



Generic Valuation Tool

Science and Technology Activities

Recordkeeping Liaison Centre
Library and Archives Canada
Telephone: 819-934-7519 or 1-866-498-1148 (toll free in Canada and the US)
Email: bac.centredeliasion-liaisoncentre.lac@canada.ca



Library and Archives
Canada

Bibliothèque et Archives
Canada

Canada

Generic Valuation Tool (GVT) Science and Technology (S&T) Activities

How to use this tool:

- This tool is designed for IM specialists to use with relevant business areas when identifying information resources of business value (IRBV) and retention specifications.
- The IRBV and retention specifications contained in this document are recommendations only and should be customized to apply in each institutional context. The complete document should be read before using any recommendations.
- **This GVT does not provide Government of Canada institutions with the authority to dispose of information.** GVTs are not Records Disposition Authorities (RDA) and do not replace the Multi-Institutional Disposition Authorities (MIDA).

Validation: While this tool has yet to be validated by communities of practice, it can still be used as a starting point for identifying IRBVs and determining their retention periods. Comments, questions or recommendations are welcome and should be sent to the Liaison Centre (liaison.centre.liaison@bac-lac.gc.ca).

Defining the Activity

In keeping with the work of the Council of Canadian Academies, the Science and Technology (S&T) Strategy of the Government of Canada (GC) defines scientific and technological activities as “[encompassing] the traditional disciplines in the natural sciences—the study of nature; the social sciences, humanities and health sciences—the study of human beings; and engineering—the creation and study of artifacts and systems.”¹ This Generic Valuation Tool (GVT) focuses on internal S&T activities conducted by the federal government, whereas external S&T activities fall under the transfer payment process.

The primary legislative framework for scientific and technological activities is based on legislation specific to departments responsible for S&T.

Relationship with Other GVTs

Business processes and activities often overlap. When the IRBV from an activity is identified in another GVT, there is a note in the table of IRBV and retention recommendations (below) to direct the user to the proper tool.

¹ Government of Canada, *Mobilizing Science and Technology to Canada's Advantage*, 2007, p. 101

Management and Oversight: assesses resources documenting the S&T strategic direction within government or within a specific institution, any policy creation as well as project management occurring beyond the usual scope of operational activities.

Communications: details the process applicable to communication activities with the public or the dissemination of knowledge.

Transfer Payments: supports any activity that pertains to the role of the GC in funding S&T activities outside the federal government.

Human Resources Management, Materiel Management, Property Management, and Acquisition Services: addresses issues concerning the administrative aspects of the management of research laboratories and their staff.

Information Management and Information Technology: addresses all administrative aspects of database management.

Legal Services: pertains to such activities as drafting and preparing contracts and other legally binding agreements.

Financial Management: deals with the management of financial activities exclusively, such as payments and accounting.

Business Processes

1. Science and Technology Management:

Entails overseeing all S&T activities within the federal government, including policy development and other strategic approaches to S&T from a GC or a specific institution's perspective, as well as establishing and managing partnerships.

Research Activities:

Includes research and development (R&D) and research activities considered by Statistics Canada to be related to scientific activities. R&D is defined as "creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge and to use this knowledge in new applications,"² and "it includes experimental development (work done to achieve technological advancement to create or improve new materials, devices, products or processes); applied research (work done to advance scientific knowledge with a specific practical application in view); and basic research (work done to advance scientific knowledge without a practical application in view)."³ Other research activities differ from R&D in that they lack the elements of uncertainty, novelty and innovation inherent to R&D, by their existence outside a project that is well-defined in time or space and by the reporting format. They include primarily the collection of data outside of an R&D project (e.g., longitudinal data

² Statistics Canada, *Federal Scientific Activities, 2010/2011*, 2010, p. 46

³ Government of Canada, *Mobilizing Science and Technology to Canada's Advantage*, 2007, p. 101

collection, cartography and other data surveys), and special studies, such as standards development, calibration, economic and feasibility studies, or operations and policy studies.⁴ Although the business processes are similar for these two types of research, information resources of business value (IRBVs) and their retention periods differ.

2. Preliminary Planning:

Includes all stages of preparation leading to research, namely alignment with research priorities (selection of problem; approval of problem; assessment of external factors, particularly political, commercial and financial factors), project definition (preliminary research, consultations, considerations, formulation of preliminary hypothesis) and research preparation (e.g., planning experiments; establishing procedures; building and testing instruments/devices/programs; developing designs and plans; identifying and compiling sources and resources to be consulted).

3. Research and Analysis:

A key element of research; entails conducting experiments, collecting data, analyzing experiment results and data, testing, and noting findings and analyses. All these processes involve consultations between researchers and their peers, their managers or their clients. Depending on the results obtained at this experiment and analysis stage, a decision may be made to redirect or adjust the focus of a research study or modify the initial hypothesis, which could lead back to the previous step in the process.

4. Reporting:

Consists of preparing a draft, holding consultations, presenting results, and submitting the actual report. Reporting may be done through a basic final report, a technical report, a series of progress reports, presentations, and other products, such as maps and data compilations.

Related Activities:

Includes activities related to the dissemination and application of scientific and technological knowledge—processes that complement and extend research.⁵ While the research process itself is rarely strictly linear, the activities presented here neither depend on nor stem from one another (and therefore do not comprise consecutive or connected processes) and may be conducted simultaneously. These activities may or may not occur, and will not necessarily follow all research activities.

5. Dissemination of Knowledge:

Includes various ways of making knowledge available to the general public, primarily through formal publications, presentations given during a public event or other events for which the documents or other official records are public, or open access publications.

6. Diffusion of Information:

Entails sharing information with a specific target audience, including transmitting a research report to a selected audience; presenting to a target audience; participating in

⁴ Statistics Canada, *Federal Scientific Activities, 2010/2011*, 2010, p. 53

⁵ Statistics Canada, *Federal Scientific Activities, 2010/2011*, 2010, p. 46

a working group involved in applying knowledge generated by R&D or consultation, which may consist of service delivery and providing expertise to clients who use this newly generated knowledge.

7. Management of Intellectual Property:

Includes intellectual property claims (e.g., patents, trademarks, copyright) with the Canadian Intellectual Property Office (CIPO) or Plant Breeders' Rights Office (PBRO) at the Canadian Food Inspection Agency, and the maintenance of this property.

8. Technology Transfer:

Entails transferring a technology generated as part of an R&D activity from the originating research institution to a third party for marketing purposes: includes any efforts to apply the newly created knowledge, licensing or technology incubation.

Retention

Recommended retention specifications in GVTs are determined based on traditional or best practices, a review of government-wide legislation and policy, and validation with subject matter experts. Retention periods are suggestions only; departments must take into account their own legislative requirements and business needs.

No specific legislation or regulations govern retention specifications for information resources generated by S&T activities.

The recommended retention periods are based on practices observed in various institutions. Unless otherwise specified, information on these practices were collected from the National Archives and Records Administration (NARA), the *Conférence des recteurs et des principaux des universités du Québec* (CREPUQ), as well as from the governments of New Zealand and Australia. (Refer to the appended bibliography for a complete list of references.) Furthermore, Library and Archives Canada's collective knowledge of various GC institutions, including Agriculture and Agri-Food Canada, was used in formulating these recommendations.

As there is very little information available on retention practices for some of the IRBV types, the actual GVT recommendations are of a highly generic nature and should go through a validation process within each institution. Any new information which would allow Library and Archives Canada to modify, refine or complete these recommendations may be integrated into this GVT.

Business Value and Retention Recommendations

1. Science and Technology Management

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
Development of policies Development of strategic approaches	<i>For IRBVs please see Management and Oversight GVT</i>	<i>For retention please see Management and Oversight GVT</i>
Establishment and management of partnerships	Meetings - Records of decisions/minutes, agenda and support documentation Memorandum Correspondence Contracts, MOUs <i>(Please also see Legal Services GVT for IRBVs related to Contracts or MOU's)</i>	10 years after completion or other termination of contract

2. Preliminary Planning (Pertains only to R&D Activities)

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
Alignment with research priorities Selection of problem; approval of solution; assessment of external factors such as political, commercial and financial	Memorandum Correspondence Records of decisions/minutes, agenda and support documentation Approval documentation Work plans Research propositions or grant applications <i>(Please also see Transfer Payments GVT for all IRBV and retention related to grants and contributions)</i>	10 years after completion of project
Project definition Preliminary research; consultations; considerations;	Research notes Correspondence Records of decisions/minutes, agenda and support	10 years after completion of project

<p>formulation and preliminary hypothesis</p>	<p>documentation Wikis/Collaborative Workspaces (debates/discussions between experts/within a scientific community) Memorandum Preliminary hypothesis Preliminary work plans Bibliography</p>	
<p>Research preparation Planning experiments; establishing procedures; building and testing instruments/devices/programs; developing designs and plans; identifying and compiling sources and resources to be consulted; etc.</p> <p><i>Please also see Material Management, Real Property Management, and Acquisition Services GVTs for related activities</i></p>	<p>Blueprints/ Drawings Research notes Correspondence Memorandum Draft agreements Work plans A/V documents Data/samples Bibliography Instruments and devices</p> <p>Instruments Log books Records documenting instrument's operation and maintenance Research notes Records documenting instrument's building specification, drawings, blueprints, photographs, research notes, correspondence, work plans, etc.</p> <p>Printouts from instruments</p>	<p>10 years after completion of project</p>

3. Research and Analysis

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
--------------------	--	-----------------------------------

<p>Research, experiment and data analysis Tests; data collection; analysis; observations; consultations Redirection or refocusing of research orientation/ hypothesis</p>	<p>Peer comments Presentations (decks) Speeches Wikis/Collaborative Workspaces (debates/discussions between experts/within a scientific community) Correspondence and memorandum Draft agreements / research parameters Log books Printouts from instruments Laboratory/Field Notebooks Research notes</p> <p>Data (bound volumes or loose papers; computer printouts, computer disks, printout from instruments; photographs, slides, moving images, etc.) Specimen collections</p> <p>Databases</p>	<p>10 years after completion of project or 10 years after last action with data set or collection</p>
--	---	---

4. Reporting

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
<p>Drafting Consultation Presenting results</p>	<p>Draft of reports Draft of articles or presentation Wikis/Collaborative Workspaces (debates/discussions between experts/within a scientific community) Peer comments Correspondence and memorandum Preliminary reports Dissertations Presentations (decks) Speeches Collected and analysed data (photographs; maps; topological surveys; reports; graphs; etc.)</p>	<p>10 years after completion of project</p>
<p>Reporting</p>	<p>Technical reports Abstracts Final reports</p>	<p>If published, see sub-sub-activity "Dissemination of Knowledge"</p>

5. Dissemination of Knowledge

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
Publication	Unofficial publications (e.g. open access publication) Peer comments <i>(For IBRV please also see Communications GVT for official publications--journal, monographies, report, etc.)</i>	10 years after publication
Transmission / Presentations	Dissertations Presentations (decks) Presentations Speeches Abstracts Newsletters Web pages Proceedings from a public conference or event	10 years after completion of activity

6. Information Diffusion

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
Limited diffusion Presentations Consultations	Presentations (decks) Speeches Presentations/ Seminars Newsletters Confidentiality agreement Minutes/summary of meeting Peer comments	10 years after completion of activity

7. Management of Intellectual Property

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
--------------------	--	-----------------------------------

Application to obtain/renew intellectual property <i>(Please also see Financial Management GVT for IRBV and retention for invoices and receipts)</i>	Any documentation required by or received from CIPO or PBRO relating to the application Correspondence and memoranda	2 years after the right is granted or application rejected
Managing intellectual property	Any documentation required by or received from CIPO or PBRO which establishes the right	Retain as long as the right is valid

8. Technology Transfer

Business Processes	Recommendations: Information Resources of Business Value (IRBVs)	Recommendations: Retention Period
Efforts towards the application of a new technology	Correspondence and memorandums Meetings: Agenda, minutes/records of decisions and support documentation	10 years after last administrative action
Licensing and assignment Discussion, decision, agreement <i>(Please also see Legal Services GVT)</i>	Confidentiality / non-disclosure agreements Interim agreements Feasibility agreements Prototype agreements Licence agreements Licences Correspondence and memoranda Minutes of meetings	As specified in agreements or 10 years after the signature of the final agreement
Technology incubation Discussion, request/proposal assessment, agreement, follow up	Expression of interest form / request Correspondence and memoranda Licence to occupy Insurance/Evidence of Insurance Meetings: Agenda, minutes/records of decisions and support documentation Agreements, contracts Preliminary reports / activity reports <i>(For IRBV please also see Legal Services GVT)</i>	As specified in agreements or 10 years after the signature of the final agreement