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UCS Reference Tool
Library Science

Version 1.0

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UCS Library Community Reference Tool

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1. Introduction

1.1 Information Management and Library Science Work

Knowledge management is the strategic use of information and knowledge resources to an organization's best advantage. Library services work in the federal Public Service is dedicated to acquiring, preserving and making knowledge available to the government and people of Canada.

Like much other work in the Public Service, library work is undergoing rapid change and development. No longer simply organizers and providers of information, Librarians are facilitators, trainers, web designers, information evaluators, knowledge architects, contract negotiators, marketers, information auditors, virtual instructors and systems experts. The work requires knowledge of computer databases, information technology and automated systems. As well, the work is inherently interdisciplinary, requiring knowledge and skills in computer science, cognitive science, psychology and sociology, economics, business, law, library/information studies, and communications.

Library work requires Librarians to be information and knowledge managers and brokers, research experts and specialists in the description and organization of information. Departmental libraries transfer knowledge and ideas by providing the mechanism, the structure, the means and the skills to provide clients with access to the information they need.

Library work requires experience and skill to create, extract, organize, manipulate, critically assess, repackage, distribute, preserve information and knowledge for use both internally to the department or agency and externally to other organizations and the public.

The work requires Librarians to perform and manage a multiplicity of information-related tasks. In order to function effectively they need to:

♦ understand how to organize information

♦ analyze user information needs and help clarify a user's thinking to add precision to the nature of the information the user is seeking

♦ design or evaluate information systems that allow for efficient and effective user interaction

♦ provide and assure the quality and value of information to decision makers

♦ understand the economic and social environment in which their organizations functions

♦ be familiar with relevant issues in law, economics, ethics, and management.

Much of the work done in federal government libraries is, by its nature, invisible to the casual observer. It is often only the end results or end product that is recognized – the information or specialist contact provided, the carefully vetted and organized information found on a web site or portal, the library catalogue available through the Internet. For this reason it is important to set aside stereotypes of professional library work. Much of the "visible" work done in libraries such as lending and shelving of books, compiling lists of sources and directing clients does not reflect the work of professional librarians.

1.2 The Reference Tool

Purpose

This Reference Tool provides departments with a guide to help in writing and evaluating Librarian work descriptions:

◆ To help Librarians and their managers better understand and interpret the Standard as it applies to library work in the Public Service.

◆ To provide examples of work activities and element descriptors, and helpful supporting information for the eight key elements, to help correct common weaknesses in the writing of Librarian work descriptions.

◆ To provide evaluators with information to assist them in understanding and evaluating Librarian work, and ensure accurate and consistent ratings.

Content and Scope

In the Reference Tool, focus has been on the eight elements identified by the Librarian community as being most important to review. This Reference Tool does not provide benchmark work descriptions. Rather, it provides anchors with proposed ratings at various degrees for individual elements, together with additional useful information. These anchors are intended as examples of the format and content appropriate for the respective elements at the suggested degrees. When combined with the descriptive information on common pitfalls, linkages, etc., the Reference Tool will serve as a guide to describing and evaluating work.

How to Use the Reference Tool

This Reference Tool supplements, but does not replace, the official Universal Classification Standard documents, the *UCS 2.0 Factors and Elements* (the Standard), the *UCS 2.0 Supplementary Application Guidelines*, the Technical Bulletins and the *UCS 2.0 Work Description Writing Guide*. It is suggested that, before describing the work of a position for a given element, the work description writer review the relevant sections in each of the official documents and the Reference Tool. In evaluating Librarian work descriptions, it is suggested that members of evaluation committees review the Reference Tool, to highlight in their minds the application of the Universal Classification Standard to Librarian work. The format of the Reference Tool encourages the user to apply maximum flexibility to select anchors that best reflect the work being described, and to adapt these as required.

Universal Classification Standard References and Additional Resources
◆ Official Treasury Board of Canada Secretariat Publications
◆ *Universal Classification Standard (UCS) 2.0 - Factors and Elements*
◆ *Universal Classification Standard (UCS) 2.0 - Supplementary Application Guidelines*
◆ UCS Technical Bulletins
◆ *Universal Classification Standard (UCS) 2.0 - Work Description Writing: A Self-directed Learning Program*
◆ UCS Organizational Impact Analysis Workbook
These documents are available from the Treasury Board of Canada Secretariat web site.
http://publiservice.tbs-sct.gc.ca/ucs-ngc/english/standard.html

2. Element 1   Information for the Use of Others

2.1 Points to remember from the element definition

♦ The element is designed to measure both the extent of responsibility and the impact of the information in terms of how others use it.

♦ Information in the library world is **both content and process**. In Librarians' work, it is important to consider the responsibility for information, the responsibility for finding the information and the responsibility for the databases that store and transmit information. *The latter is considered a responsibility for a physical asset or product.* Many Librarians' positions will rate on both elements.

♦ The "others" can be colleagues in the work unit, clients or line managers within the department or in other departments, other levels of government, business partners and members of the public. The impact scale is not primarily concerned with who the "others" are but with *how they use the information.* The impact scale progresses from maintaining to improving to accessing benefits to making productive use of them.

♦ The extent scale considers the degree of responsibility and latitude for decisions on the information.

2.2 Common Librarians' Activities

Librarians' activities in Information for the Use of Others have parallels in other occupational areas in the Public Service. For example:

- Coaching and training   - Preparing Ministerial correspondence
- Internal reporting   - Preparing Access to Information responses
- Advisory roles   - Client support roles
- Research role

2.3 Common pitfalls with this element:

♦ There is a myth that degrees A and B refer to internal clients and degrees C and D refer to external clients. The clients – that is, the recipients of Librarians' work – are both internal and external.

♦ There is a tendency to not fully describe the responsibility for information for use of others. The responsibility library work requires is often the starting point for the formulation of new policies or procedures as it provides the information foundation for the changes/creation of new policies or procedures. Librarians ensuring the "best", most accurate, relevant, current knowledge is made available to policy writers, researchers, senior managers, who depend on this information as the foundation of their work. This relationship to the final product is often overlooked and should rate at a B, C or D depending on the intended use of the end product.

♦ There is a stereotype that librarians are 'finders of books'. There is a need to recognize the evolution of the field as information management moves into new technology and challenges, as there is a proliferation of information and information media.

♦ Librarians are professionals in the effective use of information technology and facilitators of effective decision-making by end users. Librarians' work descriptions often do not articulate how others use the information in the production of a policy or as the foundation information to a research problem, etc. UCS does however recognize shared responsibility, and this work should be described and rated. It is sometimes difficult to reflect these in work descriptions as the end result or products that this research contributes to are often unknown.

♦ There is confusion between the content – that is, the information itself – and the "containers" (book, computer software vehicle, CD-ROM), which should be treated as physical assets.

2.4   Linkages

Responsibility for information tends to demand skills and effort. Look for insight into the responsibility for information in the descriptions of these elements (and vice versa). A high degree of responsibility for information must draw knowledge from either Job Content Knowledge Application or Contextual Knowledge. For example:

♦ Job Content Knowledge Application – in Librarians' work, information responsibilities will draw on deep knowledge of theories and concepts in librarianship, including research methodologies, and electronic information management, storage and research techniques.

♦ Contextual Knowledge – knowledge of the client organization (the department) is required to exercise information responsibilities around advice to management and policy analysts. Similarly, knowledge of the departmental software and other tools could fall into contextual knowledge B. Knowledge of Public Service-wide processes and practices, such as the annual estimates process, would be contextual knowledge area C. As well, Librarians are generally required to have at least moderate, if not deep, specialised subject matter expertise as it pertains to the department's mandate, in order to assess relevance and validity of data being supplied.

♦ Money –Librarians have responsibility for the planning and budgeting of financial resources to obtain the best value for money, in order to ensure the best access for clients including managers, policy analysts, researchers. This is difficult because of the high cost of information, particularly given the proliferation of new hardware and software, increasing costs in print materials and increasing costs of information tools and services.

♦ Intellectual Effort – the provision of information and research data increasingly requires greater degrees of intellectual effort. An example of this is electronic access to information. Although information may be more readily available, there is increased intellectual effort to evaluate a continuously growing body of information, to assure its accuracy and relevance and to design new search strategies for a chaotic array of data so that access is fast and easy for clients. This is also a case of doing a job so well that the underlying intellectual effort is not recognized. Keeping up with new developments in information management, availability, storage, and retrieval add to the difficulty.

2.5   Progression Scale

Extent:

The bulk of Librarians' work will be found at degrees 3 and 4, although the full range of work within the library may include all degrees. Work at degree 2 includes tasks such as: responding to enquiries within government and from the public to provide basic information; answering requests for publications and providing other source material; retrieving or cataloguing straightforward information in accordance with predetermined processes; and setting up displays of information. Often these tasks are performed by other library staff and there will be a shared responsibility for supervisors.

Impact:

An impact of A refers to information others use to continue doing what they are doing. It allows them to take the next steps.

An impact of B refers to information that others use to change/improve what they do. It could include solving long-standing problems or re-engineering a process. Information used in designing or developing new systems and applications would rate at B.

Information provided to clients outside the department, where clients have a choice about the use of the services and where the information enables the client to make a decision on accessing a government program, would rate at C.

Information provided as an integral part of the work of a team conducting work to exploit scientific research would rate at D.

2.6   Sample Work Characteristics

Sample Work Characteristics	Rating
Provides interpretations and develops recommendations on departmental accountability and commitments related to legislative requirements and central agency policies and standards for the collection, storage, disposal, and management of library data and information. Interpretations and recommendations are provided in the form of verbal and written briefings and written reports. The information is used by senior management to make decisions regarding information tools, services and processes required to improve operations to meet evolving departmental obligations.	B4
As the department/agency's technical information expert with respect to specific subject/market sectors, provides an authoritative national and technical information consulting service to officials of the department/agency concerning requests for research and information. Senior program and policy managers use this information in proposing new policies or regulations.	B4
Reviews business requirements and strategic directions in order to provide long-term Library and information management strategic recommendations. Assesses the future direction of Library's holdings and technical systems in the context of the strategic business direction of the department and recommends modification/reorientation where the current holdings and technical systems do not complement/enable the strategy. The work requires review and analysis of a diverse array of source materials, elaborating and synthesizing these materials. The work is considered the definitive information on departmental library strategy by senior management.	B4
Develops policies, standards, information systems and procedures governing the provision of library, research and knowledge management services in support of the agency. Policies and standards are used by senior management to benchmark whether comprehensive, proactive and responsive information services are provided to the agency and external clients. Some standards and information will benefit national and international organization, provincial governments, researchers, business clients and members of the media and the public.	B4
Conducts complex, in-depth and multi-dimensional research and studies in program and policy areas of the department to provide information for the development of program and policy frameworks, strategies and positions. Critically reviews, evaluates and comments on internal and external technical information sources and reliability. The information provided is used by clients for strategic decision-making in the management of policy files/issues and to facilitate policy research for the development of program policies, proposals and strategies.	B4

Sample Work Characteristics	Rating
Develops and creates strategies designed to support and exploit corporate information and knowledge resources to promote the sharing of contacts, best practices and lessons learned, in order to increase the efficiency and effectiveness of the organization. This work is directly related to the development and delivery of department-wide IM strategies as they relate to the storage, management, dissemination and sharing of corporate information and knowledge resources.	B4
Creates original cataloguing records or descriptions for the library catalogue (i.e. database) by analysing the subject and classification where there are no suitable records so that clients can access the material in the collection and selected resources outside the library. The information may be used by departmental or other government employees to assist them in achieving corporate goals and objectives, or by members of the public who benefit from the specialized services and collections provided by the library to advance their research.	C4
Selects information such as articles, other reference materials, compiles lists of individuals and Web sites from other sources and elaborates on this information by creating annotations, abstracts, and bibliographies and new taxonomies[1] and makes available through various services including web portals[2]. This information gives clients from the department, other government departments and the general public access to departmental and other government and public sector information in order to support their research requirements. This research is used to further the development of federal programs for Canadians and/or refinements or create new policy and legislation.	D3
Conceives strategies and guidelines aimed at the preservation of information for the use of future generations of researchers (within and outside the government), including the international communities *(for example defence or diplomatic)*, to further exploit it when establishing information management policies and programs, amend existing or develop new regulations and guidelines, and render decisions related to information preservation.	D4

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[1] Taxonomy is the study of the classification of materials according to their resemblances and differences. The science or technique of classification.

[2] Portal: Web sites that serve as starting points to other destinations or activities on the Web. Portals commonly provide services such as e-mail, online chat forums, searching, content, and news feeds. A Web site considered as an entry point to other sites, often by being or providing access to a search. An entrance or a means of entrance: "the local library, a portal of knowledge."

3. Element 3   Leadership of Human Resources

3.1   Points to remember from the element definition

◆ The element is designed to measure both the traditional formal requirements to manage people and the emerging patterns of teamwork, project leadership and leadership in alliances.
◆ The element should be assessed on the basis of best overall fit, not by matching a few words.
◆ Degree 4 is not necessarily the first level of supervision.
◆ Multi-disciplinary should be read to include multi-functional projects. This could include leadership of very complex projects with multiple sub-projects.

3.2   Some of the key activities in Librarians' work that *often* pertain to the element:

◆ Project management
◆ Coaching and orientation of co-workers
◆ Management of a library or unit within a library
◆ Day-to-day supervision and management, including establishing goals and priorities, scheduling and assigning work, evaluating work
◆ Determining human resource requirements and authorizing resource allocations
◆ Formal HR decisions, such as staffing and training planning
◆ Chairing interdepartmental/international/inter-jurisdictional/bilateral committees
◆ Managing and monitoring consultants
◆ Managing consultation processes with a team of people
◆ Participating on teams and committees
◆ Providing skill development of co-workers through technical guidance.

3.3   Common pitfalls with this element:

◆ Training of staff who are not members of one's own team, including staff outside the library, is information for use of others, not leadership.
◆ There is some tendency to overlook informal leadership in project management, when the project leader does not have delegated authority for HR decisions.
◆ Leadership in teams where there is not a formal reporting relationship can still be considered leadership.
◆ Concern and responsibility for well-being, learning and development of the employees in one's team falls under Leadership. It is not considered Well-being of Individuals.
◆ Work associated with selection of contracted service providers (such as development of an RFP, review of bids, etc) is information, not leadership.
◆ Similarly, work on some stages in the staffing process, particularly where the contribution focuses on subject matter expertise, is a responsibility for information rather than leadership.
◆ There is a tendency to overlook the managerial responsibility in library work and focus on the functional aspects of the work.

3.4   Linkages

Responsibility for leadership of human resources demands certain skills and effort. Look for insight into the responsibility for leadership in the descriptions of these elements (and vice versa).
◆ Leadership responsibilities generally imply some management or project management knowledge in Job Content Knowledge Application.

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- Leadership responsibilities, particularly at higher levels, are often associated with some Money responsibilities, particularly on planning and budgeting.
- Leadership responsibilities associated with project management may also involve responsibilities for planning and budgeting and for acquisition of goods and services.
- Leadership responsibilities also generally require contextual knowledge of one's own unit at least to 3 and often to 4 or 5.
- Leadership may also necessitate some contextual knowledge of Public Service HR policies and processes. However, for members of the LS community, this contextual knowledge is likely to be of less depth than contextual knowledge for a specific area of subject expertise or librarianship.
- Coaching and developing members of one's own team is part of leadership. Training and advising or guiding others (including users) is part of Information for the Use of Others.
- Communication – depending on the nature of the interactions with staff, both Communication In and Communication Out skills may be required above degree 1. However, do not assume that all leadership communications go above level 1.
- Intellectual Effort – aspects of leadership work requires dealing with multiple HR or organizational problems often simultaneously.
- Psychological/Emotional Effort – leadership, particularly in a change-management situation, could require psychological/emotional effort.

3.5   Sample Work Characteristics

Sample Work Characteristics	Rating
Participates in project teams (cataloguing, reference, acquisition, circulation, program) meetings and committees to share ideas and expertise with others.	2
Provides coaching and orientation to co-workers to contribute to their skill development. Responsibility shared with other library staff.	2
Coordinates and facilitates meetings and discussions. Work includes identifying potential participants and arranging for their attendance, establishing meeting and session agendas and timetables, tracking progress on issues, ensuring follow-up on action items and sharing information.	3
Manages the on-going activities of a (*Collections, Reference etc. -specify*) team and assists team members in providing efficient service to clients. The work includes coaching, recommending training, approving leave and overtime and evaluating the work of team members.	4
Manages and motivates section staff comprised of different work groups (for example, circulation groups, reference groups); plans and establishes goals, objectives, priorities, work and training plans; transmits corporate values and ethical leadership; assigns tasks; monitors progress and provides feedback; provides career guidance, advancement opportunities and mentoring; identifies human resource requirements; reallocates resources within the section and conducts staffing activities as required; completes performance appraisals and reviews staff members, schedules, coordinates and monitors health and safety issues within the section. The responsibility is not shared.	5
Establishes and leads intergovernmental and private sector multi-disciplinary teams which analyze, evaluate and advise on information/library management and information product development and acquisitions; tests and procures commercial products; sets quality and access standards; improves delivery arrangements; and develops promotional material. Sets goals, objectives and the work schedule and secures financial resources to carry out work.	6

Sample Work Characteristics	Rating
Leads, chairs, and facilitates on-going working groups and teams for special large-scale multi-disciplinary and multi-tier projects which span several departmental/agency libraries including establishing project goals and priorities, authorizing HR requirements for and recruiting human resources, assigning and monitoring the work of staff, colleagues and contractors through team leaders. The position requires providing functional expertise and providing advice to team leaders in order to guide the direction of the project and program outcomes.	6

4.1   Points to remember from the element definition

♦ The element is designed to measure responsibility for money in terms of modern comptrollership.
♦ It is not the amount of money that is the focus of attention but the *financial risk management* that the work entails.
♦ Think of risk in terms of the latitude that exists with respect to the spending of money.
♦ The rating scale is a cumulative progression. This means that a rating at a higher level assumes that the extent of responsibility described in lower degrees is included.

4.2   Some of the key activities in Librarians' work that *often* pertain to the element:

♦ Project planning and budgeting
♦ Acquisition planning, budgeting and spending of funds
♦ Capital planning for space and organization of space, equipment etc.
♦ Analysis and negotiation of collection and systems opportunities
♦ Negotiation and acquisition of department-wide service contracts.

4.3   Common pitfalls with this element:

♦ Acquisition of money refers to work in the revenue stream. It can cover negotiation of cost-sharing arrangements with other parties. It is not intended to cover all internal financial flows. The focus is on the acquisition of funds from "market-like" arrangements.
♦ Not considering the risk and latitude in assessing the extent of responsibility.
♦ Confusing information responsibility with money responsibility.

4.4   Linkages and Other Tips

Responsibility for money demands certain skills and effort. Look for insight into the responsibility for money in the descriptions of these elements (and vice versa).
♦ Money responsibilities also generally require contextual knowledge of one's own unit at least to 3 and often to 4 or 5. Money responsibilities may also require contextual knowledge of the department and government and Treasury Board guidelines and federal acts such as the *Financial Administration Act.*
♦ Distinguish between the responsibility for the development, operation and maintenance of assets, including asset disposal, and the financial aspect of planning and budgeting for the asset life cycle.

♦ Intellectual effort may need to be exerted in complex financial analysis associated with the delivery of responsibility for financial results/risk management in business planning.

♦ Recovering debts (funds that are owed for photocopies, lost books etc.) is often overlooked under B for Acquiring Funds. The decision not to collect these debts (i.e. to write off debts) should also be included in this section.

♦ Cost recovery would include the recovery of expenses for services provided to clients outside the department/agency. For example: providing access to special collections, information search tools or extensive searches requiring use of tools/collections/materials where fees apply.

♦ Management of subscriptions is a major cost factor and should be included under Planning and Controlling.

♦ Library work covers the full range from degrees 1 to 5 under Planning and Controlling; however, most LS work will be at degrees 2 to 5.

♦ There is money responsibility in all the streams of library and information management work, although not all to the same depth. For example, it would be expected to be greater in the Acquisition and Collections Development stream and less in the Reference stream.

♦ The risk is influenced by the content of the collection.

♦ In general, library work would require responsibility at degree 2 to 4 for Spending.

♦ In general, degree 5 responsibility for Acquiring Funds is more likely to seen at the National Library than a departmental/agency library.

♦ As you move from degree 1 to degree 5, complexity increases from tracking expenditures and making simple price comparisons to the formal responsibility for managing larger and more complex budget components or entire budgets.

4.5 Sample Work Characteristics

Planning and Controlling	Rating
Monitors the status of the budget for expenditures for services and makes recommendations to Library management for future budgetary requirements, in accordance with departmental financial policies.	A2
Conducts cost-benefit analyses and cost estimates according to the requirements of the project proposals for the development of automated systems and products and to ensure effective use of available resources (print, online, C-ROM's). There is latitude to recommend from a number of options.	A3
Plans and budgets client information programs, services and projects and recommends resource requirements to client mangers for approval. This involves costing forecasts, cost-benefit and risk analyses, recommending resource levels.	A3
Directs and conducts long-range financial planning for strategic and operational needs. There are multiple responsibility centres. Assessment is conducted to determine the strategic approach that best meets organization objectives.	A4
Responsible for preparing the budget, which consists of several responsibility centers. Responsibilities include financial and operational planning, forecasting, recommending resource levels, monitoring budgets and expenditures, managing collections budget, salary and operational budgets to ensure that available funds are optimally used and that no overruns occur. Full authority to manage the Directorate budget; extensive freedom to affect budget planning decisions and to reallocate resources within broad parameters set by the Director General, and in concert with other senior managers in the branch.	A4
Approves the plans and budgets prepared by all Library sections: prepares business cases for additional funds; establishes priorities and budget allocation levels for all budgets; monitors commitment levels against plans and forecast; and allocates, reallocates funds across different budgets.	A5

Acquiring Funds	Rating
Responsible for the cost recovery for services provided to agencies and researchers outside the Department. While an established rate structure is in place, there is latitude in the applications of such guidelines, which involve examining different courses of action guided by agency practices for cost-recovery.	B3
Has full latitude to consult and negotiate with federal, provincial and non-government library organizations for joint funding arrangements and cost-sharing agreements, including the development of consortia to make information available for research and	B4

Acquiring Funds	Rating
teaching purposes at discounted rates, or the development of national site license in order to allow access to clients of government and non-government research organizations at advantageous cost. These are high dollar-value contracts and failure to negotiate the best value for money impacts on ability to acquire other resources.	

Spending Funds	Rating
Approves all expenditures for purchases (of books, periodicals, microforms, CD-ROMs, newspapers etc.) to ensure that the budget is appropriately spent, that goods are received and paid for, that claims are made for missing materials, and that the most cost-effective vendors/suppliers are selected for supplying the goods.	C3
Contracts, commits funds, and approves payment for professional services and goods, with the authority to choose the most cost-beneficial supplier for the Section and latitude to refuse payment if work does not meet deliverables specified in the contract.	C3
Responsible for the financial management of the Library. This includes approving expenditures for salary and operating costs and includes latitude to reallocate funds between budgets to achieve departmental goals and objectives to address changing priorities.	C4

5. Element 5   Physical Assets and Products

5.1   Points to remember from the element definition

♦ From an LS perspective, you should think of both tangible assets and less tangible assets such as databases and networks. In these situations it is the content itself which is the asset, not only the physical shell of the content. Examples of this are:
  - solution databases such as REMEDY, which tracks difficult research solutions and becomes a knowledge repository;
  - portals, which are centralised knowledge bases for clients to improve their access to bookmarks and vetted sites, database of experts contacts, filtered real time information and target information sources,
  - the Depository Services Program, which is charged with managing an institutional network of some 900 libraries that provide the Government of Canada with a public access infrastructure. The network guarantees users no-cost access to government information objects in environments where they are properly supported, fully managed, effectively made accessible and housed, and where the needed technical hardware and information experts are available. This infrastructure represents a substantial saving to the government as it is largely funded by other levels of government and sources, but is available to the government in exchange for the services noted above. Similar examples can be found within Industry Canada (LibraryNet, SchoolNet; VolNet), within Service Canada (in person sites), etc.
  - the collection as the physical asset itself. The departmental library collection, which serves as repository of the department's history and is a unique collection of information in focused areas of research, which cannot found anywhere else in the world. An example of this is the history of Canadian foreign diplomacy. The content, and its organization, is of value itself and requires constant fine-tuning in terms of addition and removal. It is the notion of an asset or product that can be used productively that is important in this context.
♦ The element is designed to measure both the extent of responsibility and the impact of the asset or product. Impact is measured in terms of how readily the asset or product can be replaced.
♦ Information infrastructure is a critical asset of government.
♦ In the LS world, it is important to consider *both* the responsibilities for content (information for the use of others) and the responsibility for the infrastructure that stores and transmits information. Some LS jobs will rate well on both elements.

5.2   Some of the key activities in Librarian work that *often* pertain to the element:

♦ Library system transaction and data updating – particularly where the data are used by others
♦ Data archiving and data recovery activities
♦ Library systems and database development
♦ Library system testing
♦ Maintaining and protecting books, periodicals and archival material
♦ Holding collections for clients while assessing value or cataloguing on their behalf.
Librarian activities in Physical Assets and Products have parallels in other occupational areas in the Public Service, particularly in work that maintains and develops the infrastructure on which others depend in doing their work. For example, in the LS world, as in the many parts of the Public Service, the work often relies on a computer as a tool. The personal computer is generally not the asset that is of primary interest in rating LS work on Physical Assets and Products. Thus,

while responsibility for the tools would be considered responsibilities for assets for own use and rated at A1 or A2, the work would also likely have responsibilities pertaining to the larger infrastructure, and rate higher on that responsibility (ranging to B4, depending on the situation).

5.3 Common pitfalls with this element:

♦ Element is often written poorly, with minimal coverage of the actual extent of responsibility, the nature of the asset or product and how colleagues or clients may depend on that asset or product. The tendency is to list "things" rather than describe the productive use of the asset or product and the responsibility the work has for developing, operating and maintaining that asset or product.

♦ You should never assume that a particular key word is the sole indicator for a rating. This is very much the case for Physical Assets and Products. Consider the scope of the responsibility. Approving the purchase of the asset in a capital plan is not the same as having ongoing custody and responsibility for safeguarding that asset.

♦ The ease of replacing the asset or products can be particularly challenging to articulate for intellectual property-type assets. Consider that assets or products acquired "off the shelf" are likely more replaceable than those that were heavily customized (other things being equal).

♦ While it is true that data that have been backed up are not irreplaceable, the data may still be very difficult to recover in a timely manner.

5.4 Linkages

Responsibility for physical assets and products, like all responsibilities, tends to demand skills and effort. Look for insight into the responsibility for physical assets and products in the descriptions of these elements (and vice versa). A high degree of responsibility in any element must draw knowledge from either Job Content Knowledge Application or Contextual Knowledge. Other linkages to consider are:

♦ Contextual Knowledge – knowledge of the client organization (the department) is typically required to exercise physical asset and product responsibilities around support to clients. Similarly, knowledge of commonly used library software programs and other tools could fall into Contextual Knowledge D.

♦ Communication – depending on the nature of the interactions with clients, both Communication In and Communication Out skills may be required.

♦ Money – Acquisition of an asset could entail financial planning and spending responsibilities. Indeed, in some LS jobs, these will be more significant responsibilities.

♦ Psychological/Emotional Effort – front-line client service roles, particularly in a problem solving or troubleshooting situation dealing with very frustrated or dissatisfied clients, could require psychological/emotional effort.

♦ Intellectual Effort – to design and create new knowledge bases particularly with the proliferation of electronic information where there may not be precedents, or where sheer volume of data makes extracting information from it challenging.

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5.5 Sample Work Characteristics

Sample Work Characteristics	Rating
Shared responsibility for the use, care and general maintenance of the cataloguing database used by staff and clients to search the library's holdings. It is easy to replace by reloading the daily back-up, but as much as a day's work would have to be redone.	A4
Uses, cares for and maintains the automated library systems (e.g. database, hardware, software, systems upgrades) and electronic information products and services (e.g. Intranet/Internet-based services, CD-ROM services) which are used by the library staff to provide services to internal and external clients as well as directly by internal and external clients, including the public. Some of these items can be expensive, but it is easy to replace databases by reloading the back-up (daily or weekly) and only one day or week's work would have to be redone.	A4
Designs and maintains electronic information portals[3] to improve the reuse of intellectual capital within the organization and provide access to unstructured information and to human expertise. Full latitude to create the design elements and approaches used to develop this single access point to the department/agency's internal data as well as the integration of access to external information sources (e.g. the Web, remote databases, information feed services). The work requires creation and customization for the individual user and provides services and features that facilitate the creation, sharing, and use of organizational knowledge. Since this work also requires the creation of new taxonomies[4] to organize the information access points and the creation of metadata[5] to identify the information to be retrieved, it may be difficult to replace in a timely fashion.	B4
Creates specialized services and products (databases, Web sites, intranet sites, precise bibliographies, pathfinders and summaries, including unique subject-related information content and search/navigation tools) to meet the highly specialized research needs of library clientele, both from within the federal government and national and international clients.	B4
Shared responsibility for use and care of the library collection (e.g. books, periodicals, CD-ROMs) by staff and clients. Such library collections are difficult to replace and costly. Replacement of some items may involve significant delays, is a time-consuming process and causes disruption to service to staff and clients.	B4
Shared responsibility for use, care and preservation (environmental controls, disaster planning, restoration, etc.) of the library collections for use by library staff and clients. Some of these items (e.g. out-of-print titles) may be irreplaceable while others (manuscripts, photographs, ledgers, letters, personal papers, etc.) are unique and therefore irreplaceable in their original format.	C4
Responsible for ensuring the security of collections owned by others and in the library's temporary custody while being evaluated by the library for possible integration into the	C5

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[3] Portal: Web sites that serve as starting points to other destinations or activities on the Web. Portals commonly provide services such as e-mail, online chat forums, searching, content, and news feeds. A Web site considered as an entry point to other sites, often by being or providing access to a search. An entrance or a means of entrance: "the local library, a portal of knowledge."

[4] Taxonomy is the study of the classification of materials according to their resemblances and differences. The science or technique of classification.

[5] Metadata is specific information about the time, place and business function of the record, the ways the data are structured and the content of the communication itself. This metadata guarantees that the record will be usable over time, only accessible under the terms and conditions established by its creator, and have properties required to be fully trustworthy for purposes of executing business.

Sample Work Characteristics	Rating
library collection or other uses. These collections are unique sets of documents, texts and other materials often held in private collections of notable experts in a particular field of study and could not be replaced if lost or damaged.	
Shared responsibility for the stewardship, security, and application of preservation methods and proper use of the library collection. Some of these items may be expensive, fragile and/or irreplaceable. Publications may be in expensive formats such as livres d'artistes, may be fragile such as Braille items or on brittle acid paper, may be one of a kind such as those signed by the author (who may be deceased), rare, out of print or have special, unique bindings. These collections represent the published heritage of Canada, of national interest and importance to Canadian history, culture and identify, collected and preserved for the use and benefit of the people of Canada.	C6

6. Element 7   Job Content Knowledge Application

6.1   Points to remember from the element definition

♦ Job Content Knowledge Application focuses on the knowledge commonly associated with a specific occupation or set of occupations. For an accountant, this is accounting. For a nurse, this is nursing. For a Librarian, this is library and information management science.

♦ The UCS recognizes that value lies in the *application* of relevant knowledge to carry out the responsibilities of the work. It does not focus on the simple possession of knowledge. Be careful to consider whether the knowledge is required in the work or simply happens to be the knowledge an incumbent happens to bring to the job.

♦ In Librarian work, as in many other areas of work, people often acquire valuable knowledge through work experience. The focus is on the requirement for that knowledge, not on how it was learned. Knowledge can be acquired through training, education and/or experience.

♦ Breadth of job content knowledge is measured by articulating and measuring knowledge in up to four unrelated areas.

6.2   Many key activities in Librarians' work pertain to job content knowledge.

♦ Researching
♦ Providing advice to professionals in other organizations
♦ Project managing
♦ Managing others – this would include project management, supervision, human resource management, financial management
♦ Library systems design, development, and maintenance: information technology, data base management, and
♦ Knowledge management – managing, organizing, disseminating, sharing and preserving corporate knowledge and information resources in electronic or hard copy format.

Other examples are government documents and data librarianship. Although it is possible to take courses that cover the theoretical knowledge required to be a specialist in either area, the knowledge is generally acquired directly through job experience. As a general rule it takes several years to develop knowledge and be skilled in reference work in these areas to be considered a government documents specialist. The body of knowledge required to do this work cannot be acquired in a classroom alone. It must be gained by doing the job.

The knowledge that Librarians may require about the business processes or strategies (such as drug regulation in Health Canada or pension administration in HRDC) would generally be regarded as contextual knowledge. Depending on the situation, it could be contextual knowledge A, B or C. Librarians require knowledge of the systems, policies, practices and standards used in the private sector. This is also contextual knowledge rather than job content knowledge.

Unrelated areas of knowledge:

It is expected that work descriptions with unrelated areas of knowledge within Library Science will be a common occurrence. Examples of this include music and law, where knowledge would normally be acquired through a different and unrelated combination of education, training, and experience.

Primary Area of Knowledge	*Information Management and Library Science* – *Knowledge applied in all aspects of library work including:* - *Acquisition and development* - *Classification and cataloguing* - *Research methodology* - *Information design and information organization theory* - *Marketing and client service relations*
Area of Unrelated Knowledge	*Subject Area –(e.g. law, music) Knowledge applied in order to understand client needs and verify authority and relevance of information and data in order to provide effective, tailored service to client*
Area of Unrelated Knowledge (for some Librarians this will be part of the Primary Area of Knowledge)	*Computer Systems and Application Development* – *Knowledge applied in advising application developers on tools, techniques and 'state of the art' processes for the creation of a 'best of breed' software for application development of library tools and client transaction process or the storage and retrieval of library information*
Area of Unrelated Knowledge	*Project Management Knowledge applied to implement systems projects to meet library requirements including resource allocation and budgeting, time management, process charting etc.*
Area of Unrelated Knowledge	*Management Knowledge applied in order to manage including human resource management, leadership concepts and practices, change management theories and practices, financial planning, budgeting and controlling, asset management, operational and strategic planning theories and practices.*
Area of Unrelated Knowledge	*Public Administration applied to the understanding of the legislative process, the governance and accountability structure for public sector organizations.*

6.3   Common pitfalls with this element:

♦ Work descriptions often outline many areas of knowledge, some of which are really contextual knowledge.

♦ If the work delineates too many relatively narrow and interrelated areas of knowledge, the raters may not be able to clearly discern the major areas of knowledge.

♦ Some raters equate this element with formal education requirements or acquisition of a credential and do not consider the level of further knowledge acquired through experience. Remember that the highest ratings on the scale require considerable experience.

♦ In particular the depth of the knowledge required may not be clear. The raters may pick up on a few more generally understood aspects of the work, in effect, stereotyping that work. Given the rapid change in the work requirements for librarian positions it is particularly important to clearly describe the depth of knowledge required and why – that is, "in order to."

6.4   Linkages

Job content knowledge is generally applied in delivering on responsibilities. Look at all the responsibilities for further insight into job content knowledge requirements. If all the responsibilities are rated fairly low, it is generally safe to conclude that the job does not require deep job content knowledge. On the other hand, work with very high ratings in any of the

six Responsibility elements would tend to draw on knowledge from either job content knowledge or contextual knowledge.

- ♦ Intellectual Effort – Library research and analysis require varying degrees of intellectual effort. Deep job content knowledge is often applied in solving complex problems or making complex searches or systems analysis in particular subject areas or for original cataloguing.
- ♦ The contribution made by librarians to the work of other professionals is often "hidden" and not recognized. It is the invisible underpinning to research and other problem-resolution processes.
- ♦ It is very common that Librarians have requirement for three subject areas (library science, technology, and a subject matter area such as history or law etc.) In addition, knowledge of management or project management may also be required.
- ♦ The depth should be clearly linked to the key activities.

6.5   Sample Work Characteristics

Information Management and Library Science	Rating
The full range of library work includes degrees 1 to 5. While Librarians perform work at degrees 1 to 5, it is often completed by other library workers.	1 - 5
The work requires knowledge of the concepts, theories, principles, methods and standards of library science and information gathering, analysis, and dissemination, which are applied to complex approaches of library functioning. This knowledge is required to develop selection criteria for library acquisitions services, to identify new research and evaluation process for information resources, to conduct complex research, analyze, evaluate and assess new information resources including the development of metadata, to design new methods of collection development and preservation in a new area of collection.	6
Knowledge of the theories and principles of library and information science to conduct research, analyze, evaluate and assess information resources and to locate and organize information and to conceptualise new methods/techniques to develop and design more effective tools in accessing and retrieving material in response to client requests. This knowledge is required to develop and analyze policy proposals, options and recommendations, and provide advice, to participate in intra/interdepartmental committees and project teams and to recommend new approaches to issues and problems encountered by unit and team members.	6
Knowledge of the theories and principles of knowledge organization with respect to subject analysis and retrieval is required in order to design, apply and evaluate various methods for accessing documents and information, using controlled vocabularies and natural language (thesauri, hypertext, expert systems), and to identify and solve problems in creating and organizing bibliographic records for monographs, serials, government documents, audio-visual materials and other information sources, in both manual and automated environments.	6
The work requires knowledge of theories, principles, and techniques of library and information science and information systems: the nature, organization, storage and retrieval of information, where it is found, and how it is used, and the application of new technological developments to the preservation and communication of information. This knowledge enables effective administration and provision of information services and is normally acquired through education and extensive experience.	6
The work requires knowledge of the principles and practices of developing and maintaining collections in order to critically examine the generation, production and use of primary, secondary and tertiary information in the users' field(s) of	6

Information Management and Library Science	Rating
interest and the effects of changes in book and journal publication, marketing and use due to electronic publication. New and innovative approaches for the acquisition of library materials are developed, enabling a greater degree of customization to meet client/user needs for specific information within the limits of available resources.	
Knowledge of library and information management science including statistical and linguistic methods for automatic indexing and classification, Boolean and probabilistic approaches to indexing, query formulation, and output ranking filtering methods in order to formulate complex search/research strategies with multiple operators and parameters, using a wide range of databases, each with a unique interface, and net accurate results ordered by level of accuracy. This knowledge is critical when conducting research with limited budgets on commercial databases, which charge hundreds of dollars per session.	6
Knowledge of theories and methods for search and retrieval of text and bibliographic information, including analysis of the relevance and usefulness of information to the search topic in order to prepare bibliographic references, including annotations and briefing materials and to participate in project teams, working groups and consultations of issues.	6
The work requires knowledge of theories and principles, practices, techniques and standards of information management and library science to design and develop new information management tools and systems *(such as new classification schemes, information organization and design of portals, new techniques for searching and validating information materials etc.)*.	6
The work requires a complete and thorough knowledge of theories, principles, and practices of database management systems and technologies. The knowledge is applied in the creation of library databases. The position provides expertise and advice to other library staff and IM/IT managers around library database design and management issues, including the appropriate integration of various databases.	6
Work requires knowledge of departmental user behaviour, the information environment, politics and dynamics, and existing technological infrastructure and experience in the organization, management and development of complex information infrastructures in order to create new approaches and models of information and knowledge management that require unique information structures, and taxonomies in order to capture, share and preserve corporate knowledge sources. Because much of this knowledge is now generated electronically, few if any, models currently exist to serve as models and case studies for other organizations in the Public Service or the private sector. These new models provide departmental staff with the means to manage their work in a more integrated and effective manner by leveraging the information tools and technology at their disposal.	7
The work requires expertise in the theories, principles, and practices in information management, including emerging trends and standards, in order to ensure congruence between the departmental business strategy, the department's IM/IT strategy and the library's IM/IT strategy in order to influence the directions of departmental business strategy through the adoption of appropriate new library IM/IT. The work is expected to serve as a primary source of knowledge for others in the department, with respect to information management and library information technology strategies and in their development and implementation.	7

Information Management and Library Science	Rating
Knowledge and experience are required to create new approaches and models of information structure and taxonomies in order to capture, share and preserve corporate knowledge resources. Because much of this information is now generated digitally, few if any models currently exist; this work will serve as models and case studies for other organizations in the public and private sector. The work requires advanced specialist expertise in the theories, principles, and practices in information and knowledge management to create new theories, approaches, models, and strategies for the organization, control, management, and accessibility of information. In this position, the incumbent is expected to create and lead the development of these new strategies, approaches, models, and the organization's efforts, contributions, and thinking in this regard. Much of the work involved is new and original and leads to outcomes such as new taxonomies[6], new classification and description schema, new indexing approaches, and new visions for managing and accessing information.	8

[6]Taxonomy is the study of the classification of materials according to their resemblances and differences. The science or technique of classification. Cataloging: Providing access to large volumes of information is an intellectual problem that historically has been solved in the print environment by abstracting (providing a summary) and indexing services and by library cataloging, with rules and procedures to insure consistency and accuracy. These tools, adapted to suit new needs, will work for electronic information as well.

Job Content Knowledge Unrelated Areas

Management	Rating
Knowledge of *supervisory* practices is required in order to coordinate and assign work to employees to accomplish set objectives.	3
Knowledge of *project management* techniques to schedule specific tasks in order of priority, monitor deliverables, identify slippage, and implement corrective action in order to meet systems project deadlines.	3
Knowledge of *management, business and administrative* practices is required to establish business plans and priorities for the unit in order to accomplish objectives, which are guided by operational requirements.	4
Knowledge of *management practices* is required to initiate and coordinate work, to set priorities and operational goals to accomplish objectives; to mange resources through subordinate team leaders; to plan and authorize human resource levels; and to manage a budget.	5
Extensive knowledge of management, business and administrative theory is required to establish the overall business direction of the library, identify new opportunities to provide services, authorize human and other resources, re-design work process and practices and the organization of the library structure to meet changed priorities and technological improvements; and, to contribute to broad objectives and priorities of the department/agency; to negotiate annual allotments and additional resources based on operational need.	6
Adult Learning –Training Methodology	**Rating**
Knowledge of *presentation techniques* to present the library's interests in departmental, interdepartmental, and/or inter-library committees at conferences and meetings of professional organizations and to provide training and orientation sessions to library staff on automated library systems.	4
Knowledge of *adult learning* techniques and methodologies, computer-based training and self-paced distance learning development and application in order to design new learning tools. These "virtual" learning products offer learners an opportunity to train on a flexible schedule, connect to subject matter experts, facilitators and courses independent of time and locations restrictions. Distance learning and computer-based learning with facilitator interaction is a developing field. Much of this work is new and unique.	5
Marketing	**Rating**
Knowledge of principles, theories and methodologies of marketing and promotion, including: the conduct of market studies and needs analysis; trend tracking; market or product testing, awareness and acceptance; and the selection and application of appropriate research/survey methodologies and instruments. This knowledge is required to develop, implement and direct effective marketing strategies and to create library information products, programs, services and recommend new information products as well as related communications and promotion activities.	6
Examples of Subject Specialities	**Rating**
Law: Knowledge of: electronic and traditional legal research methods;, legal concepts and terminology; primary and secondary sources of legal and legislative information; trends in the discipline of law; the structure and documentation of two Canadian legal systems and the systems of other common and civil law jurisdictions (e.g. United States, United Kingdom, Australia, New Zealand, France and Belgium); and the structure and history of federal and provincial statutes and regulations. This knowledge is required: to understand questions posed by clients; to respond to their request for information; to guide clients to appropriate sources of information; to provide advice on research methods, to instruct and	4

guide clients through the research process; to conduct research on legal issues; to assess and meet present and future client needs with respect to legal information; and to provide information on questions relating to comparative legal issues.	27
The work requires knowledge of legal research methods and legal terminology as well as the legislative process in order to supply research and information to senior policy analysts to support the interpretation and analysis of federal, provincial and territorial legislation or to support the development of new legislation.	4
Music: Knowledge of Canadian and international music history, music literature and repertoire, and internal and external sources of information in various media and a general knowledge of the history, geography and cultural heritage of Canada, to analyze client's requests and conduct research to identify correct information.	4
Music reading skills and a knowledge of music theory and terminology to comprehend clients' requests to identify and compare copies of printed music, and to provide required information.	5
Government Documents Knowledge of the principles and variety of collection, classification, preservation and conservation methods required for the treatment of government documents in order to make informed decisions concerning collection, organization, and methods for long term preservation of government documents.	5
Information Technology (this could also be part of A: primary Job Content Knowledge)	
Knowledge of automated library systems to evaluate, test, implement and assess system requirements, to provide Requests for Proposals and prepare specifications for custom programming to the system. Knowledge of database-generated reporting modules to program and generate custom reports from the Library Management System in order to provide staff with support in extracting different views of the information entered into the system.	5
Trends, emerging standards and technological develops in the information management and library field such as digital library theory, practice, and technologies, social legal and political environment for digital libraries, current and emerging World Wide Web applications in library settings, and electronic document management technology. This knowledge is required to analyze, interpret, evaluate and recommend or promote standards-based applications in a library setting that will have maximum long-term viability and to develop new approaches to the application of technologies and standards in libraries.	5
Theories, principles, methods, techniques, and applications of information management and library network technologies and standards (e.g. the Internet, the Web, TCP/IP and ISO OSI applications standards, document format standards, document encoding standards, metadata standards) to act as an expert resource to advise development teams, senior management and other personnel and through CIDL(Canadian Initiative on Digital Library), the Canadian library community.	7

7.1   Points to remember from the element definition

♦ Contextual knowledge is commonly acquired through practical experience in an organization. It is the knowledge of people, organizations, external circumstances, and legislation and regulations needed to get the work done.

♦ As with job content knowledge, the UCS recognizes that value lies in the *application* of relevant knowledge to carry out the responsibilities of the work, not in the simple possession of knowledge. Work descriptions should contain some actions or decisions performed with this contextual knowledge, in order to enable a good assessment of the application of that knowledge.

♦ This element measures six areas of contextual knowledge. They are: one's own work unit, one's own department or agency, other government departments or agencies, Canadian private sector and other public sectors, international public and private sectors, and legislation and regulations. Each of these areas is measured separately. The element recognizes that a requirement for extensive contextual knowledge in one area does not necessarily imply a requirement for similar depth in another.

♦ For Librarians, contextual knowledge requires understanding of the processes and operations of the client organization.

♦ Contextual knowledge can include knowledge of specific applications such as the department's financial or HR application. Depending on the situation, such knowledge could be measured under own unit, own department or agency, other federal government departments or agencies, or even Canadian private sector and other public sectors.

7.2   Many key activities in Librarians' work pertain to contextual knowledge.

♦ Management would necessitate knowledge of own work unit and how things are done in the unit

♦ Policy development would necessitate knowledge of the department/agency's business context

♦ Advisory work may necessitate knowledge of the department or the wider Public Service

♦ The knowledge that Librarians may require about a business processes (such as drug regulation in Health Canada or pension administration in HRDC) would generally be regarded as contextual knowledge. Depending on the situation, it could be contextual knowledge A, B or C.

7.3   Common pitfalls with this element:

♦ Work descriptions often assert requirements for each area of contextual knowledge, but with little or no indication of how this knowledge is applied.

♦ Work descriptions may cover the contextual knowledge requirements in such global terms that it seems likely that the only real application of that knowledge could be at the general awareness level. Some degree of specificity is valuable in clarifying the depth of contextual knowledge.

♦ Some work descriptions are so specific in the outline of the acquisition of the contextual knowledge that they imply that it is the knowledge an incumbent happens to bring to the job rather than required in the work.

7.4   Linkages

Contextual knowledge is generally applied in delivering on responsibilities. Look at all the responsibilities for further insight into contextual knowledge requirements. If all the responsibilities are rated fairly low, it is generally safe to conclude that the job does not require deep contextual knowledge. On the other hand, work with very high ratings in any of the six responsibility elements would tend to draw on knowledge from either job content knowledge or contextual knowledge.

♦ Information for the Use of Others – often necessitates some contextual knowledge of the "others" such that the information can be appropriately delineated.
♦ Leadership of Human Resources – generally necessitates some contextual knowledge at least of the own unit.
♦ Money – may necessitate contextual knowledge of the department, the wider Public Service or the private sector, depending on the situation.
♦ Communication – may necessitate some contextual knowledge to enable interpretation (communication in) or persuasion (communication out).

Progression of the Degree of Depth Scale

Degree	Interpreting the progression
2	Basic: need to know enough about the *context area* to be aware that something exists and know where to go to get more information about *it*, and to be able to ask for or look up more information.
3	Limited: need to know enough about the *context area* to know what needs to be done and to be able to follow procedures to get it done.
4	Moderate: need to know enough about the *context area* to make, or share in, decisions about *it (the context area)* or to choose courses of action *relating to that area*. For example: ♦ if the context area is "D" – *Canadian private sector and other public sectors* – there is a requirement to know enough about Canadian private sector and other public sectors to make, or share in, decisions about Canadian private sector and other public sectors or to chose course of action relating to Canadian private sector and other public sectors.
5	Significant: need to know enough about the *context area* to make recommendations that will affect *its* structure, mandate, policies or regulations. For example: ♦ If the context area is "E" – *International public and private sectors* – there is a requirement to know enough about international public and private sectors to make recommendation that will affect international public and private sectors structure, mandate, policies or regulations. ♦ if the context area is "F" – *Legislation and regulations* – there is a requirement to know enough about the legislation and regulations to make recommendations that will that will affect the legislation and regulations.

7.5 Sample Work Characteristics

Own work unit	Rating
Knowledge of the structure, work practices and culture of the Technical Services section and its activities and services in order to provide library IT advisory services. Since some client problems cross boundaries, this knowledge is needed to recommend appropriate solutions, to ensure effective and efficient information sharing and coordination of activities among unit staff, and to avoid duplication of effort.	A4
Knowledge of the roles and responsibilities of the Technical Services section and its role within the Library in order to develop section procedures; to plan, organize and direct section operations; to make changes to existing section structures, policies, or mandates when necessary; to assess production; and to do, or advise on, performance evaluations annually.	A5
Own department or agency	**Rating**
Knowledge of departmental planning, budget and financial management procedures, administrative systems, accountability frameworks, and reporting requirements to plan, organize, and manage the activities of the unit congruent with the department.	B3
Knowledge of the organizational structure of the department, its goals, objectives and priorities in order to select best options to provide service and to effectively consult and collaborate on the development of information services, products and technologies for the department to benefit clients.	B4
Knowledge of the organization, mandate, programs and policies of the department to understand its goals, objectives, and priorities in order to align library services and collections accordingly and thereby assist clients in achieving corporate goals.	B4
Specialized knowledge of the subject areas relevant to the department to be able to revise policies, processes, tools to ensure that information materials and processes reflect departmental requirements to ensure that there is maximum access for clients.	B4
Other federal government departments or agencies	**Rating**
Knowledge of the roles, responsibilities and information resources of central agencies with respect to management of libraries, information resources and technology to coordinate services and contribute to the development of federal government policy for libraries and information technology.	C3
Knowledge of the mandate, structure, roles and responsibilities of central agencies and other federal government departments, in order to draw on their specialized information resources and knowledge, acquire new publications, verify accuracy and currency of published information, confirm the release of new information/statistics/data, navigate the departmental web site, use their library's catalogue to research material not held in the home department's library, and identify/consult and/or refer clients to subject specialists. In addition, a sound knowledge of the departments' library's collection and client service policies and standards are required to determine which departmental library to consult given the scope of a research request and the required turnaround time.	C3
Canadian private sector and other public sectors	**Rating**
Knowledge of the mandate and structure of libraries, commercial and public-sector bibliographic utilities/services such as AG Canada and Ontario Library Service Centre, Canadian university resource-sharing consortia, standards organizations and cultural institutions in Canada to provide support and to understand, select, modify or develop new services requirements for bibliographic and resource sharing services.	D3
Knowledge of Canadian associations and corporations related to manufacturing, distribution and exporting of goods and services, of their mandates and areas of responsibility, of the	D3

terminology used to describe various trade sectors and of the issues related to the reporting of specific trade sectors (e.g. trade in services) in order to conduct research for market feasibility studies for external business clients, to connect them to the appropriate subject expert or a potential partner for conducting business or to conduct research on behalf of departmental staff.	
Knowledge of the subject content and record quality of Canadian online data bases, such as SOQUIJ, Infoglobe, QL (or any other) and knowledge of the online databases of other Canadian libraries to conduct efficient and effective online searches on specific research topics, and to evaluate and choose those information resources which best match the requirements of the client.	D3
Knowledge of the subject content and record quality of Canadian bibliographic utilities and their databases, such as AG Canada and knowledge of the databases of other Canadian libraries (including universities and provincial counterparts) to conduct efficient and effective searches for bibliographic and authority information, and to evaluate and choose those records which are the best match for the documents in hand and download them into the cataloguing module.	D3
Knowledge of trends and developments in the Canadian publishing industry in order to select, evaluate and purchase or contract for information products and services. As the electronic publishing industry is in constant flux through company mergers, buy-outs and bankruptcies, keeping pace with the information marketplace requires ongoing monitoring. This knowledge is also required in negotiating with vendors for competitive rates for department-wide purchases of electronic information services, particularly where competitors' products offer similar content at comparable prices, or where product functionality is an issue	D4
Knowledge of the mandate, structure and services in Canadian public and academic libraries in order to negotiate and collaborate with colleagues in these organizations, on bibliographic record creation and distribution projects, Canadian standards development, and other joint projects in relation to the provision of services. The adoption of these standards, procedures, and agreements shape how services are delivered within those party to these arrangements.	D4
International public and private sectors	**Rating**
Knowledge of trends and developments in Internet-authoring specialized search engines, portals, portals and Web sites of relevance to the mandate areas of the department. This knowledge is required in order to effectively search for information on the Web (e.g. using the right type of search engine), to assess the accuracy and validity of information found on the Web, to coach and instruct clients in effective search techniques and strategies, to contribute to the development of research Web sites and portals for the library's Web site.	E3
Knowledge of other foreign ministries (e.g. U.S. Department of State, U.K. Foreign Commonwealth Office) and their local embassies and consulates, foreign organizations, universities, institutions, and libraries specializing in issues of relevance to the work of the department (foreign relations, international trade and investment, international security and disarmament, international law, etc.). The knowledge requires a sound understanding of their mandates, structures, subject specialties, information holdings, and publishing activities as well as contacts within their public affairs, publishing, information services and/or library units, in order to conduct research where the departmental library's holdings do not permit the satisfactory resolution to a complex research request, to acquire publications for the departmental library, to confirm the currency/accuracy of available information or late-breaking news, to locate subject experts, to effectively navigate their Web site or to direct clients. In addition, knowledge of the client service policies of the organizational libraries is required to determine which library to contact (e.g. Do they lend documents to other libraries? Is their library open to outside clients? Are they mandated to provide research	E3

support to member countries (i.e. the UN's Dag Hammarskjold Library)? Do they respond to research requests in a timely manner? Are their information holdings complete and up-to-date?	
Knowledge of trends and developments in the publishing industry in order to select, evaluate and purchase or contract for information products and services. As the electronic publishing industry is in constantly flux through company mergers, buy-outs and bankruptcies, keeping pace with the information marketplace requires ongoing monitoring. This knowledge is also required in negotiating with vendors for competitive rates for department-wide purchases of electronic information services, particularly where competitors' products offer similar content at comparable prices, or where product functionality is an issue	E4
Knowledge of the mandate, structure and contacts in major national libraries to negotiate and collaborate with colleagues in other countries on bibliographic record creation and distribution projects, international standards development, and other joint projects in relation to the provision of services. The adoption of these standards, procedures, and agreements shapes how services are delivered by those party to the arrangements.	E4
Knowledge of international organisations (e.g. UN, OECD, EU, OAS), their mandates, bodies and regulations and holdings in order to negotiate and/or modify the terms of depository arrangements for the formalized distribution of their documents. Such arrangements can lead to changes in work processes, in the mix of personnel retained to do specific tasks, and in what is delivered by these organizations.	E4
Legislation and regulations	**Rating**
Knowledge of international trade agreements, restrictions on foreign investment (e.g. restrictions on foreign ownership, bilateral investment treaties), import/export controls, quotas and others regulatory measures of potential impact to foreign investors, to conduct research on behalf of external business clients interested in doing business abroad.	F3
Knowledge of the acts and regulations related to the services of the library (e.g. *National Library Act*, Legal Deposit Regulations, *Access to Information Act, Privacy Act, Copyright Act*, Management of Government Information Holdings) to provide information, interpretation and guidance to clients about their rights and obligations.	F3

8. Element 9   Communication

8.1   Points to remember from the element definition

♦ The element measures the skills required by the work to convey (communication out) and receive (communication in) messages.

♦ Both written and oral communications count.

♦ Both aspects of communication are important to LS work.

♦ Communication In recognizes the skill that may be needed in interpreting messages that are confusing or ambiguous.

♦ Communication Out recognizes the range of skill from the straightforward communication of facts to the adaptation to audience needs and to situations requiring some persuasion and negotiation.

8.2   Key activities in Librarians' work pertaining to communication.

The following activities in Librarians' work may necessitate the use of communication skills:

♦ Management and supervision

♦ Advisory activities particularly interpreting information to line managers

♦ Negotiating with suppliers or potential partners

♦ Coaching and training clients

♦ Clarifying and determining client information and research requirements.

8.3   Common pitfalls with this element:

♦ Work descriptions often describe complex reading tasks. While written and oral communication are both considered under this element, it is important to recognize that reading or writing "big words" is not sufficient to pull ratings up the scale.

♦ Communication in and communication out do not necessarily increase together. Work can require higher levels of skill in communication in without necessitating higher skills in communication out, or vice versa.

♦ Proceeding from degree 1 to degree 4 along the "A" scale requires increasing skill to interpret implicit components of a message, from "not essential" to "key." If there is no message (implicit or explicit) received, there is nothing to interpret. Interpretation of implicit messages is a communication skill. Interpretation of explicit messages is intellectual effort.

♦ An implicit message must be received in order to interpret it; not understanding the explicit message and probing for additional information is not interpreting an implicit message. If interpretation of an implicit message suggests that some important information was being withheld, probing for more details would be appropriate.

8.4   Linkages

Linkages to consider are:

♦ Information for the Use of Others – necessitates communication to the "others," whether communication in or out or both

♦ Leadership of Human Resources – generally necessitates some communication at least within a team

♦ Psychological/Emotional Effort – may be required in some client service situations.

Progression

Rating	Communication In
A1	Facts and opinions provided freely and clearly, question and answer, discussion
A2	Probing, active listening are essential for clear understanding. Deal with complex questions, filter information . Interpretations of implicit messages are necessary. Many front-line workers dealing with the public get degree 2 as the work encounters implicit messages requiring consideration (frustration with the system, impatience waiting in line, the real urgency of a request, cases involving sensitive or private issues, etc.).
A3	Essential to get below the surface to understand an implicit message. Includes situations with hidden agendas or major cultural differences. While the situations are not usually adversarial there is some intent to mislead to protect confidentiality for particularly sensitive topics or because proprietary information is involved.

Rating	Communication Out
B1	Facts and opinions, audience expected to understand a clearly worded message without further interpretation
B2	Facts and opinions with some interpretation and adaptation to the audience to convey the meaning fully.
B3	Present and explain, adapting to the distinctive needs and concerns of the audience; restate in a number of different ways in order to build audience understanding. Cannot depend on audience to get it with only one explanation. Must be convincing, not just conveying of information.

8.5   Sample Work Characteristics

Communication In	Rating
Skills are required to understand the requests for information from clients on a wide range of issues. Listening, reading and verbal skills are required to make an appropriate response to the request.	A2
Listening and interpreting skills are required to understand key points during discussions with clients to ensure follow-up action is in line with client requirements. Clients are ambiguous about what they need or are indirect because of the sensitivity of the project or topic of the request.	A3

Communication Out	Rating
Makes presentations to staff and the general public. The level of knowledge of the audience and interest in the subject may vary significantly. Adapts the communication in different ways to ensure that the message is understood.	B2
Writing skills are required to synthesize information for abstracts, to summarize its level and major points, and to make the abstract clear for both the generalist and specialist audience.	B2
Communication skills are required to prepare and present project proposals for major library initiatives, reports, position papers, briefing notes, work statements, and memoranda of understanding. Persuasive arguments must be phrased to promote preferred solutions or approvals.	B3
Speaking and negotiating skills are required in representing the Library in formal meetings with representatives of industry, other federal departments and central agencies, and sister organizations in other countries to negotiate shared ventures, define information management	B3

Communication Out	Rating
solutions to be implemented, reach agreement on the standards of organization and standards for accessibility of information, and to identify and address issues and concerns. Because of the diverse nature of the audiences to whom presentations are made (domestic public sector, domestic private sector, international public sector, international private sector), it is necessary to adapt messages significantly to meet the expectations, levels of understanding, and political environments in an appropriate way. Presentations made and discussions undertaken must be persuasive because the agendas of private sector concerns are often in conflict and competition with goals of federal libraries.	

9.1   Points to remember from the element definition

♦ The element measures the effort required to solve problems.
♦ The proliferation of electronic information services gives the impression that the intellectual work required by librarians is no longer required. This is inaccurate. The requirement for sound information management in the face of rapidly changing and expanding field has increased the requirement for intellectual effort.
♦ This is a two-dimensional element. The vertical scale measures the difficulty of the problems encountered. The horizontal scale measures the constraints in the work that restrict the way the problems can be handled.
♦ Both routine and more unusual problems count. Even fairly routine problems can require a considerable accumulation of effort if they are repetitive or simultaneous. Indeed, the constraints scale considers the need for juggling multiple problems simultaneously.
♦ The difficulty of problems scale measures the diminishing clarity of problems, the increasing degree of novelty of problems, the uncertainty of factors that make up a problem, and the increasing amount of judgement and interpretation required in order to select or delete solutions.

9.2.1   Key activities and constraints in Librarians' work pertaining to intellectual effort

Cataloguing: organise knowledge through processes of subject analysis and creating information about information (metadata) so that information can be traced and accessed.	♦ Proliferation of new areas of knowledge ♦ Standards have not been developed.
Reference/Research: providing selected information with assurance of its authenticity, currency and completeness by designing different multi-disciplinary and multi-tiered search strategies; analysing, evaluating and synthesise extensive amounts of information of varying complexity and completeness, to provide relevant information to meet user needs.	♦ Proliferation of information and search tools, ♦ Lack of standardisation of metadata standards which impedes location of information ♦ Client expectations, workload pressures ♦ The interconnectivity of systems limits the ways that problem can be tackled ♦ Conflicting mandates: for example, between internal and external clients or providing service despite licensing agreements for electronic data. These agreements may prohibit the external use or distribution of information from licensed electronic tools which would normally be used in research for both internal and external clients
Collection Development: evaluating information, understanding – interpreting complex user requirements; completing cost-benefit analysis of factors such as the market value, interest and utility of information.	♦ Cost ♦ Format (may or may not be compatible with department hardware and software Copyright and licensing fees and agreements restricting types of user and usage.
Preservation of Information	♦ Short shelf life of hardware and software resulting in obsolescence: as technology evolves older systems disappear and with them the ability to read the information, so there is a

	constant requirement to migrate information from one digital hardware and software configuration to another ♦ There are no preservation standards for digital information.
Library Management and Planning: requires ♦ analysis and forecasting of requirements ♦ simultaneous management of multiple issues	♦ Copyright and licensing restrictions which limit who and how material can be used or distributed ♦ Prohibitive cost for digitization and support of technical infrastructure ♦ User resistance ♦ Conflicting agendas with information producers who are both suppliers of knowledge and competitors ♦ Competing needs of various users to be balanced simultaneously and tradeoffs to be made in choosing how to approach the problem. Information is expensive. Some information has wider interest and utility ♦ Problems with technology so that search tools cannot be accessed when required ♦ Technology not sufficiently developed to support processes because the requirement is too complex and too expensive to permit rapid development of systems-based solutions ♦ Bandwidth is not sufficient; because library work is in the business of information management, this poses serious impediments ♦ Multi-branch stakeholders bring conflicting agendas and objectives, each requiring that their needs be met in the same time frame ♦ The effort is increased because the problem cannot be solved in isolation. There are conflicting priorities between client groups in the form of demands for services, long-term objectives versus short-term imperatives, and operational considerations verses developmental opportunities ♦ There is minimal flexibility in the selection of tools, thereby requiring additional effort to work around any existing shortcomings of the standard tools (can occur in reference/research, cataloguing and library systems areas) ♦ New knowledge areas or technologies have been created for which there are no standards or methods of cataloguing or archiving. Occurring more frequently because of the dynamic state of information management and technology field.

9.3 Common pitfalls with this element:

- The element should be written so that constraints clearly apply to a particular problem. Do not simply rate the most difficult problem and then independently rate the constraints.
- Insufficient time or resources is not a constraint in this context. It is recognized that virtually all work in government has time or budget limitations. However, the effort in resolving problems that arise in a project management context (for example) when resources have to be shuffled with due consideration for the tradeoffs involved, would be counted as intellectual effort.
- Problems with a larger number of variables may require more effort to resolve, but be very cautious in equating the number of variables with the degree of difficulty. Some problems with many well-known variables are much less difficult than others with a few variables but a great deal of uncertainty in those variables.
- Similarly, it is not simply the number of clients that makes a problem more difficult but the diversity in their needs.
- The sustained attention effort exerted in detailed proof-reading of library records is distinct from the intellectual effort in analysis activities. If both aspects of the work exist, they should be considered in both elements. However, be careful not to confuse intellectual effort with sustained *sensory* attention.

9.4 Linkages

Linkages to consider are:

- Information for the Use of Others – in Librarian work this necessitates intellectual effort to develop or analyze the information
- Leadership of Human Resources – may necessitate some intellectual effort to solve day-to-day team assignment and resourcing problems
- Job Content Knowledge Application – deep job content knowledge is generally more common in jobs required to solve very difficult problems. However, remember that more routine problems can often occur simultaneously, requiring more juggling, and thus have high levels of constraints.

Progression Scale

Examples on Progression Scale	Rating
Work where solutions and standards have been developed but judgement is required to consider variables, weigh options and select or modify a solution. Examples are: - Analysing content of a publication and determining the best choice and form of the main entry in the catalogue or database (as opposed to straightforward copy cataloguing at degree 2) - Analyzing and developing subject material to train and instruct clients and staff, identifying, evaluating, selecting the information sources and online services for use in bibliographic verification and location searching	3
Librarian work deals with abstract concepts; it could require the extraction of elements from various components; understanding of linkages between information or a range of information; implies breadth of knowledge at this level; understanding of linkages among many elements or range of factors. Options are not clear; need to deal with abstraction For example: - analyzing complex material in highly specialized or technical subject fields	4

Examples on Progression Scale	Rating
where decisions and selections will be required from a number of different cataloguing national and international standards and conventions to create the best descriptive and accurate record for the material. - Analyze search/research problems and develop search options beyond immediate library or where the answer to a research issue may not exist but a complex and exhaustive search extending well beyond the scope of the collection must be conducted to verify the lack of information.	··
There may be some precedents; significant adaptation of methodology or theory, more limited scope as compared to level 6 but there is still a need to formulate new ideas. For example: - Intellectual effort is required to modify and create new taxonomies and cataloguing standards and procedures in order to ensure accessibility by department policy analysts and other researchers. Although the concept of taxonomies exists and the information that becomes part of a taxonomy may not be totally new, the development of a 'new' taxonomy requires unique adaptation and often creation of new categories of information. - Creating/designing search strategies for new and emerging areas of knowledge and or using new and emerging technologies that do not have standards or known search parameters. This would include things like the creation of portals, new thesauri and taxonomies.	5

9.6   Sample Work Characteristics

Sample Work Characteristics	Rating
Effort is required to develop and maintain the basic library databases that are pre structured where there is no requirement for programming or customization and to elaborate on technical specifications, administrative procedures, and work methods. Slow performance or interruptions associated with electronic databases occur daily and cause frustration and annoyance in the work.	A3
Intellectual effort is required when doing original cataloguing. This requires an analysis of where there are conflicting or ambiguous naming conventions, developing new subject headings to capture the full subject scope of information materials created in new areas of knowledge where there are no precedent headings, dealing with discontinued or renamed periodicals, and developing strategies for sets that must be either maintained as sets or divided according to subject areas. The work is made more complex by the lack of precedents, conflicting requirements of standards and clients and the requirement to provide consistency and congruence with the current collection.	A4
Intellectual effort is applied in selecting, compiling and interpreting information gathered from clients, synthesizing the information, determining opportunities, and developing information technology/management proposals to facilitate shared system solutions within client branch areas and between client branches and the Information Technology Branch. Effort increases where conflicting stakeholder agendas reduce the willingness to share information across or between organizations. Serving multiple, demanding client units requires balancing demands to maintain focus on activities of highest priority. When planning activities must be interrupted by other high priorities (often operational in nature), effort is required to retain elements of the suspended tasks so they can be resumed at a later time or date. New demands are received from senior management regularly such that this effort is further extended by	B4

Sample Work Characteristics	Rating
the need to re-prioritize outstanding tasks.	
Effort is required to develop comprehensive management strategies that sustain the performance of the work team and contribute to the professional development of team members while maintaining high degree of operational stability and service. This requires ongoing attention to the performance of each team member, and awareness of the need for specific training, equipment, outside knowledge, and identifying and evaluating the team's needs for additional human resources, and recommending and taking action to ensure teams have the proper resources to accomplish their mandates. It also requires initiative and effort to arrange training or assignments that are aligned to the needs and career aspirations of team members, and still meet operational requirements. Contingency planning must be done to address likely staff movements, cyclical peaks in workload activity and resource constraints. Multiple priorities and the need to implement decisions not personally supported increase the level of difficulty associated with this task.	B4
Intellectual effort is required to develop short- and long-term work plans and schedules for operational planning and budget estimates for the Library. It is necessary to determine workloads through the application of project management, change management, financial management and human resources management principles and techniques. Effort is required to define major deliverables and critical paths, to establish work schedules, to estimate the financial and human resource requirements to produce deliverables, to identify technical expertise required, and to establish timeframes for the deployment of staff. Constraints on planning activities include the wide scope of projects, the number of concurrent projects requiring planning effort, the need to apply new or emerging technologies where operational results are unpredictable, and the limited availability of multi-year funding	B4
Intellectual effort is required to analyze and synthesize the needs of clients in order to improve or create new search and retrieval systems and add applications/resources, modify others, integrate with current systems etc. to improve client productivity. Clients include staff of the department and members of the public. There are considerable variations in client needs and therefore synthesis of client needs requires an evaluation of many viewpoints. It is often difficult to come to a consensus and to satisfy all parties.	B 4
Conducting unique research in a specialized subject area, developing options for research strategy, identifying, filtering and analysing a wide range of sources, weighing the validity, currency, reliability and applicability of available information sources *vis a vis* research requirements, identifying subject experts in the field and vetting preliminary results to ensure appropriateness of solution, refocusing search strategies, analyzing, synthesizing and repackaging results in both hard-copy and electronic format. Effort increases under pressure from clients, deadlines, conflicting priorities, language barriers, subject complexity, technical difficulties, requirement for completeness of results, interruptions, and uniqueness of request and availability of resources.	B4
Effort is required to create new ways of collecting, organizing, providing access to and identifying ways of preserving Canadian published information including traditional physical as well as electronic and other new formats. Effort increases because there are no precedent solutions, theories, practices or approaches to draw upon. In addition there is a wide variety of clients and stakeholders with differing requirements and constant, rapid changes in publishing technologies and standards.	B5

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Sample Work Characteristics	Rating
Intellectual effort is required when developing, implementing or making enhancements to information products and services that will benefit clients. This involves the ability to anticipate the potential reaction of partners and other stakeholders who may have different viewpoints or agendas; to identify the need for research or information to adequately assess the impact of these issues on a project; and to frame creative strategies or concrete action plans to resolve the issues and to effect partner buy-ins. Complexity is heightened by the need to obtain information from various sources, by resource constraints and by the shifting priorities of partners.	C4
Intellectual effort is required to create new and original approaches to using technology to deliver departmental business functions. The effort is required in planning, organizing and directing research design, development, customization, acquisition and integration of departmental information infrastructure. The work develops conceptual frameworks to integrate leading-edge software technologies and existing software to serve business requirements. Effort is also expended to research, develop, negotiate and implement new strategies, policies, standards and guidelines with senior departmental management and major clients. Both technology and the business requirements are very dynamic, and the frequent and abrupt changes constrain the approach to information systems planning. Further constraints include the complexity of business requirements in a major federal multi-program department, cost, technical system specifications and the availability of technical and financial resources. Effort increases with the requirement to integrate departmental approaches to information technology, infrastructure, applications and security with government-wide initiatives such as the Shared Systems Initiative, Government On-line, and the Government of Canada PKI Secure Electronic Service Delivery project.	C5