO WHILE .T.
  clear
  @ 3,20 say "PROCESSING MENU"
  @ 4,22 say replicate (" ", 14)
 @ 5,20 say "TASK CODE" + space (5) + "TASK"
@ 6,25 say "1" + space (6) + "COMP. QTRLY/YRLY EXP."
@ 8,25 SAY "2" + space (6)+ "TRANS. QTRLY/YRLY EXP. OUTPUT FILE"
      @ 10,25 say "3" + space (10) + "EXIT"
         ch = 0
      @ 14,25 say "Enter Task code" get ch pict "9"
      read
         Do case
            case ch = 1
              do ABQCPROG
            case ch = 2
                DO ABTQPROG
            case ch = 3
                exit
          Endcase
       ENDDO
         Clear
       RETURN

  ********************************************************
  * PROGRAM: Abqcprog.prg                                *
  * FUNCTION: To process quarterly and end fiscal year report *
  ********************************************************
       Clear
    mfile = space(7)
    mqua = space(5)
    Store 0 to maest,mjan,mfeb,mmar,mfqtr,mfbal,mapr,mmay
Store 0 to mjun,mjul,maug,msep,msqtr,msbal,mtqtr,mtbal
Store 0 to moct,mnov,mdec,mftqtr,mbal,mtotex,mpcent,mcyaest
    @ 2,5 say "Enter file name" get mfile
    Read
    If mfile = "ABCAP"
       Use abcap.dbf
       @ 4,5 say "Enter Quarter" get mqua
       Read
    Endif

    Go top
DO WHILE .NOT. EOF()
  If mqua = "fqtr"
     mjan = jan
     mfeb = feb
     mmar = mar
    s*maest = aest
     mcyaest = cyaest
     mfqtr = mjan + mfeb + mmar
     mfbal = mcyaest - mfqtr
     Repl fqtr with mfqtr
     Repl fbal with mfbal
Endif
  If mqua = "sqtr"
     mapr = apr
     mmay = may
     mjun = jun
```

```
    mfbal = fbal
    msqtr = mapr + mmay + mjun
    msbal = mfbal - msqtr
    Repl sqtr with msqtr
    Repl sbal with msbal
Endif
 If mqua = "tqtr"
    mjul = jul
    maug = aug
    msep = sep
    msbal = sbal
    mtqtr = mjul + maug + msep
    mtbal = msbal - mtqtr
    Repl tqtr with mtqtr
    Repl tbal with mtbal
 Endif
  If mqua = "ftqtr"
     moct = oct
     mnov = nov
     mdec = dec
     mtbal = tbal
     mcyaest = cyaest
     mfqtr = fqtr
     msqtr = sqtr
     mtqtr = tqtr
     mftqtr = moct + mnov + mdec
     mbal = mtbal - mftqtr
     mtotex = mfqtr + msqtr + mtqtr + mftqtr
     Repl ftqtr with mftqtr
     Repl bal with mbal
     Repl totex with mtotex
   Endif
    Skip
  ENDDO
    Close database
    Clea
 RETURN

*************************************************************************
*   PROGRAM NAME: Abrprog.prg
*   FUNCTION: Display Report menu
*   ***************************************************************
DO WHILE .T.
        Clear
        @ 1,29 say "REPORT MENU"
        @ 2,29 say replicate ("_",11)
      @ 3,20 say "TASK CODE" + space (5) + "TASK"
      @ 4,25 say "1" + space (6) + "PRINT APPROVED CAPITAL BUDGET"
      @ 5,25 say "2" + space (6) + "PRINT ACTUAL QUARTERLY CAP. EXP."
      @ 7,25 say "3" + space (10) + "EXIT
       Ch = 0
      @ 22,25 say "Enter Task Code" get ch pict "99" range 1,10
      read
          Do Case
             case ch = 1
                do abrcap
             Case ch = 2
                do abrcapq
             Case ch = 3
              exit
```

```
    Endcase
  ENDDO
   Clear
RETURN

*************************************************************************
* PROGRAM NAME: Abrcap.prg                                              *
* FUNCTION: Produce hardcopy of quarterly Budget Evaluation Report      *
*************************************************************************
 Clea
 Use Abcap
 qua = space(12)
 myear = space (4)
 Store 0 to scyaest,sfqtr,ssqtr,stqtr,sftqtr,stotex
 @ 2,5 say "YEAR" get myear
 @ 3,5 say "QUARTER" get qua
        read
   *Set device to printer
   CLEA
  @ 3,26 say qua
  @ 3,39 say "NIGER STATE ACTUAL CAPITAL EXPENDITURE"
  @ 3,79 say myear
  @ 4,26 say replicate ("_",52)
  *@ 5,5 say replicate ("_",140)
  @ 6,5 say "HEAD"
  @ 6,14 say "SECTOR"
  @ 6,27 say "SUBSECTOR"
  @ 6,43 say "APPROVED ESTIMATE"
  @ 6,65 say "1ST QUARTER"
  *@ 6,80 say "2ND QUARTER"
  *@ 6,95 say "3RD QUARTER"
  *@ 6,110 say "4TH QUARTER"
  *@ 6,125 say "TOTAL CAP/EXP."
  *@ 7,5 say replicate ("_",140)
   prow = 7
 DO WHILE .NOT. EOF()
    prow = prow + 1
    @ prow,5 say head
    @ prow,12 say sect
    @ prow,27 say subs
    @ prow,43 say cyaest
      If qua = "1ST QUARTER"
         @ prow,65 say fqtr
         @ prow,79 say fbal
      Endif
      If qua = "2ND QUARTER"
         @ prow,65 say fqtr
         @ prow,80 say sqtr
      Endif
      If qua= "3RD QUARTER"
         @ prow,65 say fqtr
         @ prow,80 say sqtr
         @ prow,95 say tqtr
      Endif
      If qua = "4TH QUARTER"
         @ prow,65 say fqtr
         @ prow,80 say sqtr
         @ prow,95 say tqtr
         @ prow,110 say ftqtr
```

```
      @ prow,125 say totex
      scyaest = scyaest + cyaest
      sfqtr = sfqtr + fqtr
      ssqtr = ssqtr + sqtr
      stqtr = stqtr + tqtr
      sftqtr = sftqtr + ftqtr
      stotex = stotex + totex
   Endif
       Skip
   ENDDO
       prow = prow + 1
       @ prow + 1,44 say scyaest
       @ prow + 1,65 say sfqtr
       @ prow + 1,80 say ssqtr
       @ prow + 1,95 say stqtr
       @ prow + 1,110 say sftqtr
       @ prow + 1,126 say stotex
       @ prow + 2,5 say replicate ("_",140)
     *Set device to screen
     Close database
  RETURN
```

PROGRAM OUT-PUT BASED ON INPUT DATA

Abcap

Head 450	Subs AGRIC. & RURAL DEVT.	Jan. 450000
Feb. 500000	Mar. 600000	Apr. 550000
May. 5000000	Jun. 450000	Jul 0
Aug 0	Sep. 0	Oct. 0
Nov 0	Dec 0	

ID	1
HEAD	450
SECTOR	ECONOMIC
SUB-SECTOR	AGRIC & RURAL DEVELOPMENT
PREV YEAR ALLOCATION	151,506,300.00
PREV YEAR ACT EXP	148,300,000.00
PRES YEAR ALLOCATION	256,506,300.00

ID	2
HEAD	451
SECTOR	ECONOMIC
SUB-SECTOR	LIVESTOCK
PREV YEAR ALLOCATION	35,000,000.00
PREV YEAR ACT EXP	27,500,000.00
PRES YEAR ALLOCATION	25,500,000.00

ID	3
HEAD	452
SECTOR	ECONOMIC
SUB-SECTOR	FORESTRY
PREV YEAR ALLOCATION	1,500,000.00
PREV YEAR ACT EXP	0.00
PRES YEAR ALLOCATION	0.00

ID	4
HEAD	453
SECTOR	ECONOMIC
SUB-SECTOR	FISHERIES
PREV YEAR ALLOCATION	2,800,000.00
PREV YEAR ACT EXP	0.00
PRES YEAR ALLOCATION	1,815,000.00

SUMMARY OF 2001 APPROVED CAPITAL EXPENDITURE

ID	HEAD	SECTOR	SUB-SECTOR	PREV YEAR ALLOCATION	PREV YEAR ACT EXP	PRES YEAR ALLOCATION
1	450	ECONOMIC	AGRIC & RURAL DEVELOPMENT	151,506,300.00	148,300,000.00	256,506,300.00
2	451	ECONOMIC	LIVESTOCK	35,000,000.00	27,500,000.00	25,500,000.00
3	452	ECONOMIC	FORESTRY	1,500,000.00	0.00	0.00
4	453	ECONOMIC	FISHERIES	2,800,000.00	0.00	1,815,000.00
5	454	ECONOMIC	MANUFACTURERING	23,000,000.00	2,690,000.00	200,000,000.00
6	455	ECONOMIC	ENERGYS	800,000,000.00	785,000,000.00	1,000,000,000.00
7	456	ECONOMIC	COMM.FIN. & TOURISM	5,000,000.00	0.00	0.00
8	457	ECONOMIC	TRANSPORT	795,000,000.00	433,000,000.00	1,501,761,834.00
9	458	SOCIAL	EDUCATION	503,919,000.00	254,81[illegible] 281.00	342,822,498.00
10	459	SOCIAL	HEALTH	376,000,000.00	17,8[illegible]0,415.00	200,000,000.00
11	460	SOCIAL	INFORMATION	25,930,000.00	15,190,214.00	815,812,896.00
12	461	SOCIAL	SOCIAL DEVELOPMENT	7,500,000.00	679,219.00	1,500,000.00
13	462	REGIONAL DEVELOPMENT	WATER SUPPLY	660,000,000.00	311,764,900.00	217,595,095.00
14	463	REGIONAL DEVELOPMENT	SEWARAGE & DRAINAGE	13,000,000.00	0.00	0.00

SECOND QUARTER ACTUAL CAPITAL EXPENDITURE FOR 2000 FISCAL YEAR

HEAD	SECTOR	SUBSECTOR	FIRST QTR ACT. EXP.	FIRST. BAL	SECOND QTR ACT. EXP	SECOND BAL.
450	ECONOMIC	AGRIC . & RURAL DEVELOPMENT	1,550,000.00	149,956,300.00	6,000,000.00	143,956,300.00
451	ECONOMIC	LIVESTOCK	23,800,000.00	6,200,000.00	12,000,000.00	-5,800,000.00
452	ECONOMIC	FORESTRY	750,000.00	750,000.00	1,150,982.00	-400,982.00
453	ECONOMIC	FISHERIES	9,500,000.00	1,850,000.00	1,155,000.00	695,000.00
454	ECONOMIC	MANUFACTURING	8,900,000.00	14,100,000.00	11,293,766.00	2,806,234.00
455	ECONOMIC	ENERGY	7,100,000.00	792,900,000.00	9,482,000.00	783,418,000.00
456	ECONOMIC	COMM. FIN. & TOURISM	1,500,000.00	3,500,000.00	4,264,000.00	-764,000.00
457	ECONOMIC	TRANSPORT	15,230,000.00	778,770,000.00	8,120,000.00	697,570,000.00
458	SOCIAL	EDUCATION	92,331,000.00	411,588,000.00	27,390,000.00	384,198,000.00
459	SOCIAL	HEALTH	3,950,000.00	372,050,000.00	7,700,000.00	364,350,000.00
460	SOCIAL	INFORMATION	898,000.00	1,695,000.00	4,912,000.00	-3,217,000.00
461	SOCIAL	SOCIAL DEVELOPMENT	75,000.00	7,425,000.00	39,800.00	7,385,200.00
462	REGIONAL DEVELOPMENT	WATER SUPPLY	35,694,950.00	624,305,050.00	47,300,000.00	619,575,050.00
463	REGIONAL DEVELOPMENT	SEWARAGE & DRAINAGE	423,280.00	12,576,720.00	4,929,000.00	12,083,820.00
464	REGIONAL DEVELOPMENT	HOUSING	25,075,000.00	272,925,000.00	1,269,000.00	271,656,000.00
465	REGIONAL DEVELOPMENT	SURVEY AND MAPPING	24,000,000.00	-6,000,000.00	86,000,000.00	-92,000,000.00
466	REGIONAL DEVELOPMENT	URBAN & REGIONAL PLANNING	13,000,000.00	0.00	105,000,000.00	-105,000,000.00
467	ADMINSTRATIVE	GENERAL ADMINISTRATION	103,670,000.00	561,000,000.00	2,130,000.00	558,870,000.00

FIRST QUARTER ACTUAL CAPITAL EXPENDITURE FOR 2000 FISCAL YEAR

HEAD	SECTOR	SUBSECTOR	FIRST QTR ACT EXP	FIRST BAL
450	ECONOMIC	AGRIC . & RURAL DEVELOPMENT	1,550,000.00	149,956,300.00
451	ECONOMIC	LIVESTOCK	28,800,000.00	6,200,000.00
452	ECONOMIC	FORESTRY	750,000.00	750,000.00
453	ECONOMIC	FISHERIES	9,500,000.00	1,850,000.00
454	ECONOMIC	MANUFACTURING	8,900,000.00	14,100,000.00
455	ECONOMIC	ENERGY	7,100,000.00	792,900,000.00
456	ECONOMIC	COMM. FIN. & TOURISM	1,500,000.00	3,500,000.00
457	ECONOMIC	TRANSPORT	16,230,000.00	778,770,000.00
458	SOCIAL	EDUCATION	92,331,000.00	411,588,000.00
459	SOCIAL	HEALTH	3,950,000.00	372,050,000.00
460	SOCIAL	INFORMATION	898,000.00	1,695,000.00
461	SOCIAL	SOCIAL DEVELOPMENT	75,000.00	7,425,000.00
462	REGIONAL DEVELOPMENT	WATER SUPPLY	35,694,950.00	24,305,050.00
463	REGIONAL DEVELOPMENT	SEWARAGE & DRAINAGE	423,280.00	12,576,720.00
464	REGIONAL DEVELOPMENT	HOUSING	25,075,000.00	272,925,000.00
465	REGIONAL DEVELOPMENT	SURVEY AND MAPPING	24,000,000.00	-6,000,000.00
466	REGIONAL DEVELOPMENT	URBAN & REGIONAL PLANNING	13,000,000.00	0.00
467	ADMINSTRATIVE	GENERAL ADMINISTRATION	103,670,000.00	561,000,000.00