Corporate Information Specialists or Librarians in Today’s Information Society -
Their Key Roles in Corporate Success

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Magisteruppsats, 20 poäng, vt 2002
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Uppsatser inom biblioteks- och informationsvetenskap, nr 125  

ISSN 1650-4267
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Introduction

Opening Remarks
The demise of corporate libraries is in great conflict with today’s infinite amount of information and information sources as well as corporate organisations’ great information demands and needs. The applications and development of the corporate information specialist or librarian profession are being questioned. Simultaneously, corporate organisations recognise information and knowledge as corporate assets. These are some of the information paradoxes that made me write this very thesis.

Most of today’s corporate decision-makers are aware of the needs of environmental scanning. But when it comes to corporate information management including environmental scanning, are they equally aware of the difference corporate information specialists or librarians make? I hope this work can visualise the great and indispensable day-to-day work of corporate information specialists or librarians in corporate information management.

As an information specialist or librarian to be, I have had the opportunity to work one summer at the corporate library of Karlshamns AB in Sweden. During that period I got an idea for how information specialists, in excellent ways, participate in their parent organisation’s efforts to reach its corporate goals.

Keeping that experience in mind, I started to gather material from varying sources. I soon discovered that there is a tremendous amount of sources dealing with corporate information management. The attentive observer notices a great deal of unconsciousness and numerous buzzwords in this field. Also, corporate librarians working in this field are given new titles and names. Examples are information specialist, content manager, information architect, database manager, cybrarian, business intelligence manager, knowledge navigator, to name just a few. The naming seems to depend on the librarian’s position and duties, and also perhaps on what is “commonly known” as an information facilitator in the type of setting in question.

My work with this thesis was very much a domino effect. Many times during my search for relevant material I found not only what I was looking for but also something
else of high relevance. There were numerous days and weeks of parallel and exciting activities: researching, thinking and writing.

During our library and information science programme the roles and issues of librarians in corporate organisations are only briefly mentioned. Therefore, my research work is a way of getting an idea of what information specialists or librarians do in a corporate setting.

At this stage I would like to present my thesis.

Disposition
The thesis is divided into eleven major parts. They are as follows: Introduction; Aims and Questions at Issue; Research Overview; Theory and Conceptual Discussion; Method; Investigation; Analysis; Conclusions and Comments; Summary; References; and Appendixes. Below, the eleven parts are presented in three “paragraphs”. This is only done in order to make the thesis overview perspicuous.

Thesis Overview

Introduction; Aims and Questions at Issue; Research Overview; Theory and Conceptual Discussion
The introductory part starts off with a short outline of my topic and my reasons for choosing this. It also reveals the disposition of my thesis and includes special notes. A chapter that covers aims, focus, questions at issue and subsequent hypotheses follows. The next chapter is a research overview (literature review). Moving on, there is a theory section that presents a theory model of the corporate organisation and the outside world as well as a conceptual discussion.

Method; Investigation; Analysis
The methods and sources used as well as a method theory section are next in line. Then, a section links questions at issue and subsequent hypotheses with interview questions. The methods applied are further described in the following investigation and analysis parts. My investigation findings and analysis of my results are also to be found here.

Conclusions and Comments; Summary; References; and Appendixes
I conclude and comment on my research findings and compare these with previously mentioned theory and earlier findings of other researchers. In the following summary
text, a short repetition of the most significant results is shown. These results are compared with the aims and questions at issue from the beginning of the thesis. Finally, my references as well as appendixes are supplied.

A list of abbreviations used is enclosed in Appendix A. A list of definitions of relevant terms is provided in Appendix B. Appendix C exemplifies new roles and services of information specialists (information architect, user needs analysis and specification). In Appendix D, additional information within the field of corporate information management is enclosed. It derives from my notes that were taken while attending one free-standing seminar as well as five seminars and one workshop during two conferences. It should not be seen as a central part of my investigation but merely as an expansion.

Special Notes

**Delimitation**
It should be stressed that some of this material may apply in other libraries and information service organisations in today’s information society. However, I have found it necessary to restrict myself to a limited but still large area: key roles of information specialists or librarians in corporate information management.

**Terminology**
Information professional is a broad term. It includes e.g. system and network administrator; IT expert; computer programmer; management accountant; business, market, or financial analyst; information specialist or librarian of any kind. However, information specialists or librarians are sometimes referred to as information professionals in this thesis.

Personally, I believe that non-initiated persons may have difficulties in understanding what today’s librarians do and do very well. They may not be aware of that, in Sweden, the library and information science programme now replaces former library studies. Nor may they realise the changes and width of today’s librarian roles. Some “traditional” roles remain and will continue to remain, fully or partly.

Librarians provide their customers with information and more specifically information content (non-refined and refined). “Information specialist” may be an advantageous professional term, complementary to librarian, as it perhaps more clearly indicates what librarians do today. Today’s librarians are facilitators of all kinds of information. This is my reason for treating corporate information specialists and corporate librarians as interchangeable terms in this thesis.
Moreover, if not indicated otherwise, information management refers to both information and knowledge management (any kind). Corporate organisation is synonymous to company. Information service centres includes libraries and business intelligence functions. Users and customers are synonyms.

**Language**
The default language is British English. However, quotations are spelled according to their original sources. Quotations originating from reference material in Swedish have been translated into English by the author. As the native language of the author is not English any confusion of languages is unintentional and perhaps quite unavoidable.
Aims and Questions at Issue

Today’s information society can be looked upon as an information ecology, a metaphor that is supported by Bruce W. McConnell and Thomas Davenport (see “Research Review” below). By thinking in terms of the criss-crossing relations of “communities” and “niches” of this information ecology I have chosen to examine corporate information management put in a larger context: today’s information society. I have tried to disentangle and take into account some information management elements of corporate organisations. These elements are information society’s influence, corporate business goals, information workers (corporate employees), services and competencies of corporate information specialists as well as interactions between humans and information technology.

Aims and Focus
The major aim of this thesis is twofold. Primarily, it is aimed at getting an understanding of the key roles that information specialists or librarians play in corporate information management and success. Furthermore, I will put corporate information management into a larger context, namely the highly competitive information society of today.

The main focus is on “traditional”, changing or new roles as well as challenges of corporate information specialists or librarians. It also includes their services, customers and competencies, work tools and strategies in order to be successful information supporters and partners. Another focus is on why information and information supply is a critical success factor of today’s corporate organisations. A third focus is on information/knowledge management in corporate organisations.

Questions at Issue and Subsequent Hypotheses
By combining literature and my own thoughts and ideas in this specific area I have accomplished seven hypotheses. If possible I want to test their truth and/or falseness. These hypotheses illuminate some aspects of the questions at issue. The questions at issue (italic) and hypotheses (bold, numbered) are outlined below. They are divided into three segments: “Return on Information”; “Information Age, Corporate
Information Management and Information Specialists”; and “Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists”.

Return on Information
In financial terms it is rather difficult to calculate return on information and return on having access to the right information. But I think it is important to try to demonstrate what the potential returns and savings (time and money) actually are. Investments in information and access to the right information require basic data for decision-making. Many times decision-makers and business leaders want to rely on figures in order to be willing to spend money on information.

Hiring in-house information specialists, as opposed to hiring from external sources, should be valued and acknowledged by corporate organisations both in monetary terms but also in terms of work dedication, their knowledge of parent organisation’s activities and business secrecy matters. The decision on whether or not to outsource the organisation’s information services might very well depend on these values. Therefore, I will try to find evidence that can provide an answer to the first three questions at issue and also support two hypotheses.

Can it be argued that spending money on information is worthwhile and essential to the success of corporate organisations?
What trustworthy arguments make the existence of corporate information specialists legitimate and indisputable in today’s information society?
Are there any studies that prove a positive return on information by hiring in-house information specialists?

Hypotheses
1. Corporate organisations’ investments in information and information management are cost-effective and perhaps even money saving.
2. Corporate organisations can profit from hiring in-house information specialists.

Information Age, Corporate Information Management and Information Specialists
How have information and information technology, globalisation and competition influenced corporate information management including the work of corporate information specialists?
How well do information specialists know their mother organisation’s business, goals and challenges?
Does the work of information specialists comply with these?
Hypotheses

3. Information is a competitive asset.

4. In order to be able to deliver what the customer needs (i.e. relevant, complete, accurate, timely and comprehensive information in a preferred way), information specialists must be familiar with the parent organisation’s progress and activities.

5. Successful information technology solutions (e.g. intranets, portals) depend heavily on the contribution of information architects like corporate information specialists.

Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists

In what ways do information specialists and their services contribute to achieving the corporate business goals?

Regarding information management, what are the required competencies, collaborations and promoting activities of corporate information specialists?

Hypotheses

6. The corporate information specialists or librarians of today have both “traditional” and new roles.

7. Today’s corporate information specialists must be skilled marketers, innovators and collaborators.

The comprehensive question at issue of this thesis:

What are the key roles of today’s information specialists in corporate information management and success?
Research Overview

The first part of the overview considers paradigm shifts of society, metaphors for information infrastructure or supply within today’s information society and technology developments. It proceeds with library and information science, “traditional” corporate library being outdated, as well as “traditional”, changing or new roles and services of information specialists.

Also, I would like to refer to Appendix D, where additional information within information management (corporate in particular) can be found. This information derives from six seminars and one workshop that I have attended. Appendix D should be seen as a supplement of extra reading in the field of corporate information and knowledge management and not as an essential part of my investigation.

Paradigm Shifts of Society

The winds of change of the present information age are not a new kind of phenomenon. Civilisation has dramatically changed course many times before. About 10,000 years ago the agricultural revolution changed human life. Most people lived and worked on farms and perhaps exchanged goods and services in marketplaces. Back in the 1880s industrialisation turned humankind upside down once more. Farmers gradually became factory workers and no longer lived in the countryside. This resulted in an urbanisation process.

As with all paradigm shifts it causes a change in human thinking, which in turn results in a new way of seeing the world. But changing human assumptions about the way that the world works takes time. “Major paradigm shifts take generations.” declares George Beekman.¹

In the late twentieth century, we experienced a new paradigm shift and entered the information age. The computer, Information System (IS), Information Technology (IT) and Internet made their way into our society. Instead of growing grains or making shoes we nowadays more and more attend to information-related work. All these three paradigm shifts have one thing in common: technology.

Information Society

In a well-functioning global society information infrastructure is one of several essential infrastructures according to Christine L. Borgman. It interconnects computer networks and information technologies. A broad definition of information infrastructure, expressed by Christine L. Borgman, “/…/ incorporates people, technology, and content and the interactions between them.” Other critical infrastructures include energy, transportation, telecommunications, banking and finance, transportation, water systems and emergency services. They are increasingly reliant on information technologies, which mean that some aspects of daily life depend on global information infrastructure.

In the early 1990s, fascination of new IT applications made visions of future flow from the world’s top politicians. The global communication networks were launched as the “technical cure” against all evil. In 1992, IT was a politically “hot” issue in the United States’ presidential election. Al Gore coined the term “information superhighway”, which is one of many metaphors for Global Information Infrastructure (GII). Three of these metaphors are outlined below.

Metaphors for Information Infrastructure or Supply

Information Superhighway

The attraction of the “information superhighway” as a metaphor is due to its simplicity as it is “/…/ finite, linear and very familiar /…/” states Robert Adrian. This metaphor also suggests less commuting, easier shopping and more home entertainment, which contribute to its wide acceptance. Robert Adrian argues that one of its drawbacks is that “/…/ no matter how many lanes and levels and interchanges it has.” it does not very well resemble a network of connections. Being a spokesman of “cyberspace”, presented in the next section, he also rejects the highway metaphor because of its master-servant relationship of man-machine.

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2 Borgman, Christine L., 2000, From Gutenberg to the global information infrastructure, p. 31.
3 Borgman, Christine L., 2000, p. 31.
5 SOU 1999:12, p. 9.
7 Adrian, Robert, 1994, p. 3.
8 Adrian, Robert, 1994, p. 3.
Cyberspace

Robert Adrian also describes the “cyberspace” metaphor. William Gibson coined cyberspace in his novel *Neuromancer* in 1984 to refer to the virtual world of digital communication.\(^9\) In contrast to information superhighway, cyberspace is “/…/ infinite, chaotic and scary /…/”.\(^10\) It also differs from information superhighway as it lacks human-centricity. If humans ceased to exist, the network of machines will not vanish with them.\(^11\)

Information Ecology

Bruce W. McConnell at the U.S. Office of Management and Budget explains why he believes that the most prevalent metaphor, information superhighway, is misleading: “Networks are concurrent”.\(^12\) The collaboration among individual creators and senders cannot be assumed by the highway metaphor. In addition, redundant pathways and resources are natural parts of a healthy information system in order to ensure there is no single point of failure. Many kinds of information only make sense together with different kinds of information. They need to co-exist in a symbiotic relationship.\(^13\) Bruce W. McConnell is in favour of the “information ecology” metaphor.

Thomas Davenport (with Laurence Prusak) describes “/…/ information ecology as ‘holistic management of information’ or ‘human–centered information management’.”\(^14\) He argues that this means putting humans back at the centre of the information world and moving technology to where it belongs, the periphery. All the ”/…/ crisscrossing relations among people, processes, support structures and the other elements of a company’s information environment /…/” are just as complex as interactions in an ecological system.\(^15\) He also explains that the use of ecology as a metaphor is new to information management but is quite familiar to business strategists and economists. Besides this holistic thinking about an organisation information ecology involves integration of information, recognition of evolutionary change, emphasis in observation and description as well as focus on people and information behaviour.\(^16\) Employees responsible of information supply must understand how information can be brought

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11 Adrian, Robert, 1994, p. 6.
13 McConnell, Bruce W., 1995, p. 3.
together regardless of source, format and perspective. Information management must allow for change by assuring that information systems are flexible.

Developments of Information and Communication Technologies

Email
Technology continues to influence our lives. In today’s information society various IT applications are information disseminators and ways of communicating. In 1971, Roy Tomlinson created the first email. It was sent via Arpanet, Internet’s forerunner. Emailing is now an integrated and natural part of practically everyone’s work life. It is a fast and powerful way of getting in contact with one person or a whole group of individuals at the same time. Various data files can easily be attached to an email. Work reports, meeting agendas, job applications, market analysis reports and organisational charts are some examples of files that are sent between senders and receivers.

Internet
In the beginning of the 1990s, “/…/ prevailing technology environment made it difficult for end-users to access on-line services, thereby limiting their use to trained professionals (and a small number of online enthusiasts).” A lot has changed since the early 1990s. The reason for this is, according to Doug Church, Internet. “The main catalyst of this change has been the Internet, which effectively overcame end-user barriers to online access and use.” In 1990, the National Science Foundation in the U.S. opened Internet.

The Internet is a complex and chaotic information source. But nevertheless it is an important supply of information for all people including information specialists. Apart from the telecommunications network, Internet is the closest to a global network for interactive communication that humankind has created. Internet has become the role model for information infrastructure.

Internet and World Wide Web (www)

Four years later, in 1994, www was launched on the Internet. It has and will continue to have a large impact on human communication, dissemination of information, marketing and sales, lifelong learning and news reporting, to name just a few. This is a new, gigantic and not yet fully understood communication channel. Its network spans all over the world crossing countries, continents, cultures, and languages. Today’s globalisation means that homepages, discussion groups, database access, business reviews, and competitive intelligence analyses are indispensable information tools in a corporate setting.

New Information and Communication Tools

McConnell continues by stating that the transforming effects of the new electronic information services such as electronic mail, file transfer and the www are yet to be found.\textsuperscript{22} No one can predict their impacts on organisations and work processes. They provide new possibilities of communication and learning: e.g. participation in a discussion list among peers, publishing on the Internet and/or on the corporate intranet, financial news and trends right on the desktop of your PC, multimedia-based tutorials, and archives of lessons learned. But this is just one side of the same coin. Challenges for sustaining information are on the other side. This includes “.../ maintaining the information’s currency, availability, location, and integrity.” according to Bruce W. McConnell.\textsuperscript{23}

Intranets

An intranet is a closed network based on Internet technologies. One of the main purposes of an intranet is to effectively bring people together i.e. to facilitate information sharing within the organisation. In a corporate organisation employees can e.g. participate in discussion lists, share positive and negative experiences with each other and present their own departments to the rest of the organisation. The same information can be reached, viewed and discussed by people via one common gateway. People can find people. Intranets are knowledge management systems.

The intranet is a complementary communication channel to printed information and verbal communication. Traditionally, printed information has been used for distribution of information from top management down to employees (one way communication). In contrast, an intranet enables employees at all levels to communicate with colleagues at the same level of the hierarchy as well as with colleagues upwards and downwards in

\textsuperscript{22} McConnell, Bruce W., 1995, p. 2.

\textsuperscript{23} McConnell, Bruce W., 1995, p. 2.
the organisation. Steven L. Telleen comments this new way of communication and management.

The Intranet Paradigm

Steven L. Telleen, says in his column “The Intranet Paradigm” that

"... real paradigms are not about technologies or products. Paradigms are about perspective. Paradigms define what we view as important and how we approach problems and activities. At the most basic level they form the fabric of our view of reality. It is not the paradigm that causes change. Change forces us to alter our paradigm of what is real and how to measure it."24

He continues by explaining what intranets have to do with paradigm shifts. The intranets enable us to communicate and manage in new ways. But they also provide us with concrete experience in how distributed systems function and can be managed.

An intranet causes changes in the organizational pattern that encourage us to alter our perspective on how we manage organizations, how we view and value our employees, and how we approach problems. The paradigm is not the intranet. The paradigm is in our perception of management and business.25

According to Steven L. Telleen, understanding the potential paradigm conflicts is of great importance. On the one side is the organisation as an engineered machine. On the other side is the self-adapting organisation or learning organisation. Steven L. Telleen ends by describing the conflicting perspectives in seven aspects of the paradigm shift: culture, management, focus, co-ordination, tools, communication, and development. Table 1 summarises the differences of the seven aspects.

<table>
<thead>
<tr>
<th>Table 1. Conflicting perspectives in seven aspects of the paradigm shift</th>
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<td><strong>Classic organisation</strong></td>
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<td>Culture</td>
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<td>Management</td>
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<td>Focus</td>
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<td>Co-ordination</td>
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<td>Tools</td>
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</table>

Library and Information Science

Trend of Holism
In most disciplines there is a trend of putting fragmental research results together to holistic views of the human being, the nature, and the society or of another phenomenon e.g. information flow. Mariam Ginman argues that this trend may today have various reasons but originally it was influenced by the new possibilities that mathematics and information processing offered.27

In library and information science this holism has resulted in a desire to place information supply in a holistic perspective in order to be able to define and analyse its responsibility. It has also made us aware of the width of the responsibility of library and information science.

Information Supply Process (Information Ecology)
Today the physical library is still a significant environment for information activities but also one of many possible environments. The information activities have become independent of form and space. As a result of this independence the information supply process appears to be in the centre of library and information science.28 The production, acquisition, storage, extraction of information (knowledge, facts, literature) that is mediated, circumstances of the supply process and its prerequisites as well as adaptation of information to the needs and preferences of the customer seem to be the essential to library and information science. This process is also known as the information ecology, a term mentioned above by Thomas Davenport (with Laurence Prusak). To explore how the information and its influence are changed in different environments or at exchange of the process factors is a great challenge adds Mariam Ginman.

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Why the “Traditional” Corporate Library Needed to be Changed

Thomas H. Davenport (with Laurence Prusak) presents his ideas about why the “traditional” corporate library needed to be changed. Before the computers entered our work life the corporate library most closely resembled a lending library. Files were kept on customers, employees, divisions, products and so on. These files had to be stored for later retrieval. The information staff primarily focused on preservation of information.

This focus “/…/ necessitated strict attention to processes for indexing, cataloguing, sorting, searching, and retrieving documents – all tasks that information technology can accomplish with greater speed than human clerks.”29 This library model of information management was merely augmented with the advent of the computer, not transformed. Information technology has largely been used to replicate the paper systems that preceded it. The “new” librarians became database administrators and mainframe computer operators and continued to focus on preserving information from damage.

Today some documents and files need to be treated in this manner. However, the main emphasis of today’s corporate librarians is information content. They “/…/ have begun to expand the scope of their work to include working more closely with business users and to provide competitive advantage with their services.“ tells Thomas H. Davenport.30

Thomas H. Davenport explains why he believes that current information can no longer be profitably managed as if it were a library book:

- Corporate librarians need to make clear what information is available. In contrast, a “traditional” library assumes that employees themselves ask for the information they need.
- An unpleasant side effect of preservation of information in corporate organisations is restriction of user access.
- Information staff must constantly create meaning out of the data and information that is acquired. “Traditional” librarian roles like indexing and cataloguing are not enough today.
- The “traditional” library model typically assumes a physical repository. Information and xerographic technologies have made physical repositories somewhat obsolete.31

“Traditional”, Changing or New Roles and Services of Information Specialists or Librarians

Paradigm Shifts are Responsible for Changing or New Roles
Special Libraries Association (SLA) states in its report ‘Competencies for special librarians of the 21st century’ that library and information professionals faced at least three major paradigm shifts as we entered the new millennium. The paradigm shifts are related to global competition, new computing and communications technologies as well as to the need to measure the productivity of knowledge and service workers. The shifts in question are as follows:
1. The first shift is the transition from paper to electronic media. The advent of multimedia is linked to this shift.
2. Increasing demand for accountability including a focus on customers, performance measurement and benchmarking. Paradoxically, financial resources have been cut.
3. The third shift derives from new forms of work organisation e.g. end-user computing, telework, outsourcing and downsizing.32

Adaptation to Information Revolution
Because of the information revolution in the twenty-first century there has been a demand for “new” as well as “traditional” information specialist or librarian roles. “Librarians could, and did see the vast potential of the new information revolution. But, professionals also could, and did see the need for a librarian.”33 Jana Bradley and her graduate students in the master of library science program at Syracuse University in New York, like many others, have acknowledged the adaptation of librarians.

This ability to adapt librarianship to the needs of the 21st century had some interesting side effects. Technological training, an ability to work with people, to critically analyse, organise and present information. With the new librarian came new titles and new career opportunities. We could become, cybrarians, web masters, web site coordinators, corporate information officers, database consultants, metadata specialists, digital library managers, information brokers, information literacy trainers, or knowledge managers.34

Knowledge Workers

Librarians
The librarians have for centuries provided the services of storing, preserving and accessing knowledge in various forms. Rebecca Lloyd says, “It is arguable that they are the oldest and most well-established form of knowledge worker, responsible for developing various organizational tools upon which much of modern knowledge management is founded.”\(^{35}\) A splendid example of this is the bibliography. Modern taxonomic methods derive from the bibliography. “The invention of this tool is credited in part to one of the earliest and most famous librarians of antiquity, Callimachus of Cyrene.”\(^{36}\) In addition, Callmachus also created an index of the library of Alexandria’s collection, known as the Pinakes (tables). Callmachus continued to add records to this “catalogue” until his death in 240 B.C. and his successors continued the task.\(^{37}\)

“Everyone”
Today we are all knowledge workers Brunella Longo points out.\(^{38}\) We create, share and use information using web sites, email, databases, forums etc. The social relationships within virtual communities are based on creating and sharing information. “This sets up an enormous long-term challenge for every library or information center as well as every professional involved in publishing and education.” concludes Brunella Longo.\(^{39}\) She believes that librarians with redefined roles can successfully tackle this by “/…/ helping people develop their own cognitive abilities, understand their own needs, and learn how to express them correctly.”\(^{40}\)

Intermediaries
Bruce W. McConnell points out that intermediaries continue to matter. Information specialists or librarians are still needed and deserve appreciation. The information in databases, www, intranets, document management systems etc. needs to be put in context. Corporate librarians, like all librarians, are professionally trained and equally devoted to searching, retrieving, finding, selecting, classifying, rating, interpreting, and

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\(^{39}\) Longo, Brunella, 2001, p. 3.

\(^{40}\) Longo, Brunella, 2001, p. 3.
customising content for specific customer needs. In today’s highly competitive world for-profit organisations cannot afford to ignore these skilled and indispensable information professionals.

**Strategic Information or Knowledge Partners and Supporters**

*New Possibilities*

Ulla Virranniemi expands this view. She claims in her paper that “…the role of information specialists is, however, changing from that of an intermediary towards a role of strategic information/knowledge partners and supporters for the rest of the staff in the company in all knowledge based processes.”

She believes that the introduction of Internet, user-friendly search facilities and new databases mean “…that information services have to find new possibilities and new ways of orientating”.

*Clearer Roles*

By profiling themselves and focusing on specific information, that is relevant to a specific business process, the information specialists’ roles in the organisation are becoming clearer.

The profiling is aimed at providing better service and better profit argues Ulla Virranniemi. This also means that information specialists’ customers and strategic partners are defined. In my interpretation of Ulla Virranniemi’s words there is an obvious relationship between the parent organisation and information specialists’ roles and value, which is useful in budget negotiations and especially in times of recession.

There is a process of change of the corporate information specialist’s role from being reactive to now being proactive too. This is illustrated in figure 1.

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Figure 1. The changing roles of corporate information specialists

Source: the author

Sven Hamrefors at Stockholm School of Economics talks about the proactiveness. He speaks about “/…/ a possibility for the librarians to act as a helping hand in the decision-makers’ own scanning.” In my understanding this scanning activity is also known as Business Scanning of the Environment, which is explained below in “Theory and Conceptual Discussion”.

“Traditional” Skills in Non-Traditional Settings
Jana Bradley argues that the skills needed in the non-traditional for-profit world is not that different from the skills of becoming a “traditional” information specialist or librarian. “Traditional library skills like analyzing, evaluating, organizing and accessing databases, translate well, over into the non-traditional for-profit corporate world.” according to Jana Bradley.

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45 Hamrefors, Sven, 1999, “The company library’s contribution to the organisation’s environmental scanning”, p. 122.
46 Bradley, Jana, 2000, p. 2.
Theory and Conceptual Discussion

In this theory chapter I will provide a theory model of the corporate organisation and the outside world as well as a conceptual discussion.

Corporate Organisation and Outside World

Information Ecology Model
This ecological model below, earlier introduced in “Research Overview”, puts corporate information management including the work of information specialists in a larger context, namely information society (referred to as the external environment). Naturally, corporate information management and information specialists are influenced by information ecology elements. Information specialists work both in the internal and external environments as well as on the fuzzy borders of these environments.

![An ecological model for information management](image)

**Figure 2. An ecological model for information management**

*Source:* Based on a figure by Thomas H. Davenport and Laurence Prusak.47

47 Davenport, Thomas H., & Prusak, Laurence, 1997, p. 34.
The model in figure 2 shows three interacting and overlapping information ecological environments, which influence a corporate organisation. The organisational environment (in the middle) heavily affects the organisation’s internal information environment, represented by a dotted ellipse. In turn the external environment influences both the organisational environment and indirectly the organisation’s internal information environment. Thomas H. Davenport (with Laurence Prusak) describes what he believes that these three environments consist of. I find it necessary to depict some of their theories. I start by expanding the smallest ellipse of the model, “The Information Environment”, see figure 3 below.

![Figure 3. The information environment](https://via.placeholder.com/150)

Source: Based on a figure by Thomas H. Davenport and Laurence Prusak.

**The Information Environment**

According to figure 3 the information environment contains *strategy, politics, behaviour and culture, staff, process* and *architecture*. Information strategy is identifying what the corporate organisation wants to do with information. Information politics involves the power information provides. True information sharing will not take place if business unit executives hoard information. Information behaviour and culture must be a basic management objective. Different cultures value, share, disclose and capitalise information in different ways. "A good information staff therefore includes many kinds of people, such as content specialists (librarians and market researchers), designers and facilitators of information bases; and information liaisons (guides who help users identify their needs)." How information work is done is called information processes and includes how employees identify, acquire, understand, and act on

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information. Information architecture in the ecological terms is a guide (e.g. map or model) to the structure and location of information within an organisation.

The Organisational Environment
The corporate information environment is always rooted in the broader organisational environment, see figure 2. This includes the comprehensive business situation, existing technology investment and physical arrangement. Business strategy, business processes, organisational structure/culture and human resources orientation are all part of the so-called business situation. People responsible for technology investments should pay attention to the critical factor of simple access to information. Before making an investment they must also consider what information incentives they will facilitate by investing in information technology. The physical arrangement is critical as we share more information with colleagues in the same physical space.

The External Environment
The corporate information ecology is also affected by external factors, which the corporate organisation is more or less unable to control (see figure 2). Government regulations, a country’s politics or cultural trends, customers requirements and competitors’ activities are some examples. Corporate organisations want and need information about the external environment. This external environment consists of business markets, technology markets and information markets. The ability to acquire and manage information and the types of information they need is heavily affected by business markets. A corporate organisation must constantly know what is available on the technology market. Then it can make sound decisions whether and how the given technology is of value. The information markets provide corporate organisations with information of different kinds. The corporate organisations should always evaluate the business relevance, information quality and authority of information services on the information markets.

Thomas Davenport (with Laurence Prusak) adds, “Information ecology remains a vision, a new way of seeing the world of information use /.../”. But he also believes that information ecology is an essential perspective. Some organisations have begun grappling with their own information environments out of competitive necessity.

New Theory
The outside world affecting corporate organisations consists of many more factors than one can find in traditional theories of the organisation and the outside world. Most of the widespread theories in this sense are based on the classical economic model. This worldview includes only buyers and sellers. But the real world consists of much more. Another drawback of this model is that one cannot uncover any processes over time, as it is static.

Per Frankelius presents a new theory of the organisation and the outside world. This theory is of interest to corporate organisations and specifically to business intelligence and information management workers like information specialists. The new theory is different to the old theories in two ways: the notion of “X factors” and the dynamic time dimension. The “X factors” are very specific and concrete factors. “What one least expects can be the most important.” argues Per Frankelius. He refers to the tragic terrorist attack on September 11th in 2001 as an “X-factor”.

Moreover, Per Frankelius identifies the possible consequences of defective analysis of the outside world. The corporate organisation fails to notice opportunities, fails to adjust its products and services in time (when changes occur that call for such changes) and misses the opportunity to influence an important process in the outside world.

Theory Model of Thesis
The ecological model of Thomas H. Davenport and Laurence Prusak and Per Frankelius’ new theory together provide a theory model of the corporate organisation and the outside world. This theory model is an important reference framework for corporate information management. As such it contains some of the main starting points of my research investigation.

Conceptual Discussion
In this section information related concepts are discussed. They include data, information, knowledge and business intelligence (refined business information). Management of information and knowledge including content management aspects are also found here. Furthermore, it is explained why business intelligence is of benefit to corporate organisations. The intention is to illuminate concepts that many times have

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52 Frankelius, Per, 2001, p. 75.
53 Frankelius, Per, 2001, p. 78.
become “buzzwords” i.e. information management, knowledge management, content management and business intelligence.

Information and Knowledge

The Knowledge Concept and Its Width

“But what knowledge?” says Sven-Eric Liedman. There is constant and non-constant knowledge. A true example of constant knowledge is the flora of Linné from 1745. We can still find most of the Swedish plants in this flora. Root knowledge is a prerequisite of most detailed knowledge. Root knowledge also undergoes changes but it is always there. “Those who claim that knowledge nowadays is a perishable have not reflected on the width of the knowledge concept.” The information we find on the Internet, in the newspapers and glossy magazines, in manuals and on the TV screens is not knowledge. Knowledge is created when, and only when, knowledge is put in a larger context.

As Sven-Eric Liedman continues in his book, he argues that knowledge is closely related to the memory, but also to interest and attention and that knowledge is created when put in a larger context. “True knowledge is required in order to successfully deal with the kind of information that is only perishable”, says Sven-Eric Liedman.

Information and Knowledge in Corporate Organisations

Common Information
Bruce W. McConnell provides solutions on how to provide good and sustainable information in the “commons” (shared areas). I believe that this also applies to corporate commons. Distributed responsibility in the organisation meaning centres of excellence and expertise that make their contributions to the corporate organisation. Each centre or group of people is guided by commonly agreed standards. These

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57 Liedman, Sven-Eric, 2001, p. 15.
58 Liedman, Sven-Eric, 2001, p. 15.
standards are rules concerning dissemination, quality and presentation of information. “No single mind or machine can comprehend the universe of knowledge.”

Business Intelligence (Refined Information)

Business intelligence is the decision-maker’s tool of identifying environmental changes that influence the organisation. It consists of subgroups with different focus e.g. competitive intelligence, market intelligence, technological intelligence and regulatory intelligence. An elaboration of the business intelligence concept and examples of competitive and regulatory intelligence are found below. Letitia Andrewartha, a knowledge management director, describes the difference between competitor intelligence and competitive intelligence.

Competitor Intelligence

The former, competitor intelligence, is a sub-set of competitive intelligence. This activity is “/…/ focusing on products and services, how best stay one - or preferably - two jumps ahead of the competition /…/” says Letitia Andrewartha.\(^62\) Good competitor intelligence is being aware of and prepared for competitors’ actions as well as being capable of quickly and effectively responding to the oppositions’ moves. The downside of competitive intelligence is that it is generally based on reasonably short shelf-life information.

Competitive Intelligence

On the other hand, competitive intelligence requires a broader range of information sources. Trends, which may seem peripheral, may very well be useful when incorporated into the planning process of R&D operations. According to Letitia Andrewartha, taking these trends into account may have a substantial impact on new products and services. “/…/ the value lies in the speed with which one is able to share and reapply that knowledge to create greater client value.”\(^64\) There are four major groupings for competitive intelligence activity:

- Business scanning of the environment. This includes market and industry information and evaluation.
- Competitor intelligence target. It focuses its monitoring on one or more specific companies. A competitor’s performance, market share, intellectual property assets

\(^{62}\) McConnell, Bruce W., 1995, p. 4.
\(^{63}\) Andrewartha, Letitia, 1999, “Using business intelligence to achieve a sustainable competitive advantage”, p. 103.
\(^{64}\) Andrewartha, Letitia, 1999, p. 104.
must be examined. The SWOT analysis is applied to discover a competitor’s Strengths, Weaknesses, Opportunities, and Threats.

- The information yielded from the above two might be quite different. We must synthesise it and merge it with personal experience, collective expertise and so on.
- The value of the above aggregate must be weighed and measured against the objectives of the corporation, which requires forecast based on analysis. Now, we are able to turn informed decisions into implemented actions.  

“The ultimate objective of good competitive intelligence work is the formulation of sound, fact-based, rational decisions for action.” Margaret Gross claims in her feature article that all companies, small or large, need to have some form of competitive intelligence activity.

**Regulatory Intelligence**

Corporate organisations (like everyone else) must comply with existing regulatory conditions such as laws, rules and regulations, and immaterial rights.

**Patents as Intangible assets**

During the last years financial media have in their company assessments given publicity to patents and patents applications. According to consultant Marjolaine Thulin the reason for this is that the focus of mainly tangible assets has changed. Today “intangible assets” are given more and more attention. Immaterial rights such as patent, trademarks and copyright are intangible assets.

For instance methods, processes, products and inventions are patentable items. Patent applications and patents are published once a week. Between 70% and 80% of the described techniques in these publications are never published in any other form.

“Everyone’s Concern”

Patent is no longer a concern only of the patent department. Executive board members and marketing staff understand the importance of patents and patent protection. Investments in research and development must be protected. Therefore, patent plays an important role in the business intelligence. Patent is a way of protecting the corporate technical development from market competitors.

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66 Gross, Margaret, 2000, p 2.

67 Gross, Margaret, 2000, p 2.


69 Thulin, Marjolaine, 1999, p. 128.
Competitive Factor and Patent Protection
By making patent searches it is possible to follow the technical development outside the organisation, see where the competitors are heading and to identify new competitors and the most interesting markets.\textsuperscript{70} In order to avoid unnecessary and costly patent application procedures one must be able to find existing patents. Patent surveillance also promotes the protection of the organisation’s own patents e.g. illegal intrusion.

Knowledge of Employees – Corporate Asset
The special and unique knowledge of each and every employee is the most valuable corporate asset. “People are the organization’s biggest asset as they represent the capacity for innovation, creativity and they have the skills for combining all the other resources in the organisation in the best possible way.” write Steve Ellis and Penny Dick in their book about organisational behaviour.\textsuperscript{71}

Knowledge Loss or Corporate Amnesia
The flexible labour market has both advantages and disadvantages. One major disadvantage is that when people leave a company for different reasons (losing their jobs, moving to new jobs or retirement) they take their unique knowledge with them. Their tacit knowledge remains inside their heads and the organisation is left with a “hole” in its organisational memory (OM). Arnold Kransdorff describes this hole as “corporate amnesia”.\textsuperscript{72} How can this corporate asset or intellectual capital be retained within the company? Also, is the explicit knowledge taken care of? These problems are a challenge to all employees but especially to managers at all levels. “OM is knowledge accrued from experience” continues Arnold Kransdorff.\textsuperscript{73} In Appendix B (Definitions) tacit and explicit knowledge are explained.

Managing Information in Corporate Organisations

Information Management versus Knowledge Management
It should be borne in mind that information management and knowledge management activities have different ways of approaching the employees’ needs of information and knowledge. The former involves managing information in a way that individual

\textsuperscript{70} Thulin, Marjolaine, 1999, p. 127.
\textsuperscript{71} Ellis, Steve, & Dick, Penny, 2000, \textit{Introduction to organizational behaviour}, p. 240.
\textsuperscript{72} Kransdorff, Arnold, 1998, \textit{Corporate amnesia: keeping know-how in the company}, p. xii.
\textsuperscript{73} Kransdorff, Arnold, 1998, p. 2.
employees can find the information they need. In contrast, knowledge management focuses on groups of employees that need to share knowledge. Karen Bishop makes this very clear by stating that:

Knowledge Management is NOT a fancy new term for Information Management. Rather Knowledge Management is a way of managing an entire organisation to ensure that the ‘whole brain’ of the organisation is being used efficiently and effectively.\(^7\)

**Knowledge Management (KM)**

According to Thomas H. Davenport and Laurence Prusak “KM initiatives almost always include some mix of information and knowledge, and it’s not always easy to disentangle the two.”\(^7\) But the majority of the corporate organisations can distinguish between knowledge and data. It is important to stress that data, information and knowledge are not interchangeable concepts.\(^7\) Computers can help to add value to data, which leads to information. However, only humans can help with context.

Knowledge is neither data nor information, though it is related to both, and the differences between these terms are often a matter of degree. Often firms don’t understand what they need until they invest heavily in a system that fails to provide it.\(^7\)

Now the focus on human interaction has replaced the fixation of data.\(^7\) Examples are formation of social groups, electronic communication across the globe and face-to-face socialisation. Knowledge is created in interactions between humans. Technology alone does not hold all the answers.

Knowledge itself can not be managed. Only the processes and systems through which we share knowledge can.\(^7\) Organisational and cultural changes must also be made. The business strategy, the work processes, the corporate culture, the behaviours and the physical business environment should be permeated by knowledge.


\(^7\) Davenport, Thomas H., & Prusak, Laurence, 2000, p. viii.

Content Management

Content management systems came about because of the need to manage content on large sites tells Erik Vlietinck. This includes Internet as well as intranet sites. Perhaps the most important feature of content management is separation of content and style. The same content can be used for multiple purposes, over and over again, and formatted for different output media. Content management applications also allow for the use of templates. In turn this means that e.g. a corporate organisation’s intranet pages are not inconsistent in layout and design. The feature of a content management system that makes it different from a traditional document system is personalisation. Examples of personalisation are when an individual user and/or a group of people can customise the layout and content of the intranet as well as keep shortcuts and links to frequently used operations and accessed sites.

Corporate Organisations’ Use of Business Intelligence

Business Intelligence Related to Organisational Learning

Robyn Stockand believes that competitive or business intelligence is related to organisational learning. Change is constant in our world. “…CI enables the organisation to lay the foundation for change by learning about its external and internal environment.” CI is short for Competitive Intelligence. The complex, competitive and continuously changing world forces corporate organisations to be aware of what their survival depends on and what they must do in order to survive and succeed. This means to study and learn about the current environment and try to anticipate the environment of tomorrow. This ongoing learning process enables an organisation to successfully and timely adapt itself to the changes of the environment that it heavily depends upon.

Ulla Virraniemi states that the goal of both business intelligence and learning organisation is to create new knowledge in order to improve the profitability of the organisation. Moreover, she points out that information specialists play key roles in both approaches.

84 Stockand, Robyn, 1999, p. 2.
Learning Organisation versus Organisational Learning

Steve Ellis and Penny Dick argue that there is a clear difference between the learning-organisation concept and organisational learning. The former is an organisation that possesses a culture, structure and strategy that allows learning to take place. In the latter case, organisational learning emphasises the organisation more than the learning. “Learning in this context is conducted for a predetermined business purpose.”

“To be a learning organisation, a company has to be skilled at systematic problem solving, experimenting with new approaches, and transferring knowledge quickly and efficiently through the organisation” says Arnold Krandsorff.

Ellis, Steve, & Dick, Penny, 2000, p. 209.
Ellis, Steve, & Dick, Penny, 2000, p. 209.
Method

So far the reader has been introduced to my thesis and the aims and questions at issue of my research work. I have also provided a research overview and a theory and conceptual discussion related to the area of corporate information management.

The following part starts with a method theory section. Secondly, my methods and objectives of methods as well as my arguments for choosing these very methods are presented. Thirdly, I recapitulate how and where I have gathered my sources. Detailed descriptions of the applied methods are found in the “Investigation” and “Analysis” chapters.

Method Theory
A method is a way of solving problems or questions at issue and to gain knowledge. Careful consideration of the aims and main focus of the research together with other factors must influence the choice of method. Examples of other factors are time, costs and degree of research experience of the researcher. In brief, it must be practically viable.

There is no “ideal” research method. Both qualitative and quantitative methods have their advantages and disadvantages. A qualitative method is aimed to give a deeper understanding of the investigated problems and to describe these in a larger context, a holistic perspective. The researcher is close to the source where the information comes from. In contrast, generalisation can be made and based on results in quantitative methods. Figures and statistics are important in these kinds of methods.

Method Background
My decision to use qualitative research methods is influenced by Mariam Ginman’s view of when this method is applicable. A summary of my interpretation of what she has written on qualitative research is given below.
Qualitative Methods

Qualitative methods can be subjective or objective. The observation technique is an example of an objective method while different kinds of interviews are subjective methods. Both methods have their advantages and disadvantages.

The choice between the two depends on what you want to investigate. When consequences and characteristics of a phenomenon are of main interest observation is the preferred choice. But if one wants to investigate reasons and motives of a phenomenon the interview technique is a better choice.

The subjective researcher does not observe its population of interest from a distance. Rather, he or she mixes with the people of this particular population and asks them questions like “Why are you doing this?”, “How do you feel?” and “What is your opinion?”.

Problems of Interviews (Qualitative Methods)

There is a big risk of being too journalistic if the interview questions are not structured or at least semi-structured. The questions should be well prepared and well formulated. “The qualitative method can thus be fatal if the collected data are inappropriate or they are badly interpreted.” Referral to only typical and good examples must not be made. Both typical and atypical statements must be reported, noticed and explained.

The Interpretation of Collected Data in Qualitative Research

The interpretation of the gathered material must be strongly based on theory. If the researcher does not base his work on theory the readers will use their everyday theory. The reason is that we always see things through some theoretical framework. “These pictures we see and stories we hear must in scientific work be analyzed and interpreted in order to create new knowledge about our reality.” According to Mariam Ginman this means that a holistic view is very important in qualitative research. The research findings must be analysed with respect to background facts and theories. This background research is especially valuable to anyone lacking its own knowledge of the area in question. Many times a combination of methods contributes to this holistic overview.

89 Ginman, Mariam, 1990, “In-depth interviewing for holistic analysis of information needs in corporations and the mass media”, p. 35.
90 Ginman, Mariam, 1990, p. 36.
The way the interpretation of the gathered material is done affects the research validity. Validity is defined as “the soundness of the inferences” made from the results of a data-gathering process. Put in simple words, “the reliability of the conclusions”.

Characteristics of Applied Qualitative Methods
This background section derives from an online handbook of the National Science Foundation (NSF).92

Literature Studies
The usefulness of existing sources varies depending on whether they are accessible and accurate. Information from documents can be used e.g. to generate interview questions and for making comparisons.

Interview Studies
Interviews allow the interviewer to capture the perspectives of informants. The use of interviews as a data collection method begins with the assumption that the participants’ perspectives are meaningful and able to be made explicit. It also assumes that the participants’ perspectives affect the success of the research investigation. There are two main types of interviews: structured interview, in which a questionnaire is administered; and in-depth interviews, in which the interviewer does not follow a rigid form. In the former the emphasis is on obtaining answers to carefully phrased questions. Unlike in-depth interview informants the respondents are not given freedom to influence the coverage of the topics during the interview. Interviewers must try to deviate only minimally from the question wording to ensure uniformity of interview administration. The in-depth interviews need well-qualified, highly trained interviewers and its flexibility can result in inconsistencies across interviews.

Methods
In order to obtain my research data I have chosen to use qualitative methods. In achieving the aims of this thesis I have gathered data by performing “theoretical” literature studies and practical studies, namely structured interviews. These studies are described below. These results of the studies were supposed to answer my questions at issue and also test the truth and/or falseness of my hypotheses, see “Aims and

Questions at Issue” above. Hopefully, in turn this would enable me to fulfil my aims of this thesis.

Literature Studies

Objectives
Literature studies were performed for a number of reasons. Firstly, to provide a basis for my understanding of issues and aspects of corporate information management. This is reflected in “Research Overview”. Secondly, an additional objective was to try to find research studies that confirm my hypotheses (see “Aims and Questions at Issue”). The results are presented in the literature study parts of “Investigation” and “Analysis”. The third reason was to be able to generate interview questions that hopefully, in turn, would result in rewarding answers. The interview questions are found in the “Investigation” chapter below. A fourth reason was to be able to present the significance of entrepreneurial spirit and attitude of information specialists in corporate organisations. In addition, the literature studies serve as a complement to the interviews. Unsatisfactory or incomplete interview results may be partly compensated by other researchers’ material.

Interview Studies

Objectives
Primarily, I wanted to get a picture of corporate information management. My interest was to assess what the roles and services of today’s corporate information specialists are in the area of corporate information management. I was hoping to be able to share some of the opinions, beliefs, and concerns of corporate information specialists or librarians. They are my population of special interest. Therefore, a study of qualitative structured interviews seemed to be a relevant approach. By asking questions within the area of my thesis I was hoping to get relevant and informative answers that would contribute to fulfilling my aims of this thesis. Five interviews were conducted.

Interviews and Informants

- My first interview was a “pilot” interview with information specialist Lise-Lotte Lindskog, Business Intelligence at Saab Systems & Electronics in Järfälla, November 14th 2001.
- Secondly, I had a telephone interview with manager Technology Intelligence Margareta Nelke at Tetra Pak Research & Development AB in Lund (Sweden), 10th December 2001.
The third interview was with special librarian Elisabeth Malmberg at Library & documentation of the National Chemicals Inspectorate in Solna (Sweden), 14th January 2002 (recorded interview).

Interviewee no. 4 was corporate librarian Gun-Britt Lindberg at AB Wilhelm Becker's library in Stockholm (Sweden), 18th January 2002 (recorded interview).

The fifth and final interview was with information architect Johanna Nilsson, Process & Application Consulting at Ericsson in Västberga, Stockholm (Sweden), 24th January 2002 (recorded interview).

Changes in Interview Questions
Apart from minor changes the interview questions of the first “pilot” interview seemed to be relevant. These changes together with two questions that were added as from interview no. 2 respectively no. 3 are shown below:

• Why do you believe that authors of Knowledge Management (KM), Information Management (IM), and Content Management (CM) literature, many times seem to have forgotten or neglect the information professionals, such as information specialists or librarians? In interview no. 2, 3, 4 and 5, the question above replaced the following question of interview 1:
  Knowledge Management (KM), Information Management (IM), and Corporate Communications: do they relate to corporate library or information service centre services? If so, how? The Information Department deals with internal information, also known as Corporate Communications.

• How would you describe an entrepreneurial information specialist or librarian, given that an entrepreneur is a person who is skilled in communication, salesmanship and communication? In interview no. 2, 3, 4 and 5, the question above replaced the following question of interview 1:
  How would you describe an entrepreneurial information specialist or librarian?

• The changes that have affected information centres or libraries and information specialists or librarians, do you see them as paradigm shifts (new world-view) or merely as a question of medium changes with unchanged contents? This question was not included in interview no. 1.

• Does the parent organisation have an intranet? b) Is there an intranet website that contains links to both internal and external information? c) Does the information service centre maintain the information content of the intranet and/or the presumed website of links, mentioned in b)? This question was not included in interview no. 1 and 2.
To summarise, the interview questions of the five interviews were more or less identical. Both my literature search findings in “Research Overview” and my personal reflections had great impact on the interview questions. The interview questions are found in the “Investigation” chapter, see further on.

**Interpretation of Interview Answers**
For confidentiality reasons the informants’ answers to my interview questions are not presented in direct words. Rather, they are embedded in the text. I have compiled the answers of each and every interview and presented it to the informant in question. Every compilation has been proof-read by the informant in question. This enhances the validity (see definition above) as it counteracts possible and unavoidable discrepancies between the actual answers and my interpretations of the answers. It also increases the validity of answers given in Swedish that have been translated into English.

**Representative Interviews**
I believe that the limited number of five interviews yield a great deal of research material. Due to a limited amount of time to be spent on the thesis I find this interview material together with the literature studies sufficient. The five informants’ views should be seen as a sample of a larger population of information professionals dealing with corporate information management (four out of five informants) and government agency information management in various ways. They work as information professionals in different parent organisations in Sweden: four commercial corporate organisations and one supervisory government agency, the National Chemicals Inspectorate. All informants have some kind of professional training in the library and information area. Also, they all have information management experiences.

I believe that the National Chemicals Inspectorate as a supervisory government agency exemplifies an organisation that can provide the above mentioned public and organisations with “regulatory intelligence”. From a corporate organisation’s point of view it belongs to the “external environment” of the ecological model for information management, see “Theory and Conceptual Discussion”. The interview at the Inspectorate was a chance for me to interview a special librarian who, unlike the other four informants, does not work in a corporate organisation. Instead, this informant sometimes gets in direct or indirect contact with corporate organisations.

**Expectations of Interviews**
I was quite confident that these informants’ views and opinions would be an essential contribution to my investigations. Hopefully, the outcomes of the interviews were useful and interesting responses to my questions. Perhaps some answers might even be
surprising. In addition, I was looking forward to acquiring some experience in performing research interviews.

Recorded versus Non-Recorded Interviews
As an interviewer I wanted to compare two slightly different experiences, non-recorded versus recorded interviews. Interview no. 1 and 2, the latter a telephone interview, are non-recorded interviews whereas interview no. 3, 4 and 5 are recorded interviews. The recordings were done with the aid of a cassette tape-recorder borrowed from Uppsala University. The intention was to test whether I felt as comfortable and unhindered in the non-recorded interviews as in the recorded interviews. My theory was that the recording procedure might distract rather inexperienced interviewers like myself. Possibly because of fear that the ongoing interview was not being properly recorded.

Introduction to Informants and Their Workplaces
The aim of the introductory section of each and every one of the five interviews in the “Investigation” chapter, see further on, is to get a picture of the informants’ information management roles and services in their specific setting.

Study Visits
Except for the telephone interview, interview no. 2, I was able to combine my interviews with study visits at the workplaces of the informants. This was an opportunity for me to see the working environments of four different information professionals.

Sources
Material was sought in different sources. I have searched the catalogues of Sweden’s National Library (LIBRIS), Uppsala University Library (DISA) and Swedish Royal Institute of Technology Library (Kungliga tekniska högskolans bibliotek). I used Google and AskJeeves search machines to search on the Internet. Keywords that were used include e.g. corporate library, librarian, information specialist, knowledge, knowledge management, and organisational learning. During my thesis work I constantly browsed library and information science related sites such as the home pages of SLA, TLS, Aslib, BIBLIST and Free Pint. Listening to seminars and participating in a workshop have also contributed to my thesis, see Appendix D.

My former colleague from last summer, Inga George, gave me some valuable advice concerning whom to contact and interview at Swedish corporate libraries and
information service centres. This resulted in interviews with information specialist Lise-Lotte Lindskog at Business Intelligence, Saab Systems & Electronics and Margareta Nelke, manager Technology Intelligence, Tetra Pak Research & Development AB.

The TLS autumn conference 2001 proved to be an excellent place to get in contact with experienced information specialists, see Appendix D for extracts of this conference. I made acquaintance with two more interviewees: special librarian Elisabeth Malmberg, Library & documentation at the National Chemicals Inspectorate and corporate librarian Gun-Britt Lindberg at AB Wilhelm Becker's Library.

By more or less mere accident I read an article about my last informant, Johanna Nilsson, and her work as an information architect at Ericsson in the *DIK-forum* magazine.\(^93\)

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93 Almerud, Peter, 2000, “Bibliotekarie i webbranschen”. p. 4-5.
Investigation

It should be noted that this chapter only includes parts of my investigation. The main parts of the investigation and its findings are found in the preceding “Analysis” chapter.

In order to enable the reader to follow my research work I here provide the questions at issue (italic) and subsequent hypotheses (bold, numbered) as well as the interview questions (indicated by dots). They are all divided into the three segments that were mentioned earlier in the “Theory and Questions at Issue” chapter. Five informants were asked the interview questions during my interview studies. The informants are working as information professionals (information specialist, intelligence manager, special librarian, corporate librarian, and information architect) in different parent organisations in Sweden: four commercial corporate organisations and one supervisory government agency.

Return on Information

Questions at Issue

Can it be argued that spending money on information is worthwhile and essential to the success of corporate organisations?

What trustworthy arguments make the existence of corporate information specialists legitimate and indisputable in today’s information society?

Are there any studies that prove a positive return on information by hiring in-house information specialists?

Hypotheses

1. Corporate organisations’ investments in information and information management are cost-effective and perhaps even money saving.

2. Corporate organisations can profit from hiring in-house information specialists.
Interview Questions

• What important facts should be presented to executives and decision-makers, in order to get their support (mental and financial) of the information specialists as information management key persons?
• Do you make financial calculations or evaluations of information services? Is this used for budget negotiations? How is this done? ROI (Return on Investment), BSC (Balanced Scorecard) or others? Is this important?
• What is your opinion on partly or totally outsourcing libraries, pros and cons?

Information Age, Corporate Information Management and Information Specialists

Questions at Issue

How have information and information technology, globalisation and competition influenced corporate information management including the work of corporate information specialists?

How well do information specialists know their mother organisation's business, goals and challenges?

Does the work of information specialists comply with these?

Hypotheses

3. Information is a competitive asset.

4. In order to be able to deliver what the customer needs (i.e. relevant, complete, accurate, timely and comprehensive information in a preferred way), information specialists must be familiar with the parent organisation’s progress and activities.

5. Successful information technology solutions (e.g. intranets, portals) depend heavily on the contribution of information architects like corporate information specialists.

Interview Questions

• Why do you believe that authors of Knowledge Management (KM), Information Management (IM), and Content Management (CM) literature, many times seem to have forgotten or neglect the information professionals, such as information specialists or librarians?
• Do you find corporate information services and “traditional” library tasks to be similar? “Traditional” library tasks in this context are to realise the need for
information, know where and how to find relevant data and information, evaluate and present the information.

• The changes that have affected information centres or libraries and information specialists or librarians, do you see them as paradigm shifts (a new world-view) or merely as a question of medium changes with unchanged contents?

• Why do you think some corporate libraries have been closed down?

• How is the information sharing within the parent organisation?

• What about retaining knowledge within the parent organisation?

• Where on the organisational chart is the corporate information service centre to be found? Which department and person do you report to?

• What are the goals and purposes of the corporate information service centre? Are they put together in a document, e.g. Strategy plan? Revisions annually?

• How well do you know and understand your organisation’s business area, competitors, goals and purposes, ongoing projects? Is this sufficient?

• a) Does the parent organisation have an intranet? b) Is there an intranet website that contains links to both internal and external information? c) Does the information service centre maintain the information content of the intranet and/or the presumed website of links, mentioned in b)?

Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists

Questions at Issue

In what ways do information specialists and their services contribute to achieving the corporate business goals?

Regarding information management, what are the required competencies, collaborations and promoting activities of corporate information specialists or librarians?

Hypotheses

6. The corporate information specialists or librarians of today have both “traditional” and new roles.

7. Today’s corporate information specialists must be skilled marketers, innovators and collaborators.

Interview Questions

• What are typical everyday services at your information service centre?
• At your information service centre, what are the most frequently wanted services? What are the most appreciated ones?
• At the information service centre, do you have internal (your own organisation) and external customers? Who are they?
• How do you view the corporate employees? Do you see them as customers, as colleagues or both?
• How do you think other departments and their staff look upon the corporate information service centre and its services?
• Do you investigate how the employees value the corporate information service centre, its services and its staff?
• What is the best and the worst part of being a corporate information specialist or librarian?
• How would you describe an entrepreneurial information specialist or librarian, given that an entrepreneur is a person who is skilled in communication, salesmanship and product development?
• Do you collaborate with other departments of the organisation? Which are those departments? What kind of projects? Experiences?
• Are you networking with other corporate libraries or information service centres? Which ones and in what ways?

The comprehensive question at issue of this thesis:

**What are the key roles of today’s information specialists in corporate information management and success?**

**Literature Studies**

Literature sources in the “Return of Information” section of the next “Analysis” chapter are concerned with cost versus benefit analyses of information and hiring in-house information specialists. In section number two (“Information Age, Corporate Information Management and Information Specialists”) of the “Analysis” chapter a definition of useful information and a comparison between information management and “traditional” library tasks are provided. Finally, the third section called “Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists” gives literature study examples of information specialist’s key roles, skills and competencies in corporate information management.
Interview Studies
During the first recorded interview, interview no. 3, I was happy to experience that the tape-recorder did not disturb me too much. I was comfortable to perform my recorded interviews (interview no. 3, 4 and 5).

Reports from my five interviews are found below and include information about the informant and the informants' workplace. These introductory paragraphs should not be seen as a complete review of the five informants’ background. Further interview results are found in the “Analysis” chapter.

Interview no. 1: Information Specialist Lise-Lotte Lindskog, Business Intelligence at Saab Systems & Electronics in Järfälla (Sweden), 14th November 2001 (non-recorded interview).94

Introduction
Saab Systems & Electronics (SSE) is a business area of the Saab Group and it comprises Saab's competencies in defence electronics. The history of Saab Systems & Electronics’ Information service centre in Järfälla goes back to 1968 when the company, then part of Philips, moved to its present premises. The corporate library changed its name to Information Services in the beginning of the 1980s. It changed its name again a couple of years ago to Information Resource Centre (IRC) and is now also known as Business Intelligence (BI)/IRC.

The Information Service is situated in the entrance hall of the main building. It consists of an information desk and meeting facilities and holds a few reference works e.g. encyclopaedias and dictionaries. A room is provided nearby to house periodicals and readers.

Two corporate information specialists now run the corporate information centre, namely Lise-Lotte Lindskog and Mona Nordström. They have worked there for 27 and 20 years respectively. My correspondence with Lise-Lotte Lindskog was by email. We agreed on a date for a study visit as well as an interview. I visited Lise-Lotte Lindskog for four and a half-hours including interview and lunch (Mona Nordström joined us).

94 Interview notes and other information. Answers to interview questions are confidential. Interview & study visit no. 1, dated 2001-11-14.
Interview
This pilot interview was, except for lunch, held in the relaxed and quiet premises of Business Intelligence. The only minor interruption was one business phone call for Lise-Lotte Lindskog. A non-recorded interview was agreed upon. Due to lunch break and a minor interruption it stretched over a two hours period.

My intention with this interview was to try out my previously prepared questions (not known beforehand by the informant) that I had put together. My earlier reading on corporate information management influenced the interview questions. I decided that this “first”, non-recorded and guiding interview was a useful experience to me. Later on I was able to compare this non-recorded interview situation with recorded interviews. Some of the questions required follow-up questions or comments in English and/or in Swedish. My questions were all written and asked in English. Lise-Lotte Lindskog’s responses to these questions were both in English and Swedish.

Intranet
In 1994, the corporate intranet was created. It was initiated by Business Intelligence. Lise-Lotte Lindskog is responsible for the intranet. In practice this means that all intranet publications must be authorised by her. Lise-Lotte Lindskog is also chairman of the “web council”. The web council makes decisions about the content of the intranet and it consists of employees representing various departments. I was given the opportunity to get a glimpse of the Business Intelligence’s intranet home page.

Interview no. 2: Manager Technology Intelligence Margareta Nelke at Tetra Pak Research & Development AB in Lund (Sweden), 10th December 2001 (telephone interview).

Introduction
In 1983, Margareta Nelke was employed at Alfa Laval to build up their corporate information service centre. Six years later, in 1989, she was employed at Tetra Pak to build up Tetra Pak’s corporate library or information service centre. Tetra Pak bought Alfa-Laval in 1991. Perhaps Tetra Pak is most well known for its packaging material and packaging products.

Technology Intelligence has developed from a “traditional” corporate library to an intelligence function, working together with Business Intelligence to drive and support external information scouting and intelligence creation in Tetra Pak. Technology

95 Interview notes and other information. Answers to interview questions are confidential. Interview no. 2, dated 2001-12-10.
Intelligence activities are focused on co-ordinating and supporting Tetra Pak’s technical intelligence, analyses and knowledge sharing. Four information specialists man the Technology Intelligence unit. One of these four employees is Margareta Nelke, whom I have interviewed.

My correspondence with Margareta Nelke was by email. We agreed on a date for a telephone interview. Prior to this telephone interview, I had read one article and one report by Margareta Nelke. The article is about the “Innovation Process” at Tetra Pak. The report is called Knowledge management in Swedish corporations: the value of information and information services. Also before my interview I read an article about the new order system of journals at Tetra Pak, named “Document supply from British Library through BTJ”.

Interview
This was a telephone interview of about one hour. I was in my home when I interviewed Margareta Nelke on the phone. She was in her home in Skåne in the southern part of Sweden. During the interview I asked Margareta Nelke my previously prepared questions (not known beforehand by the informant). With a few exceptions both Margareta Nelke and I spoke English during the interview.

Intranet
Tetra Pak’s intranet was created in 1996. As this was a telephone interview there was obviously no possibility for me to have a look at Tetra Pak’s intranet.

Interview no. 3: Special Librarian Elisabeth Malmberg, Library & documentation at the National Chemicals Inspectorate in Solna (Sweden), 14th January 2002 (recorded interview).

Introduction
The National Chemicals Inspectorate, province of the Ministry of the Environment, is responsible for chemical control in Sweden. It interacts with various organisations such

99 Recorded interview (cassette tape) and interview notes as well as other information. Answers to interview questions are confidential. Interview & study visit no. 3, dated 2002-01-14.
as manufacturers, importers, vendors and users dealing with chemical compounds e.g. weed control and pesticides. Also, the general public can turn to the National Chemicals Inspectorate for advice and information within the area of chemical control.

In 1986, the National Chemicals Inspectorate was established. During that time a library section was created. The library section of the government agency is now called Library & documentation.

The premises of the government agency library consist of six rooms. There are two workrooms, a computer and microfiche reader room, one room house a database consultant (also containing a scanner), one room of journals, reports and work space, and, finally, one room filled with books and work space.

The library staff consists of two full-time special librarians and one part-time administrator together with a part-time database consultant. Elisabeth Malmberg, one of the two librarians, is the one I interviewed. She started her career as a part time secretary and part-time librarian in 1975 at the Institute of Surface Chemistry. As from 1982 she was working full-time as a librarian. In 1998 she began to work at the library section of the National Chemicals Inspectorate.

**Interview**

My correspondence with Elisabeth Malmberg was by email and telephone. We agreed on a date for a study visit including a tape-recorded interview. This was my first tape-recorded interview. At first I was a bit distracted by the tape recorder but quite soon I did not think about it.

The total interview time was about one hour. The interview took place in the workroom (closed door) of Elisabeth Malmberg. During the interview I asked Elisabeth Malmberg my previously prepared interview questions (not known beforehand by the informant). With a few exceptions both Elisabeth Malmberg and I spoke English during the recorded interview. As I interviewed a special librarian working in a government agency library the term “corporate” had to be complemented and/or replaced in the interview questions. Special or government agency library was used instead of “corporate information service centre”.

**Intranet**

Elisabeth Malmberg gave me an introduction to the Inspectorate’s intranet.

**Regulatory Intelligence**

The National Chemicals Inspectorate manages information concerning regulatory and legal aspects of chemical control i.e. EC directives, regulations, laws and so on.
Elisabeth Malmberg agrees with me that this kind of information can be thought of as “regulatory intelligence”.

**Interview no. 4: Corporate Librarian Gun-Britt Lindberg, AB Wilhelm Becker’s Library in Stockholm (Sweden), 18th January 2002 (recorded interview).**

*Introduction*

In 1865, AB Wilhelm Becker was founded. This is the beginning of what today is the Becker Group. The Becker Group is a manufacturer of products in the field of paints, coatings and stains both for industrial use and the private consumer.

The corporate library of AB Wilhelm Becker was established in 1943. Today the library consists of one workroom, an archive of historical information about the corporate organisation and a larger room. Books and journals in hardcover of interest to the Becker Group are kept in the larger room. It also contains a computer for library users and work space.

The number of people working in the library has changed over the years. At the moment corporate librarian Gun-Britt Lindberg runs this library. She is my fourth informant. Gun-Britt Lindberg has worked at this corporate library since 1964. In 1961 she was both working part-time at Stockholm School of Economics Library and studying at the National Library of Sweden to become a librarian’s assistant.

*Interview*

My correspondence with Gun-Britt Lindberg was by email and telephone. We agreed on a date for a study visit including a recorded interview. The interview was done in a quiet area of the larger library room. Apart from a quick question from a colleague there were no disturbances during our interview. The total interview time was about one hour. During the interview I asked Gun-Britt Lindberg my previously prepared interview questions (not known beforehand by the informant). Gun-Britt Lindberg answered mainly in Swedish to my interview questions in English. I helped her to translate her answers into English during the recorded interview.

*Intranet*

Gun-Britt Lindberg gave me an introduction to the Becker Group’s intranet.

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100 Recorded interview (cassette tape) and interview notes as well as other information. Answers to interview questions are confidential. Interview & study visit no. 4, dated 2002-01-18.
Interview no. 5: Information Architect Johanna Nilsson, Internet Support Group, Process & Application Consulting (PAC) at Ericsson in Västberga, Stockholm (Sweden), 24th January 2002 (recorded interview).\textsuperscript{101}

\textit{Introduction}
Corporate Common Units is a common world wide support function of the Ericsson Group. Process and Application Consulting (PAC) is a section of internal consultants within Corporate Common Units of Ericsson. One group of PAC is called Internet Support Group and consists of about 20 people. This Internet Support Group was established in year 2000.

My last informant, Johanna Nilsson, has been working at PAC during the last 3 years. At the moment she works as an information architect in the Internet Support Group. She is responsible for the functionality aspects of the search engine of the Ericsson corporate web site (http://www.ericsson.com). Before working at Ericsson Johanna Nilsson was employed one year at NetLab in Lund (Sweden). In 1998, she completed a master’s degree in library and information science at Lund University (Sweden).

\textit{Interview}
My correspondence with Johanna Nilsson was by email. We agreed on a date for a study visit including a recorded interview. The total interview time was about one hour. The interview took place in a workroom (closed door). During the interview I asked Johanna Nilsson my previously prepared interview questions (not known beforehand by the informant). With a few exceptions both Johanna Nilsson and I spoke English during the recorded interview. Internet Support Group of PAC or just PAC was used instead of “corporate information service centre” in the interview.

\textit{Intranet}
Johanna Nilsson gave me an introduction to the Ericsson Group’s intranet.

\textsuperscript{101} Recorded interview (cassette tape) and interview notes as well as other information. Answers to interview questions are confidential. Interview & study visit no. 5, dated 2002-01-24.
Analysis

In this chapter I will present results that affirm my seven hypotheses, put forward in “Aims and Questions at Issue”, as well as provide answers and comments to the questions at issue. The results derive from both my literature studies as well as my interviews, as indicated. In order to keep this thesis in a manageable format the presentation of the interview results will address most but not all of the interview questions.

Return on Information

Literature Studies

In the section below I provide answers to three of the questions at issue:

Can it be argued that spending money on information is worthwhile and essential to the success of corporate organisations?

What trustworthy arguments make the existence of corporate information specialists legitimate and indisputable in today’s information society?

Are there any studies that prove a positive return on information by hiring in-house information specialists?

The two following real world stories support that Corporate organisations’ investments in information and information management are cost-effective and perhaps even money saving, Hypothesis no. 1.

Information and information management have made a remarkable difference to the pharmaceutical corporation Pharmacia. Per Frankelius presents a Pharmacia study that “/…/ shows how information management was instrumental to business developments that led to a scientific breakthrough, billions of dollars in income and thousands of treated patients.”

Stephen H. Miller, editor of Competitive intelligence magazine, demonstrates a second example. A 1995 study by academics at the University of North Texas “/…/ found empirical evidence to show that companies that emphasize CI on average

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102 Frankelius, Per, 2001, p. 70.
outperformed other companies in three important financial measures: sales, market share, and earnings per share.”

CI is an abbreviation for Competitive Intelligence.

Decision-makers of corporate organisations must be informed about the negative aspects of outsourcing and closing down in-house information service centres and that corporate organisations can profit from hiring in-house information specialists, Hypothesis no. 2.

Doris Small Helfer gives examples of drawbacks: “Outsourced employees are typically not invited to participate in teams and can therefore not help with company and other sensitive information”

She adds that they are neither allowed nor trusted with sensitive company information. Another drawback is that contract employees have no loyalty and commitment to the corporate organisation according to Doris Small Helfer.

This does not allow for the establishment of a long-term corporate memory. These drawbacks represent in-direct money loss of outsourcing.

SLA refers to a study where the value of information provided by special librarians was demonstrated in a study at five large corporations. Four out of five of the surveyed executives said, “/…/ information provided by their special librarians helped them decide upon a course of action.”

In the same study three-quarters of the surveyed executives claimed that the “information had helped them avoid making a poor business decision.”

The two following sources confirm, in more direct monetary terms, that it can be more expensive to provide information from sources other than the in-house information service centre. Teresa McCausland refers to Griffiths and King’s cost/benefit analysis in 1993.

The analysis shows that it can be up to 2.3 times more expensive to provide information from outside sources than from in-house. In 1999, executive director of SLA David Bender wrote about a recent (in 1999) study conducted by SLA, which reports that companies without librarians are spending up to nearly 3 times more money per year per professional to access information, compared with those that employ librarians.


105 Small Helfer, Doris, 1998 p. 3.


According to Effy Oz, there are five important characteristics of *useful* information: relevant, complete, accurate, current and economical. The four first characteristics are not further commented here as they are mentioned later on, see page 59. The economical and fifth characteristic also needs attention. Today’s demands for cost-effectiveness and accountability forces corporate organisations to consider the economical aspects too. “…/ the cost of obtaining information must be considered as one cost element in any decision.”, says Effy Oz.

**Interview Studies**

The corporate information specialists must sell and market their information services and themselves. This means to present real cases of successful information services and to enlighten the customer about the usefulness, range and diversity of information that their dedicated information specialists provide and more importantly what the value and benefits are to the individual customer and the parent organisation. The indirect and direct positive outcomes and gains of earlier cases must be “common knowledge” among employees at all levels in the organisational hierarchy.

Whatever the employees’ information needs may be they should be confident that these needs are efficiently and effectively met by trained and skilled information specialists. Keeping this in mind the employees can spend their own time to do the work they really need to do and perhaps do best in their professional role. This is also both time and money saving to the corporate organisation. This supports **Corporate organisations can profit from hiring in-house information specialists, Hypothesis no. 2.**

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110 Oz, Effy, 2000, p. 10.
Information Age, Corporate Information Management and Information Specialists

In this section I will answer these questions at issue, namely:

*How have information and information technology, globalisation and competition influenced corporate information management including the work of corporate information specialists?*

*How well do information specialists know their mother organisation’s business, goals and challenges?*

*Does the work of information specialists comply with these?*

**Literature Studies**

Chun Wei Choo presents that

> Information management is a cycle of processes that support the organization’s learning activities: identifying information needs, acquiring information, organizing and storing information, developing information products and services, distributing information, and using information.\(^{111}\)

It seems to me that corporate information management is very similar to “traditional” library tasks: to realise the need for information, know where and how to find relevant data and information, evaluate and present the information. This is also supported by my interview study results, shown below.

Roslyn Donald argues that librarians possess the skills that promote a useful, user-friendly and up-to-date intranet.\(^{112}\) This is further elaborated below, see “Intranet Development Manager”. I find it reasonable to believe that my hypothesis no. 5 corresponds with Roslyn Donald’s belief. **Hypothesis no. 5: Successful information technology solutions (e.g. intranets, portals) heavily depend on the contribution of information architects like corporate information specialists.**

**Interview Studies**

Terms like Knowledge Management, Information Management and Content Management started out with IT-technicians. Many IT-technicians may not be aware of the fact that librarians or information specialists have “always” managed information,

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and still are. Today, managing information in book form is one out of numerous information management activities that they are busy with.

Even though the special librarians or corporate information specialists serve specific groups of people with specific information needs (e.g. various departments of a global corporate organisation) the way in which they work has similarities with “traditional” library tasks. Compare with results of literature study above.

Executive management members are sometimes unaware or unsure of the information specialists’ skills and how they actively contribute to corporate success. Traditionally, many librarians have been low profile and anonymous colleagues to the rest of the employees. The lack of marketing their services and themselves has contributed to management’s neglect of information specialists or librarians as natural team members in information management activities. However, this has changed a lot and is still changing.

My proposed **Hypothesis no. 3: Information is a competitive asset**, is supported by the interview studies. Information is power, competitive advantage and the base of sound business decision-making. Therefore, keeping sensitive information in-house is both necessary and wise. **In-house** information specialists must perform business intelligence or environmental scanning activities. They know their organisation, have access to all in-house information they may need and are loyal to their parent organisation. The “classified as secret information” is not a barrier to their excellence at work. In some situations outsourcing of “non-sensitive” information services may be an option. Possible examples are purchase of books and journals.

The informants state that here are numerous reasons for why corporate libraries or information service centres have been closed down. Information specialists have been incapable of adjusting to constant change and to be in the frontline. If they cannot interpret and try to predict where their parent organisation is heading and consequently what is required of them and their services they will fail to prove their value. Further, instead of being visible and presenting the information themselves to their customers the invisible information specialists fail to make the business leaders aware of who provides the information they and the rest of the organisation need and use every day. Opportunities to demonstrate value and market are lost if the information specialists do not provide leadership in corporate information management and information supply. Many times people forget or neglect that information management is much more than technology. It is also about information science and human aspects. Information specialists have a great deal of competencies in these two areas. In order to make information work processes and tools function information specialists and their competencies must be made use of and appreciated by others. People perform more searches themselves as they have desktop access to information sources on the
Internet and intranet. They may not always rely on the information service centre. Another reason is that it may be hard to see direct return on investments in information. Many times a correlation between information and revenue may be missing. A careless and ignorant business leader who believes downsizing of information services will save money and make him/her a popular leader, no matter how good the information specialists may be, is a major threat to the entire organisation.

The corporate organisation’s goals, objectives, possibilities, threats, products, customers and markets decide what kinds of information that is relevant to the corporate organisation in question. Partial and/or incorrect information may be worse than no information and that is why complete and accurate information is required.

Timely information means in time, or preferably even before. As reported earlier, Effy Oz mentions another time-related aspect of information, currency. Current information is valid and up to date information. Moreover, the customer must be able to understand the information and readily use the received information i.e. comprehensive information is a must. This all ends in my Hypothesis no. 4: In order to be able to deliver what the customer needs (i.e. relevant, complete, accurate, timely and comprehensive information in a preferred way), information specialists must be familiar with the parent organisation’s progress and activities.

This is also true according to my interviews. The informants understanding of their parent organisation seems to be sufficient. Some express a feeling of not being able to keep up with “everything” that is going on in their parent organisation. They also believe that their information management activities comply with their parent organisations’ goals.

The goals and purposes of the corporate information service centre or library, like any other part of the organisation, are to take part in the organisation’s strategies and actions to reach its goals i.e. make money, reach customer satisfaction and promote future success. The applied goals of the information service centre, translated into information management activities, are to assure that the organisation gets all the information it needs in time and in a ready-to-use format.

Hypothesis no. 5: Successful information technology solutions (e.g. intranets, portals) heavily depend on the contribution of information architects like corporate information specialists. Some of the informants are directly involved in intranet work. Intranet services are one of many services that information specialists undertake. This is mentioned below in the next section. So, these interviews may not prove that technology solutions are heavily depending on information specialists. But they show that information specialists in question are actively contributing to creation and maintenance of successful intranets. Therefore, I find it reasonable to believe that
IT solutions depend, heavily or not, on information specialists. My belief is supported by two sources in the literature. A number of corporate organisations are involving librarians or information specialists to improve the content of information flow to enhance the IT tools within their organisations writes David Bender in *San Jose business journal*.113 Roslyn Donald argues that librarians, equipped with the right skills, are competent creators of well-designed intranets (IT solutions).114

Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists

In this third and final section I deal with the following questions at issue:

*In what ways do information specialists and their services contribute to achieving the corporate business goals?*

Regarding information management, what are the required competencies, collaborations and promoting activities of corporate information specialists or librarians?

Literature Studies

*Examples of Services and Roles of Corporate Information Specialists*

**Information Guide and Expert**

On-line searches can now be done by anyone who has access to Internet. The information specialists are no longer the only ones capable of searching for information. But not everyone is able to analyse, critically examine and interpret what he or she finds. People want reliable, up-to-date and relevant information. Luckily enough, the information specialists or librarians are skilled information detectives no matter the source. We must never neglect the wide range of document types such as books, journals, reports, videos, tape recordings etc.

Also, searching for information is a time and money consuming activity. Professionally trained and skilled information content specialists such as librarians do contribute to corporate success. In an article in *San Antonio business journal*, written by Adam Katz-Stone and Edmundo Conchas, one can read “In fact, librarians argue, today’s easy access to information has made their expert sorting-and-sifting

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113 Bender, David, 1999, p. 1.
skills more valuable than ever.”¹¹⁵ This together with the tremendous amount of information and information sources creates a demand for “/…/ information specialists known as ‘special librarians’ – people who can take all this information and organize it into bite-sized bits for easy corporate consumption.”¹¹⁶

**Contributor in Decision-making**

The norms and rules of social groups influence how decision-making is performed. This limits the variation of perspectives available. As the information specialist “/…/ is representing a different enacted environment than the others he/she can contribute to supplementary perspectives to the decision-making processes.” Sven Hamrefors points out.¹¹⁷ The contribution of supplementary perspectives must be appreciated by decision-makers.

**Integrated in the Organisation and a Third Opinion**

In order to be a decision-maker’s helping hand information specialists must know their principals’ “/…/ enacted situations and help them in their particular situations.”¹¹⁸ The information specialists must be present in decision-makers’ everyday life. That is a prerequisite to be able to really make a difference to the decision-makers. This presence in decision-makers’ everyday life implies not being present at the library or information service centre. “So, many of the functions in the library have to be moved out of it, into the offices of the users.”¹¹⁹ Consequently, the corporate librarian or information specialist must be integrated in the organisation. He or she will have to attend meetings with other employees and departments. In a social setting the information specialist can offer a “third” opinion, continues Sven Hamrefors.

**Organisation’s Bridge**

In addition, another role of the information specialists is “transparency-facilitating agent” in the organisation. Unlike most other employees, they know several perspectives present in the organisation and outside. Therefore, their role is to “/…/ let the rest of the organisation share this knowledge.”¹²⁰

¹¹⁷ Hamrefors, Sven, 1999, p. 122.
¹¹⁸ Hamrefors, Sven, 1999, p. 122.
¹¹⁹ Hamrefors, Sven, 1999, p. 122.
¹²⁰ Hamrefors, Sven, 1999, p. 123.
Information Architect
In Appendix C I provide additional examples of new roles and services of information specialists: information architect respectively user needs analysis and specification. The roles of an information architect and a description of what information architecture is about is to be found in Appendix B (Definitions). An information architect is e.g. involved in development, maintenance and evaluation of corporate intranets, see “Intranet Development Manager” below.

Intelligence Provider
Simply handing over an article is no longer sufficient. The product itself, e.g. an article, is not of interest to the corporate employee. Rather, he or she expects the corporate information specialist or librarian to provide him or her with a value-added service. The service may be an analysis and summary of the article mentioned above. This worked and refined information is called “intelligence”.

Regarding the role of the information specialist in intelligence activities Margaret Gross states that “The librarian/information specialist is an integral member of the team, with primary domain over gathering, evaluating, and disseminating information.”121 New web-based technology has revolutionised the gathering, storage, and dissemination of information. The intranet and Internet are now usable work tools of corporate information specialists.

Heart of the Organisation
“Where knowledge is the lifeblood of the organization, libraries and librarians must become the heart.”122 According to Robyn Stockand at University of Alberta this implies that corporate information specialists and librarians provide Competitive Intelligence (CI).123 Competitive intelligence may be summarised as the deliberate gathering, making sense of and disseminating useful information and knowledge.

Integration in Organisation
Ulla Virraneni presents two models where information specialists are integrated in the parent organisation: business intelligence and learning organisation. The focus in the “business intelligence model” is to be part of the decision making process by providing management and decision makers (customers) with business intelligence. Market Research/Analysis Department as well as Research and Development Department form partnerships with information specialists. The second “model”, learning

121 Gross, Margaret, 2000, p. 2.
organisation, focuses on employees’ personal development and satisfaction. The information specialist’s role in this model is described below.

**Individual Learning Promoter**
Together with Human Resources, Competence Development and Training Department the information specialists support all employees in their personal development and satisfaction activities. Individual learning is an essential part of organisational learning. Satisfied employees improve business customer satisfaction adds Ulla Virranniemi. She states that as long as libraries have existed there has been a connection between them and learning.

**Patent Administrator**
Apart from patents department staff, corporate information specialists or librarians may perform patent searches and patent surveillance on the behalf of corporate employees. “Patent: a hidden source for business intelligence” says Marjolaine Thulin. The broad spectrum of corporate information specialists’ duties also includes patent issues.

**Content Manager**
Employees will use information technology tools (e.g. intranets) as a daily resource only if the information content is current and relevant to their business argues David Bender.

If a corporate intranet or Web site has all the fancy “bells and whistles” but the information is not presented in a form users can easily digest, it is not a business advantage. A company’s commitment to creating an ‘information sharing culture’ must be augmented by provisions ensuring that the information shared is of an appropriate nature and form.

David Bender claims that information specialists are engaged in IT tool enhancement in corporate organisations. They serve two major functions as information professionals: selection and organisation of information.

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Intranet Development Manager
Roslyn Donald claims that librarians possess the skills that are needed to create a well-designed intranet:

- Identifying user needs and requirements.
- Creating a controlled vocabulary.
- Evaluating content and authority.
- Weeding out outdated information.¹²⁹

Together these skills promote an intranet that is useful, user-friendly and up-to-date. Roslyn Donald adds that a corporate intranet, like Internet, “/…/ has been compared to a library with all the books thrown on the floor /…/”¹³⁰. Librarians “/…/ guiding its creation and developing the tools to help people locate its resources.” can remedy this.¹³¹

These examples of roles in literature are confirmatory of **Hypothesis no. 6: The corporate information specialists or librarians of today have both “traditional” and new roles.**

**Competencies**
Special librarians are essential in the information age according to SLA’s report “Competencies for special librarians of the 21st century”. Through their responses to critical information needs “/…/ they provide the information edge for the knowledge-based organization. In order to fulfil this key information role, special librarians require two main types of competencies:”

- **Professional** competencies relate to knowledge in the areas of information resources (content) and their organisation and management. Information specialists’ possess expert knowledge to the organisation. They make use of new technology to acquire, organise and disseminate information.
- **Personal** competencies i.e. skills, attitudes and values that makes them providers of excellent service as they are collaborative, exercisers of information leadership, effective communicators, flexible, innovative and make priorities.¹³²

¹³² SLA, 1996, p. 4.
The following two sections comply with personal competencies of SLA’s report (mentioned above).

**Entrepreneurial Information Specialists**

Entrepreneurial librarianship is at work “.../ when the information worker is inspired to reach for a level of service he/she knows can best serve the user /.../” claims Guy St Clair.\(^{133}\) He continues by stating that despite librarianship is not a business “/.../ library management must now be driven by the same qualities that characterize a successful business operation or any other enterprise: *responsibility, performance, and control.*”\(^{134}\) Today librarianship is one subset of information services. Information itself has become a broad concept. Guy St Clair defines information in the business world as “/.../ anything workers need to know in order to do their work.”\(^{135}\)

**New Paradigms of Service - Adapt to Changes**

A business organisation’s internal and external environments are constantly changing, which means that its employees’ information needs and requirements will change accordingly. To avoid becoming outdated and inefficient this means that information service centres must adapt to these changes.

Guy St Clair refers to Paul Thornton’s definition of a paradigm: “/.../ ‘an attitude, belief or viewpoint about how things should look and function’ /.../”.\(^{136}\) Guy St Clair concludes that, in addition to the above mentioned changes, the information service centre “/.../ must also develop new paradigms of service relating to the changed expectations of the people who use it and the people who staff it.”\(^{137}\)

How information specialists or librarians view themselves is also put forward by Guy St Clair. He would like to see discrimination in defining what the information services centre should do and should not do.\(^{138}\)

This is all in favour of **Hypothesis no. 7: Today’s corporate information specialists must be skilled marketers, innovators and collaborators.**

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\(^{134}\) St Clair, Guy, 1996, p. 2.

\(^{135}\) St Clair, Guy, 1996, p. 5.

\(^{136}\) St Clair, Guy, 1996, p. 42.

\(^{137}\) St Clair, Guy, 1996, p. 42.

\(^{138}\) St Clair, Guy, 1996, p. 51.
Interview Studies
The five informants carry out a wide range of “typical everyday” services. The services and their roles include to answer questions (quick reference), search for information, present information, update external and internal reports as well as databases, order copies of journal articles and books, and to purchase books. It also ranges from various user training, current awareness service, market analyses and SDI profiles creation, intranet development and maintenance (content work and web page creation) as well as business intelligence and environmental scanning. They are also facilitators of information transfer as they make connections between people i.e. people requiring information and people possessing it are connected. I believe the interviews and the findings of my literature studies, listed above, demonstrate that my **Hypothesis no. 6:** The corporate information specialists or librarians of today have both “traditional” and new roles is valid.

The informants’ customers highly value fast and excellent services in general, search guidance and useful tips on how to find information as well as business intelligence. According to the informants there are no known customer complaints and their impression is that their information service centres have quite a good reputation. The informants investigate, to varying extents, how they and their services are looked upon. Carrying out surveys, asking for customer feedback on a daily basis and arranging reference group meetings are different instruments for determination of customer satisfaction and real value to the organisation.

The informants’ picture of an entrepreneurial information specialist is a multifaceted professional. He or she thinks in new ways and is an open-minded, proactive, people-oriented marketer that asks the customers what they want as well as attends meetings. Constantly, he or she presents information services provided by the information specialists. Further, the entrepreneur is innovative (within the frames of the organisation’s goals and objectives), sees opportunities and possible applications as well as advocates reengineering.

The informants’ experiences of collaboration with other organisational departments are claimed to be positive. Examples of collaborators include just about all types of organisational departments: Computer/IT, Patent, Research & Development, Marketing, Finance, Product Communications, Human Resources, and Quality. The informants are also involved in collaborations and networks outside the parent organisation. Special interest organisations e.g. special librarian associations, software user groups, interest groups of information service centres (within the same business area) are forums where the information specialists locally and globally get together with colleagues. **Hypothesis no. 7: Today’s corporate information specialists must be skilled marketers, innovators and collaborators.** I believe the informants’
responses include the marketing and collaborating aspects in my thesis. The innovative aspect, to some extent, is discerned in their view of an entrepreneurial librarian.

In conclusion, this “Analysis” chapter reveals both that I have quite well managed to prove the truth of my hypotheses and also that I have been able to provide answers to the questions at issue of the three areas of investigation. My answer to the comprehensive question at issue is found in the following chapter, see “Conclusions and Comments”.
Conclusions and Comments

The four previous chapters have described my method (method theory, methods, and sources), interview questions related to questions at issue and subsequent hypotheses as well as my research studies and findings (literature and interview studies).

My answer to the comprehensive question at issue is found in this chapter. This chapter also includes conclusions and comments regarding my research findings in “Analysis”. In addition, I compare my research results with the “Aims and Questions at Issue” chapter and the “Theory and Conceptual Discussion” chapter as well as with other researchers’ results.

Return on Information

**Information and Information Specialists – The Bottom Line**

The findings of my investigation show that information and corporate information specialists or librarians do help the corporate organisation to reach its goals. The employees are provided with the information they need to make sound decisions and solve problems. In turn this means that they are able to get their work done in a better, or preferably successful, way. The information specialists search, gather and analyse information in order to be able to present information to their customers. Moreover, they store it in ways that allow information to be manipulated (refined) and used. At the same time, the employees can put more of their working hours on what they are hired for and do best.

Perhaps this has not been successfully addressed to decision-makers of corporate organisations that have downsized or outsourced their in-house information service centre. It is also possible that the decision-makers did not understand or simply neglected arguments that were forwarded. To raise awareness about what information specialists actually do is hard but inevitably important. The information specialists themselves must keep this activity going. The position of the information service centre must be looked after even in prosperous times. Therefore, I believe that information specialists must constantly enlighten their customers what they do and do very well. Above all they must stress that what they do is part of the organisation’s bottom line.
I believe one key issue to success and development of information services is to demonstrate cost-effectiveness by showing real proof of earlier successes. An illustrative example is to explicitly state that “This information was crucial to these persons and in these respects. These informed persons made these decisions which led to this increase in sales in this market region.” Then, it is evident that information specialists have *directly* contributed to “This increase in sales in this market region”. The information service centre is part of the revenue-generating side of the organisation. I think it helps if corporate information specialists think in profit-making terms i.e. in line with their parent organisation’s goals and objectives. They must try to think what the organisation’s goals and objectives mean when it comes to the goals of the information service centre and its staff. Then gradually I believe that the employees will think of the information service centre as an integrated part of the revenue-generating organisation.

Information specialists provide decision-makers with business intelligence, which identifies environmental changes that may influence the organisation in question. As business intelligence is related to organisational learning, according to Robyn Stockand, information specialists also contribute to organisational learning. These two activities enhance the corporate organisation’s ability to adapt to changes and to be successful. Consequently, there has been a shift from the information service centre being seen as corporate overhead to being acknowledged as part of the revenue-generating organisation. I strongly believe that corporate information specialists must address this activity shift. Then business leaders need to think twice before they even consider downsizing their information service centre. The information specialists that I have interviewed mentioned the necessity of raising awareness about the changed roles of information specialists.

**Human Touch**

Another key factor is to make the corporate employees aware of that “This particular information in question” could neither have been found by a search engine on the Internet nor an external information specialist. The refined and tailor-made information is “manufactured” by corporate in-house information specialists via a series of steps of searching, interpreting, evaluating, customising and presenting. Information specialists put information in context. Computers can not manage content but humans can. What really counts is the *content* of information and knowledge. The sources and media are only subordinates. Thomas Davenport (with Laurence Prusak) claims that an

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information ecology is a holistic or human-centered management of information.\textsuperscript{140} He points out that people responsible for information supply must understand how information can be put together. Information specialists, in my interpretation, are cut out for this responsibility of information supply.

**Information Age, Corporate Information Management and Information Specialists**

**Information Age**

Internet technology has changed the way information can be published, accessed and distributed. It has overcome end-user barriers to online access and use according to Doug Church.\textsuperscript{141} Adam Katz-Stone and Edmundo Conchas claim that the tremendous amount of information and information sources together with librarians’ sorting-and-sifting skills creates a demand for corporate information specialists.\textsuperscript{142}

**Corporate Information Management**

Today’s changing business world forces corporate organisations to become learning organisations where sharing information and learning from other colleagues are important ingredients. Both internal and external information must be shared and learned from, as all organisations are parts of a bigger world. Thomas Davenport (with Laurence Prusak) mentions the implications of this environmental overlapping in his ecology model, see page 24. One of my interpretations of this model is that we need to know both the internal and external environments of information ecology. In business terms, to be aware of both what is happening inside as well as outside the corporate organisation. This goes hand in hand with Bruce W. McConnell’s belief that many kinds of information only make sense together with different kinds of information.\textsuperscript{143} My interpretation is that many kinds of internal information only make sense together with different kinds of external information and vice versa.

I believe that information specialists, as excellent content managers, contribute by ensuring that the information shared e.g. via an intranet is relevant, easy to comprehend and current. This is content management that hopefully will increase employees’ use and appreciation of information technology tools. Also, their parent organisations have spent considerable money on these tools. Eventually, employees will view the tools as

\textsuperscript{140} Davenport, Thomas H., & Prusak, Laurence, 1997, p. 11.
\textsuperscript{141} Church, Doug, 1998, p. 1.
\textsuperscript{142} Katz-Stone, Adam & Conchas, Edmundo, 2000, p. 1.
\textsuperscript{143} McConnell, Bruce W., 1995, p. 3.
daily resources i.e. true work tools and benefit from them. This means that their parent organisations will get return on investment or rather return on information. My interview studies showed that corporate information specialists are involved with intranet work i.e. content management.

Successful Corporate Organisations Need Information

Today’s corporate organisations need information every single minute in order to be able to make wise decisions concerning e.g. product launch date, product development, entrance in new market regions and patent rights protection. Informed corporate organisations may more easily keep up with their competitors or rather stay ahead of them. Information also makes a difference in how well the corporate organisation can satisfy its customers and with what ease it can predict changes that will affect its activities.

Information about who knows what and how to find this person is also valuable, especially in today’s large and global business organisations. This will prevent people from reinventing the wheel and save time and money. Desktop access to both internal and external (examined) information resources is possible due to the advent of intranets and portals. Information specialists can make information management systems really work i.e. be useful everyday work tools.

In today’s fast changing world, the infinite amount of information and increased demand for relevant and fast delivered information are critical issues for the survival of corporate organisations. Because of their excellent information management skills (in searching, sorting, evaluating, structuring, disseminating and presenting information) information specialists have key roles in corporate information management.

Integrated and Informed Information Specialists

As part of his or her job the information specialist must keep up with current status of the organisation regarding e.g. future plans, strengths and weaknesses, its competitors and what they are up to, market trends and changes in society. He or she must try to talk the same language as the upper management and figure out how top managers see things. Both Thomas Davenport (with Laurence Prusak) and Sven Hamrefors claim that there is integration of information specialists with employees or customers and parent organisation.\(^\text{144, 145}\) The corporate information specialist can no longer work in a static environment like the “traditional” corporate library. He or she must move out of the “warehouse” library, both physically and mentally, and interact with the flexible and

\(^{145}\) Hamrefors, Sven, 1999, p. 122.
dynamic organisation. This process of integration is also reflected in my informants’ answers.

Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists

“Traditional” and New Roles
Jana Bradley says that the skills of information specialists (or librarians) needed in non-traditional for-profit settings is not that different from the skills needed in “traditional” settings. I believe this is reflected in my investigation where the roles of information specialists or librarians in question seem to be “mixes” of “traditional” and changed or new roles. My interpretation of some of the interviews and the literature I have studied is that the roles of the corporate information specialists have changed if you consider the changes of society: new media, the infinite amount of information and information sources and the need for competitive information. But if you think of information specialists as information providers and facilitators one may argue that the roles have not changed. The main thing is that corporate information specialists play the information provision roles that are relevant to their parent organisation at a given time, no matter if their roles are “traditional”, new, or a mix of both.

Services and Roles
Now I will answer the comprehensive question at issue of the thesis, What are the key roles of today’s information specialists in corporate information management and success? My general answer to this is that the key roles are to provide their parent organisation and its employees with useful (see earlier definition according to Effy Oz), timely and understandable information. This is regardless of medium and source. Providing information includes business intelligence reports, internet maintenance, user-training in database searches, patent surveillance, book reviews and press clipping service, to name just a few. Examples of key roles (or rather titles) of today’s information specialists in corporate information management, more specifically, are e.g. information expert, information architect, intelligence provider, patent administrator, content manager, intranet master, database manager and knowledge manager. The services of today’s corporate information specialists are both “traditional” and changing or new ones according to my interview studies. More “traditional” services include: to answer questions (quick reference), search for

146 Bradley, Jana, 2000, p. 2.
information, present information, update external and internal reports as well as databases, order copies of journal articles and books as well as to purchase books. User training (e.g. database search, Internet or intranet navigation), market analyses and SDI profiles creation, content management (intranet development and maintenance) as well as business intelligence and environmental scanning are examples of changing or new services and roles.

In the early phase of this work I received an inspirational email from Sybase Sweden, see Appendix C. At that time I was not aware of that one of many “new” roles of corporate information specialists is the role as information architect. But now the “message” of this email is clear to me. Information architect is one of many new roles that today’s information specialists or librarians possess. The ability to adapt librarianship to the needs of the twenty-first century has created new career opportunities, summarises Jana Bradley.\textsuperscript{147} This ability to adapt and the new careers that it has evolved are reflected in my investigation findings.

**Strategic Activities**

To ask for customer feedback in the daily work is a natural part of information service evaluation and promotion. The information specialists must take any opportunity to ask their customers for feedback on their work. The information specialists must know what information and information services their customers do need and do not need. This includes the information and information services that their customers wish for or seem to not know about already. Only then can more accurately decisions be taken on how to best assure that the organisation gets the right information (in a timely and customised manner). And only then can reactive and proactive information specialists continue to do what they do best: provide their customers with the information they really need. Today’s information specialists’ are more of strategic information or knowledge partners and supporters than intermediaries concludes Ulla Virranniemi.\textsuperscript{148} Corporate information specialists must, from my point of view, identify their roles in the parent organisation’s strive to reach its goals. Also, they need to play their roles well. In brief, they must have a great knowledge about their parent organisation in order to contribute in the best of ways.

The information specialists must never refrain from marketing themselves and their services. The marketing activities include presentations at meetings where the employees are introduced to new services and reminded about existing services. During these meetings a dialogue should be established where employees (customers)

\textsuperscript{147} Bradley, Jana, 2000, p. 1-2.
\textsuperscript{148} Virranniemi, Ulla, 2001, p. 1.
should be encouraged to ask questions and make comments on information services provided by the information specialists.

Also, important inputs and guidance on how to avoid pitfalls can be acquired by examining how colleagues at other information service centres perform a similar service and what to learn from their experiences. Benchmarking, put forward in my interview studies, is one of many issues that can be addressed in networks of information specialists. In such forums information specialists can share their experiences of their daily work. I believe this is very important in a constantly changing information society where information specialists must redefine their roles and consequently develop their services using their training, expertise as well as “traditional” and new skills.

**Strategies to Develop New Paradigms of Service**

I agree with Guy St Clair that the information specialists must view the information service centre as a business operation (within a larger parent organisation). During our library and information science programme we have learned about the strong demand for libraries to think of their activities as businesses with their own business concepts, products and markets. I think this business approach can provide guidance on how the information specialists can adapt to internal and external changes, prove value to their customers as well as take a strong and assertive position in the parent organisation’s information management. The information service centre should build its activities on the basis of its customers’ information needs and use and not on media forms and storage of information.

I am confident, like Guy St Clair, that information specialists must develop new paradigms of service relating to the changed expectations of the people who use it and the people who staff it. I hereby propose important tools or aids that can guide the corporate information specialists in developing new paradigms of service: a business plan, a marketing plan and an assessment strategy. My proposal may not be news to information specialists. However, I think it deserves to be addressed here in my library and information science thesis.

One thing that I believe can improve the activities of a corporate information service centre is to think of its strategy plan in terms of a “business plan”. The business plan must be examined and revised on a regular basis in order to comply with the parent organisation’s changing goals and objectives. As part of its business plan information specialists should define their own business concept applied to the goals and objectives of the parent organisation. This business concept must answer

\[149\] St Clair, Guy, 1996, p. 2.

\[150\] St Clair, Guy, 1996, p. 42.
questions like: “Who are our customers?”, “Which customer needs are satisfied?”, “What does the business concept mean to the customers?”, “What unique qualities does the business concept have to the customers?”, and “What are the customer benefits?”. The information service centre should also consider its existing and new products i.e. its services. “What services are currently being developed and when will they be ‘launched’?” and “What service developments are planned?”.

Secondly, a “marketing plan” should be created and used in the daily work of information specialists. This plan covers current customers, possible customers, trends, possibilities and threats of the “market”. Any business and especially a service business must on a daily basis market itself and its services.

Thirdly, evaluations of customer satisfaction should be carried out with regular intervals. Evaluation activities include e.g. direct customer feedback, formal enquiries and advisory council (reference group). Customer representatives (various hierarchical levels, departments and professional areas), IT professionals and information specialists make out the advisory council. The group members evaluate and discuss existing services (changes, improvements, exchanges and removals) as well as new and required services. During my interviews I encountered the occurrence of advisory councils.

**Competencies**

Together with the informants I believe that information specialists must be entrepreneurial and willing to take risks such as to prioritise and decide what they should do and not do. Ulla Virraniemi addresses this need for focusing and profiling. Such decisions must of course be evaluated every now and then as well as revised according to changes. This means that changes in e.g. user needs and society require differentiated services over time. It also means that just-in-time must replace any just-in-case activity.

In conclusion, in this chapter I believe I have been able to present trustworthy answers to my comprehensive question at issue. Moreover, I have made contributions in discussions relating to the three areas of investigation: “Return on Information”; “Information Age, Corporate Information Management and Information Specialists”; and “Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists”. I have also combined my investigation findings with other researchers’ results. The corporate information specialist profession is a multi-faceted

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and interdisciplinary profession. I believe that this is mirrored in my thesis. Before continuing to the summary I would like to discuss further research in relation to this work.

Questions for Further Research

I believe further research would contribute to the success of corporate information specialists. For example, it would be e.g. interesting to interview corporate employees, who are the information specialists’ customers or potential customers, of the parent organisations included in my research. Some interesting questions at issue would be: “What are the employees’ attitudes towards information specialists?”, “Are the corporate employees aware of the changing or new roles of information specialists?”, “Are the employees’ changing needs of information being met by the information specialists?”, and “What are required services and competencies of corporate information specialists according to the employees?” Hopefully, the employees’ inputs could be compared to my interview findings.
Summary

Information and information supply are critical success factors of today’s corporate organisations. Corporate organisations are depending on internal and external information in order to make sound business decisions, to solve problems and to take appropriate actions. Information technology and telecommunication, globalisation, economic pressures as well as shifting user needs and expectations are among the forces that are dramatically altering information needs of corporate organisations. This has also redefined the work of today’s corporate information specialists. Due to desktop access to Internet corporate employees are able to search for much information themselves. The physical corporate library is one of many information sources. But the easy access to the great amount of information on Internet and intranets is also a challenge to many employees. To quickly find relevant and current information is not an easy task. Information specialists’ sorting and sifting skills are valuable in a time when information is a competitive asset and power. Technology alone is not enough. Paradoxically, corporate libraries have sometimes been downsized or outsourced. The future of corporate librarians and their services have been questioned in an age of technological change. In brief, the corporate librarian profession has faced great challenges.

The major aim of this thesis is twofold. Firstly, it illuminates the key roles that information specialists or librarians play in corporate information management and corporate success. Secondly, it puts corporate information management into a larger context, the highly competitive information society of today. The main focuses are on corporate information specialists’ or librarians’ “traditional”, changing or new roles and challenges. Three areas are investigated: “Return on Information”; “Information Age, Corporate Information Management and Information Specialists”; and “Services and Roles, Competencies, Strategic Activities and Partners of Information Specialists”. Each area is represented by questions at issue and subsequent hypotheses. The comprehensive question at issue is What are the key roles of today’s information specialists in corporate information management and success?
Thomas H. Davenport’s (and Laurence Prusak) information ecology model combined with Per Frankelius’ new theory of the organisation and the outside world make out the theoretical reference framework of my investigation. A conceptual discussion is provided in order to disentangle some buzzwords of business information management. By performing literature studies and interview studies (five information professionals working in four commercial corporate organisations and one supervisory government agency) I have tried to fulfil my aim. The informants have been asked questions within the three areas of investigation.

The answer to the comprehensive question, in general terms, is to provide their parent organisation and its employees with useful information (in its broad definition) in time and in a format that is easy to understand and use, regardless of medium and source. The services of today’s corporate information specialists are both “traditional” and changing or new ones according to my investigations. “Traditional” services, more specifically, include to answer questions (quick reference), search for information, present information, update external and internal reports plus databases, order copies of journal articles and books as well as to purchase books. Changing or new roles range from user training in new media and sources, market analyses and SDI profiles creation, participation in information management system projects as well as business intelligence (the latter promotes a learning organisation culture).

My investigation also indicates that information specialists must demonstrate their value to the parent organisation’s success as return on information and information management is required. They must also market themselves, communicate what they do and do very well, be entrepreneurial and take risks by making priorities and try to not do “everything” as well as collaborate with other information professionals (e.g. IT technicians, human resources staff and marketers). Moreover, they must integrate with the rest of the parent organisation and its activities. This is to make sure that their work complies with the goals and objectives of the parent organisation. Their applied goal should be to provide “leadership” in corporate information management and information supply. Then, and only then, can corporate information specialists today and in the future prove their indispensability to the rest of the organisation and develop their roles and services in corporate information management.
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Appendixes

Appendix A

Abbreviations
Aslib Association for Information Management
BIBLIST Discussion list (email) for information specialists in Sweden
DISA Uppsala University Library’s catalogue
LIBRIS National Library of Sweden’s catalogue
SDI Selective Dissemination of Information
SLA Special Libraries Association
TLS Swedish Association of Information Specialists
(Formerly Tekniska Litteratursällskapet)
## Appendix B

### Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Balanced Scorecard</td>
<td>Method of measuring performance of a firm beyond the typical financial measures. Links corporate goals and direct performance measures in a framework specific to a firm, and is one method of measuring the impact of knowledge management.</td>
</tr>
<tr>
<td>Business Intelligence</td>
<td>Business intelligence is almost synonymous to environmental scanning but has a more commercial perspective than environmental scanning. Business intelligence is the decision-maker’s tool for identifying environmental changes that influence the organisation. Business intelligence consists of subgroups with different focus, such as Competitive Intelligence, Market Intelligence, Technological Intelligence and Regulatory Intelligence.</td>
</tr>
<tr>
<td>Content Management</td>
<td>The rules (e.g. policies, procedures and standards), roles (people who perform the management) and the resources (e.g. time, money and software) used to author, evaluate, organise, publish, maintain and store content objects for a site.</td>
</tr>
<tr>
<td>Cookie</td>
<td>A small string of data created by a web server, transmitted to a computer connected to the Internet, and stored on its hard disk in the cookie file of its web browser.</td>
</tr>
</tbody>
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154 Reitz, Joan M., 2001, downloaded 2002-02-03.
Data

Facts, figures, or instructions presented in a form which can be interpreted and communicated by a person, or processed by a computer. In a broader sense, raw facts from which inferences or conclusions can be drawn. An example is 20%.

Explicit Knowledge

Formal or codified knowledge comes in the form of books, documents, papers, databases and policy manuals.

External Information from External Sources

This is brought inside the corporate organisation from outside, the surrounding environment. Such external information may be competitors’ annual reports, articles about new inventions, world economy reports, market trends and so on.

External Information via Internal Sources

There are also internal sources of external information. This “hot” information is of current interest and must urgently be distributed to persons concerned. Later on, the information may be officially communicated but it might as well never be.

Information

Data to which meaning has been attributed within a context for its use. More concretely, all the facts, conclusions, ideas, and creative works of the human intellect and imagination which have been communicated, formally or informally, in any form. An example is a 20% increase in customer satisfaction.

155 Reitz, Joan M., 2001, downloaded 2002-02-03.
158 Frankelius, Per, 1995, p. 257.
159 Reitz, Joan M., 2001, downloaded 2002-02-03.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>Information Architect</td>
<td>A person who creates the structure or maps of information which allows others to find their personal paths to knowledge.</td>
</tr>
<tr>
<td>Information Architecture (IA)</td>
<td>The study of the organisation of information in order for the users to find their navigational way to the knowledge and understanding of information. On the Internet or intranet, information architecture is a combination of organising a site's content into categories and creating an interface to support those categories.</td>
</tr>
<tr>
<td>Information Ecology</td>
<td>The consistent parts of information ecology are the content, the tools created to leverage the content, the context of the content and the users who access the content.</td>
</tr>
<tr>
<td>Information Literacy</td>
<td>Skill in finding the information one needs, including an understanding of how libraries are organised, familiarity with the resources they provide (including information formats and computerised search tools), and knowledge of commonly used research techniques. The concept also includes critical examination of the nature of information itself, its technical infrastructure, and its social, political, and cultural context and impact.</td>
</tr>
<tr>
<td>Information Management (IM)</td>
<td>The skilful exercise of control over the acquisition, organisation, storage, retrieval, and dissemination of information resources, usually within a company, organisation or government agency, including documentation and records management.</td>
</tr>
</tbody>
</table>

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161 InfoVis.net, 2001.
162 Hagedorn, Kat, 2000.
163 Reitz, Joan M., 2001, downloaded 2002-02-03.
164 Reitz, Joan M., 2001, downloaded 2002-02-03.
Information Science
A branch of knowledge which investigates the sources, development, dissemination, use, and management of information in all its forms. Compare with Library Science.\(^{165}\)

Information System
An information system provides procedures to record and make available information, concerning part of an organisation, to assist organisation-related activities.\(^{166}\)

Information Technology
A very broad term encompassing all aspects of the management and processing of information by computer, including the hardware and software required accessing it.\(^{167}\)

Information Worker
Someone, who highly relies on having the appropriate information, whenever needed, can be thought of as an information worker. This information supply is crucial for making the right business decisions and adequate choices.

Internal Information
The internal information, also known as corporate or business communication, mainly belongs to the duties of the Information Department. But, of course there are no definite borders between internal and external information. This means that the corporate information service centre also deals with internal information.\(^{168}\)

Knowledge
Information which has been understood and evaluated by the knower, especially in the light of experience.\(^{169}\) See also Data and Information.

\(^{165}\) Reitz, Joan M., 2001, downloaded 2002-02-03.
\(^{166}\) Flynn, Donal, 1998, Information systems requirements: determination & analysis, p.3.
\(^{167}\) Reitz, Joan M., 2001, downloaded 2002-02-03.
\(^{168}\) Frankelius, Per, 1995, p. 257.
\(^{169}\) Reitz, Joan M., 2001, downloaded 2002-02-03.
Knowledge Management (KM)

KM is the distribution, access and retrieval of unstructured information about "human experiences" between interdependent individuals or among members of a workgroup. Knowledge management involves identifying a group of people who have a need to share knowledge, developing technological support that enables knowledge sharing, and creating a process for transferring and disseminating knowledge. Promoting efficiency, innovation and competitive advantage are goals of KM.170

Lessons Learned

A reflection on the knowledge a person should take with them from this experience into similar ones. These lessons often reflect on "what we did right", "what we would do differently," and "how we could improve our process and product to be more effective in the future."171

Librarianship

The profession concerned with the application of theory and technology to the creation, organisation, management, preservation, dissemination, and utilisation of collections of information in all formats.172

Library Science

The professional knowledge and skill with which recorded information is selected, acquired, organised, stored, maintained, retrieved, and disseminated to meet the needs of a specific clientele. Compare with Information Science.173

Networking

The art of developing contacts within a profession and using them to advance in a career. Librarians do this by meeting colleagues at library conferences, participating in round table discussions and colloquia, volunteering to serve on committees running for elective office, etc.174

171 Resources & Results, 2000.
172 Reitz, Joan M., 2001, downloaded 2002-02-03.
<table>
<thead>
<tr>
<th><strong>Organisational Culture</strong></th>
<th>The prevailing values, expectations, and conventions within an organisation, often unspoken and persistent.175</th>
</tr>
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<tbody>
<tr>
<td><strong>Outsourcing</strong></td>
<td>The contracting out of library services previously performed in-house to an outside service provider, usually a for-profit enterprise. Cost-effectiveness is the justification most often heard for this controversial management practice. One important disadvantage is that in decisions requiring judgement, an outside contract may lack familiarity with local conditions and practices.176</td>
</tr>
<tr>
<td><strong>Portal</strong></td>
<td>A site for a particular audience, providing a path to all-encompassing content and services through one access point.177</td>
</tr>
<tr>
<td><strong>Return on Investment (ROI)</strong></td>
<td>There is no magical formula for determining ROI for information and knowledge services. First you must decide what metrics are important to the organisation. Some examples are time saved (expressed in terms of hours and dollars), shortened cycle time, increased sales, quicker response to competitive threats and return on shareholder value. Once you have determined what will be measured, you collect data, analyse data and begin making some assumptions. If you do not have experience with these measurements, you might find support from cost accounting experts in your organisation or from consultants.178</td>
</tr>
</tbody>
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175 Reitz, Joan M., 2001, downloaded 2002-02-03.
176 Reitz, Joan M., 2001, downloaded 2002-02-03.
177 Hagedorn, Kat, 2000.
Special Library
A library established and funded by a commercial firm, private association, government agency, non-profit organisation, or special interest group to meet the information needs of its employees, members, or staff in accordance with the organisation's mission and goals. 179

Tacit Knowledge
Personal knowledge that resides in an individual. Content that has not been recorded or exchanged. It relies on experiences, ideas, insights, values, and judgements and usually requires joint, shared activities in order to transmit it. Individuals possess tacit knowledge and must learn to verbalise that knowledge. The art of talking about a problem or opportunity causes it to take shape and to be defined. Defined it can be solved or developed. 180

179 Reitz, Joan M., 2001, downloaded 2002-02-03.
180 Resources & Results, 2000.
Appendix C

Non-Traditional Roles and Services of Information Specialists
Information technology (IT) and telecommunications have broadened the work field of information specialists or librarians. Some of them are working in non-traditional settings like Internet and intranet projects, corporate organisations, IT enterprises and consultant agencies.

Exemplify Roles of Information Specialists
Last autumn, when I was searching for a suitable topic of my thesis I contacted (inquiry email) a consultant agency called IT Piloterna. I quickly got a reply mail where I was asked to meet with one of the consultants. A few days later, a consultant and I discussed possible collaboration projects that would be of benefit to my thesis.181 Just at that moment I got an inspirational email from Sybase Sweden. I had sent them an email in which I asked them for subject area suggestions of my thesis within the information area. The man who responded claimed that “considering my background I could work as an information architect within information portal implementation projects”.182 He ended by saying: "I suggest that you contact consultant companies that have ongoing information portal projects.”

Information Architect in Possible IT Project
Given that an agreement was established between a presumptive customer (organisation) and the IT consultant company I would be part of the planning phase of an information management system project.

My contribution to this project would be to undertake employee interviews that would reveal the various information user needs of the organisation’s employees. Based on the interviews, I would create a user needs analysis and specification. This would, reflecting and accounting for the user needs, identify required functionality requirements of the proposed information management system. Oral communication with the IT consultant gave me some hints on how to create a user needs analysis draft. But reading relevant literature also provided me with valuable information. Skolverket’s “Planera för en webbplats/Planning a web site” gave me basic

181 Notes from oral communication with IT consultant, dated 2001-09-18.
182 Email from Sybase Sweden, dated 2001-09-20.
information concerning users and user needs.\textsuperscript{183} I got some useful ideas from Mark McLaughlin’s article series about usability methodologies.\textsuperscript{184}

A user needs analysis is performed during the first development phase of an information management system. Donal Flynn makes a description of this development as well as maintenance of information systems.\textsuperscript{185} This also applies to information management systems i.e. IT solutions like intranets and portals. A brief overview is presented below. My user needs analysis and specification (draft) includes step no. 1 and 2 of the mentioned steps below.

**Development and Maintenance of Information Management Systems**

Development and maintenance of information systems, broadly speaking, consists of five major steps:

1. Users needs and requirements analysis. Users determine what the system should do and how it should fit in the organisation.
2. Analysis of the requirements, which ends up in a specification.
3. Design, both logical (functionality aspects) and physical (in reality) design. Computer and manual processes are worked out.
4. Implementation. Programs are written, the system is tested and it is put into operation.
5. Maintenance. Changes requested by users are analysed, designed and implemented.

The collaboration is not on the cards during the course of my thesis work. Despite this I enclose my user needs analysis and specification (draft) in this thesis, see below. A number of circumstances are responsible for this decision. First, the positive response of my analysis proposal coming from the IT consultant. My user needs analysis (draft) also serves as a pragmatic example of the many services provided by information specialists or librarians. It also exemplifies how their competencies and roles are applied in new situations.

\textsuperscript{185} Flynn, Donal, 1998, p. 100.
User Needs Analysis and Specification (draft)

Introduction
The following should be carried out by e.g. a corporate information specialist or librarian prior to implementation of an information management system. Information specialists are skilfully trained in user needs determination. They are often also familiar with functions, restrictions and possibilities of information management systems.

Special Notes
As this draft has never been used and tested it should be taken with a pinch of salt. Since the development and testing stages are not part of a user needs and requirements analysis they are not further commented here.

Aim
The major aim of the user needs analysis is to identify appropriate functionality of a future information management system. Appropriate functionality’s are to be agreed upon by the real users i.e. the employees of the organisation in question. The users of the future information management system must try to express and put into words what they need and may benefit from the system as well as what their system expectations are. This will enhance the chances of creating an information management system or work tool that is useful, intuitive and effective. Corporate time and money should be spent wisely and all business activities need to be motivated. This also applies to the phases of considering, choosing, purchasing, implementing, using and maintaining an information management system.

User Needs Analysis
Basic facts about the company’s business area, size, customers, suppliers etc. are gathered during a first meeting. Also, guidelines for interviewing employees and a representative reference group (including reserves) are agreed upon. Factors considered are e.g.:
- Roles (profession categories)
- Number of people/roles (age, sex)
- Functionality’s (in- and outflows of information, systems)
- Other factors: frequency, authority, change etc.

The next step is to inform concerned employees, in particular the informants, about the planned study. Also, explain the procedure of the user needs analysis, its objectives and how the gathered material from the recorded interviews will be used. Confidentiality matters would be considered. Then, deep interviews with employees (reference group) in their own workplace can be performed. Examples of
documentation are observations, notes and recordings. Possible interview questions and areas of investigation are listed below:

- “What is a typical day or week like in your role?” Tasks, projects etc.
- “Which functionality do you need from a work tool or an information management system in order to be able to do your present work?”
- “Which functionality would you need in case your work tasks changed?”
- “Do you have any suggestions of an advantageous functionality that would be preferable but is not provided today?”
- Ask for other suggestions, ideas and comments concerning user interface, manual, help texts, personification of some parts, feedback regarding the development phase of the system, education at implementation and so on.
- “How would you describe your current use of your computer?”, “Does it meet your requirements?”, “What are these requirements?”, “Is it a useful everyday work tool?”
- “How would you describe your own computer experience?”
- “Do you have earlier experience of information management systems?”
- “What do you expect of the new system?”
- “How would you describe information management systems in general?”
- “Is there something else you would like to add?”

Perhaps complementary questions (contacting the very person) are needed e.g. if the collected material is unclear or if interpretation issues arise.

**Specification**

The next step is to identify patterns, similarities, dissimilarities and trends in the material. Functionality grouping: general (i.e. access by everyone), tentative (i.e. may be applied due to future changes) and specific (depending on individual work tasks). If an information management system or IT solution seems appropriate one will proceed by creating a specification proposal.

A specification proposal, supported by the interview results and conclusions, is created. It proposes information management system’s functionality (general, tentative and specific). This is taken into account when putting together a requirement specification for the information management system. The specification is an important guideline for both the system supplier and the ordering organisation. The orderer must know and communicate its needs to the supplier. Adequate solutions can be developed and tested when both the supplier and the orderer understand and agree on the information needs.
Appendix D

Seminars and Workshop (notes)
I have attended six seminars and one workshop, which have enriched my understanding of information and knowledge management (emphasis on human aspects). A knowledge management seminar, seminar no. 1, was a good introduction in the earliest phase of my research work. Seminar no. 2, 3 and 4 were relevant to my understanding of information architecture, content management and knowledge management. Seminar no. 5 and 6 as well as a workshop improved my intranet knowledge. Verbally communicated material from the seminars and the workshop are reported below (notes).

Seminar no. 1, “Kunskapsarbete på IBM/Knowledge Management at IBM”, 25th October 2001, Forum Library, Royal Institute of Technology Library, in Kista (TLS seminar)

Introduction
Last autumn, during my practical training period at the Royal Institute of Technology Library in Stockholm (Sweden) I found out about this presentation.

Seminar no. 1, “Kunskapsarbete på IBM/Knowledge Management at IBM” by Naseem Quraishi-Larsson (IBM Global Services)
Naseem Quraishi-Larsson, IBM Global Services, gave a presentation on knowledge management at IBM. She proceeded quite fast, as she wanted to dedicate some of her time to questions from the audience. I tried to catch up with her quick talk by making shorter notes.\(^{186}\) Two of the concepts and activities she presented were brand new to me. Firstly, “knowledge networks” which are also known as Communities of Practice (CoP). Secondly, Naseem Quraishi-Larsson, very briefly mentioned “storytelling”.

\(^{186}\) Seminar notes, seminar no. 1, dated 2001-10-25.
Introduction

Every now and then I visit the homepage of TLS. This is also how I found out about this conference. The theme of this TLS autumn conference, “Virtual touch – human touch”, seemed relevant to my particular work. In addition, I believed that this was a great opportunity for me to meet information professionals.

This was a 2-day conference of altogether eleven seminars. Three of these seminars were of special interest to me in my research work. I took some very valuable notes during these seminars. The presentations by Peter Morville (ACIA), Mattias Beijmo (SemaInfoData) and Gunnel Stjernvall (ISIM) in different ways touched the subject area of my thesis. Peter Morville spoke English during his presentation, whereas the other two speakers (mentioned above) spoke Swedish.

Seminar no. 2, “An Information Architect’s Manifest” by Peter Morville (ACIA)

Peter Morville shared his view on the speed of Information Architecture (IA). His major concern is “the widespread practice of throwing out the baby with the bathwater” when it comes to web and intranet redesign projects. The site development process moves from strategy to design to implementation. After a period of maintenance someone decides that this is “no good” anymore and that a redesign is required. This is short-term thinking and non-learning behaviour. Peter Morville calls this “the infinite loop of destructive creation”.

Peter Morville addressed an understanding of “the layers of information architecture, content and interface”. The slowest layer is that of faceted classification schemes. Embedded navigation system is the next slowest followed by enabling technologies, controlled vocabulary and adaptive finding tools. On the other side of the speed scale we find the fast layer of content, services and interface. The slow layers provide stability whereas the fast moving layers drive innovation.

Peter Morville proceeded by talking about the impact of IA. It enables us to get an understanding of e-commerce sites and to be of assistance to corporate users that cannot find information. The Internet technologies are not the important ones. Rather, it is how we apply them which counts. I would like to refer to the inspirational email I got

from Sybase Sweden and in which information architect was mentioned, see Appendix C.

Seminar no. 3, “Innehållshantering i digitala kanaler/Content Management in Digital Channels” by Mattias Beijmo (SemaInfoData)

Another speaker, Mattias Beijmo, emphasised the importance of applying the reality (human touch) on the virtual world (virtual touch). His speech was about Content Management (CM).

Mattias Beijmo mentioned some key questions to consider before implementing an information management system. “What are our strategic goals with the new system?”, “How do the processes and flows for managing content and communication look like?”, “What content should be communicated and to whom and through which channel?” and “What technical aid(s) is(are) best suited for the previously mentioned?”.

He also talked about communication obstacles between a sender (e.g. corporate organisation) and a receiver (e.g. employee or customer) via the corporate web site. The “noise” on the www restrains the communication. This “noise” is due to a number of human related factors: a new medium, earlier experience and cultural background. The solution to this problem is feedback from the receiver to the sender and vice versa.

Feedback possibilities such as user profiles, wish lists and interactive user forms will promote communication. Personalisation can be achieved by asking questions relating to the customer’s personal profile. The resulting profile can be stored as a cookie, which will help the web site to “recognise” a revisiting customer. 90% of the intranets and Internet sites lack this feedback according to Mattias Beijmo.

Seminar no. 4, “KM för IPs/KM for IPs!” by Gunnel Stjernvall (ISIM)

Gunnel Stjernvall, now working as a consultant, is a former corporate librarian. Her presentation was both about Knowledge Management (KM) in general and more specifically for information professionals (IPs). Gunnel Stjernvall said that technology facilitates KM. A learning organisation can use and benefit from KM by sharing knowledge among individuals as well as between departments and corporate organisations.

Gunnel Stjernvall also stated that “we, information professionals, are part of the core activity”. We must be aware of our corporate organisations’ decision routes, goals etc. She concluded that IPs work in a network of KM, market analysis, business intelligence, library, products and technology as well as education.
Introduction
Last year, I browsed through the content of Vinco’s homepage. I came across a link to an intranet conference called “Intelligenta intranät/Intelligent intranets”, arranged by the Institute for International research AB. During this 2-day conference a number of speakers, coming from various corporate organisations, presented several case studies. Issues regarding usability, information structure and personalisation of intranets as well as content and knowledge management in intranets were covered. Altogether, the conference included nine seminars and one human-computer interaction workshop.

Seminar no. 5, “Så arbetar Scania med Content Management för struktur och användarvänlighet/How Scania works with Content Management in respect to structure and user-friendliness” by Fredrik Sjöblom (Scania)
Fredrik Sjöblom, manager of Web Communications, is responsible for the global web communication at Scania and has been a project leader of Scania’s global intranet. In his talk he said that the implementation of an intranet means a cultural change. The intranet is a tool that can assist us in reaching a new and preferred corporate culture. Further, he described the intranet as “the Desktop”, where employees get news updates, communicate with many colleagues at the same time, share knowledge and get access to tools and services (e.g. email and phonebook).

188 http://www.vinconet.com
189 http://www.iir.se
190 Seminar no. 5-6 and workshop notes, dated 2002-01-28 and 2002-01-29.
Seminar no. 6, “Så skapar team med olika kompetenser förbättrar användbarhet i intranätet/How teams with different competencies create improved intranet usability” by Charlotte Brenner (Ericsson Software Technology)

The informer Charlotte Brenner is responsible for the intranet of Ericsson Software Technology. The Intranet Management Team of Ericsson Software Technology consists of IT services, Operational development, Communications and Business services in order to promote an optimal development of the intranet. Thereby, many roles and competencies are represented.

Charlotte Brenner stressed that an intranet should consist of functions and services that the employees need in their everyday work. She also said that content is primary whereas technology is secondary. The goals and strategies of the corporate organisation must permeate the intranet.

Workshop, “Så lyckas du med ditt intranät genom beteendevetenskap och Människa-Dator Interaktion/How you succeed with your intranet using behavioural sciences and Human-Computer Interaction” by Sinclair Andersen (D’Arcy Interactive)

Sinclair Andersen, usability director of D’Arcy Interactive, is working with usability analyses and interactive media. He stressed that we must keep some human aspects in mind. “No single person has got all the answers and there is no one answer”. “In your intranet approach you must take into account your culture, abilities, resources and technical prerequisites”. “The human being, her cognitive processes and behaviours are seldom logical, simple or linear” and we (human beings) are emotional creatures”.

We need to structure information in order to increase the availability of information, e.g. in an intranet. This may be exemplified by summarising information and thereby providing an information overview, which is sufficient to the majority of people. Few people will read the main information. In-depth material and links attract even less.