



CALM BRIEFING PAPER 1/88

INFORMATION MANAGEMENT WITHIN CALM

Earlier this year the Department retained the services of the consultant group Arthur Young Ltd to carry out a review of CALM's information management requirements. The consultant's report has now been received and has been considered at length by the Policy Directorate and the Departmental Computer Policy Committee. A copy of the consultant's report will be sent to all regional managers and branch managers, who are asked to make it freely available to staff under their control. A copy of the Executive Summary and the seven major recommendations of the report are attached.

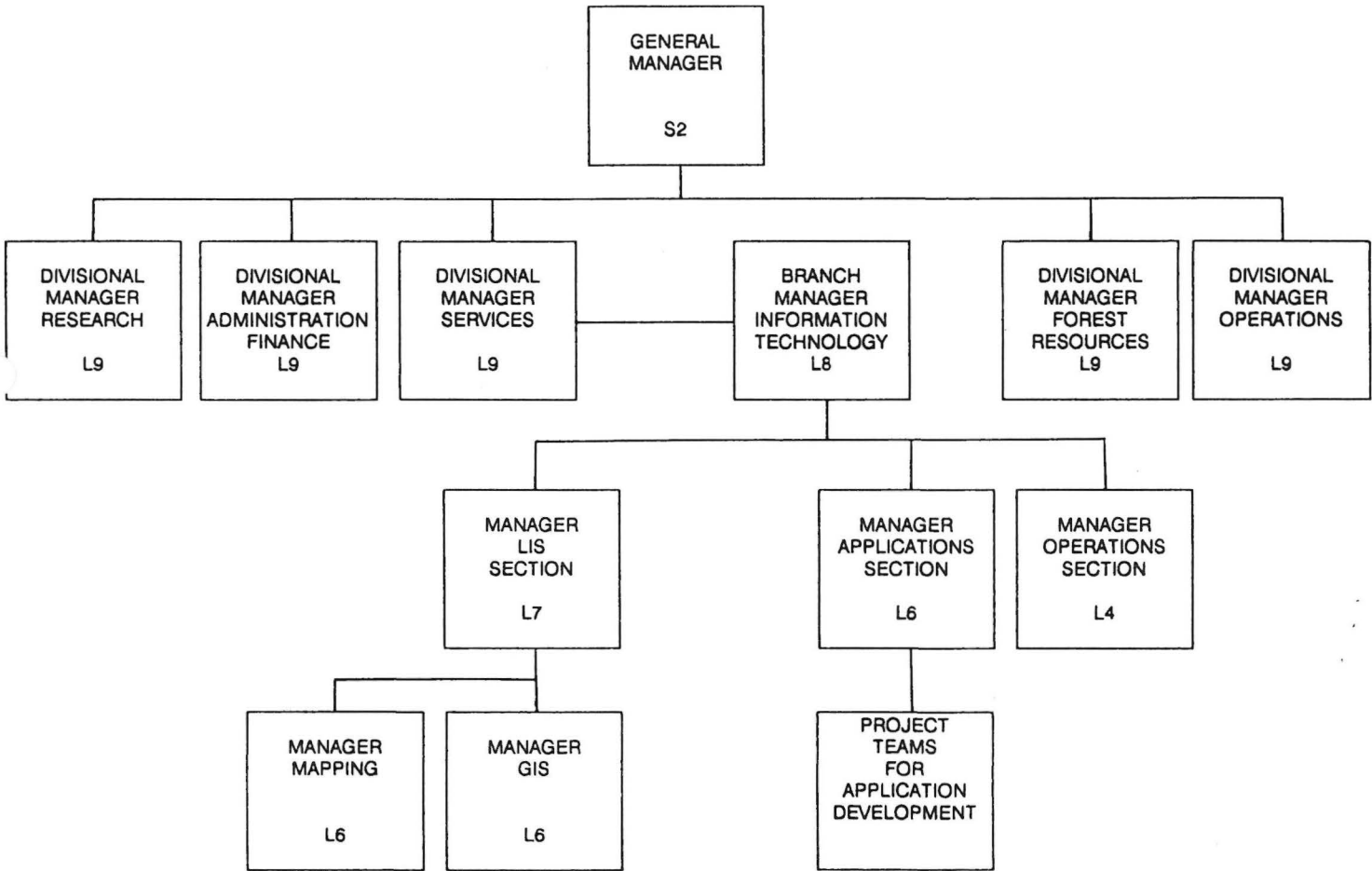
The Policy Directorate has accepted all the recommendations in principle, but has modified two important ones; those dealing with organisational structure and hardware strategy.

Subject to Public Service Board approval, it is proposed to create a new Information Technology Branch, responsible to the Divisional Manager Technical Services, which will have three Sections:

- (i) The Land Information Systems (LIS) Section, which will contain the present Mapping Branch and the Geographic Information Systems Group. However, Dr C Pearce and Mr M Green are heavily involved with an inventory project team, and although located within the LIS Section, the bulk of their work for the foreseeable future will be in that project team.
- (ii) The Applications Development Section, which will be responsible for a number of project teams working on corporate systems development, as well as personal computer user support.
- (iii) The Computer Operations Section, which will be responsible for the day-to-day running of the central computer system.

The attached chart shows the proposed structure of the new Branch.

PROPOSED CALM STRUCTURE



Extra staff positions have been allocated to this branch along the lines proposed by the consultants. A branch manager will be appointed as soon as possible and the position of LIS Manager will be allocated when a position becomes available in about six months time. Negotiation with the Public Service Board on these matters will commence immediately.

In respect of the CALM Hardware Strategy, the Directorate has accepted the recommendation of the Computer Policy Committee that CALM adopt a policy of working towards a single mainframe computer environment instead of using three separate machines (Concurrent, DOLA, VAX and WARCC CYBER) as at present. Because of CALM's large requirements for graphic and geographic information systems, where Concurrent have little experience or capability, the new mainframe will not be Concurrent. However, we do have a large investment in commercial systems for the Concurrent, so we are locked into a 2-mainframe environment for the life of those systems. The present Concurrent 3240 is also overloaded and the commercial systems have immediate requirements for growth.

It has therefore been decided to purchase a new Concurrent 3275 to replace the 3240. Apart from redevelopment of the Softwood Logging System, no new system development will take place on the Concurrent. All new systems will be developed or purchased for the new mainframe.

It is hoped the 3275 will be in operation in January, with the new mainframe computer being delivered in January-February. At that point CALM will withdraw from use of the CYBER, and the DOLA VAX. There will still be a connection to the DOLA VAX to access DOLA's legal and graphical cadastral data base and other components of the WA Land Information System.

With these improvements in Departmental organisation, staff resources and computing power, we look forward to a marked improvement in information management within the Department.

You will be advised as to the outcome of negotiations with the Public Service Board on the proposed organisational structure.

Syd Shea
EXECUTIVE DIRECTOR
15 October 1987

EXECUTIVE SUMMARY

The Department of Conservation and Land Management has been involved with computing for a number of years via the Forests Department and the Wildlife section of the Department of Fisheries and Wildlife.

At the time of planning CALM it would appear that little analysis was undertaken on the computing/information requirements of the new organisation. Now that the reorganisation has somewhat stabilised, it is clear that the resources available to CALM are inadequate to meet the demands being placed on information needs by the role and structure of the new department.

The lack of resources and the high demand levels has tended to direct computing activities towards operational systems with little consideration for a corporate view of information needs. This has been reinforced by the structure and allocation of computing resources, particularly people and funding.

The demands on the Department in terms of accountability and performance require CALM to adopt a much higher profile in the use of information technology with particular emphasis on corporate information needs. This includes the need to ensure that information is widely accessible across the organisation and in a form that is relevant to the user. In particular the availability of CALM information in graphical and related textual forms is a priority requirement of both senior management and operations level staff.

To meet this challenge CALM will require to increase the resources available to information technology areas on several fronts. While the question of hardware strategies dominates most discussions it is felt that this pre-eminent profile is not warranted. The cargo-cult approach that hardware will resolve the problems of CALM is not warranted and hides the key issues of staff resources and management control. CALM staff resources are considered inadequate to meet the needs created by its corporate role. Without proper staff resources CALM is unlikely to progress its information plans.

The plan developed in this document attacks CALM's requirements on four fronts.

Firstly the plan establishes, at a corporate level, the information needs of the department. It identifies 15 corporate subject areas, prioritised according to the department's corporate plan. The 5 priority areas requiring immediate analysis are:

- * Accounting
- * CALM Estate
- * Forest Produce
- * Geographic Information Systems
- * Records

In addition the corporate information model indicates a list of 68 potential systems needed to satisfy the departments' information needs.

The second area is that of staffing resources. To meet the backlog of systems identified above, CALM could utilise any number of staff. Given the existing and future prospects for staff the plan has identified key positions on which to build the resources needed. As systems are developed and implemented staff savings should be fed back into the information technology function until a stable self supporting group has been established.

The third area addressed in the plan is the hardware strategy. Two options are developed within the plan. Both options, the Concurrent/DEC environment and the single vendor environment will meet the demands of CALM *given* the staff resources are made available. The single vendor (DEC) environment is recommended as being more strategically desirable and one which will provide for long term gains over the dual vendor environment. This comes at a cost which has been identified as being in the order of \$1.5 million over the next 3-4 years. The strategy recommended allows for CALM to work progressively towards the single vendor situation with the *major* decision point occurring in about 12 months.

The fourth area of the plan is the creation of the supporting environment in which to develop information systems. To meet the challenges caused by large user demands and limited resources productivity must be a major goal of the existing resources. For this, 4GL productivity tools, formal project management and user involvement in systems analysis and design are paramount. The plan outlines how this should be achieved starting with the Computer Policy Committee and the project development processes needed to support information systems development.

In summary, the commitment of CALM over the next 4-5 years will be in the order of \$6-7 million to achieve the plan. Against this, significant gains are expected which provide a breakeven position in 4-5 years and then provide an ongoing benefit in the order of \$1 million pa.

It cannot be expected that the next 3 years will be easy. There is no magic elixir for success. Success will only come from:

- * a strong commitment to information technology from senior management;
- * strong controls and management of information technology resources;
- * allocation of resources to meet corporate objectives;
- * a well motivated and committed staff that is properly managed and directed.

SUMMARY OF RECOMMENDATIONS

This list does not represent a priority ordering of the recommendations contained in the plan. It is intended to offer a summary for reference only.

* **CALM Corporate Plan (Section 4.2)**

The CALM corporate plan should be further developed to identify Critical Success Factors for CALM and each business unit.

* **Priority Business Areas (Section 6.2)**

The priority business areas for further systems analysis are

- Accounting
- Calm Estate
- Forest Produce
- GIS
- Records

* **Network (Sections 7.3 and 9.5)**

The existing network should be extended to ensure existing CALM business units have access to CALM's information systems. This network should be converted to DEC network as part of the long term hardware strategy.

* **Organisation Structure (Section 8)**

A proposed structure for the management of information technology is set out in section 8.3. This needs to be read in conjunction with section 10.6 (Project structure) to ensure the full intent of the organisational structure recommendations is understood.

* **Hardware Strategy (Section 9)**

It is recommended that CALM adopt a medium to long term strategy to become a single vendor installation.

* **Development Approach (Section 10)**

It is recommended that CALM adopt a formal project approach to information systems development including the use of formal information engineering analysis and design methodology.

* **Action Plan (Section 13)**

The priority projects for Phase 2 of the Planning Brief are the Accounting and Calm Estate business areas. The business area analysis of these should commence immediately.