THE NATIONAL RIVERS AUTHORITY

Business Requirement Specification

Integrated Accounting System for the (IAS)

circa January 1991

FINANCIAL MANAGEMENT INFORMATION SYSTEMS

Integrated Accounting System
IAS
FEASIBILITY STUDY

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1. FEASIBILITY STUDY

TERMS OF REFERENCE

Project Title: Integrated Accounting System - IAS

1.1 Background

This application area was identified during the IS strategy study. The accounting function plays one of the largest roles in providing the infrastructure to any organisation and monitors all business activities from the financial and business point of view.

The strategy study provided high level business analysis of this area and from that resultant data the starting point of this project will be assumed.

The project time scales have already been stated with live running being required with effect from April 1992.

Due to the size of many facets of the project, it will be sub-divided into small projects even though it falls within the timescales given for project duration.

1.2 Scope

This system covers all the financial information requirements together with additional interfaces covering personnel, purchasing and stores.

The ten regions of the authority presently have different systems and hardware in each region.

The IAS system will provide users with a standard approach to financial information requirements and will provide a uniform information system throughout the Authority.

2. INTRODUCTION

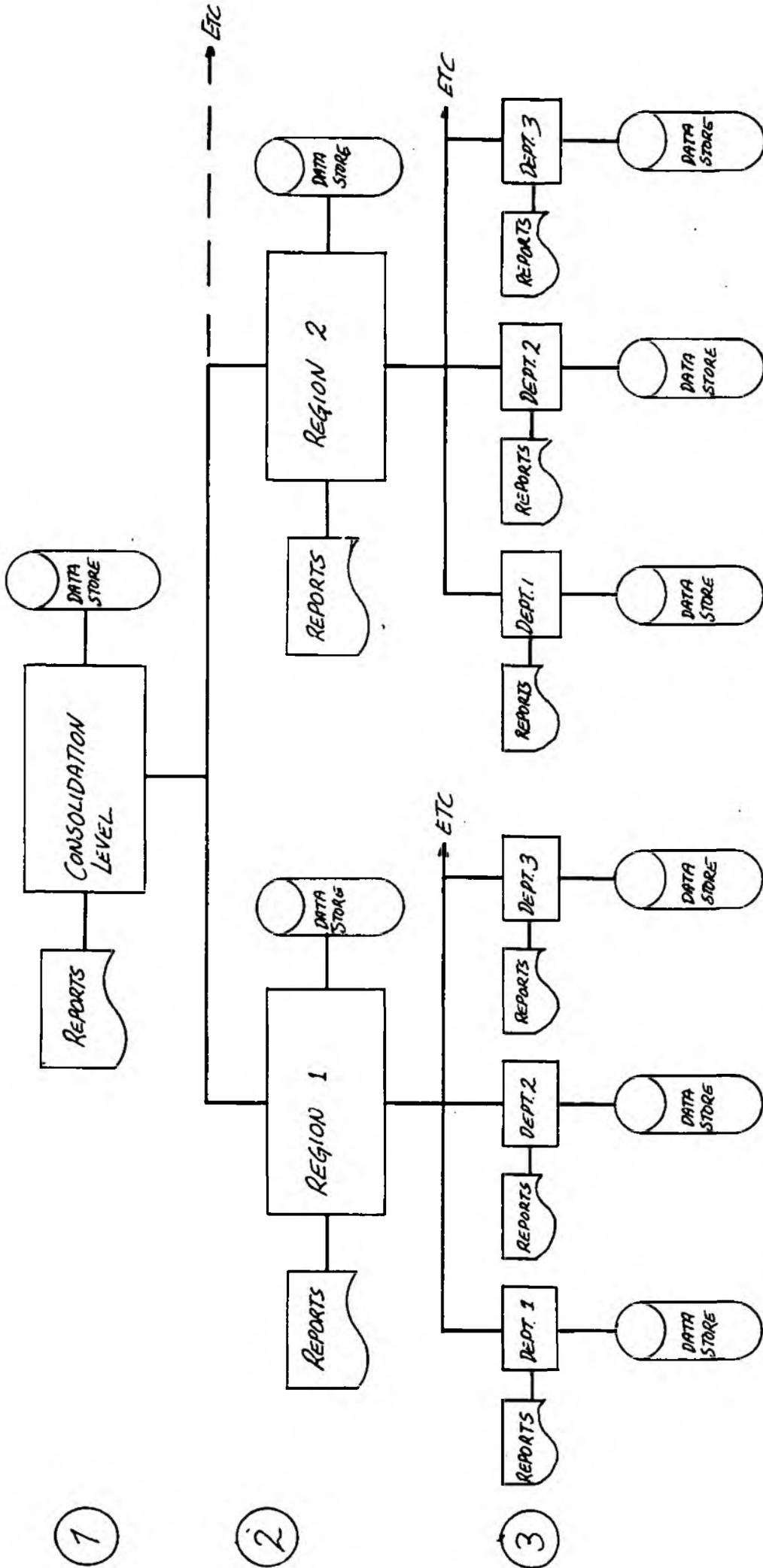This specification defines the user requirements for the National River Authority's Integrated Financial Accounting and Management System.

The system is required to provide management information to both financially oriented and non-financial business users.

In order that control can be applied throughout the Authority, the system should be standard to all regions with a standard reporting structure.

Escalation Levels

Fig 2

1 Consolidation Level

2 Regional Level

3 Departmental Level

Fig 3

1ST (TOP) LEVEL
CONSOLIDATION
REPORTS
ADJUSTMENTS

HEAD
OFFICE
ONLY

ADJUSTMENTS

2ND LEVEL
REGIONAL FINANCE :
    REPORTS
    LEDGERS
    ADJUSTMENTS
BUSINESS DATA :
    DOWN LOADING
    ADJUSTMENTS

x 11 REGIONS
(INC H.O)

ESCALATION
OF DATA

3RD (BOTTOM LEVEL)
MANAGEMENT ACCOUNTING
PLUS: NON FINANCIAL
    BUSINESS MANAGERS'
    BUSINESS PLANNING
    WORD PROCESSORS -
    SPECIFATIONS -
    BUDGET, ORDERS AND
    COMMITMENT -
    - ACCOUNTING

x NUMBER OF
REQUIRED
SCREENS PER
REGION
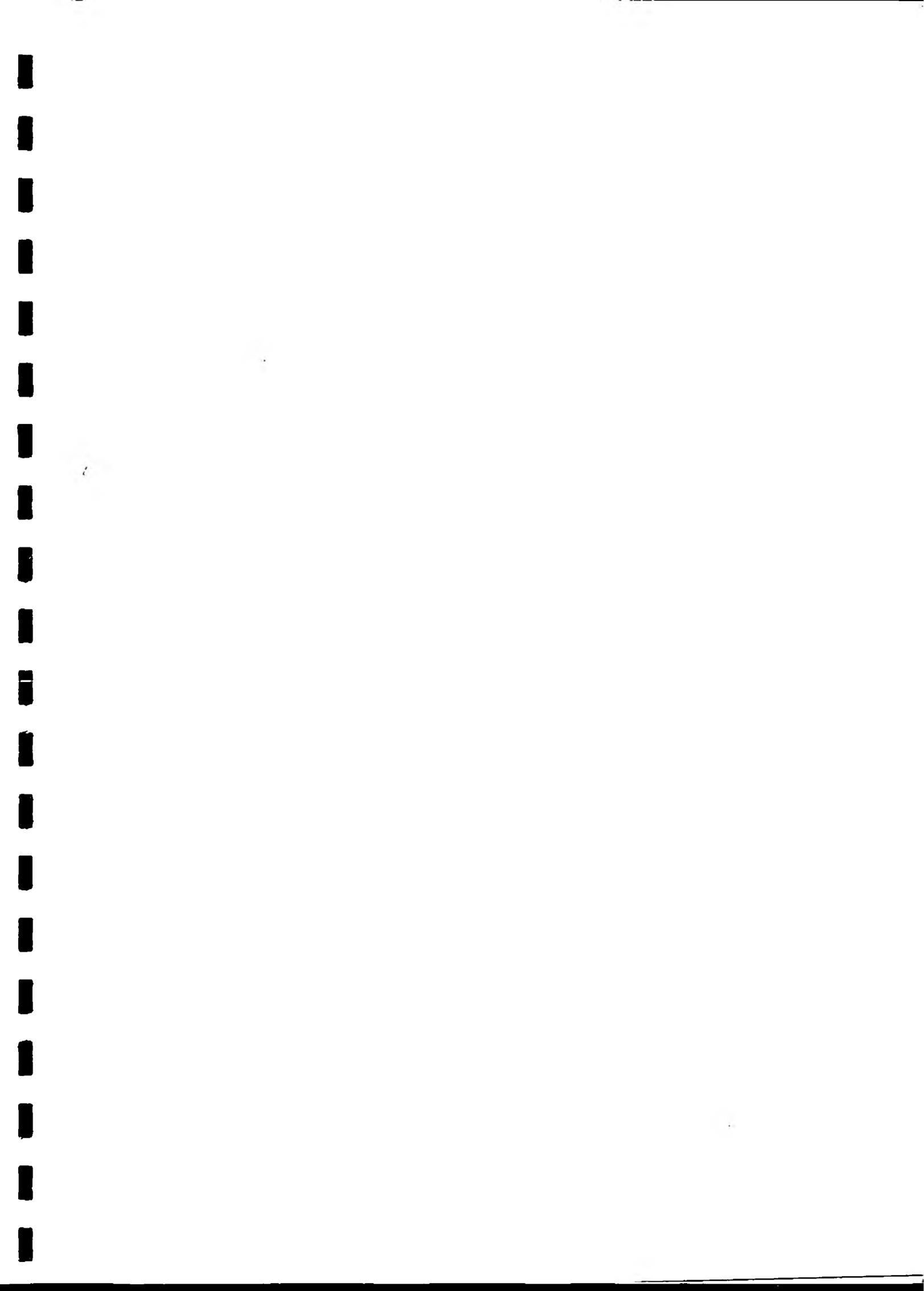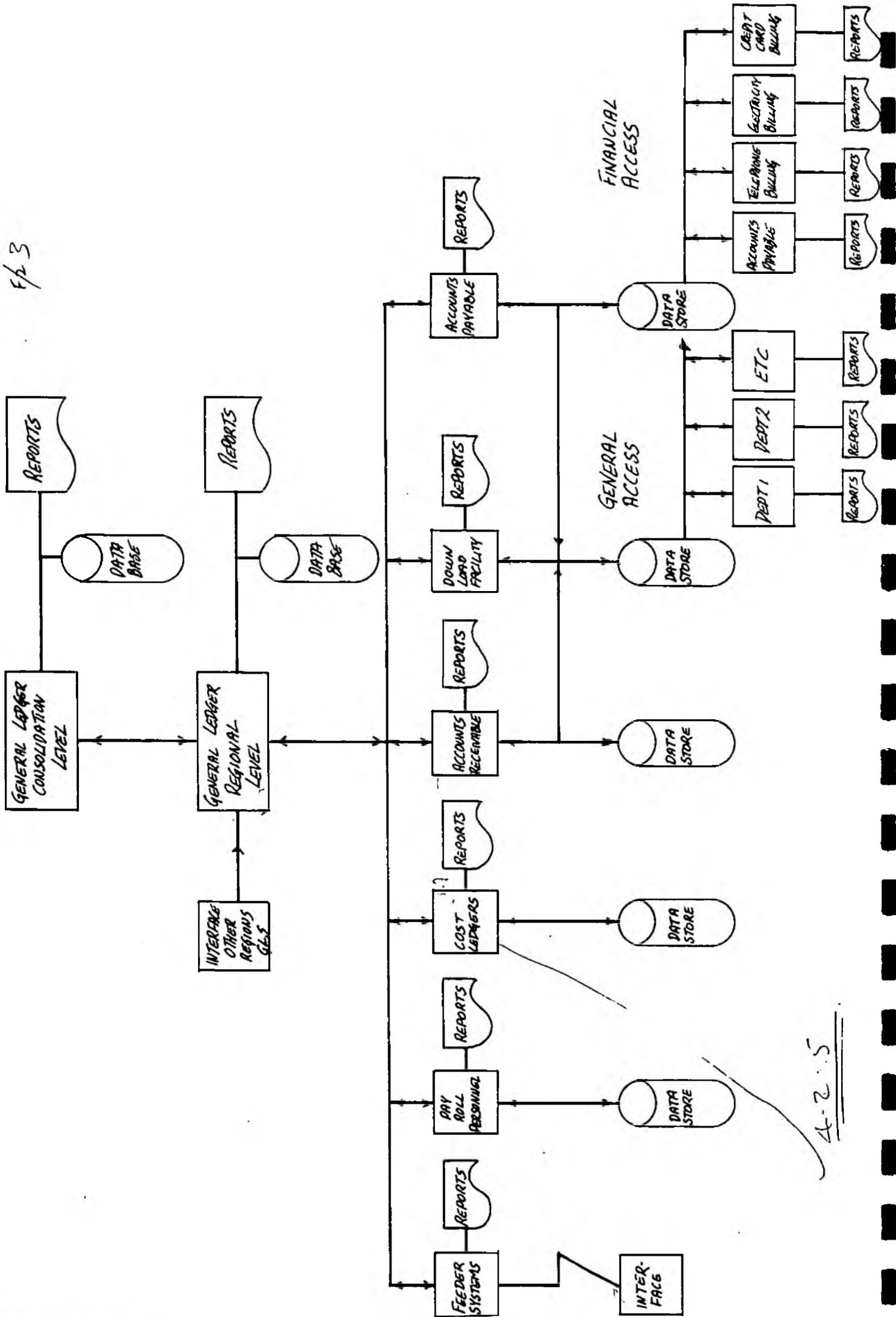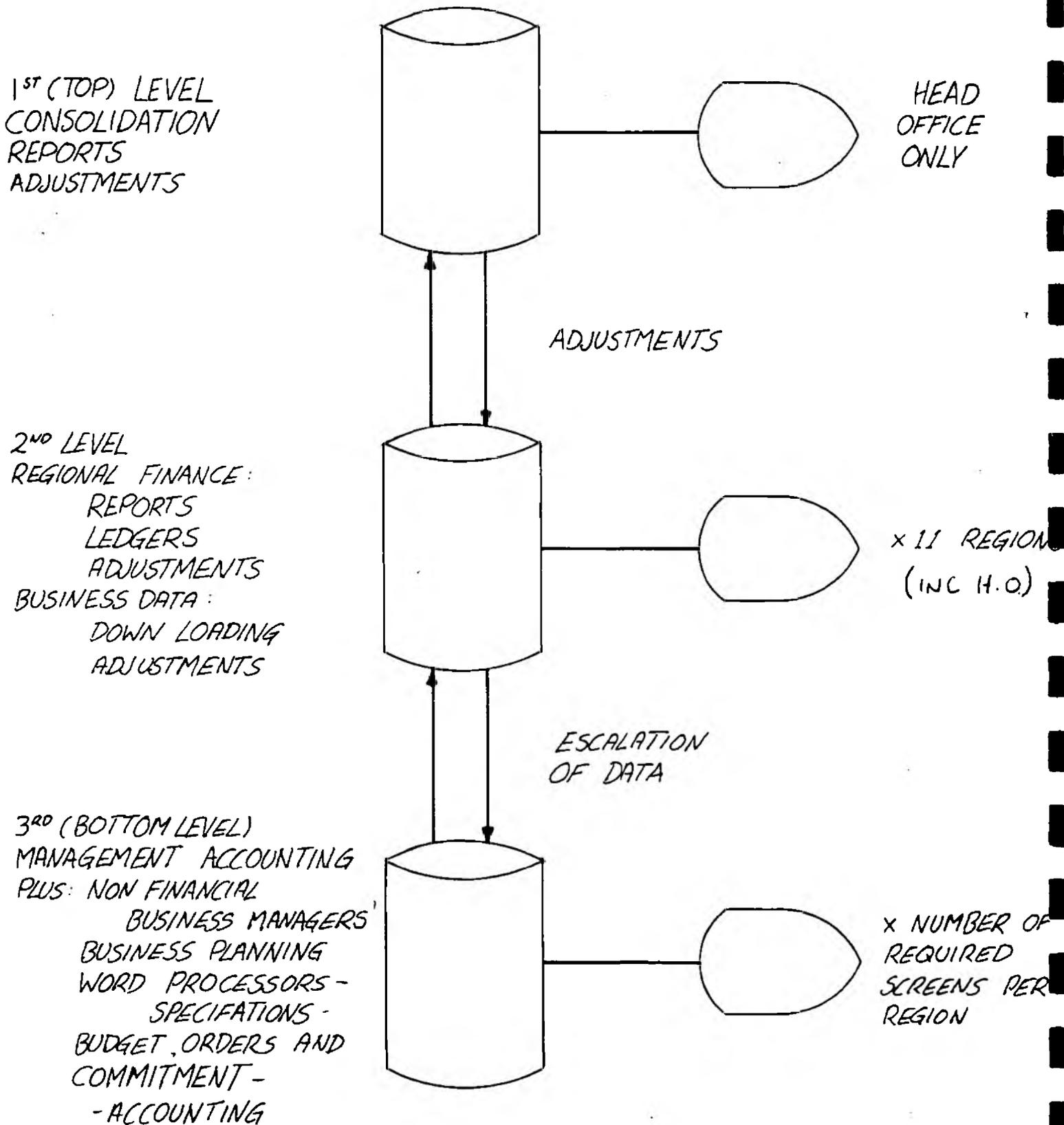
The collation of the requirements has been achieved by obtaining them on a regional basis for the accounting function with each region being responsible for one or more facets of the accounting process and then formulating reports on a checklist basis.

The 'non-financial' user requirements were obtained by direct contact with users each of which were validated by contact with a similar user at a different region.

For the purposes of this specification, the NRA has been regarded as having eleven regions (ten geographical regions plus Head Office) together with a consolidation facility which provides data for the Authority as a whole.

In order to achieve a logical view of the NRA's Management Information Requirements the structure of the system has been regarded as having three tiers:-

Lower Tier   -   Local users
Middle Tier   -   Regional accounting and management functions
Top Tier   -   Consolidation giving NRA's corporate view

Diagrams are shown opposite which demonstrate the three levels:-

Fig 1 shows the tiered approach
Fig 2 shows how the Regions fit into a reporting network
Fig 3 shows the structure of a typical Region

Having obtained a comprehensive list of requirements, further research is necessary to provide the most practical method of servicing them and this involved the following processes:-

-      Examination of systems currently in use by NRA at the Regions.

-      Examination of software packages currently available.

-      Consideration of bespoke software needs to complement either of the above two options.

The development of a totally bespoke system has not been considered due to cost and time constraints together with the fact that at least 85% of the requirements are currently available in package form.

Upon identification of the software alternatives, the next step was to examine the hardware implications.

The hardware to be selected must reflect not only the requirements for this system but also an ability to integrate with all the other systems currently being considered or developed.

Due to the complexities of such a system it is inevitable that some user requirements are duplicated in other projects. Where this occurs, it is presumed that those projects will supply the service required in an integrated manner.

Due to the size of the system and the number of interactive interfaces, it will be necessary to appoint a central System Administrator who will be responsible for the day to day running of the system while at regional levels each region will appoint a local system administrator.

Their duties will involve both the running of the system together with providing the system with updates of codes and the provision and regulation of reports etc.

3. **OBJECTIVES**

   3.1 Provide all the mechanisms required to provide the Authority's financial and management infrastructure.

   3.2 Monitor the Authority's performance by means of periodic and ad-hoc financial reports and support those reports with statistical information.

   3.3 Provide managers with all the tools required to achieve and maintain their business objectives.

   3.4 Provide flexibility in order that future development can be both planned and serviced.

   3.5 Instill financial awareness throughout the Authority at every level.

   3.6 Ensure that both integration and interfaces are viable between IAS and all other NRA systems.

4. **USER REQUIREMENTS**

   The system is intended to provide facilities for both financial and non-financial users and is designed to provide the following objectives:-

   - Maintenance of the Authority's financial records

   - Provision of Financial and Management accounting facilities

   - Provision of budgetary control and commitment accounting facilities for all business users

   - The facility to use financial information for both work scheduling and project control

   - The ability to provide specifications which can be used in tender offering procedures

   - Provision of statistical data

- The ability to provide outputs in both standard and ad-hoc formats in whichever media required e.g. disk, tape, paper, fich, screen etc

- Accessability by all users at all levels according to their needs

- Provision of interfaces with all systems contemplated by the Authority

The system has been broken down to its main components:-

> General Ledger
> Cost Ledger
> Accounts Payable
> Accounts Receivable
> Invoicing
> Purchasing
> Stores
> Payroll

Sub system requirements have been appended where appropriate and appear with the appropriate main system.

4.1 General Ledger

This module represents the centre or database of the accounting system. While all other records may be subject to substitution in some form or another, the general ledger must always be present.

The general ledger is updated by the following primary records:-

Accounts Payable (including Creditors Ledger)
Accounts Receivable (including Debtors Ledger)
Payroll
Journal

As the ledger is not dynamic and therefore does not generate data all input updates must be derived from the above preliminary records or via facilities contained in the management accounting module (sometimes separated from the general ledger proper).

Outputs from the general ledger are achieved by the use of reports and therefore a report generator is a necessary part of the system.

The requirements recorded are of two types:-

The first type deals with the systems operational aspects which are oriented more towards computing facilities than accounting requirements while the second type deals with the accounting structure of the system.

Due to the fact that postings to the general ledger are generally more frequent from the accounts payable area of the business than from the accounts receivable area, most successful implementations arise from selection of both general ledger and accounts payable from the same supplier. While it is preferable to use the same supplier for accounts receivable it is not so critical as the postings from this area are more easily traceable because they are internally created.

Access to the general ledger is limited and because it is the centre pin of the accounting system, input is carefully controlled. Output by whatever medium will be restricted and possibly subject to down-loading facilities.

Systems Requirements

On-line access to all systems together with on-line update facilities.

Ability to provide screen prints.

The ability to provide overnight processing facilities where ever necessary.

The facility to both down-load and up-load data to other systems.

The provision of spreadsheet facilities.

The provision of word processing facilities.

The ability to access other screens in the system for update or review purposes while still in an originally selected screen (window facility).

The ability to use a menu or to pass from one screen ID to another directly (without returning to the menu).

The ability to make the system secure by control of passwords and password level.

The provision of audit trail data either in disk format or paper report as required.

4.1.1   Chart of Accounts (Coding Structure)

In order to provide a standard accounting system it will be necessary to provide a chart of accounts (code book) which is standard throughout the regions.

Without such a standard approach it will not be possible to provide either automatic consolidation or traceability to transaction level throughout the Authority's records. It is therefore a prerequisite that not only any system found suitable must be able to handle the proposed chart of accounts but also the main structure of this mechanism must be in place prior to the selection of candidate systems. It must also be emphasised that some candidate systems will also have certain requirements in this area in order to handle report generation.

By careful consideration and planning it is possible to formulate a chart of accounts which not only provides the basic analysis but will also give results across the system. This facility is sometimes known as '2nd cut' chart of accounts and opens up new fields of analysis to the user.

4.1.2   Management Accounting

Although there are many comprehensive accounting packages available management accounting is dealt with more frequently outside the general ledger with use of additional physical units of information. With the down-loading techniques currently available together with sophisticated management accounting packages it enables users to use additional tools and decrease the access to the ledger required in the past.

Some general ledgers include management accounting facilities in their main general ledger system but it is frequently decided that better alternatives are available to the user.

This specification handles the requirements for either method.

The user requirements in respect of this area are set out beneath:-

-      The presence of a flexible accounting calendar together with the ability to make current postings while the old period (month, quarter, year) is still being finalised.

-      A flexible chart of accounts which will enable the user to trace data down to transaction level and provide a comprehensive basis for reporting.

-      The presence of a flexible report generator to take advantage of the flexible coding structures required above.

-   The ability to create journal entries in the following ways:-

    Transfer
    Percentage and proportionate re-
        allocation of costs
    Standard recurring
    Template
    Reversible

It is also a requirement that the original input data is preserved or traceable after the journal entry has been actioned. All journals must be self balancing and a posting must not be allowed if out of balance.

The system must have the ability to reject invalid codes on a real time basis.

The ability to handle apportionments and automatic allocation.

Budgets. The requirements are shown beneath and, where practicable, the requirements are similar for Forecasting.

-   Batch or on-line input also upload facility.

-   Ability to profile budgets.

-   Ability to hold previous years budgets.

-   Input, update, amend and delete facility.

-   Facility for production of budget turnaround documents.

-   Ability to hold authorised cost for MAFF projects.

-   Ability to hold at cost centre level or at any other predetermined level where more suitable.

-   Facility to zeroise budgets prior to input or revision.

-   Automatic update by percentage or proportion.

-   Automatic accruals via creditors interface.

-   Reconciliation facility.

-   The ability to create up to five years in advance e.g. corporate plan, financial modelling.

- Generation of rolling 12 month actuals.

- Hold prior year's actuals.

- Ability to create trend or comparison reports.

- Ability to extract prior year's information year by year (subject to archive).

- Ability to profile previous/current year actuals.

- The ability to extract on both detailed and summarized basis all levels of costs and subjective costs.

The provision of a window facility to temporarily access other screens from the current screen is required.

The ability to trace transactions to source at any system of original entry is required.

Full interface with all feeder systems is necessary.

The ability to download to spreadsheets and other facilities.

The ability to allocate overhead/support costs and holding accounts automatically.

Production of true subjective analysis.

The facility to handle accounts on a profit centre basis.

Ability to provide cash flow forecasting.

The ability to hold or access physical measures for performance aims/targets.
The ability to report on statistical bases as well as financial.

The ability to produce manpower cost analyses.

The ability to report on both standard and ad-hoc basis with the ability to produce screen prints at every level.

The system must be able to control and restrict access - preferably restricted menu control.

The production of audit trail either on disk or listings with the added facility of restriction to a specified period.

4.1.2.1 Overhead Support Cost Allocation

The requirements from this area are as follows:-

Automatic Allocation from general ledger

Facility to work on a cash or accruals basis

Ability to split departments by:-

- Specific charges e.g. capital core functions

- Standard percentages of the remainder

- Monthly allocation facility

- Allocation direct to core functions or other support services

- Facility to vary the clear down order of support services

- Facility to make allocations variable in the year

- Facility to record the allocation charges in the year

- Ability to vary allocations retrospectively

- Ability to report credit, to source departments on a pyramid basis

- Ability to report costs to core functions by source

- Comprehensive audit trail throughout system

- Facility for projecting forecasts and "what if" modelling

- Down/up loading facility

- Variable on-cost facility

4.1.3 Financial Accounting Requirements

The financial accounting requirements are set out beneath:-

- Interfaces with both Feeder Systems and Fixed Asset Register

- Flexible accounting periods (as a minimum there must be more than 12+). The system must have the flexibility to accept 'current month' postings before closing a previous month.

- The system must allow late postings and be able to apply retrospective adjustments arising therefrom.

- On-line journal input with account and total validation facilities.

- On-line enquiries for all non-archived data plus the ability to trace the original transaction in whichever ledger that information reposes.

- Screen print facility; this now being a standard requirement in most systems.

- The ability to cross modules by using a short code as well as access via main screens.

- The facility to access a second screen while still being either in or connected to the first (windowing).

- The ability to make adjustments whilst using a window facility.

- Flexible report writer to produce standard, ad-hoc and screen based reports. This should be flexible enough to reach any level and spreadsheet operated via the system.

- Report facility for balance sheet and profit and loss formats.

- Full automatic consolidation facility.

- Down/up loading facility to other systems.

- Full audit trail reporting (on demand).

- System print of all master file changes.

- Archiving facilities with simple reload procedures.

- Full disaster recovery and restoration facilities.

- The ability to accept a flexible coding structure.

- Automatic, recurring and reversible journal

entry system.

- Transaction allocation and balance redistribution sub-system facilities.

- Capital project costing.

- Separate files for General Ledger in respect of final period vs ordinary period accounts.

- The ability to handle on a cash basis as well as on an accruals basis.

4.2 Creditors - Purchasing-Stores

This part of the integrated system covers a very wide area and cover the life of a transaction from the earliest requisition point through to the purchase invoice and finally the payment of that invoice.

The subject matter also covers the following areas:-

- Commitment accounting
- Budgetary control
- Creditor management with emphasis on credit card billing, telephone bills, electricity billing management and insurance

It can therefore be said that the system must cover all those transactions from procurement to payment and transmit the relevant data via interfaces to other areas of the system such as the General Ledger.

Due to its close association with the General Ledger it is most likely that the creditors system will be created by the same source as the General Ledger.

It covers orders, stores and creditors but does not cover the wider aspects of purchasing which have been covered by a subsequent exercise.

The requirements schedule has been created in the logical flow that an order would take whilst being progressed through the system.

Some requirements may be covered by other projects but they are nevertheless bona fide requirements that the users would expect as facilities provided by their system.

4.2.1 Purchasing

Purchasing covers all the transactions which take place on receipt of a requisition to the placing of an order with a supplier. In order to provide a comprehensive service the system must be able to handle all facets of the purchasing business and provide the following facilities:-

a)   The ability to handle specifications provided
     by users and combine them with all those
     other records required when building an
     invitation to tender.

b)   Provision of both word processing and
     spreadsheet facilities (at low level) for
     provision of specification detail discussed
     in (a) above.

c)   The ability to operate on both distribution
     and centralised bases in order that
     flexibility of operation is maintained.

d)   The ability to upload/down load data to the
     word processing or spreadsheet areas for
     amendments, analysis or other needs.

e)   The facility to provide commitment accounting
     on an on-line basis.

f)   The ability to track a product either through
     the product files or via supplier files.

g)   The ability to track suppliers either via
     supplier files or product files.

h)   Maintenance of product data base for the NRA.
     Most used items cross referenced to the
     appropriate suppliers.

i)   The ability to interface into suppliers
     product files with the ensuing possibilities
     of electronic ordering.

j)   Maintenance of a supplier database which must
     include supplier history and performance:-

     Name
     Short Name
     Supplier Code
     Multi Order Address
     Payment Holders
     Supplier Status
     Supplier History and service record
     Commodity References
     Contact Name
     Contact Phone
     Price Codes, Quantity Discounts
     Settlement Terms
     Preferred Supplier Data

k)   Provision of ranges of suppliers to supply
     products.

l)   Ability to delete suppliers (old, or unused)
     according to predetermined parameters.

m)   Full integration with accounts payable together with controlled access.

4.2.2   <u>Orders</u>

Having provided the system with a full purchasing facility the requirements regarding order creation are shown beneath:-

a)   The ability to create orders at both local and regional levels.

b)   The ability to handle multi order items.

c)   The ability to produce orders in both ad-hoc and batch modes.

d)   The ability to amend/delete and order at all points up to despatch.

e)   The ability to use either print or electronic data methods of despatching orders to suppliers.

f)   The ability to hold orders for the following purposes:-

-    Validation
-    Authorisation
-    Amendment
-    Cancellation

g)   The ability to update the following fields on creation of order:-

-    Order quantity
-    Supplier history
-    Commitment record

h)   The facility to hold an order history file is required - together with on-line access to that file.

i)   On line or ad-hoc reports for the following purposes are required:-

-    Order status
-    Confirmation
-    Outstanding order history
-    Order/supplier detail

j)   The ability to identify preferred or approved suppliers.

k)   The facility to use system short codes for suppliers and commodities.

l) The facility to code orders for General Ledger purposes and invoice validation.

m) The ability to hold prices and validate with tolerances according to preset parameters.

n) Multi delivery addresses.

o) Password control for Purchasing types so that only users allowed to order that type can place an order.

p) Special security levels of password control.

q) Order history file must show returns and linked credit notes.

r) The ability to link and match both many invoices to an order and also many orders to an invoice.

4.2.3 Stores

This module requires full integration with purchasing and ordering and interface with accounts payable in order to handle auto-validation of invoices and requirements are shown beneath:-

a) Comprehensive materials catalogue (but this may ultimately be restricted to those items with greatest demand). Facilities required:-

- Specific/general descriptions
- Full description
- Short description
- Short code
- Reference number
- Unit of measure
- Search facility
- Supplier ID(s)
- Price details (last)

b) Stock records:-

Stock level   -   Re-order level
                -     Reserved/strategic/free stocks
                -     Minimum re-order quantities
                -     Buffer stocks
                -     Usage
                -     Last (re-order) date
                -     Emergency stocks

c) Stock taking – Locations
                   – Bin and bay numbers
                   – Selection options (e.g.
                      weighted random)
                   – Stock (taking) update
                      facility (single item or
                      global)
                   – Exception re-ordering
                   – Major price differences
                      Exceptional holdings
                      No movement (or minimal)
                   – Valuations – Average cost
                                  – FIFO
                                  – Last price

d) Goods received details
                   – Goods received No
                   – Date
                   – Order No/Advice No
                   – Quantity
                   – Location

e) Matching details
                   – GRN
                   – Order No
                   – Invoice No
                   – Quantity ordered
                   – Quantity delivered
                   – Variance
                   – Tolerance
                   – Price validation
                   – Commitment   decrement
                      (vals)
                   – Invoice increment (vals)

f) Goods returned – Return note No
                   – Order   invoice
                      cancellation
                   – Order – invoice awaiting
                      CR note
                   – Hold facility

g) Reports   – Outstanding orders
                   – Future requirements
                   – Usage (actual vs budget)
                   – Statistics
                   – Stocktaking reports

All reports to be ad-hoc with on-line options.

h) Stores Oncosts – Facility to change on-
                      costs to withdrawals

i) The ability to see returns on order history
    file with linked CNs.

4.2.4   Accounts Payable

This module takes validated invoices and updates
the individual creditor records in respect of
unpaid invoices and provides the posting data for
the general ledger interface. The system must
always hold data at the lowest transaction levels
in order that subsequent investigation can be to
the greatest extent.

Having taken the invoices into the system,
Accounts Payable must then arrange for application
of discounts, due dates and then payment (by BACS,
cheque or other methods of transfer).

Due to the complex nature of this application,
many sub-systems will be required to link or
interface into it. The most important of these
interfaces is, of course, the General Ledger but
there are also additional areas such as bank
reconciliation, electricity, telephone credit card
billing systems which require attention.

The module is split into three parts for business
requirement purposes:-

   -     Input to the system (invoices, credit notes
         etc) and maintenance
   -     Payment   management   including   account
         management
   -     Reports

4.2.4.1   Input and Maintenance

The system maintains certain database records
many of which are shared with the purchasing
and stores module, some duplication has
therefore been inevitable if the full
requirements are to be shown at each stage:-

   a)   Supplier details:-

               -     Name
               -     Short name
               -     Supplier code
               -     Reference number
               -     Multi order address
               -     Payment address
               -     Supplier status
               -     Settlement terms
               -     Discount details
               -     Contact name/phone
               -     Memo/notes
               -     Search facility
               -     History
               -     Analysis keys
               -     Data last invoice

- Value invoices YTD
- Value invoices PYTD
- VAT code
- Supplier maintenance facility
  - Create
  - Amend
  - Delete
- Sub contractor details, status and his expiry date

Payment details:-

- BACS - Bank account numbers or cheque

or special payment details

b)   Invoice Processing

This task breaks into two parts:-

- Automatic invoice processing
- Manual invoice processing

Both these methods are handled similarly by the system - it is merely at the input stage that there is a difference.

A.   Manual Entry. In order to handle manual items, it is necessary to provide an entry screen which contains the following details of the spaces in which they can be entered:-
- Supplier name/payment address
- Invoice number and system generated number (unique ID)
- Invoice amount (Inc. VAT)
- Discount/settlement terms
- Authorisation code
- Invoice line data entry
- GL Nominal code and amount
- Discount amount
- Total cross check with VAT validation
- Batch update and posting facilities

Where it is found that the current supplier is new and not on the database, the facility to go into the supplier file to create and then return to this screen (and batch) is required e.g. window facility.

B. **Automatic Entry.** Automatic items are validated by comparing the invoice with both order and GRN. This comparison takes place at the goods received stage and provided that all the criteria match and are within agreed tolerance, the invoice can be automatically passed for update and payment purposes.

Automatic invoice processing details:-

- Invoice number
- Unique invoice ID
- Invoice amount
- Match order/GRN No
- Values parameters
- Unmatched items report
- Authorisation validation
- Discount key/indicator
- Multi posting (split code) code details or values
- Automatic nominal code validation
- Automatic VAT validation
- Automatic batch updates
- Batch input records.

Credit Notes

It is unlikely that credit notes will be handled automatically and therefore the process will be similar to the manual input of invoices but with a credit (or minus) field for the amounts to be credited.

4.2.4.2   Creditor Payment and Account Management

This area maintains the creditor accounts and takes outstanding items for payment on automatically determined due dates or scheduled payments for standing orders, immediate payments etc.

Each creditor will be allotted its own account unless it is the 'one-off' variety which is kept in a conglomerate account. All invoices credited to an account are schedules for payment either by invoice due data relating to the batch input or by agreed payment data entered on the supplier file in order to take advantage of discount (quantity or settlement) or some other arrangement.

In order to provide the user with all the information needed to manage the accounts payable, there must be full screen visibility in respect of supplier details with invoices linked or flagged in respect of payment arrangements.

The system must also be able to provide aged creditor reports so that amounts being scheduled for each payment run are within the limits planned for the period.

In order to handle any planned adjustment the system must offer a 'what if' facility so that payment runs can be scheduled to the Authority's best advantage.

The facilities required within the payment system are as follows:-

-   The facility to choose payment methods (BACS, cheque or other)
-   The ability to cancel a payment right to the last process of the payment run
-   The ability to change payment mode (e.g. immediate cheque payment and BACS cancellation)
-   The facility to reschedule payments to the next (automatic) run
-   The ability to produce manual cheques and use manual entry screens (urgent facilities)
-   The ability to use 'computer produced' cheques
-   The input facility for special payments e.g. foreign payments
-   The ability to hold payments and reschedule at a later date
-   Production of remittance advices
-   Input facility for special authority levels
-   The ability to make formal entries and adjustments.

Telephone bill, electricity billing and credit card management

There are system requirements regarding these items which are set out beneath:-

-   The ability to schedule and make either part payments or instalments.

-   The ability to down-load to a spreadsheet to create further analyses and project resource.

- The ability to recharge users for personal items charged to NRA.

- The ability to recover outstanding amounts as a result of changes either via payroll or direct invoicing.

Bank Reconciliations

There is an overall system requirement to interface all payments into a reconciliation system.

4.2.4.3   Reports

Various reports have been identified as standard requirements. With various tools at the users disposal many of these reports may be created on an ad-hoc basis and run as and when required by the user.

It is assumed that where appropriate the following reports are available both as an enquiry or as printed output:-

- Spend by Department
- Spend by commodity category
- Spend by supplier
- Number or orders per supplier
- Number of orders per Department
- New suppliers, amended suppliers, deleted suppliers
- Cash flow
- Cheques issued
- BACS payments
- Creditors by: Age
                Business area
                Cost centre
                Capital : Revenue
- Standing orders listings
- Periodic payments listings

4.2.5   <u>Accounts Receivable</u>

This area covers both the collection of
outstanding monies due to the Authority and also
the creation of the charge which provides accounts
receivable with the items to recover.

In order to provide a full service to the user the
system must commence with the creation of a charge
against a customer from which an invoice is
raised.

In order to provide the facilities required and
bearing in mind that other feeder systems are
providing billing input this user requirement
specification has been split into two parts:

-       Billing and Invoicing
-       Accounts Receivable

Billing and Invoicing

This module accepts either a record from another
system which will form the basis of an invoice,
or a fully constructed invoice from another
system.

The records according to the system from which
they were derived are then checked for valid
customer data before creating a print file in
respect of an invoice (complete with all VAT
calculations etc where applicable) and updating
both Accounts Receivable and the General Ledger.

The user requirements are shown beneath:

-       The ability to access all customer data (per
        customer file shown in Accounts Receivable).

-       The ability to access or interface all feeder
        systems.

-       The ability to create both automatic and
        manual invoices.

-       The ability to update the General Ledger on
        either an on-line or batch basis.

-       The ability to update accounts receivable on
        either an on-line or batch basis.   ·

-       The ability to interface to all standard
        printer systems.

-       The facility to provide both financial an
        statistical data.

- On-line help facility.

- The ability to produce credit notes and cancellation of invoices right up to the final stage prior to printing.

- The ability to amend records.

- The ability to alter print layouts.

- The provision of full audit trail facilities.

- Total compatibility with Accounts Receivable.

- The ability to create a new customer account via windowing facility.

- Automatic account creation where automatic invoices are necessary.

Accounts Receivable

Accounts Receivable takes all created charges from the billing module and updates the appropriate accounts. It also monitors all cash received and provides the reports necessary for the pursuance of credit control and debt collection.

User requirements are stated beneath:

- The system must have on-line access to all users.

- Updates must have the facility to be made either on-line or batch according to need or transaction type.

- The system should contain an on-line help facility.

- Total compatibility with the billing module.

- Automatic interface with the General Ledger system.

- The system should be password controlled and access should be limited as required.

- The facility to restrict access by menu control.

- Parameter control to have limited access (systems administration only).

- Password control to be limited as with parameters above.

- Full audit trail facilities.
- The customer record must contain the following as a minimum:-

  - Name
  - Credit terms
  - Credit limits
  - Status/dispute indicators (Flag System)
  - Address
  - Telephone number
  - Contact name
  - Fast or short name search facility
  - Name selection on a 'fuzzy match' basis - giving a selection (where uncertainty)
  - Ability to produce address label runs
  - The ability to archive according to preset parameters

- Recovery Facilities
  - Age analysis
  - Statement production
  - Text driven output
  - Automatic follow-up letters
  - Legal recovery sub-system
  - Cost accounts
  - Multi date recovery
  - Single date recovery
  - Bill by bill recovery

- Cash Posting Facilities
  - Automatic allocation of cash
  - Manual allocation of cash
  - Ability to link part (on account) payments
  - Option to open item or balance forward analysis of unlinked balance

- The ability to handle cash analysis of balances arising out of the following methods:
  - Direct debit
  - BACS credits (formerly traders credits)
  - Giro credits (Post Office or bank)
  - Cheque or cash

- Provision of facilities to accept instalment payments and accountancy (either with or without interest applications)

Full analysis ability is required but with special reference to:

  - Sales analysis
  - VAT analysis

The ability to create automatically new customer references and accounts.

The ability to produce monthly and ad-hoc credit control reports.

Full search facilities.

Down loading to spreadsheet and word processing facilities.

Cash flow planning facilities.

On-line/batch adjustment facilities.

The ability to handle discounts with full discount calculator.

The ability to provide system flags on a user defined basis.

Flexible report writer.

The ability to close accounts which have been unused for a defined period.

4.2.6   <u>Payroll</u>

It should be emphasised that any investigation into
payroll user requirements will inevitably overlap into
the personnel systems area.

Due to the strong relationship between personnel and
payroll and the fact that both systems are usually
marketed in one package, it makes good sense to combine
the efforts of payroll and personnel into one project
team.

It is unlikely that a payroll and personnel system
acquired from different software houses will form a
successful integrated package.

The requirements for payroll have been extracted under
various headings which are set out beneath:-

4.2.6.1   **Functionality**

-    On-line input (with batch input alternative)
     at any location within the Region.

-    The system should be hierarchical and be set
     up in a manner which affords the least
     problematic method of consolidation.

-    The facility of an integrated personnel
     system attached to the payroll.

-    Full audit trail facilities identifiable down
     to user level.

-    Direct costing links to cost ledger - using
     short code.

-    Integrated direct feed in respect of car
     allowance, travel and subsistence data from
     source systems.

-    Integrated training expense data.

-    On-line help screens.

-    Full flexibility with regard to tax charges
     etc.

-    High levels of security, password controlled.

-    Ability to transfer to alternative media:-

-    Tape, Disk, line etc for transfer or payment
     purposes

-    The ability to use both line and local
     printers with addition screen print facility

- Employee data masterfile with facility to amend retrospectively.

- Ability to combine pay/deduction elements for reporting.

- Provision of salaries/wages budget module.

- Download facilities.

4.2.6.2 Pay Calculations

- Facility of flexible periods (weekly, fortnightly, four weekly, monthly etc).

- Access to all pay slip information before payroll run.

- On-line adjustments right up to payroll run.

- Sufficient system capacity to identify all elements of pay and deductions.

- Ability to expand system to include (unspecified) future requirements.

- Ability to formulate controls and analyse between gross pay and on-cost.

- Correct methods for calculation of NI.

- Correct methods for calculation of Tax.

- Ability to handle legislative requirements (e.g. attachment of earnings).

- Retrospective back pay (automatic) adjustments.

- Capability to interpret pay conditions (e.g. conditioned overtime average).

- Flexible bonus calculator.

- The system must handle Statutory Sick Pay/Statutory Maternity Pay & NRA Sick Pay in accordance with modules.

- On-line input for weekly wages (pay and costing).

- On-line reconciliation (hours worked and costed).

- Ability to categorise overtime (conditional, casual etc).

- Ability to handle NRA superannuation rules.

- Ability to calculate average pay, bonus etc for sickness, holidays etc.

- Ability to separate pensionable earnings from non-pensionable.

- Ability to provide personnel oriented reports showing full and half pay entitlements with automatic form generation for DSS.

4.2.6.3   Costing

The system should provide at least the following methods:-

- Standard apportionment
- Timesheet data

- Ability to cost overtime to job

- Ability to generate on-cost (selectively where required)

- Ability to cost certain pay elements to predetermined cost codes (hard coded or auto generated journals)

- Automatic absence costing (holiday, sickness, training etc)

- On-line costing amendments including on-cost adjustments.

- Separate subjective coding for wages/salaries.

- Retrospective costing of pay awards.

- Employee history (employee no, department no etc)

- Automatic validation of cost codes.

- Automatic accumulation of repeated cost codes.

- Standing apportionments for salaried staff (on-line)

4.2.6.4   Reporting Facilities

- Automatic production of year end records for PAYE and NI including P60

- Ability to produce P45 certificates

- Comprehensive flexible report generator

- Comprehensive pay history on-line subject to archiving

- Password security in all sensitive areas

- Costing information held to include both current and previous year

- Ability to produce national reports

- Ability or produce detail or summary reports

4.2.6.5   **Employee Expenses**

- Must be able to process on-line full employee details (from history file)

- Details of expenses (nature etc)

- Mileage rates and calculations
  - standard   -   non-standard

- Tax status:
  Tax, non-tax, NI, non-NI, Superannuation, non-superannuation

- Mileage stats monthly & YTD
      Person
      Responsible officer

- Excess mileage

- Forward dating re excess dates expiry

- Subsistence rates
      Allowances
      Reimbursements

- Other expenses

- Arrears/change of rate facilities

- Training costs for employees e.g. reimbursement course fees

- Trade Union meeting expenses

- VAT handling mechanisms

- Telephone charges claimed

- Telephone charges lump sum

- Remittance advices

- P11D reporting/requests

- Year end reports to individuals

- Standard close down date

4.2.6.6   **Capital Salaries**

It is important that the capital element is split
from overhead when charging salaries.   Unlike
wages which are paid on a time sheet basis,
salaries must normally be apportioned at a later
date either by application of time sheets to the
fixed   amounts   paid   or   by   pre-determined
proportions if these are known.

In order that payments are not held up, salaries
which are subject to this type analysis must be
posted to a holding account and await down-
loading to a sub-system which handles this
facility according to the requirements shown
beneath.

On completion of the adjustments, the sub-system
allows up-loading to the general ledger as a
journal entry (which also clears the holding
account).

The requirements in this area are as follows:-

- Ability to carry out allocation on a
  weekly and monthly basis

- Ability to base allocation on:
  - time sheets
  - specific charges
  - standing percentages

- Facility to enter manual adjustments as
  well as batch

- Facility to set rules for:
  - individual
  - grade
  - job description

- Ability   to   include   in   rates   the
  following:
  - labour on-cost
  - charge for department
  - overheads

- Ability to vary rates in the year and
  also retrospective facility for variance
  purposes

- Ability to allocate by activity e.g.
  design, supervision

- The system must integrate with capital project costing

- Credits must be shown on monthly cost centre reports

- A report is required of chargeable hours credited by:
  - individual
  - cost centre
  - pyramid of cost centres
  - activity within project

- A report of hours/salary cost by:
  - project
  - Geographic area is also required

4.2.7   Job Costing

This sub-system can be defined as an extension of the General Ledger and as such forms a close link. All information posted to this area is via the same routines that post to the General Ledger but at a lower analysis level. The requirements are set out beneath:-

- The system must either link to or be part of the General Ledger database

- A flexible accounting calendar is required with month, year to date, 12 months rolling forecast facilities as a minimum

- A strictly controlled chart of accounts to provide stringent definitions at national level is required to serve the system

- The provision of both budget and actual figures is necessary

- Variance analysis must be able to show price/volume

- Automatic link and windows to budget system for preparation purposes (and review)

- The ability to show standard price and volume = budget

- The ability to define a job by responsible officer (or cost centre within responsible officer)

- The ability to run exception reports for jobs according to preset parameters

- Full subjective analysis is required

- The provision of summaries as part of the reporting system is necessary

- Ability to show accounts as a pyramid - supervisor/district/area/region (as part of a comprehensive coding system)

- The ability to provide national level comparisons

- Full flexibility requirement with emphasis on flexible reporting both standard and ad hoc with additional screen print facilities

- The ability to provide job type cost data

- The ability to show comparisons by location or managers

- The system must be fully compatible with the financial ledgers with transaction traceability

- The system must also link to billing system

- The job cost codes must roll up to and reconcile with ledger codes

4.2.8   Asset Accounting

This subject area is a sub-system of the accounting system and one which also aids non-accounting business users in their day-to-day running of the Authority's business with regard to asset management and accounting.

There are many packages on the market which will handle all aspects of asset management and accounting most of which are 'stand-alone' and will interface with most other accounting packages as required.   Interface ability with transport and plant systems is also essential.

The requirements for this function are set out beneath:-

- On-line system required
- Ability to make service allocations
- Ability to define and hold asset types
- Location identifier
- Ability to enter asset life
- Ability to apply depreciation in accordance with type, method and means of calculation
- Ability to enter acquisition data
- Ability to hold depreciation history (by month, quarter, year)
- Ability to apply 'what if' calculations
- Ability to apply rate of return calculations
- Ability to apply CCA indices
- Ability to provide asset revaluations

- Facility to accept direct input in respect of either take on items or new acquisitions
- The ability to make transfers to the system from work-in-progress
- The ability to produce schedules of acquisitions and disposals
- The ability to hold both tangible and intangible assets
- The facility to make apportionments of support services
- Full scale year end/period end processing with appropriate updates interfaces areas
- The system must be subject to standard close down dates
- Automatic depreciation posting facility to General Ledger
- Full reconciliation facilities with General Ledger
- Transaction traceability to original entry
- The ability to produce forecasts
- The ability to download to sub-systems and to upload after adjustment
- The ability to transfer between Regions
- The ability to accept organisational charge
- Mass update or amendment facility
- The ability to make additions to an asset
- The facility to make revaluations
- Flexible reporting facilities with choice of method e.g. cost centre
- The ability to handle inventory analysis
- Full audit trail (disk or hard copy)
- Full journal transfer facilities

4.2.9   <u>Transport and Plant</u>

This sub-system is closely related to the Fixed Assets sub-system and in this case is largely concerned with the following:-

Life of the item and replacement details
Cost of maintenance
Location
Analysis of maintenance type

The requirements are set out beneath:-

- The system must be on-line
- The system should be log sheet based (electronic)
- The ability to provide utilisation statistics from log sheets:-
  a)   Item type
  b)   Working hours
  c)   Chargeable hours
  d)   Maintenance hours
  e)   Repair hours
  f)   Idle/off hire hours
  g)   Mileage

- There must be an interface with costing to provide the following information:-
  a) Maintenance
  b) Repairs
  c) Tyres and batteries
  d) Fuel
  e) Other costs
- There must be an asset history containing the following data:-
  a) Date of purchase/replacement date
  b) Cost, location, manager
  c) Disposal date, proceeds
- The provision of a maintenance history file
- The ability to archive usage/costs
- The ability to provide structured reporting over type/responsible manager
- The ability to charge to users in the following methods:-
  a) Hourly
  b) Mileage
  c) Direct
  d) Hire rates
     or any combination of the above
- The ability to charge locations on transfers either locally or divisionally
- Provision of a flexible reporting structure
- Prompts for taxation MOT purposes
- External plant handling as a sub-system
- Production of statistics
- Group classification
- On-line costing link/interface to cost ledger

4.2.9.1   Fuel Card System

This system is a sub-system which will be part of the creditors ledger. It operates in a similar manner to credit cards.

The requirements are as follows:-

- On-line system
- Micro operated and uploadable to creditors system
- On-line enquiry facilities
- Both batch and online update facilities
- The system must be able to both accept and transfer data by disk, tape or electronic interface means
- The system must also be able to handle manual inputs
- The ability to match items with vouchers must be in the system
- The system must interface with General Ledger although the route taken may be via creditors ledger
- Access must be password controlled and where possible multi-user
- There must be archiving facilities

- There must be an audit trail reporting either by disk or paper as required
- There must be flexible management reporting using any keys available
- There must be a facility to charge usage to user dept/divisions/regions
- There must be full downloading and work processing facilities
- There must be an auto matching system with vouchers and agency data with exception reports to back up
- All reports must be user generated

4.2.10   Bank Reconciliation

The bank reconciliation module is a sub-system which sits beneath the following systems with which interface is essential:-

    Creditors
    Payroll
    Income/receivables

The requirements are as follows:-

- On-line system
- Full interface with all systems which either handle cash receipts or payments
- The facility to handle annual cheques
- The ability to input presented cheques by the following methods:-
    On-line manually
    Tape (bank or any other media)
    Batch
- Periodic listing of outstanding cheques (day, week, month, year)
- Error reports of mis-matches
- Fast input facility for mis-match corrections
- Service analysis of outstanding cheques (by volume)
- Listings of outdated cheques
- Reminder letters re outstanding cheques more than 3 months old
- Bank reconciliation reports
- Ability to re-run a reconciliation report after adjustments (e.g. locating mis-matches)
- Separate reconciliation reports for:-
    Income/receivables
    Payments (creditors and payroll)
    General (manual) payments
- Ability to list (daily) all transactions other than valid presented cheques
- Facilities for amendments/cancellations
- Facility to log, monitor and list all cancelled cheques
- Production of a service analysis of presented cheques
- Flexible report generator

4.2.11   Research and Development

The user requirements in this area are as follows:-

- On-line system
- The ability to identify responsibility (responsible officer) for approved programme/budget
- The ability to display annual budget/actual/forecast figures (monthly, quarterly, annually)
- The facility to link with budget preparation
- The facility to create summary reports
- The facility to perform analysis by function
- The ability to interface to job costing/general ledger
- The ability to window into other systems both for review and updating purposes
- The facility to link to the following services:-
  Diary
  Word processor
  Spreadsheets
- Interface to sundry debtors - HQ recharge
- The ability to transfer between regional projects
- The ability to circulate completed projects (either on screen or hard copy)
- The ability to produce cost and benefits analyses
- The ability to produce a decision model for further investigation purposes
- Flexible chart of accounts
- The ability to hold sufficient history on the system to provide all necessary comparisons
- Flexible report writer

4.2.12 (a)   Rechargeable Works

The user requirements from this area are shown beneath:-

- On-line system
- Ability to identify function (e.g. FD, WR etc)
- Ability to identify job type (e.g. incid, stand, order)
- Ability to access all relevant data on 1st screen e.g. date, description, estimate of costs etc
- Ability to record receipts/deposits in advance
- Ability to identify all costs on a subjective analysis basis
- The facility to provide movement reports (monthly or year to date or ad-hoc)
- The facility to provide 'non-movement' or exception reports
- Ability to generate admin overhead

- Ability to complete job details input from Est/Act cost variance analysis
- The provision of interface to sundry debtors and billing systems
- Ability to look up job histories
- The ability to edit system (cancelled or completed jobs)
- Ability to provide monthly quarterly and annual accounts
- Ability to display status of jobs (history-to-date)
- Ability to adopt standard charging and hold a schedule or library of rates
- Automatic carry forward of data at Year End
- Flexible report writing system
- Interface to General Ledger
- Ability to identify internal and external R/W
- Auto generation of short cost code for job number
- Trading account by function

4.2.12 (b)   Flood Defence Income

i)   Levies and Precepts

The requirements in this area are shown beneath:-

- On-line system
- Ability to calculate precepts
- Ability to apportion levies
- Ability to update on-line or batch
- Ability to review the city
- Automatic interface with billing and account receivable
- Ability to update billing system manually
- The ability to produce levy and precept demands
- The ability to flag payment date
- Ability to produce on-line reports
- Down loading facilities
- Password controlled security
- Ability to window into other systems (e.g. diary and so update)
- Archive facility
- The ability to download or window to word processing, diary, spreadsheet facilities etc
- The ability to display comparatives over previous periods or years
- The ability to model and adopt methods with regard to cost increases
- Ability to produce a levy statement
- Levy status report by Local Authority
- Ability to store standard data for reference purposes

ii)   **IDB Drainage Rates**

All those requirements shown in 4.2.12 (b)i)
supra plus the following:-

- Property based record of:-
  Field within parish
  Fields within assessment
  Linked to customer
- Manual records of assessment linked to
  customer record on computer
- Automatic interface with digital mapping
  system
- Ability to compare with previous years
  rates
- Ability to model effects of charges on
  groups of rate payers

iii) **General Drainage Charge**

All the requirements shown in 4.2.12 (b)i)
& ii) plus the following:-

- Automatic production of declaration
  system form
- Automatic production of declaration
  system reminder

iv)   **Rents (Periodic Register)**

All the requirements in 4.2.12 to date plus
the following:-

- Automatic interface with Terrier System
- Manual interface with Terrier System
- Property based record linked to customer
- Periodic register to hold rent review
  data, when due etc

4.2.13   <u>Grants</u>

The user requirements with regard to grants are
tabulated beneath:-

- The system must be on-line
- There must be interface with expenditure and
  capital works programme
- The system must accept input of S.22 schemes
- The system must accept input of grant earning
  schemes
- The system must accept input individual scheme
  approvals
- The system must accept input of grant earning
  ceilings
- The system must display the cumulative position
  of any scheme
- The system must show the payments in year

- The system must be able to forecast to the end of a quarter
- The system must enable to record and display non windfall contributions
- The system must be able to hold and display differential grant rates
- The system must be able to hold and calculate grant entitlement
- The system should be able to produce interim grant claim form (LDW4)
- The system should show cash received (transferred from expenditure)
- The system should make periodic reports (monthly, quarterly and annually)
- There should be a facility to record audit status
- The system should interface to the ERDF grant database - operational program
  - grant rate
  - approval status
- There must be an interface with capital project monitoring
- The ability to identify the grant earning aspects of scheme
- The ability to handle LDW3 final accounts claims
- The ability to monitor outstanding claims
- The ability to automatically update in respect of scheme approval for inflation purposes
- The provision of flexible code structure to identify by
  - local FD district
  - project code
  - MAFF LDW No
  - project name
  - Project Engineer
- The ability to identify separate projects by LDW No
- Ability to hold history/record of the project
- The ability to provide working to responsible officer when expenditure is nearing or exceeding approved sum
- Indicators to show status of scheme:-
  - Commenced........
  - MAFF notified....
  - LDW3 accepted
  - (subject to audit)
  - LWD3 accepted....
- Indicators to show whether projects are tidal
- Project MAFF LWD2 classification indicator
- Ability to show cumulative expenditure claimed per scheme and allowed by MAFF
- Interface with Capital Project costing for production of LWD4 (forecast by future quarters)
- Details of contribution due per project contributor/amount/basis of contribution of cost/windfall/non-windfall
- Ability to note items not included - specialist consultancy fees

\-   Where project has more than on LDW ref number, the ability to identify compensation/costs/legal charges etc against specific LDW refs for claim purposes

DT/LCD/FMIS.DT/20.12.90

RH

You commented earlier that you've not
seen the Spec. for IH.

Something came in I think one Christmas (when
I wasn't here) and was with IR when I got
back - I presumed it had come in via yourself.

We commented on it at a fairly high level -
IR spent some time on the phone settling the
comments through with D Tickner.

If you've not seen the aforementioned - I
attach the originals - I've not kept a copy

Note from Ha & R.

Business Requirements Specification - IAS.

Further to our response to the above - David Tiktin phoned in response to to our memo of 22/11/91.

His comments, ad seriatim - were as follows.

1) He envisaged that there would be standard reports - together with ad hoc options that would be monthly fixed, with total freedom at the lowest level to screen prints and down-loading.

2) The main thrust of his response a this was that separate transactions would be classified & tied by different analysis on 'paid & unpaid'. He appreciated that this did not come to u/p cheques.

I reminded him of the difficult areas, eg VAT. his response was that additional indicators would be required to allow for this.

3) A second set of budgets could be provided, but he thought that this could be partially covered by the accruals treatment - as above.

4) His line on the Capital salaries was that there are sophisticated payroll systems that this could hang off the back of. - I explained the mechanism involved - and he intimated that there could be some delay in this area.

It was reported at the last meeting that all comments on the I.A.S. had been received by Head Office. I will follow up on what the future mechanisms are — with a view to ensuring proper coverage of these points.

I'm not clear on the extent I.C.S. is affected by this draft. — Will it effectively 'lost' — ?

Also — I'm not sure that 'Ma mos can' is properly covered — I'm copying this note to AC to follow up on this.

18/2/91

NATIONAL RIVERS AUTHORITY - ANGLIAN REGION

FAX			URGENT			ROUTINE			COURIER		

TO: Lawrie Gray	FROM: Howard Gelley
POST: Chief Financial Manager	POST: Chief Accountant
LOCATION: Bristol	LOCATION: Peterborough

OUR REF: HG/2B/LAM296   DATE: 22 January 1991

SUBJECT: <u>BUSINESS REQUIREMENT SPECIFICATION - IAS</u>

I write to confirm the comments provided verbally to David Tiktin by Ian Ripley on 9 January 1991.

Based on the specification, a number of elements of which had previously been circulated and reviewed within the Regions, the comments are limited: The specification is comprehensive and will almost certainly by impossible to achieve even in the medium to long term. The problem will then be to ensure the key areas are covered initially and expansion facilities are provided.

Regarding the detail of the specification, the following comments are relevant:-

1)   The nature of the outputs are not prescribed. It is understood that most packages have flexible reporting systems but some guidelines as to proposed requirements are necessary.

2)   Significant expansion of the specification is required regarding the conversion of the ledger to a cash base given the significant potential movements in holding accounts eg. VAT, tax etc.

3)   The system may need to accommodate both cash and expenditure budgets. This is not specifically covered.

4)   The internal ~~financial~~ *Journal* systems such as capital salaries etc. will be difficult to source in terms of external packages. They will have a significant development period and could delay implementation dates considerably.

Howard Gelley
Chief Accountant