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AUTHOR Piggott, Sylvia E. A.
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ABSTRACT

To help understand the trends, strategies, structure, and new skills that will be required by the information professional in this changing global environment, this paper examines the future of the library and information profession and the impact that information technology is having on the discipline. The paper focuses on the online delivery of information, reduced budgets, and competitive intelligence. It discusses skills and competencies for information specialists who wish to maintain a leadership role; two new roles for the information profession--business intelligence strategist and knowledge manager; technological tools; the future of the information profession; re-engineering the library model; and benefits of the re-engineered library model. A well designed and implemented competitive intelligence system coupled with outstanding library and information services is crucial to business success. If the information professional can utilize his or her competencies to implement a successful competitive intelligence system and tie it to the organization's success, as well as implement the re-engineered library model, then he or she will be able to put information on the corporate agenda as a key resource. (SWC)

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Putting Information on the Corporate Agenda as a Key Resource

By:

Sylvia E.A. Piggott

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Putting information on the corporate agenda as a key resource

Sylvia E.A. Piggott

InfoPLUS, Canada

Abstract: To help us understand the trends, strategies, structure and new skills that will be required by the information professional in this global changing environment, this paper examines the future of the library and information profession and the impact that information technology — in particular the online delivery of information, reduced budget and competitive intelligence — is having and will have on this discipline. A re-engineered library model is proposed as a means of putting information on the corporate agenda as a key resource.

Keywords: project management; managerial skills; information systems; training; skills; information technology; forecasts; roles; techniques; competitive intelligence; competition; customer services; online databases; information dissemination; executives

1. Introduction

In the new knowledge driven age, where value added information is one of the most powerful and most valuable strategic tools an organisation can command, how can information professionals position themselves and structure their activities so that they can play a key role on the executive strategy team?

Today, there are dynamic forces reshaping businesses as knowledge-based, knowledge management enterprises. These forces are innovations in information technology and telecommunications which are expanding the quality, quantity and speed of communication locally, nationally and world-wide. In this environment, even corporate giants have been awakened from slumbering complacency by the intensifying forces of global competition.

In response to new and changing pressures in the competitive environment, managers must formulate and effectively implement winning competitive strategies to keep the organisation economically viable. Competitive intelligence enables managers to understand what the competition can and will do, and when and where it plans to do it. Competitive intelligence should therefore represent a key element in the strategic information management system of the organisation.

In order to achieve this competitive advantage, the organisation must have in place a formal mechanism to collect, process, analyse and disseminate competitive intelligence. The unit which naturally has the expertise to perform this job is the library or information centre. By virtue of their education, training and continuous learning, information professionals have both the skill and expertise to play a major role in scenario forecasting. The savvy information professional will know how to combine an in-depth knowledge of the information industry and its offerings with excellent management skills and professional training to command a leadership rather than a managerial role, in any organisation.

2. Skills and competencies

The information specialist who wishes to be the information leader in an organisation must demonstrate a variety of business skills in administering the library and information centre. First and foremost, the information professional must recognise that the usefulness of what we learn will be brief as things are changing so rapidly. Therefore, continuous learning will be necessary for us to maintain a leadership role.

Some of the key competencies necessary to achieve this role are:

- knowing how to communicate with computer and information technology professionals;
- knowing where hardware, software and network technology are going and positioning the library to take advantage of what is available;
- knowing how to gauge users' needs and write up a set of specifications that make technical, business and organisational sense, and do this in the context of tough budget constraints;
- entrepreneurial skills demonstrated by managing the library as a business, employing business case

methodology and showing returns on investment both in terms of quality of information and business success;

- understanding that we are moving from a paper-based, command and control hierarchy to an environment of hardware and software and documents managed by workgroups of well educated and well motivated people who no longer need much control from above;
- skills relating to organisational issues, quality and value-added services, and re-engineering;
- change management skills coupled with effective public relations management during the change process;
- negotiating skills which will result in negotiation of equitable information services contracts for the organisation.

A typical want ad for a Systems Librarian describes the ideal candidate's responsibilities as follows:

Evaluate, analyse, design, coordinate, recommend and implement equipment, software and systems for computer-based information systems and services, including Internet/intranet, CD-ROM databases, online databases, local databases, integrated library system. Maintain, develop and administer Web site, including maintenance of Internet resource collection, and develop access to library products and services via intranet. Perform system and network administration. Provide technology consulting services for colleagues, particularly Internet/intranet development, electronic resources and information retrieval system development. Develop databases of Library resources. Provide instruction for staff and colleagues in electronic resources and tools, including Internet. Provide technical support and troubleshoot local systems and software. Acts as liaison to Information Systems department.

Maintain current awareness of trends and developments in library automation and electronic resources... This ad outlines some of the key competencies which are required now and in the foreseeable future.

3. Competitive intelligence

Competitive intelligence systems will be a key resource and will be highly valued by the organisation. In the 1990s and beyond, technology will become increasingly important and organisations will tend to become more market-oriented. This will pose considerable challenges to managers responsible for the development and commercialisation of new products. Traditional approaches will not work because time-to-market will have to be reduced, product technology content will have to be increased and competitive intelligence will have increased impact on development efforts.

In today's competitive business world, informal information-gathering is no longer adequate for an organisation that wants to be proactive. So more of them are implementing systematic programmes which assimilate and interpret a broad spectrum of information on all competitors. They are known as *competitive intelligence programmes*. These programmes have nothing to do with industrial espionage and everything to do with accessing, framing and interpreting public information in more creative and insightful ways.

Given the exponential growth in information sources and the opening up of so many new global markets, the issue of business intelligence should be foremost on the strategists' minds. When enough pieces of today's business intelligence accumulate in the analytical mind, they eventually form the basis of a company's vision for the future.

This is why the world's best-run companies systematically base their decisions on a rigorous assessment of their competitive position in the marketplace and that of their competitors. Competitive intelligence, analysed and deployed with skill, can reverse an entire market share position. Business history is littered with examples of costly failures to keep a focused eye on competitors.

Competitive intelligence does not have to be costly. It is possible to do a great deal at reasonable cost simply by culling information in the public domain. In developing a competitive intelligence programme the key to success is to be focused, to know what the information is wanted for and to know what action it is intended to produce.

Published sources are a readily accessible launching pad and the information professional is adept at knowing what these published sources are and how to access them in a cost-effective way.

Technological changes, deregulation, productivity pressures, increased emphasis on quality and other factors present new problems and sources of competition. It is this highly competitive environment that appears to stimulate movement to planning styles that require externally oriented competitive intelligence. Such intelligence systems can be put in place by the information professional and will be valued by the organisation's strategic planning executives as long as these systems provide useful, actionable information to decision makers. Business intelligence is a value-added product that leads management to make a decision, undertake an action or make a deliberate choice not to act. It is not just bits of data or an unfocused competitor profile. Unless the product helps management make a decision, it does not add value.

As competition in today's crowded marketplace continues to intensify, companies find that their market research efforts need to go significantly beyond simply gathering information about customer needs and preferences. The marketplace contains not only customers but competitors, and insights about customers become useful and valuable when that information includes the appropriate competitive intelligence about what the

company's competitors are up to and what they are likely to be planning.

The only way for many companies to grow today is at the expense of their competition. If they do not, competitors will carve away their market share. A company can get a jump on the competition by knowing what the competition is up to and staying one step ahead — by employing competitive intelligence strategies. More executives are realising the need to conduct competitive intelligence operations and the information professional has a window of opportunity to provide this competitive operation for the organisation, and thereby be recognised as a key player on the strategic business information resource team.

4. New roles

4.1. Business Intelligence Strategist

A senior vice president, chief executive or product manager cares little for large mounds of data. What these people need is competitive intelligence — information that has been analysed to the point where a decision can be made. The information professional must partner with appropriate areas within the organisation to provide an organisation-wide vision for systematically collecting, filtering, analysing and interpreting relevant information necessary for valuable intelligence to be delivered to senior decision makers proactively or on an as-required basis. The new role of Business Intelligence Strategist could very well be assumed by the information professional.

A strategic business intelligence system should support the following processes:

- (1) allowing specification of impending strategic decisions, their timetable and required informational support;
- (2) determining the sources of the required information and planning for its acquisition;
- (3) obtaining all possible raw data within the available time frame;
- (4) analysing and processing the data into a client-useful format;
- (5) presenting, disseminating and storing the end product and performing a post-assignment audit.

4.2. Knowledge Manager

In the wired business environment the value of the corporation becomes the ability to generate and to effectively communicate needed knowledge throughout the system of suppliers, customers, employees and communities within which it operates. Communication, then, is everything and therefore information professionals must be experts in the effective use of the emerging information management and communication tools. This places exciting challenges and opportunities before the professional but it will also assure an exciting future.

It is estimated that as much as 80% of what a company wants to know about its competitors is known to someone somewhere inside the company, or can be found there, and so it makes sense to have a competitor intelligence structure that can be launched into action when needed. The trend in many corporations is to appoint a Corporate Knowledge Officer (CKO) who not only captures corporate knowledge but assembles knowledge on the competition as well. The new position, or at least the premise surrounding it, promises to have a tremendous impact on corporate competitiveness. The incumbent of this new position will be the savvy information professional who can demonstrate the need for such a system as well as its value. This system must be part of the organisation's risk management system. Each company needs an individualised risk management strategy because each has its own unique set of challenges.

5. Technological tools

Organisations that do not stay abreast of the latest advancements in science and technology (S&T) stand a greater chance of missing opportunities than those that maintain vigilance over the ever-changing technical environment. As a result, a resurgence of interest in technical intelligence for business is occurring in companies around the globe. Many organisations now have formal electronic intelligence programmes to gather, analyse and use S&T information to watch their competitor, to track emerging trends in technological development and to anticipate significant technology-based changes in key markets. The Electronic Intelligence System (EIS) which houses this information should be delivered to the desktops of staff in a seamless, transport manner. This kind of system is of special value to the organisation which has a significant mobile workforce since remote users can tap seamlessly into the EIS and continue to work from an informed position.

Electronic publishing and dissemination will continue to grow in importance, displacing print for most of the information used by corporate executives for business intelligence and decision-making. Therefore, much of the information services products will be delivered electronically and the library without walls will be a reality in many corporate settings. The online provider of information is challenged to supply the libraries in this setting with the necessary information which will be delivered over internal networks. Academic, public and school libraries will continue to make use of strong collections of print and other media along with physical delivery systems to serve the essential needs of their clients.

One way for the information professional to put information on the corporate agenda as a key resource is to develop a programme to build a 'knowledge management architecture' — an online competitor-and-customer database to which employees have access. This 'knowledge management architecture' system should contain continuously updated company profiles and news from public sources like Hoover, NewsEdge and other wire services; reports from salespeople and attendees' notes from conferences and conventions; an in-house directory of experts; and regulatory news, cross-indexed by company, technology and so on. All of this is information that most companies have, but it is scattered and hard to find. This system could be part of the organisation's intranet system with the information professional having the responsibility for the content of the competitive intelligence and library and information sector of the intranet.

6. The future of the information profession

The globalisation of markets is not only making things more competitive: it's making everything move faster. Companies are under increasing pressure to abandon fundamental practices such as large staff groups and slow, methodical decision-making. To survive and prosper they have implemented strategies resulting in faster, leaner and more customer-focused entities. In this kind of changing environment, information professionals must respond by being proactive so that they are not only reacting to today's realities: instead they are influencing them.

Information professionals can no longer control the speed at which information flows, or who has access to information. Clients are now accessing, via public or corporate networks, electronic services such as commercially available online services, the Internet and newswires which can communicate stories with lightning speed and visual impact.

In this new environment the role of the information professional will be changed and it will be elevated. Competition for their jobs will largely come from highly qualified technical and communications professionals. In this changing environment, the quality of the people in the profession needs to be a priority. Training programmes need to focus on elevating the standards of the profession so that information professionals can compete for and assume the leadership role in the profession. There is also a requirement to test new theories and ideas in order to redefine the information professional's and the library's roles. When this is done, the chief information professional will have an integral role in steering the organisation by managing and influencing events, not after they occur but prior to their occurring.

As the information professionals' influence increases they will be held much more accountable for the counsel they provide, the strategies they prepare and the statements they make.

To move into this era there is a need to develop best practices, in order to be recognised and accepted as professionals rather than simply as providers of a service. As part of the process, a method of evaluation must be created that enables clients and funding agencies to determine whether the work of the library has been effective.

With so many users demanding current data, information and knowledge, while demonstrating self-sufficiency in accessing information sources themselves, the information professional's department must be able to give its clients the correct tools to meet these demands while at the same time effectively managing the information resources of the organisation. When deciding on an enterprise-wide information solution, several factors should be evaluated including the size and structure of the data resources and systems, and the knowledge level of the users and the kind of information users are looking for.

The quest for value will be intensified which means that a significant amount of routine tactical activities such as the creation of information packages, or accessing research databases, will be done by the clients themselves with little or no interference from intermediaries. Clients are becoming more and more adept at doing some things for themselves as a result of improved technology.

If we are to believe the experts who peddle instant wisdom to business and governments, our future clients will be so familiar with the use of technology to access information that there will be little we can do for them or teach them.

We can't really blame the management consultants, economists, futurists or politicians for peddling this stuff because there is an inexhaustible demand for simple explanations for what is occurring and a heavy bet is being placed on high technology, the information superhighway and the wonders of the knowledge-based economy to solve our problems.

In this kind of environment we will be expected to master the technology or become marginalised. Our challenge is to differentiate between what is rhetoric and what is reality.

Information professionals have found it difficult to convince management that they represent a core function and that their efforts show return on investment. Many information professionals maintain that one can't show direct results of the work done in the information centre or library on the bottom line because there are too many subtle influences and uncontrollable variables.

It may not be easy to do so but this does not mean that dollar figures cannot be assigned to organisational problems that exist and then the changes that occur after information has been applied to the problem measured. Assuming the leadership role in the corporate competitive intelligence system is one sure way of demonstrating the value of the information professional — as well as the library — to the organisation's bottom line. It is imperative that information professionals find creative ways to demonstrate their value to the bodies which fund their operation.

7. Re-engineering the library model

Given the revolution in the telecommunications and information technologies, the globalisation of business, the growth of global networks and the improvements in storage and transmission of multimedia documents, what can the information professional do to position the library on the corporate agenda as a key resource?

I believe that to be considered as key resource a new re-engineered library model must be implemented. This model should be strategic rather than tactical, proactive rather than reactive. The model must be one where the library gets results utilising technology and managing people, and where the evaluation of its work demonstrates the usefulness of the results it produces in achieving corporate goals. The re-engineered model must embody, at the minimum, these elements:

- it must employ more sophisticated techniques for measuring the bottom line impact of its intervention;
- the value of the library must be demonstrated by becoming the hub for information acquisition and dissemination throughout the organisation. The goal of this hub would be to develop a seamless environment in which audiences that wish to can access information about the organisation's products and services; keep updated on internal and external news; monitor the competition; become informed in order to contribute to policy decisions; and engage in continuous learning. The fact that the information comes from different departments should be transparent to the clients;
- it must demonstrate outstanding business practices and fiscal responsibility. For example, rather than staffing up to achieve a goal the librarians will look for ways of forging partnerships with an appropriate area and forge a series of alliances to achieve corporate goals;
- flexibility to make the paradigm shift as opportunity presents itself. This may include shifting from a physical library to a virtual library when this is of strategic importance to the organisation;
- behave in a manner which demonstrates that the information professional moves with authority, makes decisions, takes action and takes some calculated risks which should provide strategic advantage to the organisation;
- focus on getting results and show a sense of urgency in doing so;
- exercise constant diagnosis and relentless scrutiny of internal and external environments, and be ready to take appropriate action and to make some strategic opportunities;
- perform in such a way that our clients come to believe that our professional expertise is vital to their success. Gain the client's confidence by being proactive in delivering strategic information even before the client realises that it is required;
- as funds get scarce the information professionals must give real perception that they are performing effectively and delivering good value for resources invested. It is therefore important for users to have a clear positive understanding of the value of the services performed. Publicise the advantages that clients derive from continued patronage;
- apply the principle of 'compete or perish'. Operating in this mode means applying a continuous improvement system. Continuous improvement includes continuous education;
- operate the library as though it is judged on the same basis as the clients' departments, which are given a short time to produce a given result or suffer the consequences. Keep in mind it is not whether something is being achieved but whether the clients are persuaded that it is;
- the information professional must not be content until the organisational situation is fully understood, including who the chief players are in the organisation. Whatever is important in understanding how and why the organisation produces results is of paramount importance to the information professional. Know what the organisational goals are. Identify the power centres — who are the people who get things done, who are the people who are looked up to or deferred to? Align the library with those power centres. It is politically astute this way. Learn to swim with the sharks;
- think and speak the way the key players in the organisation speak — use the keywords they use when describing what the information professional and his or her unit does for the organisation rather than using library jargon;
- provide audience segmented services. Know what each group does, thinks and feels, know what they value and what their commitments are to the organisation. How do they approach the organisation's competition? Prepare an annual report in which you talk about departments, groups or divisions which the library or information centre has assisted over the past year to achieve organisational goals;
- establish statistical benchmarks to show how the library is doing in relation to the competition. Compare numbers of staff, costs per search etc. in comparison with others in the same industry;
- when planning or budgeting for any aspect of the library's function, think of yourself as an investor for your organisation and answer questions:
 - will this activity help the organisation achieve its objectives? And how?
 - how will I demonstrate the relationship between the success of my actions and the achievement of the organisation's goals?

- what is the return on investment for a specific project? (Never talk about money spent, always talk of resources invested. Money spent is gone: resources are invested with the expectation of a return.)
- how can I document, in quantifiable terms, the status of the library's responsibilities — what benchmarks exist?

8. Benefits of the re-engineered model

There are many benefits of adopting this model of which I will highlight a few:

- you will increase the likelihood that you will be asked to serve on important committees or task forces;
- you will be more successful in the competition with other managers for your organisation's scarce resources because you are applying business methods to your requests;
- you will get authorisation for added staff when the workload requires it because you can demonstrate the need and measure the accomplishment;
- you will be far less expendable when the organisation suffers setbacks;
- the library will be recognised as a key resource for the organisation.

Working in the background, showing complacency, downplaying your professional talents, staying in your office and not mingling with key staff in different areas is one sure way of being ignored and remaining unrecognised. In addition, this kind of behaviour will ensure that the position of information leader will be assumed by a more astute business executive who will seize the opportunity to take the leadership role. The information professional must therefore be in a constant state of readiness to show leadership by assisting the parent organisation in maintaining or gaining competitive advantage.

This constant state of readiness requires a strategic approach that recognises the importance of:

- understanding how the information professional is perceived by various corporate constituents;
- creating the capacity for reaching large, diverse constituencies with precision and speed;
- finding specific solutions for specific challenges;
- looking at the short-term and long-term implications of a solution, recognising that it is not possible to predict all the long-term solutions, therefore solutions must be monitored, evaluated and changed — if necessary periodically;
- don't accept something as inevitable since we have the ability to influence the future.

9. The future in the making

Putting information on the corporate agenda as a key resource and keeping it there involves vigilance concerning what is taking place in the environment. The technology is one of the driving forces behind the collection, organisation and dissemination of information. Consequently the information professional must be on a constant watch to see what the new and proposed developments are in this area. The developments at the Media Lab at the Massachusetts Institute of Technology (MIT) are worthy of being monitored. This is especially true because corporations look to places such as these to provide leadership in predicting the future, and moreover they tend to believe these predictions!

The Media Lab at MIT, which opened about 12 years ago, promises to revolutionise life in the early 21st century in much the same way as the telephone and the automobile changed the world in the early 20th century. The guru of this lab, Nicholas Negroponte, says that doing business face to face, or even by telephone or fax, is too slow, too inflexible, too inexact — a waste of time. One of the main focuses of this Lab is to develop new ways to learn. For example, instead of dissecting frogs students will build their own computerised frogs. Instead of memorising economical or political science theories they will create their own market systems or governments. The students are therefore constructing new knowledge. In the future the answers will not be something that's waiting to be discovered: the answers will have to be invented. Teachers will become coaches in the classroom in how to use the computers to create answers.

The staff in the Media Lab are looking for new ways to blend information and artificial intelligence so that computers will do much of our thinking for us. The perfection of holography is proceeding at a rapid rate, creating free-standing holographic images. Think about information research. What many of us do now is information retrieval. We punch in keywords and the machine gives us a list of documents containing those words. But this is unsatisfactory because the retrieved list is often too long — 500 or even 15 articles will not be considered helpful to the recipient. Staff at the Lab are working on 'machine understanding' — programs that will allow computers to analyse and summarise materials for us. So, instead of 500 articles the computer will compose a one page executive summary of what has been written on the topic. The goal of the Lab is not to get people to understand computers but to get computers to understand people.

The staff in this Lab see a future where the computer will understand you and your preferences, will sort your

e-mail, package the day's news into your own personal briefings, research your entertainment options, and set-up meetings and social engagements. These computers will gather and organise information for you in the way you would yourself, if you had the time. You would in fact have a digitised personal assistant working for you in the background while you carry on with your tasks.

9.1. Narrowcasting

As the information technology progresses, narrowcasting or the possibility of preparing personalised newspapers, newsletters, news shows and magazines will be a service which will appeal to the consumer, especially the busy business executive. Individuals will be able to program their computers to extract information from a constant online stream to create information in a form and quantity that they like.

This ability to get information without the intervention of an intermediary will certainly have an effect on the livelihood of the information professional. Again, it is necessary to know what is rhetoric and what is reality in all of this. It is also important to understand the cost of implementing such systems in terms of financial outlay, as well as who will be the 'haves' and the 'have nots' in such an environment.

10. Conclusion

A well designed and well implemented competitive intelligence system coupled with outstanding library and information services is crucial to business success. If the information professional can utilise his or her competencies to implement a successful competitive intelligence system and tie it to the organisation's success, as well as implement the re-engineered library model, then he or she will be able to put information on the corporate agenda as a key resource.

Sylvia Piggott
InfoPLUS
Montreal
Quebec
Canada H4V 1Y5
Tel: +1 (514) 486 0305
Fax: +1 (514) 486 9809
E-mail: spiggott@accent.net

Bibliography

- Ashton, W.B. and G.S. Stacey (1995) Technological intelligence in business: Understanding technology threats and opportunities, *International Journal of Technology Management*, **10**(1), 79-104.
- Burke, M.E (1994) Scenario forecasting: The role of the business information professional, *Business Information Review*, **11**(1), 34-39.
- Fuld, L.M. (1996) The future of databases: What's really needed are decisionbases, *Information Today*, **13**(2), 1, 19.
- Hallaq, J.H. and K. Steinhurst (1994) Business intelligence methods — how ethical, *Journal of Business Ethics*, **13**(10), 787-794.
- Jones Jr, W.A. and N.B. Bryan Jr (1995) Business ethics and business intelligence: An empirical study of information-gathering alternatives, *International Journal of Management*, **12**(2), 204-208.
- Leake, W.W. (1996), Will the real CKO please stand up? *UE Solutions*, **28**(3), 4.
- Montgomery, G.E. and J.P. Spiers (1996) Competitive intelligence: An antidote to downsizing, *Public Utilities Fortnightly*, **134**(6), 22-25.
- Sandman, M.A and D.L. Borska (1995) Intelligence managers and intelligence representatives, *Electric Perspectives*, **20**(3), 86.
- Sorgenfrei, M. (1994) IS project management, *Systems Management*, 3X/400, **22**(4),10.



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