

CHAPTER 6

Information and computing

Management information

6.1. In the previous chapter we reviewed BAA's strategy, the role of its main Board and the Authority's formal planning. The main information received routinely by the Board is in BAA's Monthly Management Report which is circulated also to senior management (General Managers and above). The commercial analysis and the performance indicator annex are produced on a quarterly basis.

6.2. The Monthly Management Report for December 1984 was tabled at the meeting of the Board in February 1985. A section on commercial activity followed those on Traffic and Finance; this last contained details of income including that from Trading concessions and from rents and services. The commercial section consisted of a ten-page commentary under these sub-headings:

- promotional activities

- duty- and tax-free

- duty-paid

- catering

- other concessions

- new products

- air cargo

There was no reference to income from property.

6.3. A later section entitled 'Services to Passengers' had as its main sub-sections:

- complaints analysis (related mainly to BAA areas of responsibility)

- baggage reclaim analysis

- passenger delays.

6.4. An annex to the Monthly Management Report for December 1984 contained performance indicators. The indicators most relevant to commercial activities were:

- duty- and tax-free income per international departing passenger (IDP);

- other concession income per passenger;

- gross property income; and

- complaints per 100,000 passengers.

Examples of the results of complaints analysis, and of commercial performance indicators, are given in paragraphs 13.29 and 13.30.

6.5. The Management Accounting Reporting System (MARS) reports are produced monthly and are given 'wide circulation' within the Authority. They are discussed in paragraph 7.21 *et seq.*

6.6. A Commercial Revenue Analysis report is produced monthly on a bureau computer and 'circulated widely' within the Trading Department. (Relevant sections of the report are also sent to airport managements.) It gives BAA revenue for the previous month, the percentage growth in revenue over the same month in the previous year, and the percentage growth in income per passenger (per IDP for duty- and tax-free) over the same month in the previous year. The report also includes an end-of-year forecast of revenue and compares this with the figures from the last budget review.

Computing

6.7. Before looking at particular aspects of BAA's use of computers it is worth noting its approach to computing before 1983, when an outside consultancy was commissioned to review the Authority's information processing strategy. The Authority told us that it had encouraged as many of its staff as possible to take an interest in computing. BAA told us:

We let people go off and do what they thought was right and gave them help where we could.

[The Managing Director] judged it and still judge[s] it to have been a very important and beneficial period in the BAA that the knowledge of and the use of computers in many, many areas was encouraged and not dampened by some simplistic approach from the centre ...

Computerised property management system

6.8. BAA's first computerised property management system was installed at Heathrow in July 1976. A feasibility report in April 1981 proposed a new system for Gatwick and Stansted, which Heathrow was expected eventually to adopt. The system became operational on the following dates: Gatwick, January 1984; Heathrow, April 1984; Stansted, November 1984. At an early stage of our inquiry BAA expressed 'serious ... concern' over the new system and told us that a review was being carried out. We asked for a statement on the system which would be as up-to-date as possible within the timetable for our inquiry. BAA's statement of 28 June 1985 is reproduced at Appendix 6.1.

6.9. In addition to its intrinsic relevance to our inquiry, we were interested in whether the computerised property management system's problems were indicative of problems in computing experienced more generally by BAA. The 1983 report (see paragraph 6.7) reviewed the Authority's computing achievements and problems to date and suggested major changes.

Review of information processing strategy 1983

6.10. The consultancy reported on its review in May 1983. BAA had asked it:

- (i) To identify BAA's actual and potential information processing requirements through discussion with the main users.

- (ii) To review the resources currently available within the Management Services function, and assess the extent to which these appeared to meet BAA's actual and potential requirements.
- (iii) In the light of the assessment, to review the range of options available, and recommend a strategic plan for future information processing activities. The plan should particularly consider the balance and co-ordination between various types of hardware.
- (iv) To assess the strengths and weaknesses of the present organisation structure, to analyse the skills currently available and to recommend a future management structure for information processing activities. The structure should be sufficiently flexible to allow advantage to be taken of evolving technology.

6.11. In the Introduction to the Management Summary of its report the consultancy acknowledged that BAA's approach to information processing showed the Authority's desire to exploit developments in information technology to the full. Micro-computing and specialist information systems were especially praiseworthy. However, there had been inadequate co-ordination. Moreover, while Head Office functions were adequately supported by Management Services' facilities, airport management in its day-to-day operations was not properly catered for. Organisational changes were needed to improve co-ordination. BAA would have to make major changes in its approach to information processing.

6.12. In a paper presented to the Authority's Executive in September 1983 the Personnel Director reported:

(a) The areas of concern can be summarised as

- the present largely unco-ordinated approach to systems development which tends to offer sub-optimal solutions, both for airport and corporate requirements;
- the difficulty experienced by users in gaining access to, and making effective use of, information held in the central computer for existing systems;
- the lengthy time taken to develop new systems;
- the comparative lack of systems addressing management information needs;
- the inadequacy of resources to support the development of airport systems;
- the lack of a single point of contact in Management Services for managers to approach to consider the best type of application for their needs;
- the lack of a mechanism for Directors to become involved in defining information processing policy.

(b) The consultants concluded that there is considerable scope for information processing to 'assist BAA to be as profitable as possible in all areas'.

(c) To achieve this the consultants had put forward a strategy with three main themes:

- consistency of data across BAA;
- a 'systems architecture' which offered both speedy development of major systems, and ease of use and access by end users;
- a co-ordinated approach with Management Services responsible for all policy on administrative information processing.

6.13. During the Executive's discussion of the report the Heathrow Airport Director suggested that his airport should set up its own data processing function with a Heathrow-based team responsible for software. The Personnel Director said that Management Services would contain a 'Management Group' dealing solely with airport systems requirements. The Managing Director agreed that some such staff could be based at Heathrow provided they were under Management Services' control. It was further agreed that departments would budget for some of their own computer needs. Beyond that the main recommendations noted in paragraph 6.12(c) were accepted.

6.14. Given BAA's acceptance of the main 1983 recommendations, particularly those concerning improved co-ordination of computing throughout BAA, we were interested in the present state of computing, which falls within the Authority's Management Services Department.

Management Services

6.15. Management Services has three major functions:

- (a) developing strategies and plans to match the corporate information processing policy;
- (b) developing systems to satisfy the business needs of the Authority; and
- (c) providing and operating the technical elements necessary to run and support the systems.

6.16. At our request, the Head of Management Services prepared a paper which described both the organisation and activities of the department in general, and those activities which are especially relevant to BAA's commercial functions. The paper's main headings were:

- (a) Organisation and equipment;
- (b) Commercial systems—current;
- (c) Further plans for commercial systems;
- (d) Methods and standards; and
- (e) Further plans for Management Services.

The summary in paragraphs 6.17 to 6.21 is based largely on this paper, supplemented by interviews conducted by our staff.

6.17. The Personnel Director is responsible at Executive level for Management Services. He reports formally to the Executive every six months. He chairs the Information Processing Sub-Committee of the Executive, which met for the first time in June 1985. Another committee is the Computer Projects Working Group, which includes representatives of each airport and Head Office

department, advises the Head of Management Services on priorities amongst projects, and acts as a forum for discussion.

6.18. The Head of Management Services, who reports to the Personnel Director at Head Office, was appointed in December 1984. The post, which is a new one and was filled from outside BAA, is at Deputy Director level. She is responsible for:

- (a) setting and implementing the corporate policy on information processing; developing comprehensive plans for information processing;
- (b) setting and monitoring standards on data, hardware, software and methodologies;
- (c) co-ordinating the work of information processing groups at airports and in other departments;
- (d) developing and implementing corporate solutions;
- (e) approving information processing developments carried out by groups outside Management Services; and
- (f) budgeting for, installing and operating corporate data networks, and computer facilities.

6.19. The Head of Management Services is supported by:

- (a) the General Manager, Management Services;
- (b) the Business Systems Manager, who is responsible for identifying users' needs and developing appropriate systems; and
- (c) the Computing Services Manager, responsible for hardware, software, data management, data communications and technology training.

6.20. The current systems serving primarily the commercial functions of BAA are:

- (a) concessions accounting/commercial performance;
- (b) duty-free point-of-sale analysis;
- (c) the bureau-run system (see paragraph 6.6);
- (d) property management system (see paragraph 6.8).

Other relevant systems include:

- (e) general ledger (see paragraph 7.25 *et seq*);
- (f) PRESTEL;
- (g) current office automation; and
- (h) some systems with more general application.

The interaction between present systems is shown in the diagram in Appendix 6.2.

6.21. In addition to the Trading Department's planned information system (see paragraph 6.24 *et seq*), possible changes or developments in the computerised property management system, and the recently introduced general ledger system, future plans for commercial systems include enhanced Electronic Point-of-Sale (EPOS) data capture at concessionaires' outlets at BAA airports and the development of an 'automated office'.

6.22. At present Management Services does not charge other BAA departments for the use of its services (people, software and computer time). From April 1985 all Management Services activities were costed against projects and user departments. BAA intends to formulate charging rates for both staff and central computers so that actual charging can begin by April 1986.

6.23. Since 1983 there has been an increasing tendency for airports to set up units to handle information processing. At Heathrow the Planning and Traffic section contains a Management Information systems team. Scottish Airports Head Office has a liaison officer for information processing. In addition, Head Office Trading Department has a Information Management Manager.

Trading Department computer system

6.24. The Trading Department's planned information system is of particular relevance to our inquiry. While recognising that it is still at a rather early stage of development, we looked at it in some detail.

6.25. Shortly after it was established the Trading Department, together with Management Services, commissioned an outside consultancy (different from that which prepared the 1983 report) to review the computer system requirements for the Trading Department. The consultants' report was presented in May 1984. The review led to a feasibility study whose objective was to expand the role of the earlier study to include:

- (a) identifying user requirements in more detail, including those of airports;
- (b) examining existing Trading Department information systems in more detail;
- (c) reviewing and evaluating alternative approaches to meeting the requirements identified; and
- (d) preparing a Feasibility Report according to PROMPT II standards which sets out the business case for development and includes an implementation plan and cost estimate.

6.26. The report's 'Management Summary' concluded that the development of a computer system for the Trading Department would bring major benefits to BAA. Total staff costs of implementing the new system would be about £175,000. Software costs would add at least a further £30,000. Operating costs might be of the order of £25,000 per annum. Against these costs, savings in payments to third parties for data processing would be some £240,000 per annum (from which could be subtracted at most £40,000 per annum for BAA hardware and machine time costs). Other benefits would include the facility for Trading and Airport staff to:

- (a) monitor commercial performance and thereby identify opportunities for significantly increasing BAA revenue;
- (b) evaluate the effect of promotions and other marketing actions and react accordingly;

¹PROMPT is an acronym for *Project, Resource, Organisation, Management, and Planning Techniques*, developed by Simpect Systems Limited.

- (c) gain more understanding of the factors affecting commercial performance in order to exert better control over Trading activities; and
- (d) forecast commercial performance.

6.27. According to the report, information then available to the Trading Department and to commercial staff at airports was not consistent, was not sufficiently accurate and was not produced quickly enough. Problems included:

- (a) Data inputs and initial processing were not controlled adequately. Inaccurate and out-of-date information resulted.
- (b) Systems were not integrated.
- (c) Systems were difficult to modify.

6.28. Timely, accurate and consistent information was required for the following main categories:

- (a) concessionaires' monthly sales and BAA's income by appropriate product group;
- (b) passenger statistics;
- (c) detailed point-of-sale information;
- (d) information from market research surveys; and
- (e) information on concessions including floor areas and product percentage margins, and BAA spending on concessions.

Access to information should be available via regular reports and *ad hoc* queries. Information should be capable of graphical presentation.

6.29. BAA decided in November 1984 to implement this proposed system. The 'user specification' stage was completed by the end of March 1985. The systems design stage was completed on schedule at the end of July 1985. The original development costs were estimated to be £205,000; the latest estimate (June 1985) for the total development cost was just under £400,000. BAA told us that the increase was due to the inclusion of the hardware and training costs as a direct cost to the project rather than a corporate cost outside the project. The annual running costs were estimated at a total of £88,000. The estimate of 'annual tangible benefits' (savings) remained at £240,000.

Conclusions and recommendations

6.30. BAA has in recent years noted deficiencies in the management information relevant to its commercial activities and has developed, or begun to develop, new systems to remedy these deficiencies.

6.31. Continuing difficulties with the property system suggest that not all the problems identified in the 1983 review of the whole of the Authority's information processing strategy have been solved.

6.32. At an early stage in our inquiry the Authority admitted to 'serious . . . concern' over its new computerised property management system. BAA's statement of 28 June 1985 on this system is reproduced at Appendix 6.1. Past mistakes are evident, and most important and urgent decisions, particularly

concerning Heathrow, remain to be taken. BAA is now seeking information about computerised property management systems recently developed elsewhere.

6.33. In view of our proposal in paragraph 5.50 that final responsibility for all activities at an airport, including Trading and other commercial activities, should remain with its Director or General Manager it will be necessary to ensure that the new computerised Trading Information System meets the specific requirements of the airport management responsible for Trading performance.