Information management and managing information

Background

There has been a remarkable and documented increase in recent years in the coverage given to information and information technology matters in the general management and business literatures and arenas. At a local level, *The Australian* of 11 April, 1989, gave considerable prominence to a major US-based study on how American companies can and should master the many uses of information and information technology. Some emphasis in the report was placed on 'information itself becoming a product' and the need to 'fully and effectively use sophisticated information gathering systems as part of ... decision-making process(es) or suffer the competitive consequences'. Information is now seen as a 'resource' in a way which was not so evident even 5 years ago.

What does all this have to do with ALIA members? It is interesting to note that, in the same timeframe, both the peak industry and professional associations, ACLIS and ALIA, have incorporated the word 'information' into their titles and are engaged in complementary campaigns to highlight the value of information and library services. ALIA has initiated the broadly based 'Information for the Nation' campaign, while ACLIS has begun a targeted lobbying campaign to highlight the economic importance of library services to business, government and research activities.

This article seeks to identify some of the changes that have been taking place in what has become known as the 'information management' or 'information resources management'

area. We hope that this is useful as a way of looking at some possible future developments and the role that ALIA members can and should play in these developments.

The importance of information inputs

Developments in information processing technologies and telecommunications have affected many production and services areas, and, in particular, the management of information resources and information services in organisations. Australia now operates in a truly global market in an increasingly turbulent and volatile environment. This situation makes it more important for businesses and government to monitor local, regional and international developments and to integrate this information into key decision processes.

Thus, at the macro level, there is a cluster of factors that have heightened the importance of managing organisational information services, and have, at the same time, provided more sophisticated tools and technologies to both assist in and stimulate these processes.

At the individual manager level, management is becoming increasingly 'information intensive' because of these national and international environments. Information-based activities now occupy a substantial proportion of the workforce and are increasingly important to business success and government effectiveness.

While much emphasis is often placed on the role of information technology, it is useful to identify a concern for both the content and use of information resources, together with the technology or conduit on which those resources are conveyed. In this way information service managers are concerned with providing information services that focus on the use of information for organisational purposes in a way that adds value to the organisation's outputs.

Information management: adding value

The handling of information of all types and its integration into effective information systems and services is increasingly seen as essential if organisations are to operate effectively in times of technological and environmental change. This process is referred to as 'information management' or 'informa-

tion resources management' and involves both the management of data resources and the management of the information process.

In the 1970s and early 1980s, Woody Horton and Don Marchand shaped the concept of information resources management, initially from involvement in public sector organisations. (See, for example, *Information management in public administration*, Information Resources Press, 1982). The aim of information management was to promote 'organisational effectiveness by enhancing the capabilities of the organisation to cope with the demands of its internal and external environment in dynamic as well as stable conditions'.

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Information management had two dimensions: management of the data resources and management of the information process. Management of the data resources emphasised control of the physical manifestations of the organisation's information processes. Management of the information process concerned the way in which members of the organisation interacted with the data resources and supporting technology for decision making and analysis. The emphasis in this dimension was on the value of resources that were used in the organisation.

A notion to emerge consistently in the information-management literature after the early works of Horton and Marchand is that of 'adding value'. This can be seen in Taylor's *Value-added processes in information systems* (Ablex, 1986) and in chapters in Cronin's *Information management: from strategies to action* (Aslib, 1985).

The most recent work co-authored by Marchand and Horton, *Infotrends: profiting from your information resources'* (Wiley, 1986) reinforces the notion of extracting value from information resources. Horton has more recently collaborated with Cornelius Burk in the publication of *InfoMap: complete guide to discovering corporate information resources* (Prentice-Hall, 1988).

Woody Horton will be in Australia in November and December 1989 to present a series of seminars to different groups of information and general managers on the theme 'Discovering your corporate information resources'.

Federation of information systems

Attempts to 'harness' information and information technology have already caused significant restructuring in large organisations, particularly in the private sector. Most organisations other than very small ones have what might be called a 'federation of information systems'. Organisations require a range of information services for people working at different levels, developed from key information sources and using different types of information systems.

The three-tiered layer of organisational activity — strategic/directing, management control, and resourcing and operations — can be used as a basic model to visualise the different types of sources and information services required at different levels (see diagram page 14). Information has time, scope and source dimensions that vary according to the level and nature of the activity and decision-making involved. At the operational level, information relates to specific tasks and actions, is narrow in scope and short-term in timeframe. This is usually the focus of transactional information systems. At

the middle levels, managers need information that will help them to acquire, use, dispose of and control resources and activities in their organisations. Management information systems are required that include information more diverse in scope, and some external information resources, in a medium-term timeframe.

At the strategic and directing levels, planning, prediction and the achievement of organisational objectives require greater reliance on externally derived information resources about business and government environments, markets and competitors. (Public sector organisations have 'competitors' too.) Executive management requires information that is more diverse in scope and has a longer time horizon. Some of this may be part of a decision-support system, or — in the future — an expert system.

However, not all of the information required at strategic and directing levels can be put into such a structured form and format. Increasingly, managers and professionals are coming to recognise the importance of external information, environmental or contextual, to decision making.

Management and strategic information

Studies of occupational patterns in the services sectors show that all managers are increasingly required to acquire planning, analytical, knowledge-based and problem-solving skills. Moore, in an article on 'Information-intensive management and the expanding market for information professionals' (Aslib Proceedings. **40**:9, September 1988, pp. 255-9) claims that organisations are recruiting fewer generalist managers and more specialists, including information and computer professionals to handle what has become 'information-intensive' management.

In an address to the 1987 Annual Conference of the Institute of Information Scientists (in New Horizons for the Information Profession, Taylor Graham, 1988), Cronin uses Mintzberg's organisational framework to differentiate management requirements and information handling needs. Information specialists have been seen as 'support staff', with a rather circumscribed sphere of activity and responsibility. While this is appropriate in some areas, it means that at the 'strategic apex' information management requirements are often under- or mis-capitalised.

Cronin puts the case strongly that an organisation's ability to develop an

appropriate strategy and sustain advantage over competitors will depend on the quality and perceived value of the intelligence channelled to the strategic apex.

The 'intelligence' referred to most often in the business and management literature is that which is external to the organisation. While some of this is gleaned at a personal level and is intuitive and subjective, the publicly available sources are the substance of what library and information professionals have been dealing with for many years. But how much of that is being provided by ALIA members to those at the 'strategic apex', and in what forms and format is it being developed?

We ask these questions as our recent and current research indicates that there is growing interest in the areas of 'strategic information', 'competitor intelligence' and 'management information'. These are all areas where an understanding of both the content and use of the information, as well as its delivery mechanisms, is paramount. In most organisations, however, this need is as yet not met by library and information professionals. Many managers are unsure where to seek the appropriate expertise. In our view, it usually requires a team approach because the services and systems require a combination of backgrounds, experiences and skills.

Lateral thinker Edward De Bono has acknowledged the problem and challenge of 'information overload' for today's managers and organisations. In De Bono's view, developments in electronic technology have created problems for managers and professionals because there is simply not enough time to cope with the information that is available and relevant. De Bono saw two new professions emerging. First, that of 'information broker'. Such a broker would function at any level — collector, sorter, explorer, synthesiser or reviewer. Second, that of 'information designer'. Here the task might be to design information so that it is self organising or so that it can be absorbed at a glance (*Letters to thinkers: further thoughts on lateral thinking* by Edward de Bono, Penguin, London, 1988, p. 31).

While these concepts may not seem new to many ALIA members, the potential capacity of ALIA members to act as De Bono's 'information brokers' and 'information designers' has not yet occurred to many organisations.

Organisational structures and responsibilities

Some of the coursework of RMIT Graduate Diploma and Master's students has provided very pertinent input to examining the types of information service units or groupings in organisations, the nature of information-handling required by different types of organisations, and the range of information specialists employed.

Students in the Graduate Diploma course are required to interview two information specialists, preferably working in different information service areas in the one organisation. * These interviews and the resulting organisational analyses reveal a wide range of information specialists and responsibilities, in diverse organisational structures and settings. These positions have in common responsibility for handling part of the organisation's information resources and processes.

The first group of Information Services students in RMIT's new Master of Business coursework program have prepared preliminary case study reports on aspects of the alignment of organisational and information strategy in their workplaces. These students cover a wide spectrum of information positions and include every type of library service. Again we are struck by both the diversity of information specialist roles, types of clients and the information resources handled, concurrent with similarities in types of responsibilities.

MANAGEMENT DECISION MAKING AND THE 'INFORMATION FRAME'

Koenig's Information Frame
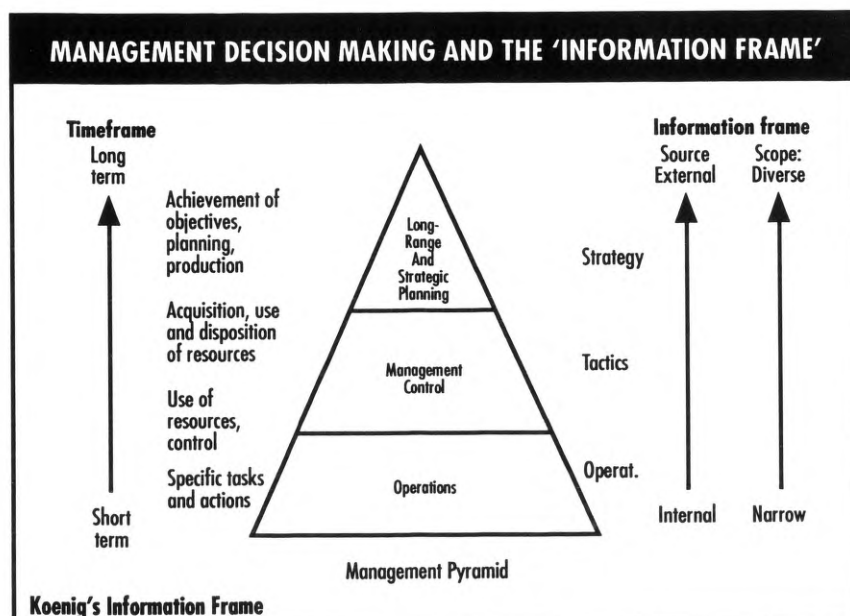
Two similarities in particular are worth noting. First, all positions require considerable 'teamwork' with colleagues, other professionals and/or managers. Second, the consistently dynamic nature of most of the organisations concerned, be they educational institutions or large financial institutions, was remarkable. There appear to be few very stable organisations in evidence in 1989!

In 'A conceptual framework for information resources management' (*International Journal of Information Management* **8**, 1988, pp. 5–11), Wiggins made a valiant effort to represent visually the connections between different information personnel and their roles and responsibilities in organisations with an amusing diagram indicating titles, major information resources used and professional affiliations. The diagram requires some concentration to comprehend, but it is worth the effort. We are aware of very similar situations in Australian organisations.

Making the connections

The attention given to information and information technology in the general business literature is increasingly being reflected in the variety and responsibilities of information specialist positions. A range of educational programs are being developed or are already offered to meet some of these needs. Some of these programs have emerged alongside, as part of, or in concert with, the programs offered by ALIA. Others have developed independently.

While ALIA has changed its name to reflect a broadened focus, we need to ensure that this focus is reflected in ALIA membership and in the wider penetration of ALIA's information professionals in the wider information workforce. In the past, ALIA activities have placed much emphasis on library and information services. Now is the time to focus on the role and importance of library and information professionals or specialists, who are capable of providing a value-added information service no matter what the organisational context.

Marianne Broadbent and *Kerry Grosser*
RMIT

AUSTRALIAN LIBRARY AND INFORMATION ASSOCIATION
Election of Vice-President 1990
(President-elect 1991)
Call for Nominations

In 1986, the General Council of the then Library Association of Australia resolved to change the composition of the Executive Committee from President, immediate Past-President, Vice-President, General Secretary, General Treasurer and Chairman of the Board of Education to President, immediate Past-President, Vice-President and two members of the Council elected by the general Council to the Executive Committee.

The positions of General Treasurer and General Secretary are thus being abolished. This will be completed when revised By-laws are approved by the Governor-General. In the interim, these positions are being filled by the two members of the Council elected to the Executive Committee.

In accordance with Division F Regulations, nominations are now called for the position of Vice-President 1989 (President-elect 1991). Nominees must be personal financial members of the Association. Candidates and nominators should read the relevant regulations carefully. Please note that nominations must be:
• in writing
• signed by two financial members of ALIA
• accompanied by the written consent of the nominee, who shall supply a curriculum vitae and a statement of professional concerns (each of no more than 100 words).

Nominations must reach the Executive Director, PO Box E441, Queen Victoria Terrace, ACT 2600, by 5 pm on 1 September 1989.