Generic Valuation Tool
Science and Technology Activities

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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.

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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

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collection, cartography and other data surveys), and special studies, such as standards
development, calibration, economic and feasibility studies, or operations and policy
studies. 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. 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

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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

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

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

<table>
<thead>
<tr>
<th>Business Processes</th>
<th>Recommendations: Information Resources of Business Value (IRBVs)</th>
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</thead>
<tbody>
<tr>
<td>Alignment with research priorities</td>
<td>Memorandum</td>
<td>10 years after completion of project</td>
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<tr>
<td></td>
<td>Correspondence</td>
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<tr>
<td></td>
<td>Records of decisions/minutes, agenda and support documentation</td>
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<tr>
<td></td>
<td>Approval documentation</td>
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<tr>
<td></td>
<td>Work plans</td>
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<td></td>
<td>Research propositions or grant applications</td>
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<tr>
<td></td>
<td>(Please also see Transfer Payments GVT for all IRBV and retention related to grants and contributions)</td>
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</tr>
<tr>
<td>Project definition</td>
<td>Research notes</td>
<td>10 years after completion of project</td>
</tr>
<tr>
<td></td>
<td>Correspondence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Records of decisions/minutes, agenda and support documentation</td>
<td></td>
</tr>
</tbody>
</table>
| formulation and preliminary hypothesis | documentation  
|                                      | Wikis/Collaborative Workspaces (debates/discussions between experts/within a scientific community)  
|                                      | Memorandum  
|                                      | Preliminary hypothesis  
|                                      | Preliminary work plans  
|                                      | Bibliography  
| 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.  
| Please also see Material Management, Real Property Management, and Acquisition Services GVTs for related activities | Blueprints/ Drawings  
|                                      | Research notes  
|                                      | Correspondence  
|                                      | Memorandum  
|                                      | Draft agreements  
|                                      | Work plans  
|                                      | A/V documents  
|                                      | Data/samples  
|                                      | Bibliography  
|                                      | Instruments and devices  
|                                      | 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.  
|                                      | Printouts from instruments  
|                                      | 10 years after completion of project |

3. Research and Analysis

<table>
<thead>
<tr>
<th>Business Processes</th>
<th>Recommendations: Information Resources of Business Value (IRBVs)</th>
<th>Recommendations: Retention Period</th>
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</thead>
</table>

- **Formulation and Preliminary Hypothesis**
  - Documentation
  - Wikis/Collaborative Workspaces (debates/discussions between experts/within a scientific community)
  - Memorandum
  - Preliminary hypothesis
  - Preliminary work plans
  - Bibliography

- **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.

Please also see Material Management, Real Property Management, and Acquisition Services GVTs for related activities.

- **Blueprints/Drawings**
- **Research Notes**
- **Correspondence**
- **Memorandum**
- **Draft Agreements**
- **Work Plans**
- **A/V Documents**
- **Data/Samples**
- **Bibliography**
- **Instruments and Devices**
- **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.**
- **Printouts from Instruments**

3. Research and Analysis
### Research, experiment and data analysis

Tests; data collection; analysis; observations; consultations
Redirection or refocusing of research orientation/ hypothesis

- 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
- Data (bound volumes or loose papers; computer printouts, computer disks, printout from instruments; photographs, slides, moving images, etc.)
- Specimen collections
- Databases

10 years after completion of project or 10 years after last action with data set or collection

### 4. Reporting

<table>
<thead>
<tr>
<th>Business Processes</th>
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<th>Recommendations: Retention Period</th>
</tr>
</thead>
</table>
| Drafting  
Consultation  
Presenting results | 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.) | 10 years after completion of project |
| Reporting | Technical reports  
Abstracts  
Final reports | If published, see sub-sub-activity "Dissemination of Knowledge" |
## 5. Dissemination of Knowledge

<table>
<thead>
<tr>
<th>Business Processes</th>
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<th>Recommendations: Retention Period</th>
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</thead>
</table>
| **Publication**    | Unofficial publications (e.g. open access publication) Peer comments  
                        (For IBRV please also see Communications GVT for official publications—journal, monographies, report, etc.) | 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

<table>
<thead>
<tr>
<th>Business Processes</th>
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<th>Recommendations: Retention Period</th>
</tr>
</thead>
</table>
| **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
<table>
<thead>
<tr>
<th>Application to obtain/renew intellectual property</th>
<th>Any documentation required by or received from CIPO or PBRO relating to the application Correspondence and memoranda</th>
<th>2 years after the right is granted or application rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing intellectual property</td>
<td>Any documentation required by or received from CIPO or PBRO which establishes the right</td>
<td>Retain as long as the right is valid</td>
</tr>
</tbody>
</table>

### 8. Technology Transfer

<table>
<thead>
<tr>
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<th>Recommendations: Retention Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efforts towards the application of a new technology</td>
<td>Correspondence and memorandums Meetings: Agenda, minutes/records of decisions and support documentation</td>
<td>10 years after last administrative action</td>
</tr>
<tr>
<td>Licensing and assignment Discussion, decision, agreement</td>
<td>Confidentiality / non-disclosure agreements Interim agreements Feasibility agreements Prototype agreements Licence agreements Licences Correspondence and memoranda Minutes of meetings</td>
<td>As specified in agreements or 10 years after the signature of the final agreement</td>
</tr>
<tr>
<td>Technology incubation Discussion, request/proposal assessment, agreement, follow up</td>
<td>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 (For IRBV please also see Legal Services GVT)</td>
<td>As specified in agreements or 10 years after the signature of the final agreement</td>
</tr>
</tbody>
</table>