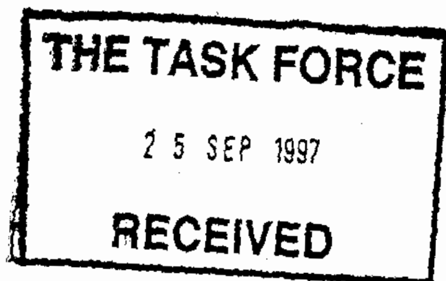
Eastern Health Board



EHB Business Processes & Data

Operations Model Commentary

September 1997

EHB BUSINESS PROCESSES & DATA

OPERATIONAL MODEL COMMENTARY

(Draft document for review and discussion)

September 1997

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1. Introduction

Purpose of the Document

1.1 This document presents a commentary on the operational analysis of the business processes and data requirements of the EHB undertaken as part of the Information Systems Strategy Planning project. This commentary and analysis is based on the following two primary inputs:

- The business process framework developed during the Enterprise Strategy Analysis;
- The outputs from the seventeen operational workshops and interviews involving a wide range of EHB personnel.

The process model reflects the activities currently carried out to meet the health and personal social service needs of the population of the catchment area served by the EHB. The entity relationship model identifies the supporting data requirements for these processes. However, this document also identifies a number of related process issues which require further discussion and consideration both by the Project Team and EHB personnel. This discussion should take place by reference to agreed business strategy of the EHB and, where appropriate, should take account of the recommendations and proposals contained in the Interim Report of the Task Force on the Eastern Regional Health Authority, June 1997.

1.2 The purpose of this document is to reflect the thinking of the Project Team on the business process and data as it develops, and to facilitate a common understanding and consensus on the models. Elements of this document may be revised and incorporated, as appropriate, into the final Enterprise Operational Analysis (EOA) report.

Structure of the Remainder of the Document

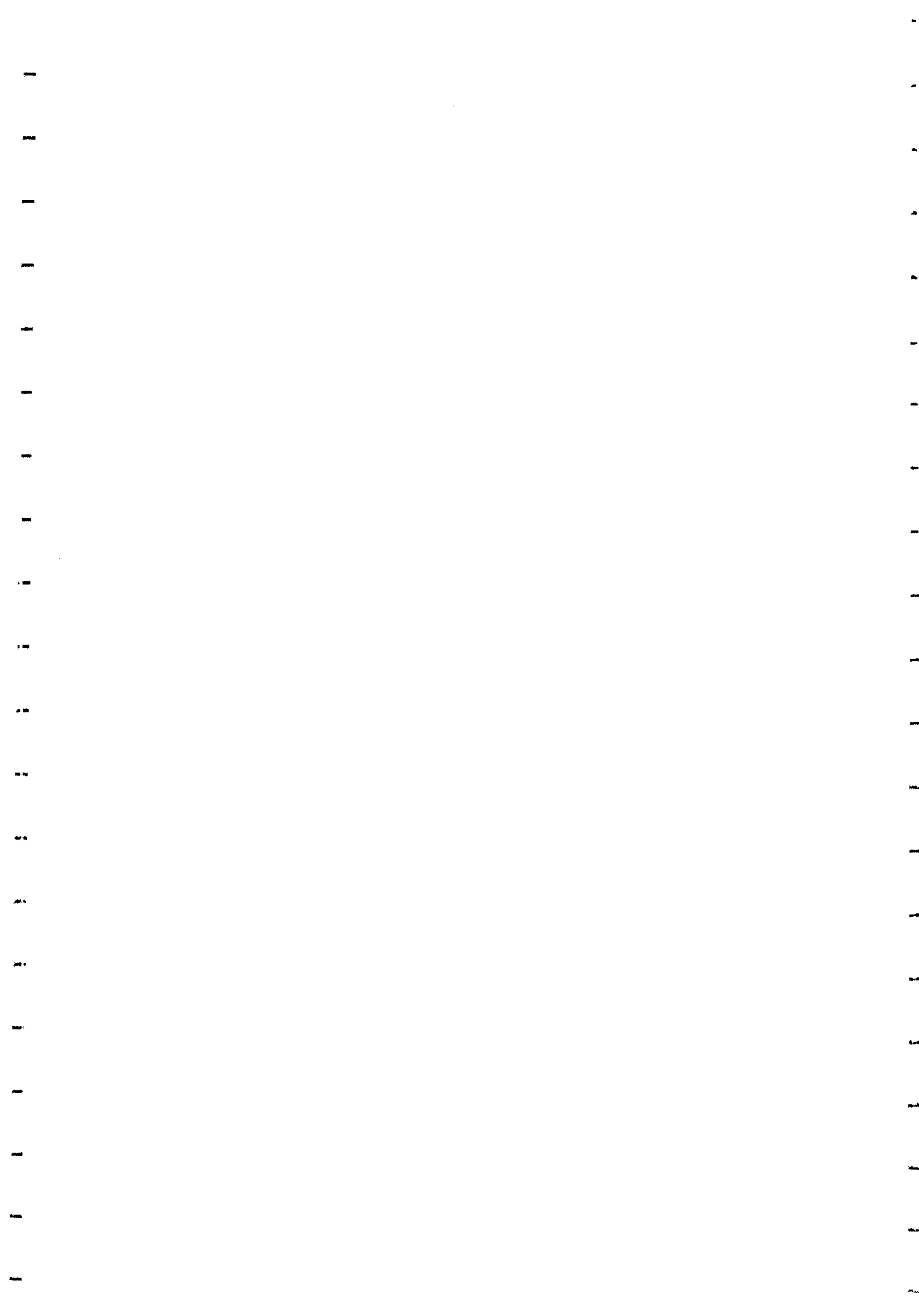
1.3 The remainder of this document is structured as follows:

Section 2 presents a management summary of the main points of the commentary;

Section 3 identifies the key assumptions and issues in relation to the process model;

Sections 4 to 9 describe each of the business processes and the component major processes and identifies the key issues which emerged from the analysis.

Section 10 outlines the data requirements of the business processes through a narrative, summarising the approach and key points of the ERD.



2. *Management Summary*

Summary of Key Assumptions and Issues

2.1 The EHB serves or otherwise has a relationship with the following three main groups:

1) **Clients:** which includes all service users referred to the Board or potential service users who resides within the catchment area of the Board;

2) **Stakeholders:** anyone who has an interest in the Board, e.g. Department of Health, Board members or public representatives; and

3) **EHB staff:** all staff employed by the Board.

2.2 The client's perspective of the EHB is based on how the Board responds to their particular need. The construct of a client encounter was developed to reflect this perspective. An encounter includes an assessment of client needs, the EHB response and the outcome. Client encounters have been classified into two categories, medical and non-medical. An alternative classification of health encounter and personal social service encounter was also suggested.

2.3 The EHB procures three main types of service. These are: health and personal social services, support services required by the EHB Functions, and the services required by the local facilities. The activities required to manage and procure each type are significantly different.

2.4 There is need to share information between service providers. Management information needs can be satisfied through the aggregation of information collected on individual clients by operational systems, not identified in the aggregated information. The operational systems will record details of the individual encounters. The information shared between operational systems to facilitate the delivery of seamless health and personal social services may consist of a minimum set of client data. The exact content of this minimum client data set requires further discussion, consideration and agreement on a Board level. National issues may also need to be considered.

Summary of the Principal Business Processes

2.5 The business process framework developed during the Enterprise Strategy Analysis has been further refined and developed as a result of the operational workshops and interviews. The following six principal business processes have been identified:

- Plan Health and Personal Social Services (HPSS);
- Deliver Health and Personal Social Services (HPSS);
- Manage and Co-ordinate Care Group Activities;
- Manage Externally Provided HPSS;
- Manage External Relations;

- Manage EHB Support Services.

The principal difference between the ESA process framework and the operational model is that two delivery processes have been combined into one. The key issue to consider is the impact the proposed new structure will have on this model.

3. Key Assumptions and Issues

Overview

3.1 To facilitate understanding and discussion it is necessary to identify a number of key assumptions underlying the development of the process model. These may be summarised under the following key headings:

- Clients, Stakeholders and EHB Personnel;
- Client encounter;
- Classification of Services;
- Sharing of information;

These assumptions are further expanded in the following paragraphs and, where appropriate, in the relevant descriptions of the business processes.

Clients, Stakeholders and EHB Personnel

3.2 In developing the process model the Team found it beneficial to identify and distinguish the following three groups:

- **Clients** includes all service users or potential service users, i.e. each individual who resides in or visits the catchment area or who is referred to the Board. A client can have a multifaceted relationship with the Board during their lifetime (e.g. member of a care group, in patient, out patient, long term residential patient). At any stage an individual can belong to one or more of these categories.

  Deliver Health and Personal Social Services and *Manage and Co-ordinate Care Group Activities* are the two business processes primarily concerned with serving and supporting the client.

- **EHB personnel** includes all the staff of the EHB (both management and operational). In this context they are customers of the internal Functions (e.g: Finance, Personnel, Estate Management). These Functions provide support to the direct service providers so as to enable them to meet the needs of the EHB clients.

Manage EHB Support Services is the business process primarily concerned with meeting the needs of this group.

- **Stakeholders** includes all those individuals, groups and organisations (excluding Clients and EHB personnel) who have a relationship with the EHB. These include the Department of Health, Board members, public representatives, general public, external service providers, other health boards and health agencies and the media. This list is not necessarily exclusive or complete.

  Manage External Relations and, to a lesser extent, ***Plan HPSS and Manage External Provided HPSS*** are the business process primarily concerned with addressing the needs of these stakeholders.

It is recognised and accepted that there is a considerable level of interaction between these three groups. However, adopting this approach and classification allowed the Team to focus on the activities of the Board independently of organisational and functional structures. This will be of assistance in the future as the recommendations and proposals of the Task Force are implemented.

Client Encounter

3.3 At present the EHB is structured and organised into programmes with a related group of services. Services are, however, not necessarily programme specific. Further refinement of the structure takes account of the particular needs of the designated care groups. These are : Child, Elderly, Mentally Handicapped, Physically and Sensory Disabled and Drug (substance) Misusers. The care group approach is currently being further formalised and structured with the recruitment of designated Care Group Directors.

3.4 This approach facilitates the management, planning control and operation of the Board. However, it does not necessarily reflect the clients perspective of the service they receive from the EHB. A client will present to the staff of the EHB with a particular need. This may arise either through direct contact, referral from other agencies or through a GP. The client's need can range from the simple, e.g. request for drugs refund or medical card, to the more complex, e.g. domestic violence with associated physical and social needs. In the case of the latter these are likely to be more vunerable individuals and may be associated to a particular care group.

The EHB responds to the needs of its clients. The nature and complexity of this response depends on the particular needs of the individual client. A complex response can require a combination of services, or elements of services. In this context the issue of sharing information becomes an important factor (refer to Sections 3.8 and 3.9 below). The Care Group Directors will play a key role in ensuring that the more vulnerable individuals

and care group members receive an integrated and seamless response which meets their needs. Each client response will have a related outcome.

3.5 To reflect this approach, the Team developed the construct of a client encounter. Each encounter includes the following elements:

- Client need as presented to the EHB staff member e.g. this can arise from direct contact by the client, referral by another party, G.P. or Department of Social, Community and Family Affairs;
- Evaluation of client needs, e.g. assessment/ examination/ diagnostic testing/ diagnosis;
- EHB response e.g. advice, payment, medical card, social service, medical / dental treatment;
- Outcome: Each encounter has an associated outcome.

Client encounters have been classified into two broad categories; medical and non-medical. This classification has been made on the basis that the core activities undertaken for each category are significantly different.

3.6 It is important to emphasis that the client may be a recipient of both types of response in a single encounter. The issue was raised during discussion as to whether a classification of Health Service Encounter and Personal Social Services Encounter would be more appropriate. In this context it would be necessary to develop a definition of what constitutes a Health Service and a Personal Social Service. The client encounter construct is discussed further in Section 5, in the context of ***Deliver Health and Personal Social Services*** business process.

Classification of Services

3.7 The external services required by the EHB have been classified into the following three categories:

- **Health and Personal Social Services** which are provided by a wide range of organisations on behalf of the Board. These include the voluntary hospitals, nursing homes and other voluntary organisations (e.g. mentally handicapped). The nature and structure of the relationship between the Board and these external service providers is largely determined by, and dependant on, the nature of the services they provide (refer to Section 6 Manage Externally Provided HPSS);
- **Functional Support Services** are those services which are required by the EHB Functional Units (e.g. external audit services, legal services, building maintenance support, computer support and IT services (refer to Section 8 Manage EHB Support Services);

- **Local Support Services** includes the services provided to local EHB facilities (eg: catering support to hospitals, cleaning and security to health centres, refer to Section 4, Deliver Health and Personal Social Services).

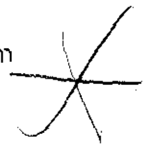
This classification reflects the current situation. It is likely to become more appropriate and relevant, particularly in relation to the first category, following the implementation of the recommendations and proposals of the Task Force.

Sharing of Information

3.8 A management team workshop was held on the 2 September 1997 to review and agree the management information needs of the EHB. There was agreement on the information needs as presented in the Workshop Briefing Document, subject to the suggested modifications. A major issue of concern which arose during the course of this session related to the sharing of information. There was a general consensus that a level of sharing of information was required to support both the management information needs of the EHB and to provide a seamless integrated service to clients. However, the nature, content and presentation of this information will differ depending on its purpose. The following key questions were raised and discussed during this session:

- Client confidentially, what information could or should be shared between EHB service providers and between the service providers and management;

- The implications of the provisions of the Data Protection and the Freedom of Information Acts on the sharing of information;



- The use which will be made of the shared information (e.g. who will initiate and take action when a vulnerable or problem client has been identified);

  If you had the info, you had the prob - before you share it

- The ability of the EHB to obtain client information from external service providers (e.g. the role of service agreements in specifying this information).

Vols

There was a common agreement that sharing of information was an important factor in identifying and supporting vulnerable and problem clients. It could also be used to facilitate the EHB in identifying abuses of the services.

3.9 The discussion resulted in general agreement on the following issues:

Management Information

The management information needs as outlined in the Workshop briefing document and the ESA report, can be satisfied through the provision of aggregated information which is not client specific(e.g. activities, services, resources and facilities used, costs);

Operational Systems

A range of operational systems will be implemented to support the service providers (e.g. Social Workers, A&E,). These systems will record detailed information on each encounter between the client and the EHB (e.g. evaluation of client need, assessment, response, treatment, outcome). This detailed information will be aggregated regularly, ***not at a client level***, to provide the required management information;

Minimum Client Data Set

There should be a level of shared information. It was suggested that this could consist of a subset of the detailed client information. This might include the unique client identifier, demographic data, summery of previous encounters with the name of the relevant individual professional service providers (e.g.: social worker, clinician, community health nurse). The objective of this shared data set is to provide the ***minimum*** information to the individual service provider so as to facilitate their task of providing an integrated service to clients consistent with the boards requirements for efficiency and effectiveness. It is felt that this would be particularly important, as previously noted, for more vulnerable clients and members of care groups.

The exact content of this minimum client data set will require further detailed discussion with interested parties, possible at both at national and regional/ local level. It is important that these discussions are initiated as soon as possible so as to ensure the requirements of sharing of information, to whatever level and extent, is taken into account during the detailed systems analysis and design

4. *Plan Health and Personal Social Services*

Overview of the Business Process

4.1 This process contains the following four major processes as illustrated by the diagram on the opposite page:

- Determine HPSS Status and Needs of the Population;
- Develop and Approve EHB policies;
- Develop Service Plans;
- Manage and Control Service Plans.

The diagram on the opposite page presents an overview of this process. The major processes are summarised in the following sections.

4.2 The primary focus of these processes at present is on service plans which the EHB is statutorily obliged to develop, agree and implement. It also recognises the need to monitor and control these plans with particular focus on ensuring that the budget guidelines and parameters are adhered to. The service plans should be based on an assessment of the HPSS status and the needs of the population served. However, the overall planning process is currently constrained by the limited amount the detailed information available on the HPSS needs and status of the population.

Determine HPSS Status and Needs of the Population

4.3 This process involves identifying and assessing the current health and personal social service status of the population served by the EHB. It will involve gathering epidemiological and socio-economic data. This information is then used to identify the areas of need so that the services and resources can be appropriately targeted. Services area profiles are developed, as required (e.g. by DED, Community Care Area, Facility catchment).

Develop and Approve EHB Policies

4.4 This process relates to defining the EHB policies in relation to the delivery of HPSS. It includes setting guidelines and parameters for the service planning and delivery (e.g. location of Community Health Units, impact on the local community of sensitive facilities). It involves interaction between both management and operational staff.

Develop Service Plans

4.5 The Health Amendment Act, 1996 requires the EHB to produce detailed service plans based on the budget allocation provided by the Minister of Health. This process includes all of the activities necessary to develop, agree and publish these plans. The service needs are based on the HPSS status and needs of the population. Each plan specifies the type and level of services to be provided, the estimated costs and other relevant performance measures (e.g. quality levels, targets and goals). Where appropriate, the EHB will take account of alternative service providers so as to avoid duplication of services. The resources required to meet the service plans must not exceed the total budgetary allocation provided by the Minister. Service plans must be formally approved by the Board before they are submitted to the Department of Health for approval. Following this approval, Service Plans are then published available.

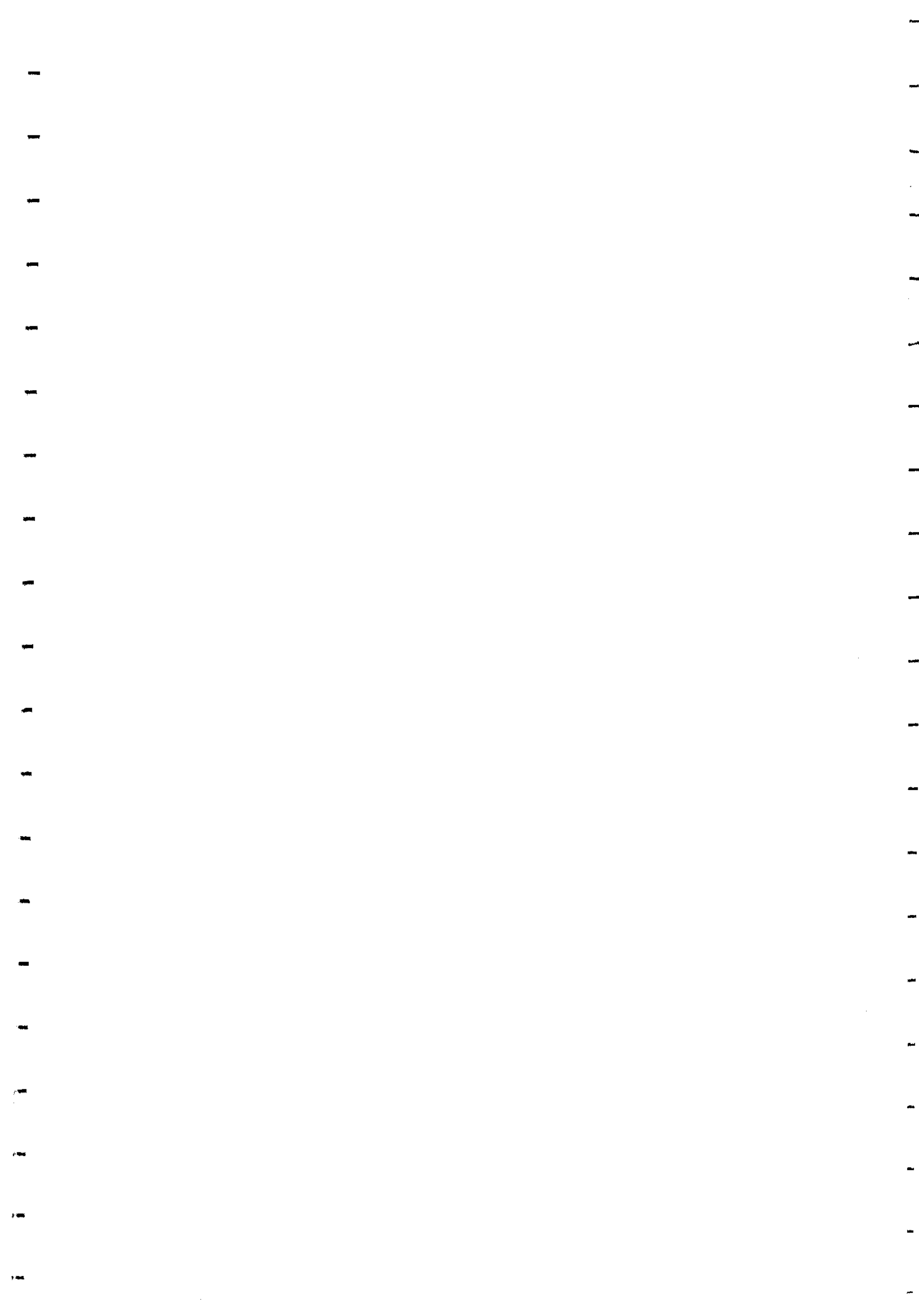
Manage and Control Service Plans

4.6 Under the terms of the Act, the implementation of the Service Plans must be managed and controlled to ensure that the annual net expenditure does not exceed the annual allocation. . Service plans are evaluated from both a client satisfaction and financial aspect. Plans may be amended provided these do not result in the budget allocation being breached. In this case, Ministerial approval is required for the amended plan(s).

Planning Process Issues

4.7 The key issues to emerge in relation to the planning business process can be summarised as follows:

- The line management and staff do not consider that they are sufficiently involved in the planning and budgetary process. They were being asked to take responsibility for budgeting without having sufficient involvement in the process and without being provided with the necessary information;
- What will be the future relationship between planning at this level and planning at care group level ?;
- Will this model be suitable for the proposed new structure following the implementation of the recommendations and proposals of the Task Force ?;
- At present there is limited availability of detailed information on the population HPSS current status and current and future needs;
- How will the MIS needs be addressed in the period between now and the full implementation of the supporting operational systems?



5. Deliver Health and Personal Social Services

Overview

5.1 The business process includes all of the current service delivery activities of the EHB and involves the following major processes:

- Manage Health Promotion;
- Manage Client Encounter (medical and non-medical);
- Manage Administrative Support to Service Providers;
- Manage Local Resources;
- Manage Environmental Health Service;
- Register Births, Deaths and Marriages

The diagram on the opposite page presents an overview of this process. The major processes are discussed further in the following sections.

Manage Health Promotion

5.2 The Health Promotion process includes developing and delivering health promotion products and campaigns at both a Board and an individual service level. There is, therefore, a strong element of co-ordination involved. Health promotion delivery will involve all staff interacting with the client. It is not confined to a small select group of staff.

Manage Client Encounter

5.3 The EHB Board currently provides a range of services, each of which is, in effect, a separate business. To model each of these services at this stage would result in a very detailed and complex process model. This would not be appropriate for developing a strategic vision of the future IT requirements. As this model is further refined during the systems analysis stage more detailed process models will be developed.

5.4 It was considered appropriate and necessary to make a broad distinction between the medical and non-medical services. The core activities which are carried out to provide each type of service are sufficiently different to warrant separate representation. The construct presented in this model is based on the concept of the client encounter as discussed in sections 3.3 to 3.6 above.

5.5 As previously noted, an encounter may be simple or complex, depending on the need of the client. It can range from an application for a service (e.g: medical card) to a more complex need incorporating both medical and non-medical response (e.g: an individual suffering from domestic violence who may require hospitalisation, follow up community support and which may involve other members of a family). An encounter, as defined by the Project Team, involves all elements from the initial contact in the particular instance through the EHB response to the final outcome. This construct reflects the current situation with the relevant response/ treatment comprising the health and personal social services(s) required to satisfy the clients needs. This model would also appear appropriate for the future, particularly for supporting more vulnerable clients and members of care groups.

Manage Administrative Support to Service Providers

5.6 At present there is a considerable level of administrative support provided to individual service providers. This relates primarily to the recording of client information and to the dissemination of information. At present, this requires a high level of staff input. Consequently, it is both time consuming and expensive.. Future systems should support the streamlining of these activities and so make this process more efficient. The service providers and support staff should be facilitated in this aspect of their roles. As previously noted the systems should support the sharing of information (refer to section 3.8 and 3.9 above).

Manage Local Resources

5.7 The EHB has in excess of 300 physical units within its catchment area (refer to section 2.3 of the Interim Report of the Task Force). These range from large acute hospitals, e.g. JCM, to smaller units, e.g. Health Centres and Community Units. This process includes all of the activities relating to the management and operation of each facility scaled to suit the size of the individual facility. In particular, these would include all aspects of staff management including rostering. Each facility has a requirement for a range of support services. These are currently, and will continue to be, acquired locally.

5.8 In addition to local support services, there is currently a significant level of centralised support (e.g: Finance, Management Services, Personnel, Estate Management, Technical Services, refer to Section 9 below). The current structure will change following the implementation of the recommendations and proposals of the Task Force . The nature and level of support services that will be under the control of Regional Health Authority and the Area Health Councils has yet to be determined. There will, however, continue to be a requirement to have a local management and operation of the individual facilities. In considering this issue further, one of the overriding objectives should be to reduce to a minimum, or if possible, eliminate duplication of

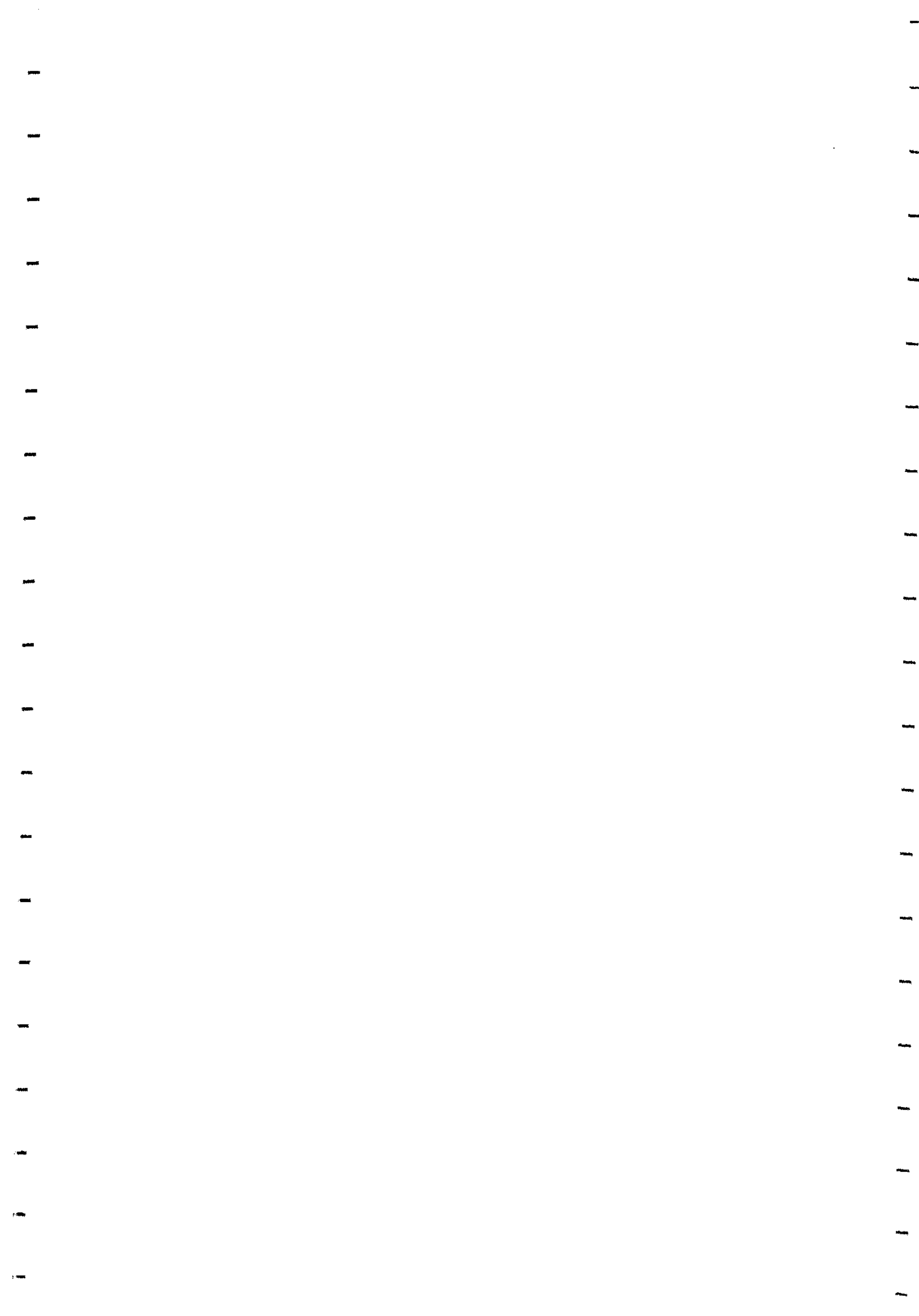
effort and activity. Integrated information systems will have a key role to play in this regard.

Manage Environmental Health Service

5.9 This service has been identified and modelled separately. This service has a strong community focus. It is not confined to a particular client. It is also worth noting that a significant level of the environmental health activity (in the order of 70%) is carried out on behalf of other agencies, usually the Local Authorities.

Register Births, Deaths and Marriages

5.10 This process includes the activities undertaken to provide registration services for the population of the catchment area. This service is provided on behalf of the Department of Health.



6. *Manage and Co-ordinate Care Group Activities*

Overview of the Process

6.1 This business process includes all of the activities required to ensure that a seamless and integrated service is provided to the members of designated care groups. At present the care groups are Child, Elderly, Physical and Sensory Disabled, Mentally Handicapped, Mental Health and Drug Misusers. It addresses both the operational co-ordination of services and the allocation of resources to focus on the specific needs of the care groups. It includes specific service development initiatives and the resolution of difficulties for the members of these groups through the integration of the relevant services (both EHB and non EHB).

6.2 The major process are as follows:

- **Develop Care Group Plan,** for each group taking account of the services provided by both EHB and non EHB service providers. These plans cross programme;
- **Co-ordinate with Service Providers,** a wide range of the services required by care groups are provided by non EHB agencies and groups. The Care Group Directors actively work with and co-ordinate the efforts of these external bodies so to avoid duplication and to ensure an effective and efficient service;
- **Monitor Care Group Specific Activities**, involves resolving any difficulties which may result from the implementation of the care group plan or the delivery of specific services;
- **Evaluate Care Group Plans** includes monitoring actual outcomes against planned outcomes and reviewing and revising these plans to ensure that they continue to be relevant and appropriate to the needs of the groups;

The diagram on the opposite page presents an overview of this process.

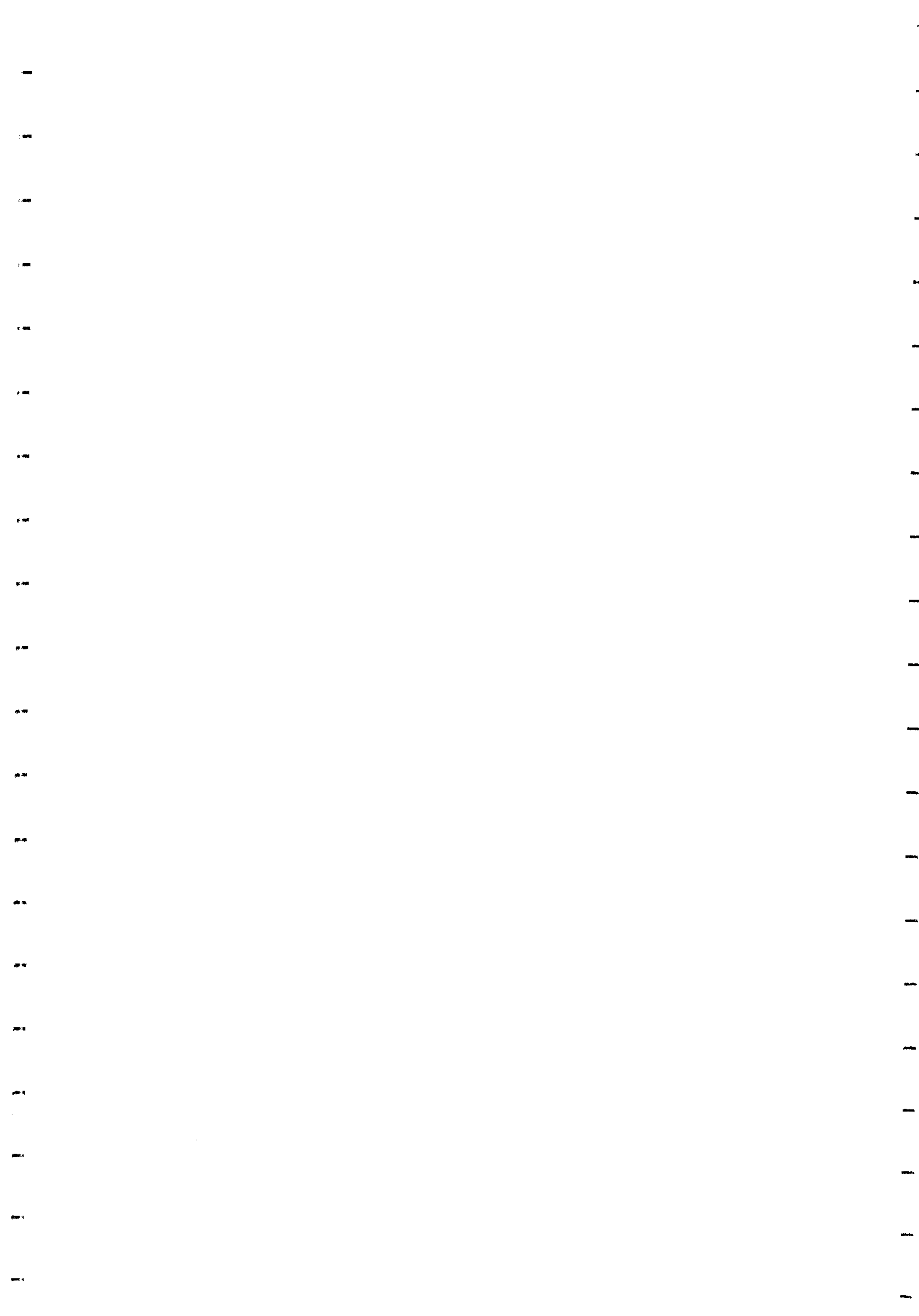
6.2 Based on our current level of understanding, the primary focus of the activities in this process is on the planning and co-ordination of activities for the individual Care Groups. However, we recognise and accept that this is a developing and evolving process which is likely to change with the imminent appointment of the Care Group Directors.

Key Issues in Relation to Care Group Co-ordination

6.3 Our analysis has highlighted the following issues in relation to this business process which requires further consideration and discussion:

- It will be necessary to define the relationship between Service Planning and Care Group Planning;
- It is assumed that the Care Group Directors will avail of current (and future?) service providers and channels, both internal and external, i.e. they will not establish separate service delivery structures and mechanisms specifically for Care Groups;
- To what extent will the Care Group Directorate become involved in the co-ordination (and possible integration) of Care Group activities? Will this remain at the Group level or will it devolve down to the individual level?
- In either case, it would appear that the Care Group Directorate will have a significant requirement for sharing of information (refer to sections 3.8 and 3.9 above), particularly in the case of more vulnerable clients.

It may be too early in the development process to satisfactorily address all of these issues. However, it is strongly suggested that the sharing of information should, in so far as possible, support the broadest possible role so as to provide flexibility for the future.



7. *Manage Externally Provided HPSS*

Overview of the Process

7.1 This business process includes all of the activities involved in the EHB procurement of health and personal social services from external third-party service providers. At present, this is achieved through service contracts with non EHB service providers. These activities are currently ongoing though not necessarily in a formal and structured manner. The nature of the relationship between the Board and the Service Provider will depend on the type and nature of the services. In general, these relationships should be governed by service level agreements. The following major processes constitute this process:

- **Agree Service Levels with External Providers,** which involves specifying all elements of the agreement between the parties (e.g. type of service, quantity, cost, quality);
- **Procure the Health and Personal Social Services** which includes the actual procurement and implementation of the services;
- **Manage Relationship with External Service Provider,** which includes all of the activities involved in the ongoing management of the individual contracts (e.g. payment, training). The model also reflects the specific support given to GP's. This models the current situation where the EHB provides a considerable level of support to GP's.

The diagram on the opposite page presents an overview of this process.

Service Agreements

7.2 The service level agreements should specify in detail the elements of the agreement between the EHB and Service Provider. This should include, inter alia:

- The services to be provided;
- The cost of these services;
- The indicators for measuring performance (e.g. quality, timeliness, delivery, client satisfaction, value for money, accessibility).

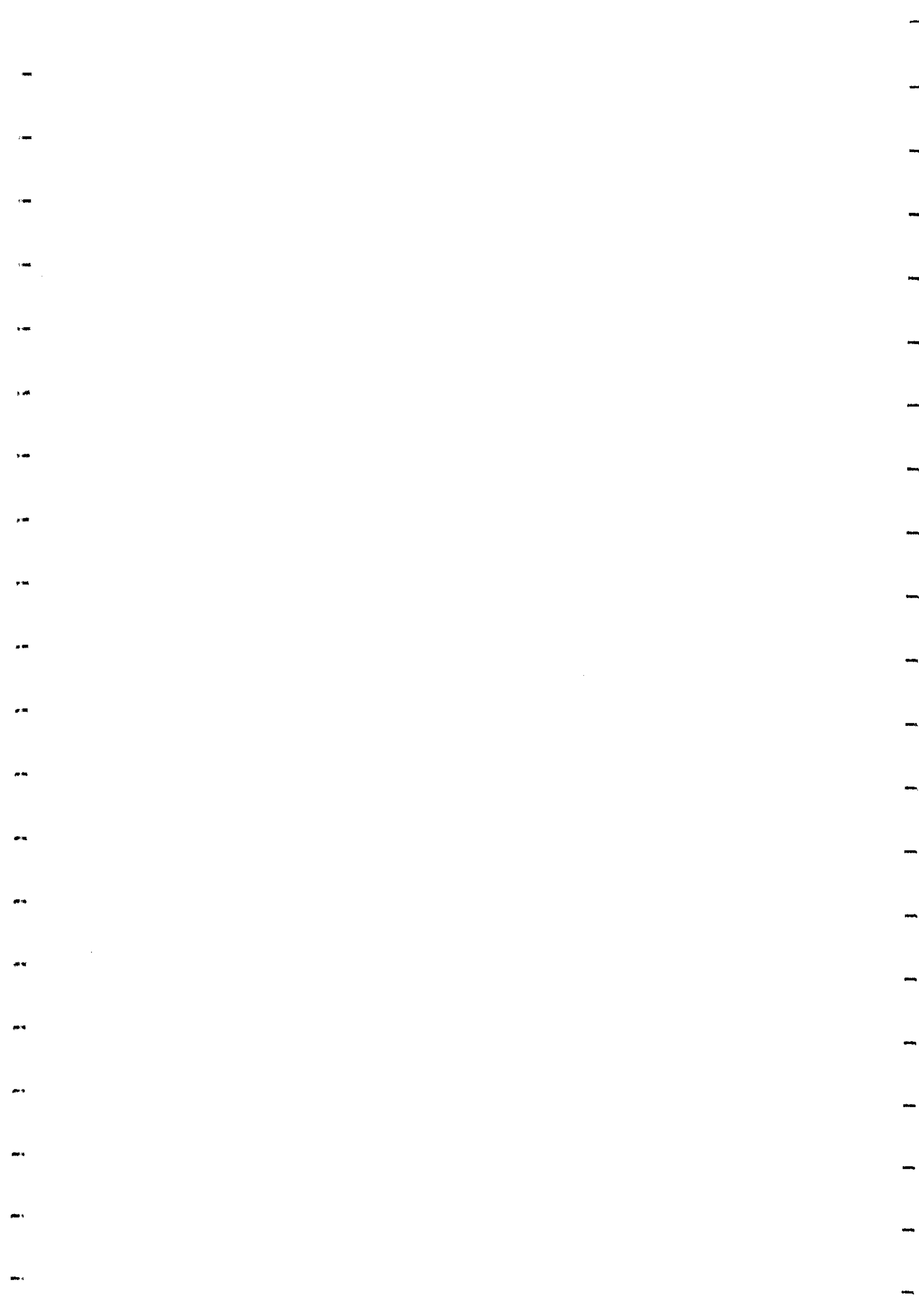
In addition, these agreements should (could) include details of the information to be made available by the Service Provider to the Board. This would be particularly important in relation to the sharing of information at client level as previously discussed. It would also appear appropriate that these agreements

should specify how the relationship between the EHB and the Service Provider would be managed and operated (e.g. member of the board, monthly reports).

The Impact of the New Structure

7.3 In the future, as the recommendations and proposals of the Task Force are implemented, this process will become increasingly important. It is accepted and recognised that the operational details have yet to be finalised. However, it is clear that there will be greater focus on the provider relationship between both EHB and non-EHB service providers and the Regional Health Authority and the Area Health Councils. In this environment, it is particularly important that there are clearly agreed and transparent standards and performance measures so as to ensure, and be seen to ensure, all service providers are treated and evaluated equally.

7.4 The availability of the appropriate information will be a key element in monitoring, controlling and measuring the relationship between the providers and the relevant procurer (EHB or new Regional Health Authority and the Area Health Councils). In so far as possible, the exchange of this information should be automatic and should be in a format that is most suitable for the respective parties. This factor should be taken into account when developing the IT strategy (e.g. exchange of information, interfaces between internal and external systems, future MIS requirements).



8. *Manage External Relations*

Overview of the Process

8.1 The EHB currently has a wide range and variety of relationships with external stakeholders (refer to section 3.2 above). These relationships are a critical aspect in the ongoing management and operation of the Board. This process includes all of the activities involved in the ongoing management of these relationships as follows:

- Influence and Inform Legislative Changes;
- Co-operate with External Agencies;
- Respond to Queries (all types);
- Promote the Positive Image of the EHB;
- Produce Research Articles.

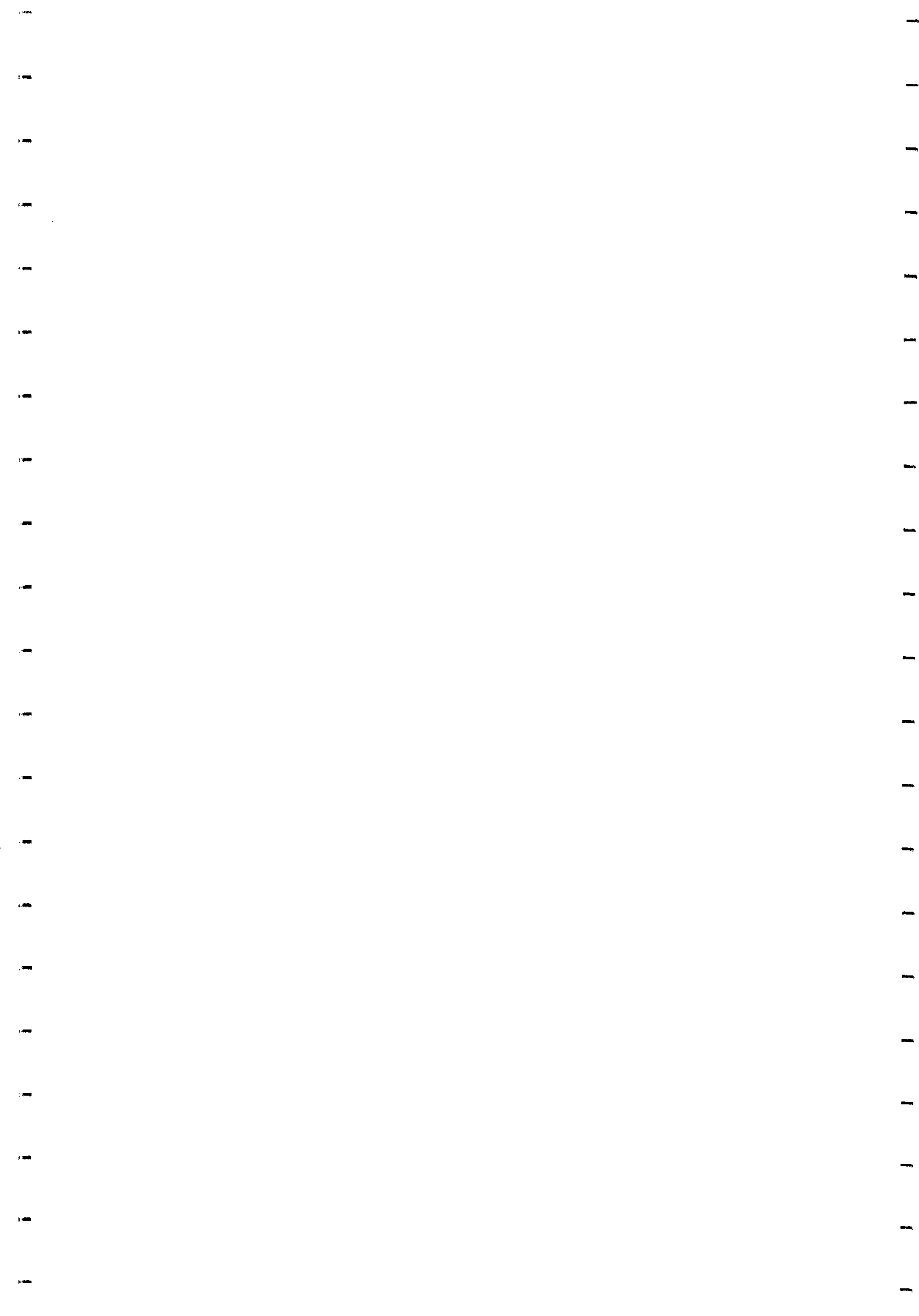
The diagram on the opposite page presents an overview of this process.

The Focus of this Process

8.2 The above activities are primarily concerned with and focused on the wider *public role* of the Board. In this context, there is likely to be a need for limited IT support for this business process. The primary requirement is likely to relate to management information, both internal and external, so as to facilitate EHB personnel in managing these relationships. The nature of the information provided by and to these external stakeholders together with the format and presentation will be important factors to be addressed. The nature and scope of these component processes is likely to change significantly with the implementation of the recommendations and proposals of the Task Force. There will be a need for greater level of co-ordination between the Regional Health Authority and the three Area Health Councils so as to ensure consistency of approach in these relationships.

Respond to Queries

8.3 This process includes all of the different types of queries the EHB currently receives (e.g. Public Representatives, Media). This will require a more significant level of IT support. The relevant EHB personnel are likely to require a query logging/response system with possible access to selected operational system. The issue of information sharing may also be relevant in this instance.



9. *Manage EHB Support Services*

Overview of this Process

9.1 This business includes all of the support services required by the EHB service providers to meet the needs of both clients and stakeholders. It broadly corresponds to the current functions and, therefore, includes the following major processes:

- Manage Personnel;
- Manage EHB Finances;
- Manage Information Systems;
- Manage Physical Resources;
- Manage Central Stock and Inventory Stores;
- Provide Secretariat Support Services;
- Manage Internal Communications;
- Manage Complaints;
- Manage External Support Service Providers.

The diagram on the opposite page presents an overview of this business process. The following paragraphs contain a summary of each of the major processes.

Manage Personnel

9.2 This includes all of the centralised activities relating to staff management, e.g. manpower planning, staff support, counselling, industrial relations performance, recruitment and training, together with responsibility for the Health and Safety and Occupational Health activities of a Board wide basis.

Manage EHB Finances

9.3 This includes all of the centralised finance functions, e.g. accounts receivable, accounts payable, general ledger, cash management, payroll, internal audit, financial reporting and support for Budget management.

Manage Information Systems

9.4 This includes all of the activities currently undertaken by the Management Services Department, e.g. IS planning, development, implementation, systems maintenance, user support, equipment and software procurement.

Manage Physical Resources

9.5 This includes all of the activities relating to the management of the physical buildings and property of the EHB (e.g. management of the property portfolio, capital works, energy and waste management, fire safety, maintenance of property and buildings, maintenance of the fixed asset register). These are currently the responsibility of both Estate Management and Technical Services.

Manage Central Stock and Inventory Stores

9.6 This includes all of the activities relating to the centralised management, operation and control of all stock and inventory management, e.g. requisition of stores, distribution of stock, cost allocation, stock reconciliation, inventory levels, supplier delivery. In addition to the centralised stores there are also sub stores in selected locations.

Provide Secretariat Support Services

9.7 This includes all of the activities which directly support the CEO, the Board and the Management Team, e.g. preparation and distribution of minutes reports, processing of PQ's and representations received from public representatives, supporting the budgetary working group and other working groups and advisory committees.

Manage Internal Communications

9.8 This includes all of the activities relating to communication with the staff on EHB policies, procedures and activities, e.g. distribution of the annual report, production of the staff magazine, co-ordinating staff induction courses, official memos, and internal post.

Manage Complaints

9.9 This includes all of the activities relation to the management of complaints which are received centrally (e.g. CEO, Programme Manager). This may be processed and resolved at a local level with the outcome reported back to the center;

Manage External Support Service Providers

9.10 This includes all the activities relating to the management and procurement of the services required by the support functions, e.g. identification of requirements, preparation of proposals and requests for tenders, tender assessment and approval, implementation of services and co-ordination of service delivery.

The Impact of the New Structures

9.11 The major processes outlined in the previous paragraphs relate primarily to centralised support activities. As noted in the Deliver Health and Personal Social Services business process in Section 5 there are also a number of support activities which are performed at a local facility level. This current structure will change significantly with the implementation of the recommendations and proposals of the Task Force.

10. EHB Operational Analysis Entity Relationship Diagram/Model (ERD)

Introduction

10.1 The objective of Data Modelling is the production of a representation of the data in the organisational environment. The model records two main features of the structure of the data used in the organisation:

- the organisation's entities
- the relationship between each of those entities

In data modelling we are concerned with analysing the underlying logical structure of the data, not with producing a design of how it will be implemented in any given system.

Background

10.2 As stated in the introduction to the document, the ERD developed during the Enterprise Operations Analysis stage is a refinement of the key information needs identified during operational workshops held, and from the ERD developed during the ESA stage.

It is a model of the association of entities through relationships and their classification according to their 'type'. By convention, entity names are always in upper case.

This classification of type, indicates that some entities have an interest in a common set of data. The following example illustrates this point; there are two types of asset recognised by the Board, a FACILITY & a piece of EQUIPMENT. However, a facility may also be COMMUNITY UNIT, a HOSPITAL or a HEALTH CENTRE. The HOSPITAL may also be either a GENERAL HOSPITAL, a LONG STAY HOSPITAL or a PSYCHIATRIC HOSPITAL .

Each entity/relationship also forms a complete sentence which can be recognised as a business rule of the organisation. For example, "SERVICE LEVEL AGREEMENT defines the standards for a SERVICE PROVIDER". Similarly, "a SERVICE LEVEL AGREEMENT is the basis for implementation of a SERVICE".

Approach

10.3 Given that an entity is a 'thing about which we want to hold data', we need a method by which we can identify the entities used within the organisation. Fusion, Ernst & Young's methodology, identifies entities through the grouping of key information needs (KIN). By examining all the KINs gathered during the EOA stage, a list of potential entities was developed. This list was subsequently rationalised using local business knowledge and data normalisation techniques. Consequently, approximately 200 entities were thus identified.

10.4 Due to the large number of entities it was necessary to introduce a layer of abstraction into the model by developing what are known as Subject Areas. These Subject Areas are significant groupings of related entities. The subject areas related to EHB are as follows:

- *Client*
- *Finance*
- *Employee*
- *Equipment*
- *Service*
- *Facility*

In order to understand the context of each of the Subject Areas, there is a certain degree of overlapping of the occurrence of entities in more than one Subject Area.

Subject Area *CLIENT*

10.5 A CLIENT is any person to whom a service is provided directly or indirectly by the EHB. A client may be a resident or non -resident within the Board's catchment area. CLIENTS have identified needs and belong to recognised care groups and reside within DEDs. They may belong to a FAMILY and reside in a HOUSEHOLD. They can submit applications for SERVICES which may involve one or more care plans. The EHB must cater for the needs of the greater client population by means of the services it provides. The health status of the EHB clients is considered fundamental to the planning and provision of services.

The interaction between a CLIENT and the EHB is through an ENCOUNTER. ENCOUNTERS are triggered by either a REFFERRAL or by a SERVICE PROVIDER recognising an IDENTIFIED NEED. ENCOUNTERS can be medical, social or administrative and are further classified by being an ASSESSMENT, a RESPONSE or an OUTCOME. The OUTCOME is an formal recognition of the identified need which may require the creation of a CARE PLAN to meet the need in some way.

CLIENTS may submit APPLICATIONS for SERVICES and may have a right of APPEAL against DECISIONS made. Events such as BIRTHS, DEATHS & MARRIAGES are recorded by GRO REGISTRATIONS.

Subject Area *FINANCE*

10.6 The Finance subject area identifies core financial entities such as LEDGER, FINANCE CODE, FORECAST, BUDGET ALLOCATION, etc. together with stock control entities, instanced by STOCK ITEM, GOODS RECEIVED NOTE, PRODUCT INVENTORY RECORD, DISPATCH DOCUMENTS, etc. This subject area also associates Employee financial information, such as PAYROLL, DEDUCTIONS, PAYMENT AND PAYMENT REQUISITIONS.

The concept of SUPPLIER is used to identify anyone who supplies Goods to the EHB. SERVICE PROVIDERS are dealt with separately.

INVOICES also link charges due in respect of SERVICES provided by the EHB. For example, Lab Services.

The identification of ASSETS are integral to any finance processing. Consequently, we have physical, financial and intangible assets. The EHB are interested in the first two. Sub-typed with ASSET is the concept of a FACILITY, EQUIPMENT, or a VEHICLE. These ASSETS are recorded in a FIXED ASSET REGISTER and must be covered by appropriate INSURANCE POLICES. The ASSETS should be traced to a Location and are subject to a DISPOSAL.

Subject Area *FACILITY*

10.7 The FACILITY subject area concentrates on the concept of a FACILITY being a type of building. This building can be a HOSPITAL, COMMUNITY UNIT or HEALTH CENTRE. Buildings may be owned or leased (by the EHB or from the EHB) and are the subject of a MAINTENANCE SCHEDULE, APPRAISAL REPORTS FIRE CERTIFICATES and INSPECTIONS. EMPLOYEES are situated at a building. Buildings may have many UNITS associated with them. These UNITS may have ROOMS which can be booked by EMPLOYEES for MEETINGS, ENCOUNTERS, etc. As stated above, Buildings may be subject of a Maintenance Schedule, each of these schedules requires that a MAINTENANCE EVENT takes place. These events may have a MATERIAL REQUIREMENT, such as piping, roofing materials, paint, etc.

If modifications or a new building is required, a PLANNING APPLICATION should be made to the LOCAL AUTHORITY. New buildings are usually the subject of a CAPITAL PROJECT. When a Building is acquired or built, it will require a VALUATION. The VALUATION may be for insurance or marketing purposes

Subject Area *EMPLOYEE*

10.8 EMPLOYEES of the EHB are classified by GRADES and CATEGORIES. Each GRADE will have its own LEAVE ENTITLEMENTS, SALARY SCALE, and ROLE. EMPLOYEES may be the subject of an Employment Contract and may also be identified as being an INTERNAL SERVICE PROVIDER. EMPLOYEES are normally associated with a specific MANAGEMENT UNIT. The identification of the TRAINING REQUIREMENTS, together with the TRAINING COURSE available are essential to managing the overall Skills necessary to support the EHB in delivering its SERVICES.

EMPLOYEES receive PAYMENTS in the form of BASIC SALARY, OVERTIME or OTHER ALLOWANCES. Different types of LEAVE are recorded in respect of each EMPLOYEE. The ROSTERING of EMPLOYEES is carried out in two stages: a) the ROSTER DETAIL (which is what is planned) and b) the ACTUAL ATTENDANCE. Among the many TASKS and ACTIVITIES undertaken by EMPLOYEES are attendance at various types of MEETINGS.

Subject Area *SERVICE*

10.9 The Subject Area Service is core to recording the operational and strategic activities of the EHB. Within this subject area, the various ENCOUNTERS are recorded and SERVICE PROVIDERS identified. APPLICATIONS are processed, DECISIONS made and OUTCOMES measured. BUDGETS are allocated to each of the SERVICE PROVIDERS and SERVICE LEVEL AGREEMENTS developed. PERFORMANCE MEASURES are identified and the use of RESOURCES, such as BEDS, EQUIPMENT, FACILITIES are assessed. CARE PLANS are produced by SERVICE PROVIDERS, if required. As part of the provision of a CARE PLAN, DRUGS may be prescribed, against which may necessitate the use of a MEDICAL CARD.

SERVICE PLANS are the overall mechanism by which SERVICES are provided to EHB CLIENTS, each SERVICE PLAN will be allocated a BUDGET which will be monitored against the SERVICE LEVEL AGREEMENT. SERVICE PROVIDERS respond to IDENTIFIED NEEDS and may become involved in the issuing of PAYMENTS to CLIENTS.

Subject Area *EQUIPMENT*

10.10 EQUIPMENT is the concept of the basic articles or things used by the SERVICE PROVIDERS in carrying out their tasks. EQUIPMENT can be classified as anything from a diagnostic aid to a PC. Underlying the concept must, however be that the organisation is interested in recording specific information about EQUIPMENT. For example, equipment may be the subject of a PURCHASE ORDER, it may also be the responsibility of an

EMPLOYEE and may be subject to an INSPECTION (e.g. calibration or preventative maintenance).

Frequently, STANDARD OPERATING PROCEDURES exist for the use of specialised equipment and BOOKINGS may be made by EMPLOYEES for the use of specific equipment. The LOCATION of a piece of EQUIPMENT may be required to track its usage. INSURANCE POLICIES may be a requirement and it may be such that one INSURANCE POLICY covers one and only one ASSET. As Equipment can be classified as an ASSET, EQUIPMENT over a specific value must be included in the ASSET REGISTER.

Finally, as part of the MAINTENANCE SCHEDULE, a CONTRACTOR may be responsible for its maintenance.

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