Ministry of Sustainable Resource Management

ILRR Project

ILRR Business Requirements
Version 1.1

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Mapping to MSRM System Analysis Standard Table of Contents

The ILRR Business Requirements document has been substantially based on the MSRM System Analysis Standard Table of Contents. However, as this document includes topics not normally addressed in the MSRM System Analysis Standard, the Table of Contents has been adjusted. The following mapping is provided to assist MSRM reviewers in identifying the location of specific topics.

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9   SIGN-OFF

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APPENDICES

MSRM Standard TOC	ILRR TOC
Appendix A: Logical Entity Relationship Diagram (ERD)	Appendix H - placeholder, not within the scope of this phase
Appendix B: Entities and their Descriptions	Appendix I - placeholder, not within the scope of this phase
Appendix C: Attributes and their Descriptions	Appendix J - placeholder, not within the scope of this phase
Appendix D: Context Diagram	Appendix K - placeholder, not within the scope of this phase
Appendix E: Business Function Model	Appendix L - placeholder, not within the scope of this phase
Appendix F: Function Hierarchy Diagram	Appendix M - placeholder, not within the scope of this phase
Appendix G: Process Model Diagram	Appendix N - placeholder, not within the scope of this phase
Appendix H: Detailed Workplan (MS-Project)	Appendix O - placeholder, not within the scope of this phase

Electronic Files

The ILRR Business Requirements document is available in electronic format. The following files make up the contents of this document

Document Section(s)	File Name
1. ILRR Business Requirements, Section 1 – 13 Appendices F and H through O	ILRR_BusinessRequirements_V1-0.doc
2. Appendix A – ILRR Stakeholder Reports	ILRR_BusinessRequirements_AppendixA_V1-0.doc
3. Appendix B – ILRR Working Groups Terms of Reference	ILRR_BusinessRequirements_AppendixB_V1-0.doc
4. Appendix C – ILRR Business Requirements Consultation Process and Working Group Workshop Minutes	ILRR_BusinessRequirements_AppendixC_V1-0.doc
5. Appendix D – ILRR Glossary	ILRR_BusinessRequirements_AppendixD_V1-0.doc
6. Appendix E – Land and Resource Interests and Legislation	ILRR_BusinessRequirements_AppendixE_V1-0.doc
7. Appendix G – Data Quality Impact Assessment	ILRR_BusinessRequirements_AppendixG_V1-0.doc
8. Generic Process Models	ILRR_BusinessRequirments_GenericProcessModels_V1-0.vsd
9. Interest Granting Agency Specific Process Models	ILRR_BusinessRequirments_AgencyProcessModels_V1-0.vsd

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Project Management

The resources below have been defined to carry out project level management of this project.

Name	Position
Rosa Munzer	ILRR Project Manager, Ministry of Sustainable Resource Management
Simon Lanoix	ILRR Project Manager, Sierra Systems
Elizabeth Vannan	ILRR Project Senior Business Analyst, OA Solutions

Document Control

The tables below identify various document control items for this document.

Change Record

All changes made to this document have been listed in the table below.

Date	Author	Version	Change Reference
2004-01-24	Elizabeth Vannan	0.1 Draft	No Previous Document
2004-02-23	Elizabeth Vannan	1.0 Final	Completed document delivered to MSRM
2004-03-29	Elizabeth Vannan	1.1	Revisions to document based on feedback from Rosa Munzer, Dave Chater, Olga Kopriva and SRM IMB.

Acknowledgements

We would like to thank the Core Working Group, the Northeast Working Group and the Client User Group for their input and guidance during the course of the initial business requirements gathering process. Their input during the various workshops, their efforts in completing homework and their input during follow-on interviews were significant.

For a complete list of working group members please refer to **Appendix B.**

1. Introduction

This document contains the Business Requirements for the Integrated Land and Resource Registry (ILRR). These requirements were gathered during consultation workshops with a number of stakeholder working groups (see **Appendix B** for a list of working group members and **Appendix C** for workshop notes) that took place between December 2003 and February 2004.

1.1 Purpose

The purpose of Business Requirements phase of the ILRR Project is to:

- Document the ILRR system goals, objectives and principles;

- Document the basic expected ILRR use cases;

- Document and define government business processes, which result in the creation, maintenance, update or removal of registered interests in land and resources;

- Document existing business processes for processing rights applications, and indicate where interfaces to the ILRR are to occur;

- Document changes to existing business processes (if any) required to support an interest based register model;

- Document changes to legislation, regulation and policy (if any) which must occur in order to support an interests based register model; and

- Document a business function transition plan, for each business area.

1.2 ILRR Business Requirements Scope

The ILRR Business Requirements document addresses the following topics (**in scope**):

Topic	Description	Addressed in Section
Current Process Review	• Identification of all ILRR stakeholders and their associated right-granting authority.	• **Section 3.2** identifies stakeholder • **Section 3.3** identifies rights, interests and associated legislation

	• Document and define all government business processes which result in the creation, maintenance, update or removal of registered interests in land and resources with a focus on the following processes:
	  – Granting rights.
	  – Updating rights
	  – Terminating rights.
	  – Statusing.
		• **Sections 3.4** through **3.6** provide an overview of interest management business processes
		• **Appendix A** provides Agency-specific interest management business process information

	• Preparation of business process models for all existing processes that will interface with the ILRR.	• **Section 3.4.4** provides a generic interest management process model. • **Appendix A** contains Agency-specific process models

Topic	Description	Addressed in Section
ILRR Business Requirements	• ILRR system goals, objectives and principles.	• **Section 2** provides overall system objectives • **Section 4** provides the ILRR business objectives
	• Business processes that the ILRR will support.	• **Section 3.4** describes the existing business process that ILRR will support.
	• Basic expected ILRR use cases.	• **Section 6.6** contains the basic expected use cases for ILRR.
	• At the conceptual level, data to be captured by the system.	• **Section 5.1** contains the ILRR conceptual data requirements.
	• ILRR interface points with current business process with recommendations on how best to connect them.	• **Section 8.1** provides a generic interface model with associated impacts. • **Appendix A** provides Interest Granting Agency-specific interface models with associated impacts.
ILRR Business Impact	• Existing stakeholder business processes impacted by the ILRR.	• **Section 8.1** provides a generic interface model with associated impacts. • **Appendix A** provides Interest Granting Agency-specific interface models with associated impacts.
	• Specific legislation, regulation and policy changes required by ILRR	• **Section 8.2** provides an overview of the legislation, regulation and policy changes required by ILRR
ILRR Business Transition	• A transition plan for each business area to ensure that the stakeholders' business functions continue uninterrupted during the ILRR implementation.	• **Section 10** provides an overall Business Transition strategy • **Appendix A** provides additional Interest Granting Agency Business Transition information.
	• A data quality assurance process to provide data quality improvements to support the integration of stakeholder data with the data in ILRR.	• **Section 9** provides an overall assessment of data quality improvement priorities and strategies • **Appendix A** provides Interest Granting Agency-specific data quality improvement priorities and strategies
	• Recommendations for changes to business processes to reduce or eliminate data quality problems.	• **Section 9** provides an overall assessment of data quality improvement priorities and strategies • **Appendix A** provides Interest Granting Agency-specific data quality improvement priorities and strategies

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The following topics will be addressed during the Systems Architecture phase of this project (**out of scope**):

Topic	Description
Business Process Mapping	The *Business Process Model* will primarily be delivered as a Microsoft Word document, containing diagrams and supporting text, each describing a discrete business process. It will be delivered as a section of the overall Systems Architecture deliverable.
Logical Data Model	*E-R Diagram* – The model will be developed in Oracle Designer/2000 and will be delivered as a workspace export accompanied by a folder of printed E-R diagrams and a Microsoft Word document.
	Entity and Attribute Descriptions – Each entity will be given a description, to be ratified by the business domain experts. Attributes will be identified and named.
	Spatial Element Descriptions – The spatial requirements of the system are not easily modeled in Oracle Designer, but do require definition. In Oracle, the geometry will be "stubbed", as an attribute or as a linking key in a correlation table. Diagrams and text describing the geometric sections of the model will be assembled into a Microsoft Word document and where appropriate supplemented by UML diagrams.
Metadata Management Plan	*Metadata Requirements* Consists of the following requirement categories; Data sources, Representation, Accuracy, Availability, Discovery or linkage requirements.
	Tool and Registry High Level Design – select tools to support metadata management for the following; Population, Report Generation, and Maintenance. High level design of metadata repository. Development of metadata management implementation plan
	Metadata management implementation plan – A plan for the population and validation of the metadata
Application Architecture	The Application Architecture will be comprised of:
	• Elaborated Use Case View – storyboards for user interfaces (screen mockups and narratives).
	• Logical or functional view of the proposed application architecture – includes the most important layers, subsystems, packages, frameworks, classes and interfaces.
	• Process view – depicts the collaboration of the application components for the major process threads.
	• Supporting Information – Describes the motivation of the architecture design. It is a summary of the architectural analysis and decisions that support the architectural views.
Technology Architecture	This physical representation will describe each component of the solution's various layers of technology; Network and Hardware layer, Non-application software layer, High Level Application Software layer, Security layer, and Data distribution.
	Each layer will be described through a graphical model and a textual description.
Integration Plan	The *Integration Plan* will be delivered as a Microsoft Word document. It will contain; External Agency Interfacing, ICIS Integration, LRDW Integration, Common Services Interoperation, Metadata Management Plan.
Data Transition Plan	The plan will be delivered as a Microsoft Word document and as a Microsoft Project MPP binary file. As a plan, the content will primarily consist of tasks, dependencies, resources and milestones.

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1.3 ILRR Business Requirements Assumptions

During consultation with stakeholders and documentation of the ILRR Business Requirements the following assumptions were made:

- All Agencies responsible for granting or managing interests in land and resources will participate in the project.
- Interest Granting Agencies will be able to provide data that is complete and of sufficient quality to serve the needs of ILRR users.
- ILRR information will be stored in a centralized database with uploads from each Interest Granting Agency's registry system.
- All Interest Granting Agencies will be capturing all data required by ILRR electronically.
- All Interest Granting Agencies will have a registry system capable of interfacing with the ILRR for the purpose of transferring data to ILRR.
- The ILRR Project will not be responsible for building operational systems for Interest Granting Agencies.

1.4 Other Documents

The following documents are associated with or are referenced in this document:

Document	Author	Date
ILRR Phase 1 Project Statement – Business Requirements and System Architecture	Sierra Systems Group	November 24, 2003
Data Assessment Reports – Phase II	Fujitsu Consulting	September 24, 2003
Data Assessment Report – Phase I	Fujitsu Consulting	April 25, 2003
Business Case for the Integrated Registry	Lime Kiln Group	April 2003
ILRR Business Strategy and Transition Plan	Fujitsu Consulting	October 31, 2002
Business Strategy Addendum	Fujitsu Consulting	February 24, 2002

Copies of all of the above documents are available at:
http://srmwww.gov.bc.ca/irp/docs/background.htm

2. Integrated Land and Resource Registry Overview

2.1 Project Background

As the owner and manager of most of the land and resources in British Columbia, the Province has been granting rights to develop and use land and resources to individuals and companies for over 100 years. To convey rights, an individual typically submits a request to the ministry responsible for managing and issuing those types of rights. The ministry then reviews the request against legislative and regulatory criteria, checks the availability, and, if both are acceptable, grants the request to convey the rights by issuing a legal document to the individual. This system of administration works well as long as Crown Land and resources are plentiful and potential conflicts are few and far between.

However, as more and more land and resource grants take place over time, and the types of grants grow, the administration of this mosaic of Crown allocations is becoming more complex and expensive to operate. This has led to delays in responding to individual requests. In the very worst cases, these delays are measured in years, and seriously impede the effective use of Crown Land and resources.

As part of its New Era commitments, Government has directed the Ministry of Sustainable Resource Management to move from the current diverse set of inefficient electronic databases and multiple tenure registries to an "integrated register" that will assist government agencies and industry in *quickly and accurately* selecting areas of operational interest, and processing requests for land and resource rights.

> *The ILRR Project vision is a spatially enabled, accurate, efficient and accessible electronic register of all legal interests in Crown and private land and resources, which serves the business needs of a diversity of users and clients.*

The Ministry has conducted a study of the current state of rights registration in the Province, international examples of tenure registries, and best practices in the field of tenure and land status.

The conclusion outlined in the *Business Strategy and Transition Plan* is that the Province should transition its rights registries to a single "interests based" register of land and resource rights. This "interests based" register will be the authoritative source of information regarding new land and resource rights. In order for a land or resource right to exist, it must first be registered in the integrated register. Ministries will continue to manage the process of tenure applications and approvals and maintain their operational systems. These systems will use the integrated register to officially register rights once they have been granted, to de-register lapsed and expired rights, and to ensure that conflicts do not occur.

The *Business Strategy and Transition Plan* further recommends that the implementation of the ILRR proceed in geographically distinct "increments". The first increment will be delivered in the Northeast part of the Province to maximize development value by supporting ongoing oil and gas exploration.

The *Business Strategy and Transition Plan* identified data quality as being one of the most significant issues affecting the outcome of the Integrated Land and Resource Register project. High levels of data quality are key to establishing the level of user confidence, certainty, reliability and efficiency required for the ultimate success. Conversely incomplete, inaccurate
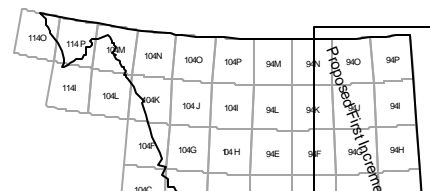
Figure 1 - Province of BC Map Grid

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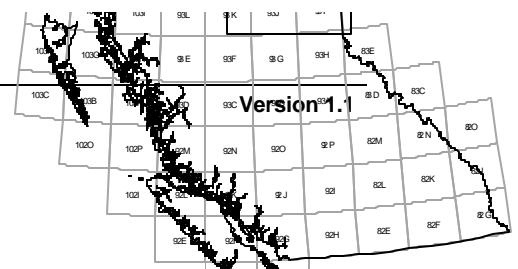
and poorly defined or out of date information would result in a system of little value to anyone.

The Ministry will take the lead in resolving data quality issues and will work collaboratively with Sierra Systems to integrate this process into the business requirements, systems architecture phase (Phase I).

2.1.1 Project Phases

2.1.1.1 Project Overview

As the following diagram illustrates, the ILRR Project is a multi-year undertaking encompassing a number of phases.
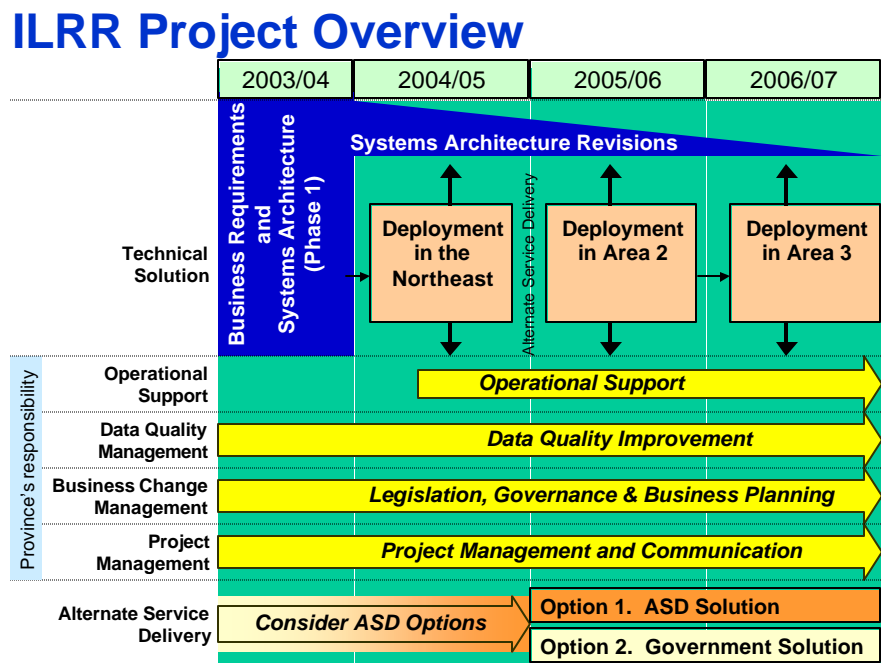
In addition to developing a technical solution, with the goal of completing an initial implementation in the Northeast region of the Province by March 31, 2005, the project will also be addressing:

- Operational Support

- Data Quality Improvement

- Legislation, Governance and Business Planning

- Project Management and Communication

- Alternate Service Delivery

2.1.1.2 ILRR Project, Phase 1
Business Requirements and System Architecture

The current phase of the ILRR project represents the beginning of development of the technical solution. This phase has been broken into two stages:

- Business Requirements
- Systems Architecture

As the following diagram illustrates, this phase of the project is to be completed by May 2004 and, upon successful completion, will lead into the design, development and implementation of the ILRR in the Northeast by March 31, 2005.

ILRR Project – Phase 1
Business Requirements and Systems Architecture
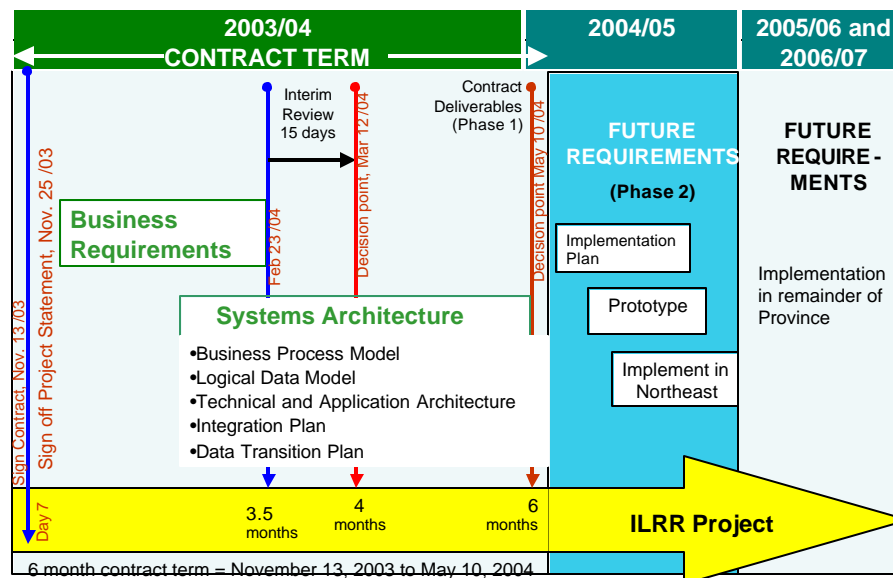
2.2 Scope & Guiding Principles

The Integrated Land and Resource Registry will be the single source of information on rights and interest in land and resources within the Province of British Columbia. It will support the business processes of a variety of stakeholders, including Interest Granting Agencies, other branches and levels of Government, Industry, Special Interest Groups and the General Public.

The following represents an overview of the scope and guiding principles for ILRR:

1. ILRR will be a Registry of Rights and Interests within the Province of British Columbia.

2. ILRR will not replace existing operational systems used to manage interest processes and workflows.

3. At a minimum, ILRR will contain a description of each right, issuing agency, a unique identifier, and a reference to supporting documentation.

    a. ILRR will maintain interest history, allowing users to review both all changes to interests over time and expired interests.

4. ILRR will include requests for interests (pending and applications).

    a. Cancelled/withdrawn/refused requests will not be retained.

5. ILRR will be available to a variety of users within and external to the Government of British Columbia.

6. ILRR will comply with the Freedom of Information and Protection of Privacy Act and other applicable legislation governing the availability and protection of information.

    a. Interest Granting Agencies will have the ability to limit or restrict access to information in the ILRR as required by their business area or by legislation.

    b. Data access will be based on security profiles.

7. Interest granting and maintenance will continue to be the responsibility of the Interest Granting Agencies.

    a. Interest Granting Agencies will be responsible for updating ILRR with application and interest information.

    b. ILRR will not modify or delete data except as instructed by the applicable Interest Granting Agency.

    c. Decision-making regarding the granting of interests/rights is the responsibility of the Interest Granting Agency.

    d. ILRR will not prevent the registration of interests that conflict with other interests. Conflict resolution is the Interest Granting Agency's responsibility.

8. Users will be able to query ILRR for information on interest requests and current and historical rights and interests.

9. ILRR will be spatially enabled and will include representational maps and legal location descriptions. Spatial information will not be a legal depiction.

10. ILRR will support the collection of user fees.

2.3 Objectives

The objectives for the ILRR Project are to support:

- **Economic Development**

    o   Enable faster decisions and access to Crown land and resources

    o   Reduce land-use conflicts and associated risks

    o   Reduce uncertainty by contributing to better and faster resolution of First Nations issues

- **Government Efficiency**

    o   Reduce costs and risk of error or uncertainty associated with confirming the legal status of land

    o   Reduce costs associated with collecting and maintaining land and resource registry information

- **Sustainable Development**

    o   Support improved decision-making for large development projects, land use planning activities or First Nations treaty processes

    o   Support improved land use policy-making to ensure sustainable development of land and resources

- **Customer Service**

    o   Enable improved client service to all owners, users or regulators of land and resources

    o   Provide leadership in electronic service delivery

2.4 Constraints

The following constraints should be considered during subsequent phases of the ILRR Project:

- The ILRR must be deployed in the Northeast region of the Province by March 31, 2005.

- The ILRR must be developed in compliance with MSRM and other applicable BC Government development standards.

- Currently, some information on interests is not current or available in electronic format from all Interest Granting Agencies.

- Significant data quality problems have been identified for many of the interest data sets (See **Section 9** for additional information).

- Many operational systems (See **Section 3.6** for details) will need to interface with ILRR. Several of these systems are currently under development.

- The ILRR Project is dependent on a number of other projects currently underway, such as:

    o   Integrated Cadastral Fabric (ICF)

    o   Land and Resource Data Warehouse (LRDW)

    o   Digital Provincial Base Atlas

    o   Digital Survey Plan Project

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- Staff reductions within Government may make obtaining subject-area specialist support difficult during development and implementation.
- Budget reductions within Government may impact the project's ability to access resources to support the implementation.

2.5 Measures of Success

The ILRR project will be successful if:

- All Interest Granting Agencies are providing interest information to ILRR in a timely manner.
- Users have confidence that the information in ILRR is complete and of sufficient quality to support their business processes.
- Economic Development within the Province is enhanced due to:
  - o Faster interest granting decisions.
  - o Reduced land-use conflicts.
- Government interest management process are more efficient:
  - o Costs for statusing interest requests are reduced.
  - o Risks associated with interest granting are reduced.
- Government and its clients are using the ILRR to support land-use planning and management.
- Government is able to provide clients with better customer service by providing clients with direct access to land and resource information.

2.6 Target Audience

This document has been prepared for the Integrated Registry Branch of the Ministry of Sustainable Resource Management who should ensure that the business and data requirements described in this document accurately reflect the operational and management needs.

The document should also be reviewed by the following groups to ensure that it accurately reflects the strategic and operational objectives of the project and its respective stakeholders:

- ILRR Executive Steering Committee
- ILRR Senior Project Advisory Group
- ILRR Core Working Group
- ILRR Northeast Working Group
- ILRR Client User Group

This document is also directed at members of the Ministry's Information Management Branch and System Developers. The document is intended to be the foundation for system architecture, design and development decisions in subsequent project phases.

3. Current Situation Assessment

The purpose of the Current Situation Assessment is to describe the following:

- Who are the ILRR stakeholders?

- What rights and interests are currently being granted?

- How are rights and interests currently being managed (business processes)?

- What information external to their organization do Interest Granting Agencies require when considering an interest request?

- What are the issues, risks and challenges related to the current business processes?

3.1 Current Situation Overview

The Government of British Columbia has charged select Ministries, Crown Corporations and Agencies (collectively referred to within this document as Interest Granting Agencies) with the responsibility for managing land and resource interests and rights on behalf of the Province. These responsibilities include:

- Receiving applications for interests and rights (referred to within this document as "requests").

- Adjudicating requests for the granting of interests.

- Registering or recording the granting of interests.

- Managing interests that have been granted.

- Conducting long-term strategic land-use planning.

The authority for granting interests is defined by legislation. Each Interest Granting Agency may have responsibility for the management of one or more interest type. In some cases, more than one Interest Granting Agency will have the authority to grant a particular interest type.

The granting of the right to use or occupy land for a specific purpose usually involves one of the following transaction types:

- Transfer of rights from the Crown to a private entity.

- Transfer of rights between private entities.

- Transfer of rights from a private entity to the Crown.

- Transfer of the management of a right between Crown entities or to/from other levels of Government (federal or municipal).

- Recognition of the existence of a right.

Each Interest Granting Agency has developed business processes and operational systems to manage the interests and transaction types that occur within their area of responsibility. These processes vary greatly between Interest Granting Agencies based on the business need, but generally an Interest Granting Agency must determine the following when adjudicating a request for an interest:

- **Ownership** – who currently holds the right?

- **Current Rights** – what rights are currently held?

- **Impediments** – are there any conflicts or legal barriers to granting the right?

While each Interest Granting Agency is ultimately responsible for making the decision to grant an interest, they must consult with other Interest Granting Agencies and interested parties when adjudicating a request to ensure that no impediment outside of their area of responsibility exists. As the number and complexity of interest types being managed has increased over time, so has the complexity of the business processes.

Interest information systems are both manual and electronic and there is little or no integration of information systems across Interest Granting Agencies. This lack of system integration means that it is very difficult to obtain a complete picture of the status of a particular parcel of land when considering a request for an interest. The result is that Interest Granting Agencies must conduct complex and time consuming referral processes in order to establish whether impediments exist or assume the risk inherent in granting an interest with incomplete information.

This lack of integration also impacts stakeholders outside of Government (Industry), who wish to acquire interests for the purpose of land and resource development. Industry needs accurate and timely information on the status of land and resources to support their development planning and currently this can be very difficult to obtain.

The following sections provide detailed information on the ILRR stakeholders, the interests (with associated legislation) identified as being relevant to the ILRR, and, generically, the business processes and system currently in place to manage interests. **Appendix A** contains Interest Granting Agency-specific interest and business process information.

3.2 ILRR Stakeholders

Information on land and resource rights is of interest to a broad range of stakeholders who generally fall within one of four categories:

Interest Granting Agencies

Interest Granting Agencies are those branches of the BC Government or closely associated organizations that have a statutory responsibility for the management of rights and interests in land and resources.

Responsibility for managing interests will change over time due to revisions to interest types and Government reorganizations. The following Interest Granting Agencies were identified during the consultation process as currently having responsibility for the management of one or more interests:

- BC Assessment Authority

- Land and Water British Columbia Inc.

- Ministry of Agriculture

- Ministry of Community, Aboriginal and Women's Services, Heritage Branch

- Ministry of Energy and Mines, Titles Division, Mineral Titles

- Ministry of Energy and Mines, Titles Division, Oil and Gas Titles

- Ministry of Forests

- Ministry of Sustainable Resource Management, Crown Contaminated Sites Program

- Ministry of Sustainable Resource Management, Land Information Services Division, Land Titles Branch

- Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department

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- Ministry of Sustainable Resource Management, Archaeology and Registry Services Branch

- Ministry of Sustainable Resource Management, Surveyor General Branch

- Ministry of Sustainable Resource Management, Registry Services Section, Crown Grants and Document Unit

- Ministry of the Attorney General - Treaty Negotiation Office

- Ministry of Transportation

- Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Biodiversity Branch

- Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Fish and Wildlife Recreation and Allocation Branch

- Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Parks and Protected Areas Branch

- Oil and Gas Commission

Non-Interest Granting Government Organizations

Non-Interest Granting Government Organizations are branches of the BC and other levels of government that do not have right or interest granting responsibilities, but have an interest in using the information in the ILRR to support their planning or policy development processes. These include (but are not restricted to):

- Municipalities

- Federal Government

    o Fisheries and Oceans Canada, Pacific Region

    o Justice Department

    o Canadian Wildlife Service (Environment Canada)

    o Department of Public Works

    o Parks Canada

- Ministry of Sustainable Resource Management, Corporate Policy and Planning

- Integrated Cadastral Information Society

Industry

Industry stakeholders include companies, professional associations, and individuals who have a business interest in the information maintained in the ILRR to support their interest request or management business. The following is a representation of the range of industry groups that will likely be users of the ILRR (but are not restricted to)[1]:

- BC and Yukon Chamber of Mines

- BC Association of Professional Consulting Archaeologists

- BC Association of Professional Registry Agents

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[1] Industry associations provide representation for individual companies that may ultimately be users of the ILRR.

- BC Fishing Resorts and Outfitters Assoc
- BC Resorts and Outfitters
- BC Wilderness Tourism Association
- Business Council of British Columbia
- Canadian Association of Petroleum Landmen
- Canadian Association of Petroleum Producers
- Cattlemen's Association
- Corporation of BC Land Surveyors
- Council of Forest Industries
- Council of Tourism Association of BC
- Ducks Unlimited Canada
- Earth First Energy Inc.
- Guide Outfitters Association
- Law Society of BC
- Mining Association of BC
- Nature Conservatory of Canada
- Parks Canada
- Public Works Canada
- Society of Notaries Public
- The Land Trust Alliance of BC
- The Nature Trust of BC
- Truck Loggers Association
- Union of British Columbia Municipalities
- URISA (Urban and Regional Information Systems Association)

General Public

Members of the General Public may have an interest in the ILRR for research, general interest or to support request for interests. The General Public will most likely have limited access to the ILRR information and functionality.

3.3 Managed Rights/ Interests

A right or interest (referred to throughout this document as an "interest") is a right or claim whereby the holders are entitled to or are bound by certain legal privileges or restrictions associated with tenure and land use activities.

Interest Granting Agencies manage, on behalf of the Government of British Columbia, a vast array of land and resource interests. During the consultation phase more than 90 different interest types were identified as being under the control of the Province and relevant to the ILRR. It is anticipated that additional interests will be added to this list over time as they are identified or created. The ILRR may possibly seek (in the future) to capture information on interests controlled by other levels of Government (for example Municipal, Federal and First Nations)

A breakdown of the number interest types managed by each Interest Granting Agency is as follows [2]:

Interest Granting Agency	Number Interest Types
BC Assessment Authority	1
Land and Water British Columbia Inc.	15
Local Governments	1
Ministry of Agriculture	1
Ministry of Community, Aboriginal and Women's Services, Heritage Branch	2
Ministry of Energy and Mines, Titles Division, Mineral Titles	9
Ministry of Energy and Mines, Titles Division, Oil and Gas Titles	7
Ministry of Forests	27
Ministry of Sustainable Resource Management, Crown Contaminated Sites Program	1
Ministry of Sustainable Resource Management, Land Information Services Division	3
Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department	1
Ministry of Sustainable Resource Management, Archaeology and Registry Services Branch	3
Ministry of Sustainable Resource Management, Surveyor General Branch	1
Ministry of Sustainable Resource Management, Registry Services Section, Crown Grants and Document Unit	8
Ministry of the Attorney General - Treaty Negotiation Office	1
Ministry of Transportation	1
Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Biodiversity Branch	1
Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Fish and Wildlife Recreation and Allocation Branch	3
Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Parks and Protected Areas Branch	8
Oil and Gas Commission	1
Grand Total	**95**

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[2] Note: Interest types have been associated with the Interest Granting Agency who is primarily responsible for that interest. In some cases an interest type may be granted by other Interest Granting Agencies.

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3.3.1 Managed Interests Table

The following is a list of interest types identified through the consultation process as being relevant to the ILRR. Interests have been divided into four groups:

1. Administrative Boundaries – an interest that represents an administrative boundary.
2. Land Use – an interest that indicates that a specific use of the land has been designated for the region.
3. Interest in Land Use – an interest that does not convey any legal rights, but where the interest holder has indicated that:
   a. Land and resource activity in the region is to be restricted
   b. The interest holder (of the interest in land use) should be consulted when requests for interests are being considered for the region.
4. Legal Rights – an interest that conveys to the interest holder the right conduct specific activities.

Appendix E contains detailed descriptions of each interest type:

3.3.1.1 Administrative Boundary

Interest Granting Agency	Interest Type
Ministry of Sustainable Resource Management, Registries and Titles Department	Administrative Boundary

3.3.1.2 Land Use

Interest Granting Agency	Interest Type
Ministry of Agriculture	Agricultural Land Reserve
Ministry of Energy and Mines, Mineral Titles	Coal Land Reserves
	Mineral Reserves
Ministry of Forests	Community Forest Agreement
	Provincial Forest
	Timber Supply Area (TSA)
Ministry of Sustainable Resource Management, Land Information Services Division	Land and Resource Management Plan - Zone 1
	Land and Resource Management Plan – Zone 2
	Sustainable Resource Management Plan – Landscape Unit
Ministry of Sustainable Resource Management, Crown Grants and Document Unit	Greenbelt Land

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3.3.1.3 Interest in Land Use

Interest Granting Agency	Interest Type
BC Assessment Authority	Assessment
Land and Water British Columbia Inc.	Map Reserves
	Notations of Interest
	OIC Reserves
	Reservations of Water

3.3.1.4 Legal Right

Interest Granting Agency	Interest Type
Land and Water British Columbia Inc.	Crown Grants
	Land Lease
	Land Licence
	Land Right of Way
	Land Temporary Permit
	Permits Over Crown Land
	Right to Use Unrecorded Water
	Transfers of Administration (to Provincial Agencies)
	Transfers of Administrative Control and Benefits (to Federal Agencies)
	Water Approval
	Water Licence
Local Governments	Designation and listing of heritage properties
Ministry of Community, Aboriginal and Women's Services, Community Services and Culture Division, Heritage Branch	Heritage Conservation Act Permit
	Registry of local government designed heritage
Ministry of Energy and Mines, Mineral Titles	Coal Lease
	Coal Licence
	Coal Licence Application
	Mineral Claim
	Mining Lease
	Placer Claim
	Placer Lease

Interest Granting Agency	Interest Type
Ministry of Energy and Mines, Oil and Gas Titles	Drilling Licences
	Geothermal Leases
	Geothermal Permits
	Oil and Gas Leases
	Petroleum and Natural Gas Permit
	Section 72 Agreement
	Underground Storage Lease
Ministry of Forests	Christmas Tree Permit
	Community Salvage Licence
	Forest Land Reserve
	Forest Licence
	Forest Road Permit
	Forest Road Use Permit
	Forest Service Road
	Forestry Licence to Cut
	Free-Use Permit
	Grazing Licence
	Grazing Permit
	Hay Cutting Licence
	Hay Cutting Permit
	HCA permits - alterations to trails, pursuant to agreements
	Interpretive forest sites, recreation sites and recreation trails
	Master Licence to Cut
	Occupant Licence to Cut
	Ongoing Silvaculture Obligation
	Private Timber Marks
	Special Use Permit
	Timber Licence
	Timber Sale Licence
	Tree Farm Licence
	Woodlot License
Ministry of Sustainable Resource Management, Crown Contaminated Sites Program	Contaminated Site

Interest Granting Agency	Interest Type
Ministry of Sustainable Resource Management, Archaeology and Registry Services Branch	Archaeological Sites
	Heritage Conservation Act Alteration Permit
	Heritage Conservation Act Permit
Ministry of Sustainable Resource Management, Surveyor General Branch	Land Act Parcel Cancellation
Ministry of Sustainable Resource Management, Land Titles Branch	Land Title
Ministry of Sustainable Resource Management, Crown Grants and Document Unit	Air Space
	Integrated Parcel Fabric (Integrated Survey Parcel)
	Lease, right of way or easement over greenbelt land
	Pipelines
	Railway Lines
	Survey Parcels
Ministry of the Attorney General - Treaty Negotiation Office	Treaty Settlement Lands
Ministry of Transportation	Highways
Ministry of Water, Land and Air Protection, Biodiversity Branch	Wildlife Habitat Areas, Ungulate Winter Range
Ministry of Water, Land and Air Protection, Fish and Wildlife Recreation and Allocation Branch	Angling Guide Licence
	Guide Outfitter Licence
	Traplines
Ministry of Water, Land and Air Protection, Parks and Protected Areas Branch	Crown land acquisitions for Parks/PAs or conservation areas (not designated)
	Lands owned by NGOs but under long-term lease to WLAP to manage
	Ecological Reserve designations
	Ecological Reserve Permits for Scientific Research and Educational Purposes
	Park Use Permits for land use/occupancy and exclusive or semi-exclusive tenures
	Parks and Protected Area Designations
	Permits/authorizations in Wildlife Management Areas
	Wildlife Management Areas
Oil and Gas Commission	Petroleum Natural Gas Entry on Crown Land

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3.3.2 Interest Enabling Legislation Table

The authority to grant an interest is defined, in most cases, by enabling legislation. The legislation typically defines:

- The type of interest that may be granted (interest name)

- Rights associated with the interest

- Restrictions or conditions that may apply to the interest

- Length of time an interest may be in effect

The authority to grant a particular interest type may be defined in one Act or in multiple Acts. On rare occasions the Government will pass new legislation to allow it to grant a very special type of interest – an example would be granting lands as a result of Treaty Negotiations.

Legislation changes over time and it is important not only to know what interest type has been granted, but also what version of the legislation was in effect at the time of granting.

The following is a list of Legislation that enables the issuing and management of interests, identified through the consultation process as being relevant to the ILRR, grouped by Interest Granting Agency (Appendix E contains descriptions of each Act):

Interest Granting Agency	Legislation
Land and Water British Columbia Inc.	1. Land Act
	2. Water Act
Local Government	3. Local Government Act
Ministry of Agriculture	4. Agricultural Land Commission Act
Ministry of Energy and Mines, Titles Division, Mineral Titles	5. Coal Act
	6. Mineral Tenure Act
	7. Mining Right Of Way
Ministry of Energy and Mines, Titles Division, Oil and Gas Titles	8. Geothermal Resources Act
	9. Petroleum And Natural Gas Act
Ministry of Forests	10. Forest Act
	11. Forest Land Reserve Act
	12. Forest Practices Code Of BC Act
	13. Forest Range Practices Act
	14. Ministry Of Forests Act
	15. Range Act
Ministry of Sustainable Resource Management, Archaeology and Registry Services Branch	16. Heritage Conservation Act

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Interest Granting Agency	Legislation
Ministry of Sustainable Resource Management, Registry Services Section	17. Greenbelt Act
	18. Land Survey Act
	19. Land Title Act
	20. Pipeline Act
	21. Railway Act
Ministry of the Attorney General - Treaty Negotiation Office	22. Mcleod Lake Indian Band Treaty No. 8 Adhesion And Settlement Agreement Act
	23. Nisga'a Final Agreement Act
	24. Sechelt Indian Government District Enabling Act
Ministry of Transportation	25. Highway Act
Ministry of Water, Land and Air Protection, Fish and Wildlife Recreation and Allocation Branch	26. Wildlife Act
Ministry of Water, Land and Air Protection, Parks and Protected Areas Branch	27. Ecological Reserve Act
	28. Environment And Land Use Act
	29. Park Act
	30. Parks And Protected Areas Act Of BC
Oil and Gas Commission	31. Oil And Gas Commission Act

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3.3.3 Interests and Legislation Matrix

The following is a mapping of interest types to enabling Legislation as identified during the consultation process:

	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
1. Assessment																															
2. Crown Grants	X																		X												
3. Land Lease	X																														
4. Land Licence	X																														
5. Land Right of Way	X																														
6. Land Temporary Permit	X																														
7. Map Reserves	X																														
8. Notations of Interest	X																														
9. OIC Reserves	X																														
10. Permits Over Crown Land		X																													
11. Reservations of Water		X																													
12. Right to Use Unrecorded Water		X																													
13. Transfers of Administration (to Provincial Agencies)	X																														

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	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
14. Transfers of Administrative Control and Benefits (to Federal Agencies)	X																														
15. Water Approval		X																													
16. Water Licence		X																													
17. Designation and listing of heritage properties			X																												
18. Agricultural Land Reserve				X																											
19. Heritage Conservation Act Permit																X															
20. Registry of local government designed heritage																X															
21. Coal Land Reserves					X																										
22. Coal Lease					X																										
23. Coal Licence					X																										
24. Coal Licence Application																															
25. Mineral Claim						X																									
26. Mineral Reserves						X																									
27. Mining Lease						X																									

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	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
28. Placer Claim						X																									
29. Placer Lease						X																									
30. Drilling Licences									X																						
31. Geothermal Leases								X																							
32. Geothermal Permits								X																							
33. Oil and Gas Leases									X																						
34. Petroleum and Natural Gas Permit									X																						
35. Section 72 Agreement									X																						
36. Underground Storage Lease									X																						
37. Christmas Tree Permit										X																					
38. Community Forest Agreement										X																					
39. Community Salvage Licence										X																					
40. Forest Land Reserve											X																				
41. Forest Licence										X																					
42. Forest Road Permit										X																					
43. Forest Road Use Permit										X																					
44. Forest Service Road										X																					

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	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
45. Forestry Licence to Cut										X																					
46. Free-Use Permit										X																					
47. Grazing Licence															X																
48. Grazing Permit															X																
49. Hay Cutting Licence															X																
50. Hay Cutting Permit															X																
51. HCA permits - alterations to trails, pursuant to agreements																X															
52. Interpretive forest sites, recreation sites and recreation trails												X																			
53. Master Licence to Cut										X																					
54. Occupant Licence to Cut										X																					
55. Ongoing Silvaculture Obligation										X																					
56. Private Timber Marks										X																					
57. Provincial Forest										X																					
58. Special Use Permit												X																			
59. Timber Licence										X																					

25

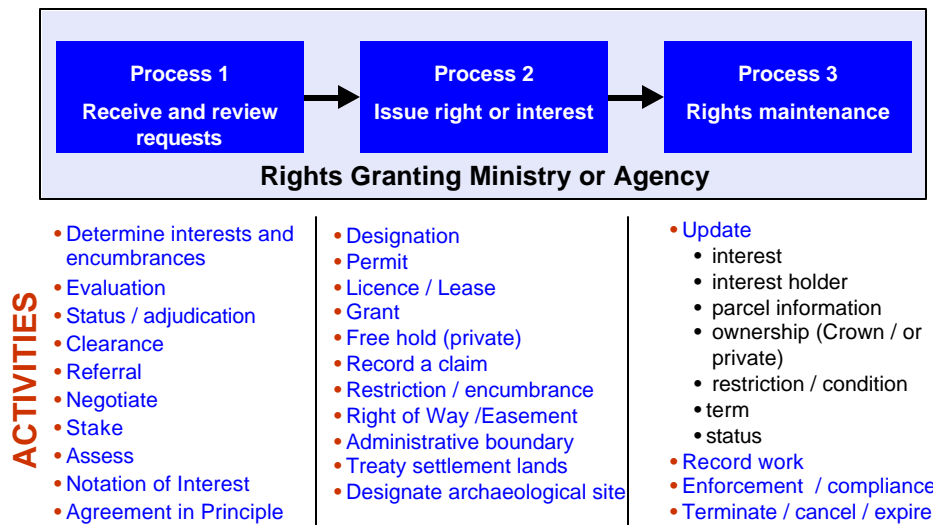|	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
60. Timber Sale Licence										X																					
61. Timber Supply Area (TSA)										X																					
62. Tree Farm Licence										X																					
63. Woodlot License										X																					
64. Contaminated Site																															
65. LRMP - Zone 1																															
66. LRMP - Zone 2																															
67. SRMP - Landscape Unit																															
68. Administrative Boundary																															
69. Archaeological Sites																X															
70. Heritage Conservation Act Alteration Permit																X															
71. Heritage Conservation Act Permit																X															
72. Land Act Parcel Cancellation	X																														
73. Air Space																			X												
74. Greenbelt Land																	X														

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	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
75. Integrated Parcel Fabric (Integrated Survey Parcel)																		X													
76. Land Title																			X												
77. Lease, right of way or easement over greenbelt land																	X														
78. Pipelines																				X											
79. Railway Lines																					X										
80. Survey Parcels																		X													
81. Treaty Settlement Lands																						X	X	X							
82. Highways																									X						
83. Wildlife Habitat Areas, Ungulate Winter Range												X																			
84. Angling Guide Licence																										X					
85. Guide Outfitter Licence																										X					
86. Traplines																										X					
87. Crown land acquisitions for Parks/PAs or conservation areas (not designated)																															

	1. Land Act	2. Water Act	3. Local Government Act	4. Agricultural Land Commission Act	5. Coal Act	6. Mineral Tenure Act	7. Mining Right Of Way	8. Geothermal Resources Act	9. Petroleum And Natural Gas Act	10. Forest Act	11. Forest Land Reserve Act	12. Forest Practices Code Of Bc Act	13. Forest Range Practices Act	14. Ministry Of Forests Act	15. Range Act	16. Heritage Conservation Act	17. Greenbelt Act	18. Land Survey Act	19. Land Title Act	20. Pipeline Act	21. Railway Act	22. Mcleod Lake Indian Band Treaty No. 8	23. Nisga'a Final Agreement Act	24. Sechelt Indian Government District Enabling Act	25. Highway Act	26. Wildlife Act	27. Ecological Reserve Act	28. Environment And Land Use Act	29. Park Act	30. Parks And Protected Areas Act Of BC	31. Oil And Gas Commission Act
88. Ecological Reserve designations																											X				
89. Ecological Reserve Permits for Scientific Research and Educational Purposes																											X				
90. Lands owned by NGOs but under long-term lease to WLAP to manage																										X					
91. Park Use Permits for land use/occupancy and exclusive or semi-exclusive tenures																													X		
92. Parks and Protected Area Designations																												X	X	X	
93. Permits/authorizations in Wildlife Management Areas																										X					
94. Wildlife Management Areas																										X					
95. Petroleum Natural Gas Entry on Crown Land	X								X																						X

3.4 Current Interest Management Processes

Land and resource interests administered by the Province of British Columbia are currently managed by a number of Ministries and Agencies (commonly referred to as Interest Granting Agencies). Each Interest Granting Agency has evolved business processes to support the granting and maintenance of the interest or interests under their control. Most Interest Granting Agencies have similar business processes that can be summarized by the following diagram:

Process 1	Process 2	Process 3
Receive and review requests	Issue right or interest	Rights maintenance

Rights Granting Ministry or Agency

ACTIVITIES

- Determine interests and encumbrances
- Evaluation
- Status / adjudication
- Clearance
- Referral
- Negotiate
- Stake
- Assess
- Notation of Interest
- Agreement in Principle

- Designation
- Permit
- Licence / Lease
- Grant
- Free hold (private)
- Record a claim
- Restriction / encumbrance
- Right of Way /Easement
- Administrative boundary
- Treaty settlement lands
- Designate archaeological site

- Update
  - interest
  - interest holder
  - parcel information
  - ownership (Crown / or private)
  - restriction / condition
  - term
  - status
- Record work
- Enforcement / compliance
- Terminate / cancel / expire

As the diagram above illustrates, each of the three process areas contains a number of activities. Depending on the business area and interest type, Interest Granting Agencies may perform some or all of the activities listed (see Appendix A for a detailed description of each key Interest Granting Agency's business processes).

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Generally there are three "actors"[3] involved in the Interest Management process:

Client/Proponent	The individual or organization requesting the interest. The Client/Proponent may be: • A private company (forest or petroleum company) • An individual (land owner, miner) • An agency or branch of Government
Interest Granting Agency	The agency or branch of Government responsible for managing the interest. In some cases more than one agency may be able to grant an interest.
Referral Agencies	Individuals or organizations that may be impacted by or may influence the granting of the interest. Referral Agencies may be: • Other Interest Granting Agencies • Other Interest Holders • Non-Interest Granting Branches of Government • First Nations • General Public

3.4.1 Process 1:   Receive and Review Requests

The Receipt and Review Request process encompasses all activities related to processing a request for a specific interest from the preparation of the request (or application) through to the decision to grant (or deny) the interest.

Most Interest Granting Agencies have three sub-processes within the Receipt and Review Request Process:

3.4.1.1 Request Preparation/Submission

In order to obtain most land and resource interests managed by the BC Government the proponent must submit a formal "request" to the appropriate agency for review. The request for the interest may be made by an organization or individual outside the BC Government (examples: forest companies, other levels of government) or from within the BC Government.

The Interest Granting Agency evaluates the request for the interest and makes a decision whether to grant the interest. The evaluation process includes determining whether the interest is available to be granted and establishing whether any other types of interest exist that may conflict with the interest being requested.

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[3] "Actor" is used to describe any individual or organization that plays a role within the business process.

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The activities that may occur during this process are:

Activity	Description	Performed By
Preparation and submission of Interest Request	In most cases an interest is granted in response to a formal request for the interest. Interest requests may take the following forms:	Client/Proponent
	• **Formal Application**. Many interests have a formal application process and require the Client/Proponent complete an application form. In addition the Client/Proponent may be required to provide additional supporting information and application fees. Examples of interests that require a formal application are Water Licenses, Forest Tenures, and Guide Outfitter Licenses.	
	• **Land and Resource Planning**. As part of land and resource planning, various branches of Government may identify areas of the Province that are being considered for a specific use. Depending on the use or interest being considered the Agency may wish to formally indicate its potential interest in the location, either to prevent the granting of conflicting interests or to ensure that other Interest Granting Agencies consult with the Agency prior to granting new interests. Examples of this type of interest are proposed Highways, Parks and Protected Areas, and Treaty Settlement Lands.	
	• **Identification of Possible Existing Interest**. There are a small number of interest types where the interest is considered to exist even if the interest has not be identified and recorded. In these cases the interest request represents the identification of a possible location of an unrecorded interest and is a request for the Interest Issuing Agency to confirm and record its existence. Examples of this type of interest are Archaeological Sites and Contaminated Sites.	
	In all cases the Client/Proponent identifies the interest type desired and the interest location (area of the Province).	
	Depending on the type of interest being requested (and the form of the request) the interest location may be very specific (a defined polygon) or quite wide-ranging (covering a general area).	
	Typically the Client/Proponent gathers and reviews information related to the interest being requested to support their application. The Client/Proponent may consult with existing interest information (from various interest registries) as well as geological or geographical information.	
	The outcome of the Preparation and Submission of Interest Request activity is the receipt of the interest request by the Interest Granting Agency.	

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Activity	Description	Performed By
Evaluation of completeness/ appropriateness of Interest Request	Most Interest Granting Agencies perform an initial evaluation of interest requests when they are received. This initial evaluation determines that: • All information required to support the interest request has been provided. • Any application fees have been received. • At a high-level, the interest request is appropriate (request has been submitted to the appropriate Interest Granting Agency, interest is available) Should an interest request not be complete or appropriate the Interest Granting Agency either rejects the request or requests an amendment from the Client/Proponent. The outcome of the evaluation of the interest request is the decision to accept or reject the request for processing.	Interest Granting Agency
Acceptance/Recording of Interest Request	Once the Interest Granting Agency has determined that the interest request is complete and appropriate the request is formally accepted and recorded. Interest Granting Agencies record requests by: • Entering request information into their operational system (examples: Tantalis, IRIS) • Recording request in request tracking list (examples: MS Excel, paper registry) • Recording area of interest request on paper maps (Notices of Interest, Map Reserves) The outcome of the Acceptance/Recording of Interest Request is the formal acceptance of the interest request.	Interest Granting Agency

3.4.1.2 Clearance/Referral Notification

Once an Interest Granting Agency has accepted a request for an interest, the Interest Granting Agency must determine if the interest may be granted. The Interest Granting Agency must establish that:

• The interest is available to be granted (has not already been granted).

• The client/proponent is eligible to hold the interest.

• The interest requested is appropriate use of the land and/or resource.

• The granting of the interest will not conflict with other types of interests already granted.

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The activities that may occur during this process are:

Activity	Description	Performed By
Statusing/Clearance	Statusing is the process of determining: 1. That the interest requested is available. 2. Whether other interests exist that may conflict with the requested interest. 3. Whether any conditions or restrictions should apply to the interest. The Interest Granting Agency consults various information sources (own interest registry, other registries, paper files and maps) to determine the status of the location of the requested interest. The outcomes of Statusing process include: • **Rejection of the interest request**. The initial statusing may reveal that the interest requested is not available or that it conflicts with existing interests or land use plans. For example, a request for a petroleum tenure could be rejected during statusing if the location requested is within a Park or Protected area. • **Approval of the interest request**. The initial statusing may provide the Interest Granting Agency with sufficient information to support the decision to grant the interest. • **Identification of Referral Agencies**. The initial statusing may indicate that the Interest Granting Agency needs to consult with other organizations prior to making a decision to grant the interest.	Interest Granting Agency
Prepare and distribute Referrals	If the Interest Granting Agency decides to consult with other organizations prior to granting an interest they begin a process commonly called "Referrals". Referrals may be undertaken when: • The Interest Granting Agency has identified a potential conflict with an existing interest managed by the Referral Agency and needs additional information or permission (sometimes referred to as "clearance") from the Referral Agency to grant the request interest. • The Interest Granting Agency is unable to independently obtain information on existing interests managed by the Referral Agency (for example, the Referral Agency's interest registry is not available to the Interest Granting Agency) and therefore cannot determine if potential conflicts exist. • The Interest Granting Agency determines that granting the request interest may have broad impact and that public and/or special interest group consultation is required. Referral policies and procedures vary by Interest Granting Agency and interest type and include: • Conducting referrals with a set group of Referral	Interest Granting Agency

Activity	Description	Performed By
	Agencies for every interest request.	
	• Conducting referrals with Referral Agencies only when a potential conflict has been identified.	
	• Conducting information sessions with public and/or specific inter-agency management committees	
	In additional, some Interest Granting Agencies do not perform referrals for certain types of interests (for example Archaeological Sites, Mineral Titles)	
	When an Interest Granting Agency is conducting referrals they:	
	• Identify the organizations and/or individuals to be consulted (Referral Agencies)	
	• Prepare Referral Packages, which may consist of the interest request, maps and other information related to the request	
	• Distribute the Referral Packages to the Referral Agencies	
	In addition, the Interest Granting Agency may involve the Client/Proponent in the Referral process by requiring the Client/Proponent consult with interested parties or place advertisements advising the public of the interest request.	
	The outcome of this activity is the distribution of Referral Packages to the appropriate Referral Agencies.	
Respond to Referral Request	Referral Agencies provide the Interest Granting Agency with a response to their Referral Package. Responses may include:	Referral Agencies
	• Information on existing (or requests for) interests that may conflict with the requested interest.	
	• Identification of issues or impacts of granting the requested right.	
	• Indication that the Referral Agency has no impediments that might prevent the requested interest from being granted (clearance).	
	The outcome of the Respond to Referral Request activity is the receipt of additional information and input related to the interest request by the Interest Granting Agency.	

3.4.1.3 Adjudication/Decision/Technical

Activity	Description	Performed By
Review information supplied/Evaluate all available input	Once the Interest Granting Agency has completed the clearance/referral process it will undertake a review of all relevant information.	Interest Granting Agency
	The outcome of this activity is the ability for the Interest Granting Agency to make a decision regarding whether the interest request should be granted.	

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3.4.2 Process 2: Issue Right or Interest

Activity	Description	Performed By
Make Interest Issuance Decision	When the Interest Granting Agency has completed the review of all information relevant to the interest request a decision will be made to approve or reject the interest request.	Interest Granting Agency
Issue Interest	Once a decision has been made to grant an interest the Interest Granting Agency may: Prepare contracts, permits or other legal documents Record the interest in their operational system (this may be delayed until signed contracts have been returned by the Client/Proponent) The outcome is that the interest has been granted.	Interest Granting Agency
Notify Client/Proponent	The Interest Granting Agency notifies the Client/Proponent of their decision and forwards relevant contracts for signing. The outcome is that the Client/Proponent (now the Interest Holder) may begin to exercise the rights associated with the interest.	Interest Granting Agency and Client/Proponent
Notify Referral Agencies	The Interest Granting Agency informs those Referral Agencies consulted during the Referral process of their final decision.	Interest Granting Agency and Referral Agencies

3.4.3 Process 3: Rights Maintenance

Activity	Description	Performed By
Provide Interest Reports	Depending on the type of interest the Client/Proponent may be required to provide regular reports to the Interest Granting Agency. These may include information on work performed, status of development, updates to Client Proponent information (name, address) and submission of fees or rent.	Client/Proponent
Request More Information	During the interest tenure the Interest Granting Agency may require additional information from the Client/Proponent.	Interest Granting Agency
Site Inspection	During the term of the tenure, the Interest Granting Agency may conduct a site inspection to determine compliance with conditions that are associated with the interest.	Interest Granting Agency\

Activity	Description	Performed By
Maintain Interests	Throughout the life of the interest the Interest Granting Agency is responsible for maintaining the currency of the interest information. Interest maintenance includes: • Updates to client/proponent information (name, address) • Changes to the interest (location modifications, additional conditions or restrictions) • Changes to the status of the interest (extensions of tenure, expiries, suspensions) When changes to interest information are identified the Interest Granting Agency will update the interest record in their operational system.	Interest Granting Agency

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3.4.4 Generic Interest Management Process Model

The following represents a generic process model for management of interests as described in the previous sections.

Generic Interest Business Process Model
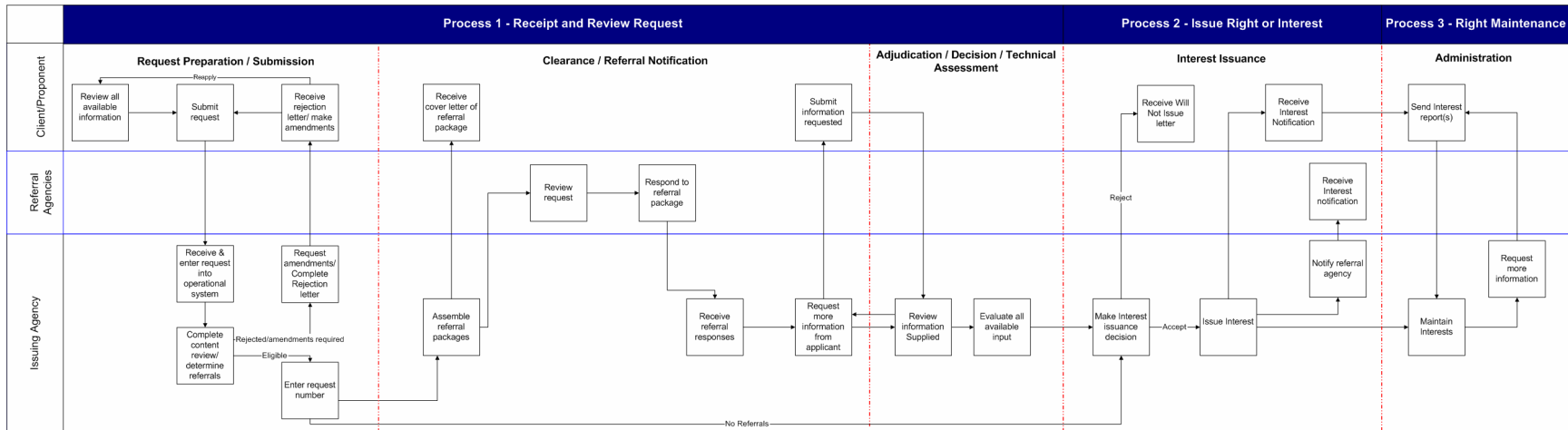
3.5 External Information Required During Referrals

A fundamental component of many Interest Granting Agencies' business processes are referrals. During the referral process, Interest Granting Agencies consult with other Interest Granting Agencies, other branches of government, special interest groups and members of the general public (collectively referred to as Referral Agencies) to ensure that the interest being requested does not conflict with existing interests or have a negative impact on the community or environment.

Referrals may take several forms:

- Consultation of Referral Agencies' registries to identify existing interests

- Informal request for information/input from Referral Agencies

- Formal request for input/clearance from Referral Agencies

- Structured public consultation

Consultation with nine Interest Granting Agencies indicates that there is a need to have access to information on interests in all areas. These agencies were asked to provide a listing of those external agencies that they routinely consult when considering a request for an interest or performing planning exercises related to interests. They were provided with 32 interest areas, which represented logical groupings of like rights and interests. The agencies were also given the opportunity to provide "Other" categories.

The matrix below summarizes the response from these nine agencies. Each of the 32 interest areas is consulted by at least one of the agencies; in most cases by multiple agencies. In addition, the nine agencies that responded identified an additional 12 external areas from which they require information when processing an interest request.

External Information Requirements	Archaeology	BC Assessment	LWBC	MEM-Oil and Gas Titles Division	Ministry of Transportation	OGC	SRM Registry	Surveyor General	Treaty Negotiation Office
Administrative boundaries	X	X	X		X	X	X		X
Agricultural land reserves	X	X	X	X	X	X	X		X
Archaeology sites	X	X	X	X	X	X	X		X
Coal reserves			X		X	X	X		X
Coal tenures			X		X	X	X	X	X
Contaminated sites designation	X	X	X		X	X			X
Crown Acquisitions	X	X	X		X	X	X		X
Crown Forfeitures	X	X	X		X	X	X		X
Crown Grants	X	X	X		X	X	X		X
Forest land reserves		X	X		X	X			X
Forest roads	X	X	X		X	X			X
Free hold mineral ownership.	X		X		X	X	X		X

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External Information Requirements	Archaeology	BC Assessment	LWBC	MEM-Oil and Gas Titles Division	Ministry of Transportation	OGC	SRM Registry	Surveyor General	Treaty Negotiation Office
Geothermal tenure	X		X		X	X	X		X
Guiding trap lines	X		X		X	X			X
Indian Reserves	X		X	X	X	X	X		X
Integrated parcel fabric	X	X	X	X	X	X	X		X
Land Act reserves	X		X		X	X	X		X
Land water business integration			X		X	X	X		X
Land/Ministry Act tenuring	X	X	X	X	X	X	X		X
Mineral and placer tenures	X		X		X	X	X	X	X
Mineral lands reserves			X		X	X	X		X
Other - Aboriginal Treaty Rights			X	X		X			
Other - Community comments and concerns				X					
Other - Federal Agencies	X								
Other - Major subsurface services	X								
Other -Archaeological Sites Federal Land	X								
Other -Major underwater services	X								
Other -Municipal Regional Heritage Designations	X								
Other: Navigation			X						
Other: Fisheries			X						
Other – FDP Forest Development						X			
Other - Forest Lover/VEG data						X			
Other – Land Resource Management Plans						X			
Parks	X		X	X	X	X	X		X
Petroleum natural gas Tenures		X	X		X	X	X		X
Private title	X	X	X		X	X	X	X	X
Provincial roads and highways	X		X			X	X		X
Range tenures	X	X	X		X	X			X
Recreation sites	X	X	X		X	X			X
Special use permits	X	X	X		X	X			X
Survey parcels	X	X	X		X	X	X		X
Timber tenures	X	X	X	X	X	X			X
Water Act licence issuance	X	X	X		X	X			X
Well site tenures	X	X	X		X	X	X		X

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3.6 Interest Data Management

A detailed review of existing interest data management systems (referred to throughout this document as "operational systems") will be conducted during the Systems Architecture phase of the project. The result will be a detailed mapping of operational systems to interests and operational attributes to the ILRR data requirements.

The following is a preliminary list of existing systems. It is anticipated that additional systems will be identified during the next phase and this list expanded.

System	Description	Agency[4]	Custodian
WLIS	Water Licensing Information System. Records additional information with WRIS.	Land and Water British Columbia Inc.	Land and Water British Columbia Inc.
WRIS	Water Rights Information System. Is served by POI (point of interest). An application that manages 42,000 active water licenses and $300M of annual revenue from 50,000 clients. The database also contains dam information.	Land and Water British Columbia Inc.	Land and Water British Columbia Inc.
TANTALIS	Crown Parcel Fabric, Survey Fabric, Crown Land Disposition, Interest Parcels. Maintaining and enhancing the system, which records all spatial and attribute information regarding survey and Land Act dispositions. Tantalis is the key system used by LWBC and the Oil & Gas Commission to record disposition of Crown lands. Represents the basis for managing over 30,000 tenures with several thousand applications processed each year, along with over 500,000 survey parcels and associated reversions and acquisitions. Tantalis Extranet is the web-based viewer, which provides crown land information to external government & private sector users. The latter group will form an e-commerce opportunity. This results in better-expedited decision-making and streamlined processes for all parties undertaking activities on Crown land.	Land and Water British Columbia Inc./ Ministry of Sustainable Resource Management	MSRM
MIDA GRAPHICS	Mineral Data System Microstation files. A set of MicroStation vector files and a set of IRAS/B raster files and contains spatial data on all mineral, placer, and coal tenure information, reserves, and alienations.	Ministry of Energy and Mines, Titles Division, Mineral Titles	MSRM

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[4] The agency may or may not be the custodian of the operational system used to manage its interests.

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System	Description	Agency[4]	Custodian
MIDA RECORDS	RDB containing the record data on all free miner licenses, mineral, placer and coal tenure information, administrative reserves and tenure holder data.	Ministry of Energy and Mines, Titles Division, Mineral Titles	MSRM
MTO	Mineral Title Online Mineral Titles Online (MTO) is an Internet-based Mineral Title Administration system that will provide a powerful new tool to the mineral exploration industry. The initial phase of project implementation will allow users to view spatial and attribute data online, acquire free miner certificates (FMC), authenticate as a legitimate client, select tenure for acquisition, and make payment for the transaction. In the future, MTO will also incorporate subsurface mineral and placer titles administration, providing a fully web-based recording application for all titles transactions. The map selection part of MTO will allow the acquisition a mineral claim by selecting the area on a seamless digital GIS map of British Columbia. MTO will include the ability to pay electronically.	Ministry of Energy and Mines, Titles Division, Mineral Titles	MEM
ENERGIS	Spatial component of PTS. Registry of Petroleum and Natural Gas tenure, Geothermal tenure, and soon to include Coal Bed Methane tenure. Contains official locations of Oil and Gas Wells (OGC). Contains spatial and attribute data for Oil and Gas fields, and other related GIS coverages used for referral processes.	Ministry of Energy and Mines, Titles Division, Oil and Gas Titles	MSRM

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System	Description	Agency[4]	Custodian
PTO	Petroleum Titles Online The project will be developed in 3 phases. Phase 1 entails the development of an interactive map-query tool for viewing and searching petroleum tenures. The tool will mirror the functionality of MEM's web-based MapPlace. Phase 2 will focus on delivering improved client access to sale parcel map information. Phase 3 will involve development of a map-based online sales parcel request module and related petroleum tenure administrative transactions, consistent with government's direction on e-business processes. Phase 1 & 2 to be complete by March 31, 2004	Ministry of Energy and Mines, Titles Division, Oil and Gas Titles	MEM/MSRM
FRMA	Forest Road Management Application. Database containing information on Forest Roads	Ministry of Forests	Ministry of Forests
FTA	Forest Tenure Application. FTA is the new forest tenure application system that will allow users to electronically submit tenure applications. FTA will require that spatial information is provided at the time of data submission. Implementation is currently underway. FTA will eventually replace FTAS and INCOSADA as MOF's forest tenure operation system.	Ministry of Forests	Ministry of Forests/MSRM
FTAS	Range and Forestry Act tenures Attributes. Records land clearance status and operational status of Recreation Campgrounds, Trails and reserves including facilities, structural improvements and activities associated with them. FTA is going to replace FTAS	Ministry of Forests	MSRM

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System	Description	Agency[4]	Custodian
INCOSADA	Forest Tenures. Major Forestry initiative to create a current, complete and managed database of information about the land base. INCOSADA will provide a standardized set of corporate spatial & attribute data (i.e. map & text data) with common database structures. INCOSADA will deliver a single suite of tools to Land Information Management staff to support file update &management. ISDD is a set of ORACLE tables defining data standard. There is also a WEB app that queries ISDD. VEGCAP is a vegetation system that will replace FIP/FC1. RTECAP is a tenure processing application that will replace FAMAP. FTA is going to replace INCOSADA	Ministry of Forests	MSRM
LIAM	Land information administration management: manages sub-tenures on MOF lands	Ministry of Forests	Ministry of Forests
RESULTS	RESULTS - Silvaculture Management System. RESULTS is the database application used to track forest tenure holder's silvaculture obligation once a tenure has expired.	Ministry of Forests	Ministry of Forests
ICP	Integrated Cadastral	Ministry of Sustainable Resource Management	MSRM
CSD	Contaminated Sites Database. The Contaminated Sites Database is currently in development. The CSD will house information on identified contaminated sites located on Crown Land.	Ministry of Sustainable Resource Management, Crown Contaminated Sites Program	MSRM
ALTOS	Land titles, parcels. ALTOS is a comprehensive computer system with anintegrated image subsystem which automates the process of land title registration in British Columbia. External access (e.g. title search) is provided through BC OnLine.	Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department	MSRM

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System	Description	Agency[4]	Custodian
HRIA	Archaeological sites. A system for the recording, maintenance and dissemination of archaeological and other types of heritage information as required under the HCA. Remote Access to Archaeological Data (RAAD) is the public window into HRIA. RAAD allows users to: • easily find any recorded archaeological site in the province • select one or more archaeological sites to examine detailed information • create and download inventory site form reports of selected archaeological sites • download maps, images and documents associated with a site • download spatial data of selected sites	Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department, Archaeology and Registry Services Branch	MSRM
PERMLOG	PERMLOG (Permit Log) is a MS Excel application that tracks archaeological permits.	Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department, Archaeology and Registry Services Branch	MSRM
ABMS	Administrative Boundary Management System. System for managing administrative boundary information	Ministry of Sustainable Resources	MSRM

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System	Description	Agency[4]	Custodian
DRA2	Digital Road Atlas The Digital Road Atlas project (DRA) will build a data management system for all roads in British Columbia. Inputs into the system include roads data from TRIM, GIS Innovations, Elections BC, the Ministry of Transportation, resource roads from the Ministry of Forests, and all associated updates. DRA will be a value added product, considered as part of the Provincial Baseline Digital Atlas. DRA will serve as a single source of all roads data, where transportation or geographic position is the primary focus. Some communities of users may consider the DRA as a primary data holding; others may treat it as a warehouse. The system will be designed to handle spatial queries concerning general location, routing, position, and distance along a route, mixed with non-spatial queries based on the road attributes, data source, date and method of capture, accuracy, etc. Road engineering detail is beyond the project's scope. Additionally, the geometric representation of the roads and intersections will be as centrelines and points, respectively	Ministry of Sustainable Resources	Ministry of Sustainable Resources
PAR	Protected Areas Registry (VAX). Vax Application that has been maintained because of the relationship with other VAX Applications. (PSPS, Attendance, Management Levels). Web Application to capture BC Parks individual protected area information (size, class etc.).	Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Parks and Protected Areas Branch	MSRM
IRIS	The system the Oil and Gas Commission uses to track applications. Once a permit is granted the information is transferred to Tantalis.	Oil and Gas Commission	Oil and Gas Commission

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3.6.1 Interest Type/Operational System Matrix

The following table provides a preliminary mapping of operational systems to interest types. Further refinement of this mapping will be completed during the Systems Architecture phase.

Operational System / Interest Type	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
1. Assessment																		
2. Crown Grants																X		
3. Land Lease																X		
4. Land Licence																X		
5. Land Right of Way																X		
6. Land Temporary Permit																X		
7. Map Reserves																X		
8. Notations of Interest																X		
9. OIC Reserves																X		
10. Permits Over Crown Land																X		
11. Reservations of Water																	X	X
12. Right to Use Unrecorded Water																	X	X
13. Transfers of Administration (to Provincial Agencies)																X		
14. Transfers of Administrative Control and Benefits (to Federal Agencies)																X		
15. Water Approval																	X	
16. Water Licence																	X	

Interest Type \ Operational System	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
17. Designation and listing of heritage properties																		
18. Agricultural Land Reserve																		
19. Heritage Conservation Act Permit																		
20. Registry of local government designed heritage																		
21. Coal Land Reserves											X							
22. Coal Lease											X							
23. Coal Licence										X								
24. Coal Licence Application										X								
25. Mineral Claim											X							
26. Mineral Reserves											X							
27. Mining Lease											X							
28. Placer Claim											X							
29. Placer Lease											X							
30. Drilling Licences			X											X				
31. Geothermal Leases			X											X				
32. Geothermal Permits			X											X				
33. Oil and Gas Leases			X											X				
34. Petroleum and Natural Gas Permit														X				
35. Section 72 Agreement			X											X				

Operational System / Interest Type	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
36. Underground Storage Lease														X				
37. Christmas Tree Permit				X														
38. Community Forest Agreement							X											
39. Community Salvage Licence							X											
40. Forest Land Reserve				X														
41. Forest Licence				X			X											
42. Forest Road Permit				X														
43. Forest Road Use Permit				X														
44. Forest Service Road							X											
45. Forestry Licence to Cut				X			X											
46. Free-Use Permit				X														
47. Grazing Licence				X														
48. Grazing Permit				X														
49. Hay Cutting Licence				X														
50. Hay Cutting Permit				X														
51. HCA permits - alterations to trails, pursuant to agreements																		
52. Interpretive forest sites, recreation sites and recreation trails				X														
53. Master Licence to Cut							X											

Interest Type	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
54. Occupant Licence to Cut							X											
55. Ongoing Silvaculture Obligation															X			
56. Private Timber Marks							X											
57. Provincial Forest							X											
58. Special Use Permit							X											
59. Timber Licence				X			X											
60. Timber Sale Licence				X			X											
61. Timber Supply Area (TSA)							X											
62. Tree Farm Licence				X			X											
63. Woodlot License				X														
64. Contaminated Site		X																
65. LRMP - Zone 1									X									
66. LRMP - Zone 2									X									
67. SRMP - Landscape Unit									X									
68. Administrative Boundary									X									
69. Archaeological Sites					X													
70. Heritage Conservation Act Alteration Permit													X					
71. Heritage Conservation Act Permit													X					
72. Land Act Parcel Cancellation																		
73. Air Space																		

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Operational System / Interest Type	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
74. Greenbelt Land																		
75. Integrated Parcel Fabric (Integrated Survey Parcel)						X												
76. Land Title	X																	
77. Lease, right of way or easement over greenbelt land																		
78. Pipelines																		
79. Railway Lines																		
80. Survey Parcels																		
81. Treaty Settlement Lands	X															X		
82. Highways	X															X		
83. Wildlife Habitat Areas, Ungulate Winter Range																		
84. Angling Guide Licence																		
85. Guide Outfitter Licence																		
86. Traplines																		
87. Crown land acquisitions for Parks/PAs or conservation areas (not designated)												X						
88. Ecological Reserve designations												X						
89. Ecological Reserve Permits for Scientific Research and Educational Purposes												X						

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Operational System / Interest Type	ALTOS	CSD	ENERGIS	FTAS	HRIA	ICP	INCOSADA	IRIS	LRDW	MIDA	MTO	PAR	PERMLOG	PTS	RESULTS	TANTALIS	WLIS	WRIS
90. Lands owned by NGOs but under long-term lease to WLAP to manage												X						
91. Park Use Permits for land use/occupancy and exclusive or semi-exclusive tenures												X						
92. Parks and Protected Area Designations												X						
93. Permits/authorizations in Wildlife Management Areas																		
94. Wildlife Management Areas												X						
95. Petroleum Natural Gas Entry on Crown Land								X								X		

4. Business Requirements

4.1 Business Objectives

The objective of the ILRR is to support the processes related to the granting and management of interests in land and resources within the Province of British Columbia by providing Interest Granting Agencies, other branches of Government, Industry and the General Public with a single source of information on rights and interests. The goal is to improve the efficiency of right and interest granting by providing stakeholders with access to accurate, timely information to support their business processes.

Specifically ILRR will support the following three processes:

Process 1: Receive and Review Requests

The ILRR will support the Receive and Review Request process by:

- Allowing Interest Granting Agencies to record requests for interests in the ILRR in order to share this information with other stakeholders.

- Providing Government and Industry users with accurate and timely information to support land use and interest acquisition planning.

- Consolidating the information needed for "statusing" interest requests.

- Providing Interest Granting Agencies, Client/Proponents and other stakeholders with notifications of updates to ILRR that may impact an interest request.

- Supporting the referral processes by:

    o Enabling Interest Granting Agencies to quickly identify existing and requested interests that intersect with the request under review.

    o Allowing Interest Granting Agencies to easily compile a list of Referral Agencies (other Interest Granting Agencies and Interest Holders) to include in consultation processes.

    o Providing Referral Agencies with electronic documentation and maps for reference when preparing referral responses.

Process 2: Issue Right or Interest

The ILRR will support the Issue Rights or Interest process by:

- Requiring Interest Granting Agencies to register the granting of interests in the ILRR in order to share this information with other stakeholders.

- Providing Interest Granting Agencies, Client/Proponents and other stakeholders with information of new interests.

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Process 3: Rights Maintenance

The ILRR will support the Rights Maintenance process by:

- Allowing Interest Granting Agencies to update interest information in the ILRR to ensure the currency of the information available to stakeholders.

- Providing Interest Granting Agencies, Client/Proponents and other stakeholders with notifications of updates to interests.

- Providing Government and Industry users with accurate and timely information to support interest maintenance and land and resource use planning.

Other Processes (ILRR Administration)

In addition to supporting the three interest management process, the ILRR will need to develop processes and functionality to support its own administration. Processes to be supported include:

- User account management

- Data access

- Code set management

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4.2 Business Context

4.2.1 Current Context

Currently, when performing basic interest granting processes such as statusing, Interest Granting Agencies (and other stakeholders) must interact with a number of other organizations in order to obtain information on existing interests.

As the figure below[5] illustrates, the current flow of information requests and responses between Interest Granting Agencies, other levels of Government, Industry and the general public is complex. Gathering basic information to determine what existing interests are associated with a region of the Province requires interaction with a large number of stakeholders and is time and resource intensive.

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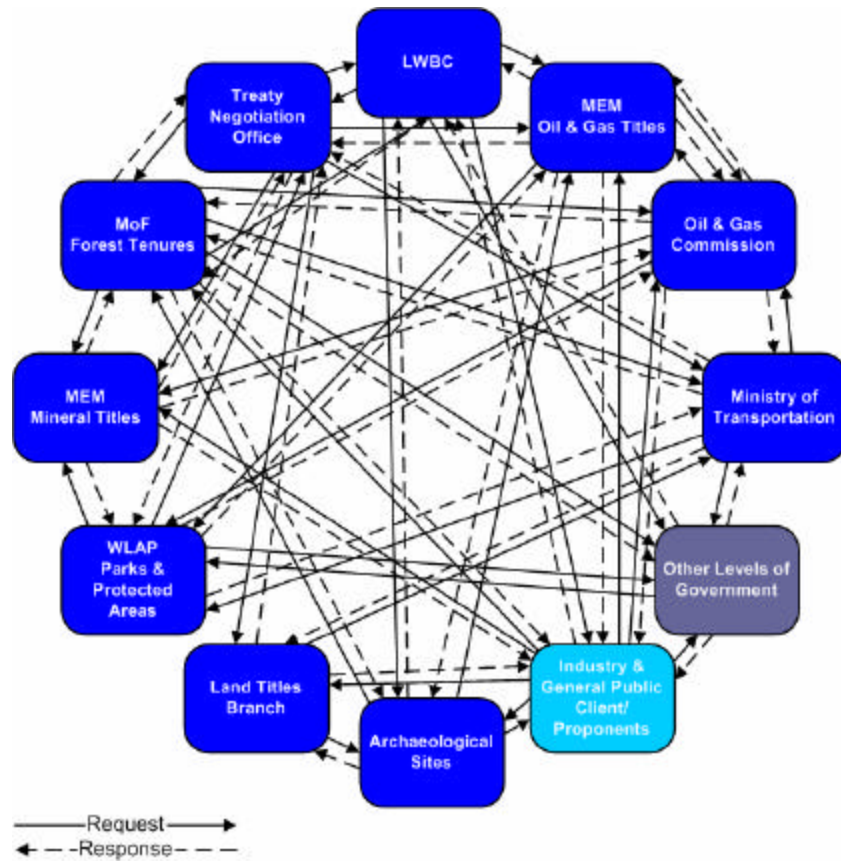
[5] This diagram is meant to illustrate the complexity inherent in the current interest granting business processes. It is not a representation of all stakeholders and their interactions.

4.2.2 Future Context (with ILRR)

The implementation of the ILRR will simplify many of the interactions required to support interest granting business processes. As the figure below illustrates, the ILRR will become the central source of information on interests that have been requested or granted. Interest Granting Agencies will be able to register new requests and granted interests and use ILRR to support their statusing and referral processes. Other stakeholders (other branches and levels of government, industry and the general public) will be able to reference the ILRR when planning and applying for interests.
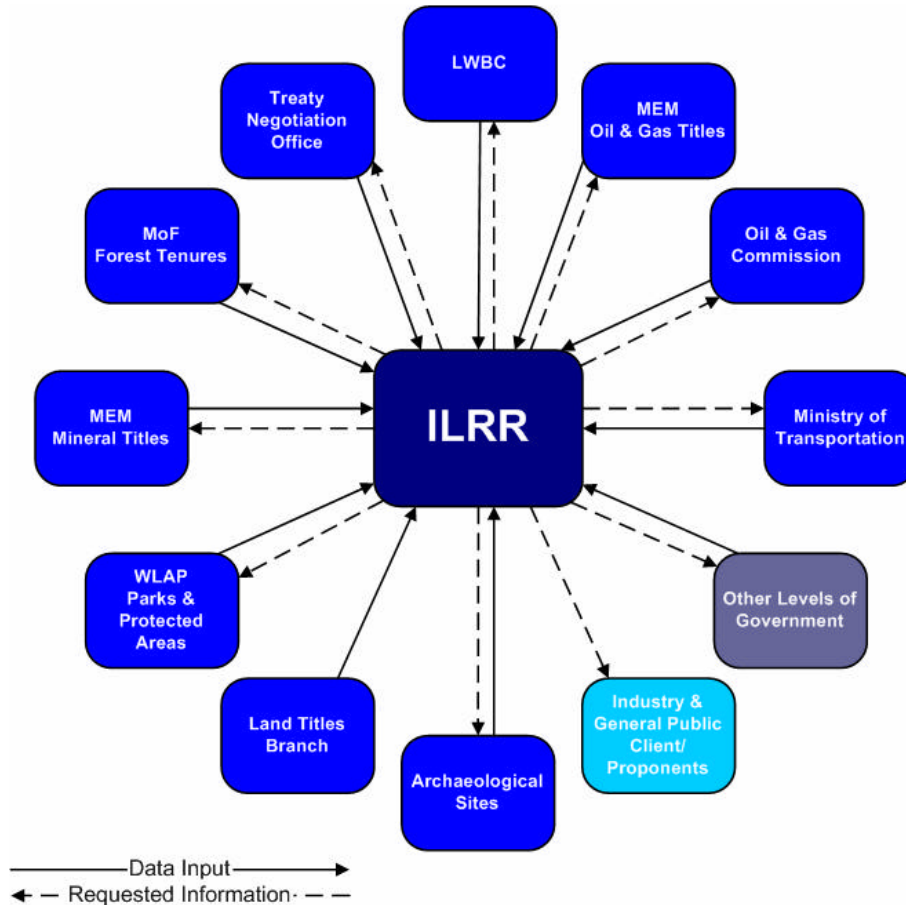
4.2.3 Legal Registry Status

In order to establish the ILRR as the "Legal Registry" of land and resources within the Province of British Columbia, as recommended by the Business Strategy, additional effort is required to define the legal registry framework.

Designating ILRR as a "Legal Registry" would serve two purposes:

1. Legal status would provide users of the ILRR with certainty that the information provided by the system is an accurate and complete description of the current status of the land within the Province. ILRR would be the single authoritative source of information.

2. Associated legislation would provide ILRR with the authority to compel Interest Granting Agencies to provide the data required by the ILRR in a timely, accurate and complete manner.

4.2.3.1 Establishing a Legal Registry

In order to establish ILRR as the "Legal Registry" the following activities will need to take place:

1. Development of legal registry framework

The first activity required in establishing ILRR as a "Legal Registry" will be to determine exactly what "Legal Registry" means.

The best-know system of title registration is the Torrens system, which was recommended in the ILLR Business Strategy and Transition Plan document for ILRR. The Torrens system supports the three generally accepted principles of title registration:

- **The mirror principle** – that the register reflects accurately and completely the current state of the title.

- **The curtain principle** – that the register is the sole source of information necessary for a purchaser. No further historical investigation beyond the register is necessary (i.e. a curtain effect that blocks out all former transactions).

- **The guarantee principle** – that the state is responsible for the veracity of the register and provides compensation to anyone who suffers a loss in the event of an error.

The project needs to determine if a Torrens-like model is both viable (given the complexity inherent in the range of interest types) and desirable, or if an alternate framework needs to be developed. Of particular importance will be determining the impact that creating a "Legal Registry" will have on existing legislation and associated business processes and systems.

2. Enactment of enabling legislation

In order to establish ILRR as a "Legal Registry" the Government would need to enact enabling legislation. The timeline for passing legislation would be constrained by the Legislative Assembly's schedule and priorities. Conservatively it could take a minimum of a year from the time the initial draft of the legislation is produced to full implementation of the legislation.

3. Analysis of business and technical requirements

Once a legal framework has been established for the ILRR, additional analysis work will be required to identify any additional business or technical requirements that will be needed to support the framework. This activity could be conducted in parallel with the drafting and enactment of legislation.

For example:

- The framework may require that, as a "Legal Registry" ILRR must be able to provide "proof of ownership" documentation to clients. This requirement was not identified during the consultation conducted during this phase of the project and would represent an enhancement to the system.

- The framework may imply a currency of data that is not supported by the initial design of the ILRR and therefore modifications or enhancements would be required.

4. Implementation of enhancements to support legal registry

Upon completion of the business and technical requirements analysis, any modifications or enhancements of the ILRR would need to be designed, built, tested and implemented. The timeline for this effort would be dependent on the complexity of the additional requirements, but would need to be completed to coincide with the proclamation of the legislation.

5. Changes to Interest Granting Agencies' business processes

In parallel to the implementation of enhancements to ILRR would be the need to review and re-engineer the business process and systems for each Interest Granting Agency that will be impacted by the establishment of the "Legal Registry". This activity would also need to be completed to coincide with the proclamation of the legislation and the completion of enhancements to ILRR.

4.2.3.2 Implications for ILRR Implementation in the Northeast

Regardless of the framework established for the creation of a "Legal Registry", ILRR will not have legal status for the implementation in the Northeast region.

- The deadline for implementation in the Northeast does not allow enough time to complete the activities required to establish the ILRR as a legal entity.

- ILRR could not be considered the "Legal Registry" for the Province if it is only implemented in one region.

In order to meet the March 31, 2005 deadline for completion of implementation of ILRR in the Northeast, development efforts will continue with the goal of supporting the business requirements **as defined in this document**. The project will address the additional requirements of a "Legal Registry" as MSRM proceeds through the process of establishing a legal entity.

4.2.3.3 Ongoing Assumptions

In order to continue with the development and implementation of the ILRR the following assumptions have been made:

1. ILRR with eventually become some form of legal entity.

   a. ILRR will not become a legal entity until it has been implemented in all regions of the province.

2. System design and implementation efforts will continue in such a manner that, upon ILRR becoming a legal entity, process and system retrofitting will be minimized.

3. The initiative to define the ILRR legal entity will be conducted in parallel to the initial implementation in the Northeast and will be completed to coincide with province-wide implementation.

4.3 High-Level Business Process Model

A detailed business process model will be completed during the System Architecture phase of the project and delivered in May 2004. This document includes the following preliminary business process models, describing the existing interest management business processes and the likely intersects with the ILRR:

- Section 3.4.4 – Generic Interest Management Business Process Model.

- Section 8.1.1 – Generic Interest Management Business Processes with ILRR Intersects.

- Appendix A – Interest Granting Agency-Specific Business Processes with ILRR Intersects.

4.4 Business Drivers/Issues

The implementation of the ILRR is intended to address the following issues:

4.4.1 Limited or no integration of interest information

At present there is no single source of information on rights and interest in land and resource within the Government of British Columbia. The lack of a central "registry" has resulted in very complex processes for gathering information from all Interest Granting Agencies in order to determine the status of a region when a request for an interest is received.

The ILRR will provide all stakeholders with a single source of information that may be used to support interest planning, requests and maintenance. It should result in a reduction in the effort required to process interest requests enabling Interest Granting Agencies to better utilize staff resources.

4.4.2 Information availability – some registries are not up to date

While most Interest Granting Agencies are able to access the various registry systems to view information on existing interests, many of these registries are not up to date. In some cases there are data entry backlogs representing thousands of interest records. These backlogs have been caused by:

- Reductions in staff and budgets.

- Business process not being followed.

- Business process not designed to cope with current request volumes.

- Operational systems not designed to cope with current volumes or not designed to allow for electronic submission of requests.

The ILRR Project may be a catalyst for enhancing the timeliness of Interest Granting Agencies' data sets. This could be achieved by:

- Establishing ILRR as the "Legal Registry". If ILRR were to be the legal registry of interests then an interest would not be "legal" until it was recorded in ILRR. This would compel Interest Granting Agencies to ensure that their information is up to date.

- Providing Interest Granting Agencies with support and resources for data cleanup.

- Providing Interest Granting Agencies with support and resources for business process and system re-engineering.

4.4.3 Processing an interest request can be very slow

The current interest granting processes are very complex due to the vast number of interests that are being managed and the lack of centralized information. Gathering information to support statusing land is very time consuming and often results in long delays in responding to interest requests. These delays typically are measured in weeks but in some extreme cases a client/proponent may wait years before receiving a decision on their request.

It is believed that these long interest granting time lines serve as a deterrent to economic development. Faced with long delays in gaining access to land and resource rights, industry may choose to invest in other jurisdictions where they are able to expedite development.

The ILRR should help reduce the time required to process interest request by providing Interest Granting Agencies with faster access to the basic information need to support their decision-making.

4.4.4 Decisions made without complete information

One of the results of the current situation is that Interest Granting Agencies frequently make decisions to grant interests without complete land and resource status information. Making decisions without complete information places the Government at risk and may result in the payment of compensation to interest holders.

Interest Granting Agencies currently do their best to mitigate the risks associated with granting interests without complete information, the following situations do occur:

- Interests are granted that directly conflict with other existing interests

- Interest are granted that conflict with the planned use for the land

- Multiple Interest Granting Agencies attempt to dispose of the same parcels

Interest Granting Agencies are unable to get complete information for the following reasons:

- Interest registries are not up to date

- Interest records are inaccurate. In particular, spatial information may not be available

- Interest information is not available electronically and the time and effort to review paper files and maps is prohibitive.

- Interest Granting Agencies may be unwilling to broadly share information on their planned land use.

The ILRR will help address these problems by:

- Providing decision makers with a complete and up to date source of land and resource status information.

- Addressing deficiencies in the data sets through the Project's data quality improvement initiatives.

- Ensuring that all Interest Granting Agencies have the same access to planning information through the Project's data access principles.

4.5 Input & Output Requirements

4.5.1 Inputs

The ILRR will receive interest information from each Interest Granting Agency. The ILRR must be able to accept data input in electronic form through a direct transfer from each Interest Granting Agency's operational system. Specific protocols and architecture of this data transfer will be determined during the Technical Architecture phase of the project.

A limited number of Interest Granting Agencies use manual processes for capturing interest information. If the ILRR is to accommodate their requirements there will be a need for an input interface to allow these agencies to provide data input. Alternately, ILRR could mandate that all Interest Granting Agencies must have operational systems capable of electronically transferring interest information.

The ILRR must be able to accept input of all data attributes described in Section 5.1, ILRR Conceptual Data Requirements.

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4.5.2 Outputs

ILRR must be able to output information in a variety of formats, included structured textual reports and spatially represented map format. See **Section 6.5 – ILRR Functional Requirements** for detailed output specifications.

4.6 Volumes

Comprehensive volumes information will be provided at the completion of the Systems Architecture phase. Some preliminary volumes information is included in **Appendix A**.

4.7 Interfaces

All operational systems that manage interest information will be required to interface with the ILRR. Specific interface architecture and protocols to be developed during the System Architecture phase of the project.

Section 3.6 provides a preliminary list of existing operational systems that manage interest information.

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5. Data Requirements

5.1 ILRR Conceptual Data Requirements

The following attributes represent the conceptual data requirements for the ILRR as identified through consultation with stakeholders. These attributes will form the basis for the development of the ILRR data model and technical architecture, which will be undertaken during the technical phase of this project.

5.1.1 ILRR Interest Record Data Attributes

Attribute	Description	Optionality[6]	Source[7]
ILRR_RECORD_IDENTIFIER	A unique number assigned to the record when it is added to the ILRR database. Machine generated by the ILRR database.	M	ILRR
ISSUING_AGENCY_IDENTIFIER	A unique identifier of the agency that granted this instance of the right or interest. May not be the agency currently responsible for the Interest Type. If responsibility for the granting of a specific Interest Type changes over time (for example, the responsibility is transferred to a new ministry) this element will not be updated to reflect the new agency responsible for the interest. The Interest Agency attribute will provide the name of the agency currently responsible for a specific Interest Type. An Interest record may be associated with only one ISSUING_AGENCY_IDENTIFIER.	M	IA
ISSUING_AGENCY_FILE_ NUMBER	The file number or other identifier assigned by the Agency responsible for granting the right. May not be unique within the agency (example – an agency may assign the same file number to more than one interest).	M	IA
ISSUING_AGENCY_SYSTEM_ID	The unique identifier assigned to the interest record by the issuing agency's operational database. May or may not be the same as the Issuing Agency File Number (depending on business practices) The combination of the Issuing Agency System ID and Issuing Agency System should be unique within ILRR.	M	IA
ISSUING_AGENCY_SYSTEM	An identifier for the issuing agency's operational database (example: Tantalis)	M	IA

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[6] Indicates if a value must be provided for the attribute. M = Mandatory. O=Optional. In some cases the Optionality varies depending on the status of the interest record.

[7] Indicates if the value for the attribute is provided by the Issuing Agency as part of the interest record, from a code table or is auto-generated by the ILRR database. IA = Issuing Agency, CT = Code Table, ILRR = ILRR application.

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Attribute	Description	Optionality[6]	Source[7]
INTEREST_HOLDER	The name of the applicant or interest holder. An interest record will have one or more interest holders.	M	IA
INTEREST_HOLDER_ADDRESS	The mailing address of the interest holder. (to be based on MSRM Corporate Person Organization Model)	O	IA
INTEREST_HOLDER_PHONE	The phone number of the interest holder. Includes an area code. (to be based on MSRM Corporate Person Organization Model)	O	IA
INTEREST_HOLDER_E-MAIL	The e-mail address of the interest holder. (to be based on MSRM Corporate Person Organization Model)	O	IA
INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER	The Business Registration Number of the interest holder if the interest holder is a registered business.	O	IA
INTEREST_HOLDER_TYPE	Describes whether the Interest Holder is Private (individual or organization) or Public.	O	IA
INTEREST_HOLDER_PERCENT	The percent interest that the interest holder has in the interest.	O	IA
INTEREST_HOLDER_CAPACITY	The legal capacity in which the interest holder is able to act as relates to the interest. An example would be "Executor"	O	IA
INTEREST_STATUS	Indicates the current status of this record. Possible values include: **Request**: indicates that the record represents an application or a request for a right or interest that is being processed by the issuing agency. **Active**: Indicates that the agency has granted the right or interest **Inactive**: Indicates that the right or interest has expired or has been cancelled. **Suspended**: Indicates that the right or interest has been suspended and may be reactivated in the future.	M	IA
INTEREST_TYPE	The type of interest or right that has been granted or requested for by the Interest Holder. For example: • Grazing Permit • Water Licence • Timber Licence	M	IA

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Attribute	Description	Optionality[6]	Source[7]
INTEREST_AGENCY	The identifier for the agency currently responsible for the Interest Type. May not be the agency that is listed as having granted the interest. If responsibility for the granting of a specific Interest Type changes over time (for example, the responsibility is transferred to a new ministry) this element will be updated to reflect the new agency responsible for the interest. An INTEREST_TYPE may have more than one INTEREST_AGENCY with the authority to issue the interest type. Where more than one Interest Granting Agency may issue the right one Interest Granting agency will have primary responsibility for the interest type and the other will be considered to be secondary Interest Granting Agencies. For example: OGC may issue Cutting Permits to allow their clients to harvest trees on property where they have petroleum rights. The primary INTEREST_AGENCY for a Cutting Permit is MOF.	M	CT
INTEREST_AGENCY_ADDRESS	The mailing address of the agency responsible for the interest. (to be based on MSRM Corporate Person Organization Model)	M	CT
INTEREST_AGENCY_PHONE	The phone number of the responsible for the interest. Includes an area code. (to be based on MSRM Corporate Person Organization Model)	M	CT
INTEREST_AGENCY_E-MAIL	The e-mail address of the responsible for the interest. (to be based on MSRM Corporate Person Organization Model)	M	CT
INTEREST_AGENCY_ AUTHORITY	Indicates if the INTEREST_AGENCY is the Agency with primary responsibility for granting the INTEREST_TYPE or if the authority to grant the INTEREST_TYPE has been delegated to the INTEREST_AGENCY. Code set based: **Primary**: The INTEREST_AGENCY has responsibility for the management of the INTEREST_TYPE as defined by the applicable legislation. **Secondary**: The INTEREST_AGENCY has the authority to issue the INTEREST_TYPE, but is not primarily responsible for the management of the INTEREST_TYPE.		
INTEREST_THEME	The general area of interest of the Interest Type. Allows for grouping of multiple Interest Types. Examples: Minerals, Forests, Water, Parks	M	CT
AGREEMENT_TYPE	The form of granting of the interest. Examples: Tenure, Licence, Permit	M	CT

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Attribute	Description	Optionality[6]	Source[7]
SURFACE_CLASS	Describes the layer of the interest location to which the interest pertains. Examples: Surface, Sub-Surface, Airspace.	M	CT
INTEREST_LEGISLATION	The legislation that currently enables the granting of the INTEREST_TYPE. An INTEREST_TYPE may have more than one INTEREST_LEGISLATION values. An INTEREST_TYPE may have zero INTEREST_LEGISLATION values.	O	CT
INTEREST_DESCRIPTION	A text description of interest requested or granted. Is unique to the interest record.	O	IA
ISSUING_LEGISLATION	The legislation that was in effect at the time the interest was granted that enabled the granting of the INTEREST_TYPE. An INTEREST_TYPE may have more than one ISSUING_LEGISLATION values. An INTEREST_TYPE may have zero ISSUING_LEGISLATION values.	O	CT
CONDITIONS_RESTRICTIONS	A text description of circumstances under which the interest has been granted or any limitations that apply to the interest. No null values accepted. Must be: • Text description of conditions and restrictions • Statement that no conditions or restrictions apply • Statement that condition/restriction information is not available.	M	IA
LOCATION_LEGAL_ DESCRIPTION	A structured legal description of the location of the right or interest.	O	IA
GEOMETRY	The geometric coordinates of the location of the interest. Describes the locations. Could be a line, point or polygon. Could have one or more values	M	IA
GEOMETRY_ACCURACY	An estimate of the accuracy of the location information. Numeric value. To be used in conjunction with the Geometry Accuracy Unit. For example: +/- 100 M.	M	IA
GEOMETRY_ACCURACY_UNIT	The measurement unit used in conjunction with Geometry Accuracy. Examples: Meter, Kilometre.	M	IA
ELEVATION	Text to describe the elevation (in metres) or range of elevations which apply to the interest (if applicable)	O	IA

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Attribute	Description	Optionality[6]	Source[7]
START_DATE	The date the interest become effective (may be the date the interest was granted or other date).	M For Active, Inactive or Suspended Interest Statuses. O For Requested Status	IA
END_DATE	The date the interest holder's interest expires. If the right does not have an end date this may be null.	O	IA
TERM_DURATION	The length time that interest holder's interest is in effect. Numeric. Used in conjunction with the Term Duration Unit.	O	IA
TERM_DURATION_UNIT	The time measurement unit us ed in conjunction with the Term Duration. Examples: Month, Year.	O	IA
REQUEST_DATE	The date that the Agency accepted the request for the interest.	M for Requested Status. O for all other Statuses	IA
INTEREST_DATE	The date that the Agency recorded the right or interest.	O for Requested Status. M for all other Statuses	IA
ADDITIONAL_INFORMATION	The web address (URL) for supporting documentation or additional information about the interest	O	IA
SENSITIVE_RECORD	Indicates the level of sensitive data contained in the record. Code set based: If no value is provided by the Agency, will default to Non-Sensitive.	M	IA
ILRR_CREATE_DATE	The date that the record was created in ILRR	M	ILRR
ILRR_UPDATE_DATE	The date that this record was last updated in ILRR	M	ILRR

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5.1.2 ILRR Save Query Data Attributes

Data	Description	Optionality[8]
QUERY_NAME	The name assigned to the query by the ILRR user who created it.	M
QUERY_ DESCRIPTION	A brief description of the query, entered by the ILRR user.	M

5.1.3 ILRR User Account Data Attributes

Data	Description	Optionality[9]
USER_IDENTIFIER	Unique identifier for the user (may be based on IDIR or BCEID).	M
USER_PASSWORD	A secure alpha/numeric string, to be used for authentication (may be based on IDIR or BCe-ID)	M
USER_NAME	The name (FIRST_NAME, LAST_NAME) of the user. (To be based on MSRM Corporate Person Organization Model)	M
USER_ ORGANIZATION	The organization to which the User is associated. Not all users will be associated with an organization (for example – a member of the general public)	O
DATA_ACCESS_ GROUP	The data access group (User Class) to which the User has been assigned. Users may be assigned to one or more Data Access Groups. Data Access Group membership determines what data the User may view.	M
USER_ADDRESS	The mailing address of the user. (To be based on MSRM Corporate Person Organization Model)	M
USER_PHONE	Phone number of the USER (person, organization or person of the organization). Includes area code.	M
USER_E-MAIL	Email address of the USER (person, organization or person of the organization).	M

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[8] Indicates if a value must be provided for the attribute. M = Mandatory. O=Optional. In some cases the Optionality varies depending on the status of the interest record.

[9] Indicates if a value must be provided for the attribute. M = Mandatory. O=Optional. In some cases the Optionality varies depending on the status of the interest record.

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5.2 Conceptual Entity Definitions

Finalized Entity Definitions will be provided during the System Architecture phase of the project and will be delivered in May 2004.

The following conceptual entities and definitions were identified during consultation with the ILRR stakeholders:

Entity	Definition
ILRR ACCESS CONTROL	The ILRR Access control entity specifies access restrictions for interest types.
ILRR ACTIVE AGENCY	An agency that is currently active.
ILRR AGENCY	A private or public organization that can issue, view or modify data in the ILRR
ILRR DATA ACCESS GROUP	A data access group defines a collection of access controls for a given user. It is a convenient container for defining what could be called a role or profile for a user or collection of users.
ILRR DATA PROVIDER REGISTRY	A single source or central repository of information related to a particular set of rights, interests and tenure.
ILRR DATA PROVIDER SYSTEM	A computer-based system that is used for the day-to-day recording and administration of, or querying of interests and related information.
ILRR INTEREST	A right or claim whereby the holders are entitled to or are bound by certain legal privileges or restrictions associated with tenure and land use activities.
ILRR LOCATION	Location information consists of geometry that provides a spatial representation of an interest. The geometry describing an interest may consist of points or collections of point, lines or collections of lines, or polygons or collection of polygons.
ILRR INTEREST HOLDER	An individual or corporation that has complete or partial ownership of an interest, or has made a request for an interest. It also has reference to contact information.
ILRR INTEREST TYPE	The type of interest or right that has been granted or requested for by the Interest Holder.
ILRR ORGANIZATION	An organization is a public or private entity that partakes in some capacity in the ILRR.
ILRR QUERY	A stored query associated with a user, agency or interest.
ILRR THEME	A logical grouping of interest types.
ILRR USER	An ILRR user is an individual that belongs to an ILRR Organization.

5.3 Logical Data Model

The ILRR logical data model will be developed and delivered as part of the Technical Architecture Phase of the ILRR Project. Delivery date is May 2004.

5.4 Business Rules and Validation

5.4.1 ILRR Business Rules

The following business rules were identified during consultation with ILRR stakeholders:

1. Interests may only be recorded by the Interest Granting Agency (or Agencies) that are currently designated as having responsibility for managing the interest type being recorded.

2. Interest records may only be updated by the Interest Granting Agency (or Agencies) that are currently designated as having responsibility for managing the interest type associated with the record.

3. Interest records may only be recorded for interest types that exist within the list of interests types maintained by the ILRR.

5.4.2 ILRR Validation

ILRR will perform the following validation on all new records:

Mandatory attributes – ILRR will ensure that all attributes that are mandatory are provided for each new record.

Correct Data Type – ILRR will ensure that data provided is of a type consistent with the attribute type. For example, alpha text entries would not be valid data for an attribute where the attribute type is integer.

Correct Data Format – ILRR will ensure that data provided is in a format consistent with the attribute format. For example if the date format is MM/DD/YYYY a date formatted DD/MM/YY would not be valid.

Contained with Domain Values – Where applicable, ILRR will ensure that data provided is contained within the defined set of domain values. For example, a new interest record with an interest type of "Water Pmt" would be rejected if the domain value for this interest type is "Water Permit"

Geometry Validation – ILRR will perform validation on geometry data to ensure that no self-intersecting linework is submitted.

If a record is submitted to the ILRR that fails one or more of the above validations the ILRR will reject the record and return the data provider an error log or message.

5.5 Conversion/Load Requirements

The Systems Architecture phase will include a detailed study of the data conversion load requirements and a Data Transition Plan will be developed. At present, the following Conversion/Load Requirements have been identified:

5.5.1 Initial Data Load

The initial data load will require that existing information from Interest Granting Operations systems is loaded into the ILRR. As there are some data sets that may not completely meet the ILRR data requirements, special accommodations may have to be made to facilitate the initial data load. More specific data load requirements will be established during the Systems Architecture phase.

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5.5.2 Historical Data

Considerable historical information on both active and inactive (expired) interests may be available and during the System Architecture phase the feasibility and desirability of loading this information into the ILRR will be studied. As many data sets may not have sufficient information available to meet the ILRR requirements, decisions may be made to limit the loading of historical data to those interests that are currently active.

5.5.3 Code Tables

The ILRR will contain a number of Code Tables (domains) that will require loading prior to the loading of interest data from the various Interest Granting Agency operational systems. Code table will include[10]:

Entity	Definition
ILRR AGENCY	A private or public organization that can issue, view or modify data in the ILRR
ILRR DATA ACCESS GROUP	A data access group defines a collection of access controls for a given user. It is a convenient container for defining what could be called a role or profile for a user or collection of users.
ILRR DATA PROVIDER REGISTRY	A single source or central repository of information related to a particular set of rights, interests and tenure.
ILRR DATA PROVIDER SYSTEM	A computer-based system that is used for the day-to-day recording and administration of, or querying of interests and related information.
ILRR INTEREST TYPE	The type of interest or right that has been granted or requested for by the Interest Holder.
ILRR ORGANIZATION	An organization is a public or private entity that partakes in some capacity in the ILRR.
ILRR THEME	A logical grouping of interest types.

5.6 Spatial Requirements

One of the key functional requirements of ILRR is that potential conflicts between requests or interests will be identified based on location. Therefore, every request or interest that is stored in ILRR must have a location reference in order to support the visualization of the interest location and the identification of conflicts spatially.

The location reference requirement may be supported in one of the following ways:

- Explicit geo-referenced geometry coordinates (e.g. a polygon representing the boundary of the interest at the correct location on the earth)

- A land identifier reference (e.g. PIN, PID, JUROL) that acts as a link to an existing parcel in a defined geo-referenced spatial data layer. The right or interest location is then derived from the geometry of the linked feature.

- A map sheet reference that allows ILRR to link to a known geo-referenced spatial indexing schema (e.g. PNG grid cell, NTS map sheet). The right or interest location is then derived from the geometry of the linked referencing schema feature(s).

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[10] Additional code tables may be identified during the System Architecture phase.

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Additional methods for deriving location for operational data sets may be determined during the detailed mapping of agency databases to the ILRR data model. This exercise will occur during the technical design phase of ILRR.

6. Functional and Non-Functional Requirements

6.1 Business Function Model

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.2 Triggers

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.3 Process Model

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.4 System Features

The ILRR will have the following features:

Feature	Description
1. Register a Request	Allows an Interest Granting Agency to record the receipt of a request for an interest.
2. Amend a Request	Allows an Interest Granting Agency to update the information in an interest request
3. Delete a Request	Allows an Interest Granting Agency to delete an interest request if the Agency rejects the request or the request is withdrawn by the Proponent.
4. Determine Existing Interests (Statusing Report)	Allows the user to quickly determine the status of a specific region. Provides information on granted and requested interests.
5. Register an Interest	Allows an Interest Granting Agency to register the granting of an interest.
6. Amend an Interest	Allows an Interest Granting Agency to update information contained within an interest record.
7. Amend Interest Holder Information	Allows an Interest Granting Agency to update Interest Holder information (name, address, other information) where the Interest Holder has multiple interests.
8. Search for Record (Quick Search)	Allows the user to quickly locate a specific interest record using attribute data (non-spatial)
9. Report on Interests or Requests	Allows the user to create complex reports on interests, specifying report parameters, contents, and output format.
10. Save Query	Allows the user to save the specifications for a report or query so that it can re-executed at a future date. Also allows users to share queries.
11. Run Query	Allows the user to run previously defined queries.
12. Modify Query	Allows the user to modify previously defined queries.
13. Delete Query	Allows the user to delete saved queries
14. Request Notification	Allows the user to request that ILRR notify them of user-defined events within ILRR.

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Feature	Description
15. Distribute Notification	Enables ILRR to distribute notifications to users
16. Modify Notification	Allows the user to modify previously defined Notification Requests.
17. Cancel Notification	Allows the user to cancel a Notification Request
18. Report Possible Data Quality Issue	Allows the user to report a possible data quality issue to the Agency responsible for the record
19. Logon to ILRR	Allows the user to log into the ILRR system.
20. Log Off ILRR	Allows the user to log off of the ILRR system.
21. Create User Account	Allows an authorized user to create new user accounts.
22. Calculate User Fees	Enables the ILRR to calculate user fees based on data consumption or duration of use.
23. Maintain Domain Values	Allows an authorized user to add new code values or modify existing values

The following table provides a mapping of system features to the four interest management processes to be supported by the ILRR:

Feature	Process 1 Receive and Review Requests	Process 2 Issue Right or Interest	Process 3 Right Maintenance	Process 4 ILRR Administration and Maintenance
1. Register a Request	X			
2. Amend a Request	X			
3. Delete a Request	X			
4. Determine Existing Interests (Statusing Report)	X			
5. Register an Interest		X		
6. Amend an Interest			X	
7. Amend Interest Holder Information			X	
8. Search for Record (Quick Search)	X		X	
9. Report on Interests or Requests	X		X	
10. Save Query	X		X	
11. Run Query	X		X	
12. Modify Query	X		X	
13. Delete Query	X		X	
14. Request Notification	X		X	
15. Distribute Notification	X		X	

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Feature	Process 1 Receive and Review Requests	Process 2 Issue Right or Interest	Process 3 Right Maintenance	Process 4 ILRR Administration and Maintenance
16. Modify Notification	X		X	
17. Cancel Notification	X		X	
18. Report Possible Data Quality Issue	X		X	
19. Logon to ILRR	X	X	X	
20. Log Off ILRR	X	X	X	
21. Create User Account				X
22. Calculate User Fees	X		X	X
23. Maintain Code Tables				X

6.5 ILRR Functional Requirements

The following sections describe the functionality required to support each of the system features:

6.5.1 Register a Request

1. ILRR must allow Interest Granting Agencies to record requests for interests when the Agency receives a new request.

2. Interest Granting Agencies must provide the following information when recording an interest request:
ISSUING_AGENCY_IDENTIFIER
ISSUING_AGENCY_FILE_NUMBER
ISSUING_AGENCY_SYSTEM_ID
ISSUING_AGENCY_SYSTEM
INTEREST_HOLDER
INTEREST_STATUS
INTEREST_TYPE
CONDITIONS_RESTRICTIONS
LOCATION_LEGAL_DESCRIPTION
GEOMETRY
GEOMETRY_ACCURACY
GEOMETRY_ACCURACY_UNIT
REQUEST_DATE
SENSITIVE_RECORD

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3. Interest Granting Agencies may provide the following information when recording an interest request:

    INTEREST_HOLDER_ADDRESS

    INTEREST_HOLDER_PHONE

    INTEREST_HOLDER_E -MAIL

    INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER

    INTEREST_HOLDER_TYPE

    INTEREST_HOLDER_PERCENT

    INTEREST_HOLDER_CAPACITY

    INTEREST_DESCRIPTION

    LOCATION_LEGAL_DESCRIPTION

    ELEVATION

    START_DATE

    END_DATE

    TERM_DURATION

    TERM_DURATION_UNIT

    TERM_DETAILS

4. ILRR must assign the following attributes to each new interest record with a status of "Request":

    ILRR_RECORD_IDENTIFIER

    ILRR_CREATE_DATE

5. Interest Granting Agencies may only record requests for interests where the interest type is one for which the Interest Granting Agency is currently designated as having responsibility.

6. ILRR must allow for the electronic transfer of request for interests records from each Interest Granting Agencies' operational system.

7. ILRR must provide the data provider (either system or user) with confirmation that a new interest record has been created and the applicable ILRR_RECORD_IDENTIFIER

8. ILRR will perform basic data validation as specified in Section 5.4.2 on each new record.

6.5.2 Amend a Request

1. ILRR must allow Interest Granting Agencies to update requests for interest records in ILRR.

2. Interest Granting Agencies must be able to amend any attribute of an interest record with a status of "Request"

3. ILRR must assign the following attribute each time an interest record with a status of "Request" is updated:

    ILRR_UPDATE_DATE

4. Interest Granting Agencies may only amend request for interest records where the interest type is one for which the Interest Granting Agency is currently designated as having responsibility.

5. ILRR must allow for the electronic transfer of amendments to request for interest records from each Interest Granting Agencies' operational system.

6. ILRR must provide the data provider (either system or user) with confirmation that the amendment has been accepted.

7. ILRR must maintain a history of changes to request for interest records so that the user is able to review all changes to each record.

8. ILRR will perform basic data validation as specified in Section 5.4.2 on each amendment to a record.

6.5.3 Delete a Requested Interest

1. ILRR must allow Interest Granting Agencies to delete requests for interest records in ILRR when the Interest Granting Agency rejects or withdraws the request within their operational system.

2. Interest Granting Agencies may only delete request for interest records where the interest type is one for which the Interest Granting Agency is currently designated as having responsibility.

3. ILRR must allow for the electronic transfer of instructions to delete request for interest records from each Interest Granting Agencies' operational system.

6.5.4 Determine Existing Interests (Statusing Report)

1. ILRR must provide users with a basic "Statusing" report, which provides the user with information on all existing and requested interests that intersect with a specific location or region.

2. A user requesting a "Statusing" report must be able to describe the location (set the parameter) to be statused in one of the two following methods:

LOCATION_LEGAL_ DESCRIPTION	User enters an LOCATION_LEGAL_ DESCRIPTION. LOCATION_LEGAL_ DESCRIPTION may consist of:
	• Property Identifier (PID) number
	• Crown Land Parcel Identification Number (PIN)
	• Or some other identifier that is associated with a defined spatial location within the integrated cadastral fabric.
	User may enter more than one LOCATION_LEGAL_ DESCRIPTION
	System returns records that are an exact match.
GEOMETRY	User enters the GEOMETRY parameters by:
	• Manually entering coordinates of the point, line or polygon
	• Utilizing a "map viewer" to locate the area of interest and drawing a point, line or polygon.
	• Using the GEOMETRY from an existing interest record. User would find the interest record with the desired GEOMETRY and then "import" the GEOMETRY from the record into the report parameters.
	User may enter more than one point, line or polygon
	System returns records with GEOMETRY that intersects with the point, line or polygon specified by the user

3. A user requesting a "Statusing" report will only be required to provide location information. Additional parameters for the Statusing Report will be set by default as follows:

Parameter	Default
INTEREST_STATUS	INTEREST_STATUS = "Request" or "Active"
BUFFER	BUFFER = 100 M
SPATIAL_RELATIONSHIP	SPATIAL_RELATIONSHIP = "Intersect" or "Adjoin"

4. Users will be able to specify the output format for a Statusing report, selecting from:

- Web
- PDF
- RTF (Text)
- CSV (Spreadsheet)
- XML
- GML
- JPEG

5. Every Statusing report generated by the ILRR will contain the following information, either in the header or footer:

    a. Name of user who generated report

    b. Date and time report was generated

    c. Parameters of the report

6. The Statusing Report will provide the user with a list of all interest records that match the user's parameters.

7. The Statusing Report will include the following information for each matching record:

> ILRR_RECORD_IDENTIFIER
> ISSUING_AGENCY_IDENTIFIER
> ISSUING_AGENCY_FILE_NUMBER
> INTEREST_HOLDER
> INTEREST_STATUS
> INTEREST_TYPE
> INTEREST_AGENCY
> GEOMETRY
> START_DATE
> END_DATE
> REQUEST_DATE
> INTEREST_DATE

8. The list of records returned by the Statusing Report will be grouped and sorted as follows:

> INTEREST_STATUS (Active, Request)
> INTEREST_TYPE
> INTEREST_HOLDER

9. The user will be able to navigate to a "map viewer" which will display the location of each record.

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10. The Statusing Report will allow the user to select a specific record and view detailed record information.

11. When viewing ILRR reports on-line the user must be able to switch from an attribute report (text) to a "map viewer" version or display both views of the information simultaneously.

12. If ILRR is unable to find any records that match the user's parameters the system will return a "No Matches" found message and provide the user with the ability to modify the report parameters.

13. Once a user has executed a Statusing Report ILRR will allow the user to switch to the "Report on Interest and Rights" interface to further customize the report.

14. The records returned and data displayed by ILRR as part of a Statusing Report will be governed by the ILRR data access rules and the user's level of access.

15. ILRR will maintain a history of run queries (reports), recording:

    a. Date query executed

    b. ID of user who executed

6.5.5 Register an Interest

1. ILRR must allow Interest Granting Agencies to register an interest when the Agency grants an interest or right.

    a. If the granted interest was recorded in ILRR as a request then ILRR will allow the Interest Granting Agency to update the interest request record. This will involve amending the status to "Active" and amending/adding additional information. See Section 6.5.1.5 for a description of the Amend Interest functionality.

    b. If the granted interest has not been previously recorded in ILRR as a request then ILRR will allow the Interest Granting Agency to add a new interest record.

2. Interest Granting Agencies must provide the following information when registering an interest:

    ISSUING_AGENCY_IDENTIFIER
    ISSUING_AGENCY_FILE_NUMBER
    ISSUING_AGENCY_SYSTEM_ID
    ISSUING_AGENCY_SYSTEM
    INTEREST_HOLDER
    INTEREST_STATUS
    INTEREST_TYPE
    CONDITIONS_RESTRICTIONS
    GEOMETRY
    GEOMETRY_ACCURACY
    GEOMETRY_ACCURACY_UNIT
    START_DATE
    REQUEST_DATE
    INTEREST_DATE
    SENSITIVE_RECORD

3. Interest Granting Agencies may provide the following information when registering an interest:

   INTEREST_HOLDER_ADDRESS

   INTEREST_HOLDER_PHONE

   INTEREST_HOLDER_E -MAIL

   INTEREST_HOLDER_BUSINESS_ REGISTRATION_ NUMBER

   INTEREST_HOLDER_TYPE

   INTEREST_HOLDER_PERCENT

   INTEREST_HOLDER_CAPACITY

   INTEREST_ DESCRIPTION

   LOCATION_LEGAL_DESCRIPTION

   ELEVATION

   END_DATE

   TERM_DURATION

   TERM_DURATION_UNIT

   TERM_DETAILS

   REQUEST_DATE

4. ILRR must assign the following attributes to each new interest record :

   ILRR_RECORD_IDENTIFIER

   ILRR_CREATE_DATE

5. Interest Granting Agencies may only register interests where the interest type is one for which the Interest Granting Agency is currently designated as having responsibility.

6. ILRR must allow for the electronic transfer of interests records from each Interest Granting Agencies' operational system.

7. ILRR must provide the data provider (either system or user) with confirmation that a new interest record has been created and the applicable ILRR_RECORD_IDENTIFIER

8. ILRR will perform basic data validation as specified in Section 5.4.2 on each new record.

6.5.6 Amend an Interest

1. ILRR must allow Interest Granting Agencies to update interest records in ILRR.

2. Interest Granting Agencies must be able to amend attributes of an interest record as follows:

   a. Interest records with a status of "Request" – any attribute may be amended

   b. Interest records with a status of "Active" - any attribute **except** for INTEREST_TYPE. Changing the INTEREST_TYPE represents the creation of a new interest. If an Interest Granting Agency wishes to change the INTEREST_TYPE for an existing interest record the existing record should change status to "Inactive" and a new interest record should be created.

    c. Interest records with a status of "Inactive" – Inactive interest records should not be amended except in the following circumstances:

        i. Interest Holder information is being updated for all interests held by the Interest Holder. If the Interest Granting Agency is submitting an update of the interest holder's name, address or other information for all interest records associated with the interest holder, inactive interest records may be updated.

        ii. If an inactive interest is being changed to a status of "Active" then any attribute that may be amended in an active record may be updated.

    d. Interest records with a status of "Suspended" – Suspended interest records should not be amended except in the following circumstances:

        i. Interest Holder information is being updated for all interests held by the Interest Holder. If the Interest Granting Agency is submitting an update of the interest holder's name, address or other information for all interest records associated with the interest holder, suspended interest records may be updated.

        ii. If a suspended interest is being changed to a status of "Active" then any attribute that may be amended in an active record may be updated.

3. ILRR must assign the following attribute each time an interest record is updated:

   ILRR_UPDATE_DATE

4. Interest Granting Agencies may only amend interest records where the interest type is one for which the Interest Granting Agency is currently designated as having responsibility.

5. ILRR must allow for the electronic transfer of amendments to interest records from each Interest Granting Agencies' operational system.

6. ILRR must provide the data provider (either system or user) with confirmation that the amendment has been accepted.

7. ILRR must maintain a history of changes to interest records so that the user is able to review all changes to each record.

8. ILRR will perform basic data validation as specified in Section 5.4.2 on each amendment to a record.

6.5.7 Amend Interest Holder Information

1. ILRR must allow Interest Granting Agencies to submit a single request to ILRR to amend the interest holder information (name, address, other information) for all records in the ILRR associated with that interest holder.

2. A request to update interest holder information will only apply to those records in ILRR originally supplied by the Interest Granting Agency or Operational System. For example: a request from Tantalis to update a specific interest holder's information (including specific places of business) would result in an update of this information on all records originally provided by Tantalis.

3. ILRR must assign the following attribute each time an interest record is updated:

   ILRR_UPDATE_DATE

4. ILRR must allow for the electronic transfer of amendments to interest holder information from each Interest Granting Agencies' operational system.

5. ILRR must provide the data provider (either system or user) with confirmation that the amendment has been accepted.

6. ILRR must maintain a history of changes to interest records so that the user is able to review all changes to each record.

7. ILRR will perform basic data validation as specified in Section 5.4.2 on each amendment to a record.

6.5.8 Search for Record (Quick Search)

1. ILRR must allow users to specify parameters and based on these parameters search the ILRR for records that match the users parameters.

2. ILRR shall provide users with a "Quick Search" function to enable users execute a simple search of the system for a specific record (or group of records) based on the following parameters:

Parameter	Functionality
ILRR_RECORD_IDENTIFIER	User enters an ILRR_RECORD_IDENTIFIER.
	User may enter more than one ILRR_RECORD_IDENTIFIER
	System returns list of record that is an exact match.
ISSUING_AGENCY_IDENTIFER	User enters the ISSUING_AGENCY_IDENTIFIER by selecting from a drop down list or similar interface.
	User may select more than one ISSUING_AGENCY_ IDENTIFIER.
	System returns list of records where the ISSUING_AGENCY_IDENTIFIER matches those specified by the user.
ISSUING_AGENCY_FILE_NUMBER	User enters the ISSUING_AGENCY_FILE_NUMBER.
	User may enter more than one ISSUING_AGENCY_FILE_NUMBER
	System returns list of records where the ISSUING_AGENCY_FILE_NUMBER matches those specified by the user.
	As ISSUING_AGENCY_FILE_NUMBER may not be a unique number (the same number may be in use by more than one agency), user must specify a ISSUING_AGENCY_IDENTIFIER in conjunction with the ISSUING_AGENCY_FILE_NUMBER
INTEREST_STATUS	User enters the INTEREST_STATUS by selecting from a drop down list or similar interface.
	User may select more than one INTEREST_STATUS.
	System returns list of records where the INTEREST_STATUS matches those specified by the user.
INTEREST_TYPE	User enters the INTEREST_TYPE by selecting from a drop down list or similar interface.
	User may select more than one INTEREST_TYPE.
	System returns list of records where the INTEREST_TYPE matches those specified by the user.
INTEREST_HOLDER	User enters INTEREST_HOLDER name
	User may use wildcards
	User may select advanced search functionality:
	• Exact match only
	• Contains within
	• Sounds like (example – a request for "MacDonald" would return "MacDonald" and "McDonald")
	System returns list of records where the INTEREST_HOLDER matches the parameters specified by the user.

Parameter	Functionality
START_DATE	User enters the START_DATE User may specify search for records with a START_DATE: • That is an exact match for the START_DATE entered • On or before the START_DATE entered • On or after the START_DATE entered • Between two dates that the user enters System returns list of records where the START_DATE matches the parameters specified by the user.
END_DATE	User enters the END_DATE User may specify search for records with a END_DATE: • That is an exact match for the END _DATE entered • On or before the END_DATE entered • On or after the END_DATE entered • Between two dates that the user enters System returns list of records where the END_DATE matches the parameters specified by the user.
REQUEST_DATE	User enters the REQUEST_DATE User may specify search for records with a REQUEST_DATE: • That is an exact match for the REQUEST_DATE entered • On or before the REQUEST_DATE entered • On or after the REQUEST_DATE entered • Between two dates that the user enters System returns list of records where the REQUEST _DATE matches the parameters specified by the user.
INTEREST_DATE	User enters the INTEREST_DATE User may specify search for records with a INTEREST_DATE: • That is an exact match for the INTEREST_DATE entered • On or before the INTEREST_DATE entered • On or after the INTEREST_DATE entered • Between two dates that the user enters System returns list of records where the INTEREST_DATE matches the parameters specified by the user.

3. The ILRR "Quick Search" will return to the user a list of all records that match the user's parameters with the ability for the user to select a specific record and view detailed record information.

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4. The list of records returned by the ILRR "Quick Search" will contain the following information for each record:

ILRR_RECORD_IDENTIFIER
ISSUING_AGENCY_IDENTIFIER
ISSUING_AGENCY_FILE_NUMBER
INTEREST_HOLDER
INTEREST_STATUS
INTEREST_TYPE
INTEREST_AGENCY
GEOMETRY
START_DATE
END_DATE
REQUEST_DATE
INTEREST_DATE

5. The list of records returned by the ILRR "Quick Search" will be grouped and sorted as follows:

   a. INTEREST_STATUS (Active, Request, Inactive, Suspended)

   b. INTEREST_TYPE

   c. INTEREST_HOLDER

6. If ILRR is unable to find any records that match the user's parameters the system will return a "No Matches" found message and provide the user with the ability to modify the search parameters.

7. The records returned and data displayed by ILRR as a result of a "Quick Search" will be governed by the ILRR data access rules and the user's level of access.

8. ILRR will maintain a history of run queries (reports), recording:

   c. Date query executed

   d. ID of user who executed

6.5.9 Report on Interests or Requests

2. ILRR must provide users with the ability to create reports on interests.

3. ILRR must allow user to specify complex parameters for a report. Parameters that may be specified by the user are (one or more):

Parameter	Functionality
ILRR_RECORD_ IDENTIFIER	User enters an ILRR_RECORD_IDENTIFIER. User may enter more than one ILRR_RECORD_IDENTIFIER System returns records that are an exact match.
ISSUING_AGENCY_ IDENTIFIER	User enters the ISSUING_AGENCY_IDENTIFIER by selecting from a drop down list or similar interface. User may select more than one ISSUING_AGENCY_ IDENTIFIER. System returns records where the ISSUING_AGENCY_IDENTIFIER matches those specified by the user.

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Parameter	Functionality
ISSUING_AGENCY_ FILE_NUMBER	User enters the ISSUING_AGENCY_FILE_NUMBER. User may enter more than one ISSUING_AGENCY_FILE_NUMBER System returns records where the ISSUING_AGENCY_FILE_NUMBER matches those specified by the user. As ISSUING_AGENCY_FILE_NUMBER may not be a unique number (the same number may be in use by more than one agency), user must specify a ISSUING_AGENCY_IDENTIFIER in conjunction with the ISSUING_AGENCY_FILE_NUMBER
INTEREST_HOLDER	User enters INTEREST_HOLDER name User may use wildcards User may select advanced search functionality: • Exact match only • Contains within • Sounds like (example – a request for "MacDonald" would return "MacDonald" and "McDonald") System returns records where the INTEREST_HOLDER matches the parameters specified by the user.
INTEREST_HOLDER_BUSINESS_ REGISTRATION_ NUMBER	User enters an INTEREST_HOLDER_BUSINESS_REGISTRATION_ NUMBER. User may enter more than one INTEREST_HOLDER_BUSINESS_ REGISTRATION_ NUMBER System returns records that are an exact match.
INTEREST_HOLDER_TYPE	User enters the INTEREST_HOLDER_TYPE by selecting from a drop down list or similar interface. User may select more than one INTEREST_HOLDER_TYPE. System returns records where the INTEREST_HOLDER_TYPE matches those specified by the user.
INTEREST_STATUS	User enters the INTEREST_STATUS by selecting from a drop down list or similar interface. User may select more than one INTEREST_STATUS. System returns records where the INTEREST_STATUS matches those specified by the user.
INTEREST_TYPE	User enters the INTEREST_TYPE by selecting from a drop down list or similar interface. User may select more than one INTEREST_TYPE. System returns records where the INTEREST_TYPE matches those specified by the user.
ISSUING_LEGISLATION	User enters the ISSUING_LEGISLATION by selecting from a drop down list or similar interface. User may select more than one ISSUING_LEGISLATION. System returns records where the ISSUING_LEGISLATION matches those specified by the user.
INTEREST_AGENCY	User enters the INTEREST_AGENCY by selecting from a drop down list or similar interface. User may select more than one INTEREST_AGENCY. System returns records where the INTEREST_AGENCY matches those specified by the user.

Parameter	Functionality
INTEREST_THEME	User enters the INTEREST_THEME by selecting from a drop down list or similar interface. User may select more than one INTEREST_THEME. System returns records where the INTEREST_THEME matches those specified by the user.
AGREEMENT_TYPE	User enters the AGREEMENT_TYPE by selecting from a drop down list or similar interface. User may select more than one AGREEMENT_TYPE. System returns records where the AGREEMENT_TYPE matches those specified by the us er.
INTEREST_LEGISLATION	User enters the INTEREST_LEGISLATION by selecting from a drop down list or similar interface. User may select more than one INTEREST_LEGISLATION. System returns records where the INTEREST_LEGISLATION matches those specified by the user.
SURFACE_CLASS	User enters the SURFACE_CLASS by selecting from a drop down list or similar interface. User may select more than one SURFACE_CLASS. System returns records where the SURFACE_CLASS matches those specified by the user.
LOCATION_LEGAL_ DESCRIPTION	User enters an LOCATION_LEGAL_ DESCRIPTION. LOCATION_LEGAL_ DESCRIPTION may consist of: • Property Identifier (PID) number • Crown Land Parcel Identification Number (PIN) • Or some other identifier that is associated with a defined spatial location within the integrated cadastral fabric. User may enter more than one LOCATION_LEGAL_ DESCRIPTION System returns records that are an exact match.
GEOMETRY	User enters the GEOMETRY parameters by: • Manually entering coordinates of the point, line or polygon • Utilizing a "map viewer" to locate the area of interest and drawing a point, line or polygon. • Using the GEOMETRY from an existing interest record. User would find the interest record with the desired GEOMETRY and then "import" the GEOMETRY from the record into the report parameters. User may enter more than one point, line or polygon System returns records with GEOMETRY that intersects with the point, line or polygon specified by the user
BUFFER	The BUFFER is a further refinement of the GEOMETRY parameter. It allows the user to specify a distance around the defined GEOMETRY to be included in the search for intersecting interests. By default, ILRR will use a BUFFER of 100 M when executing a query that includes GEOMETRY or LOCATION_LEGAL_DESCRIPTION. If desired, the user may modify the BUFFER User enters the BUFFER distance (in metres) System returns records with GEOMETRY that intersects with the point, line or polygon specified by the user, extended by the distance of the buffer.

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Parameter	Functionality
SPATIAL_RELATIONSHIP	SPATIA L_RELATIONSHIP is a further refinement of the GEOMETRY parameter. It allows the user to specify if the search should look for interest records that: • **Intersect** with the specified GEOMETRY – where some portion of the interest record GEOMETRY overlaps with the GEOMETRY parameter. • **Contained** within the specified GEOMETRY – where the entire GEOMETRY of the interest record is within the GEOMETRY parameter. • **Adjoins** the specified GEOMETRY – the GEOMETRY of the interest record does not intersect with the GEOMETRY parameter, but is immediately next to. User enters the SPATIAL_RELATIONSHIP by selecting from a drop down list or similar interface. System returns records with GEOMETRY matches the SPATIAL_ RELATIONSHIP parameter
START_DATE	User enters the START_DATE User may specify search for records with a START_DATE: • That is an exact match for the START_DATE entered • On or before the START_DATE entered • On or after the START_DATE entered • Between two dates that the user enters System returns records where the START_DATE matches the parameters specified by the user.
END_DATE	User enters the END_DATE User may specify search for records with a END_DATE: • That is an exact match for the END _DATE entered • On or before the END_DATE entered • On or after the END_DATE entered • Between two dates that the user enters System returns records where the END_DATE matches the parameters specified by the user.
TERM_DURATION	User enters the TERM_DURATION User may specify search for records with a TERM_DURATION: • That is an exact match for the TERM_DURATION entered • Less than or equal to the TERM_DURATION entered • Greater than or equal to the TERM_DURATION entered • That falls within a range of TERM_DURATION that the user enters System returns records where the TERM_DURATION matches the parameters specified by the user. When using TERM_DURATION as a parameter the user must also specify a TERM_DURATION_ UNIT
TERM_DURATION_ UNIT	User enters the TERM_DURATION_ UNIT by selecting from a drop down list or similar interface. System returns records where the TERM_DURATION_ UNIT matches those specified by the user. When using TERM_DURATION as a parameter the user must also specify a TERM_DURATION.

Parameter	Functionality
REQUEST_DATE	User enters the REQUEST_DATE User may specify search for records with a REQUEST_DATE: • That is an exact match for the REQUEST_DATE entered • On or before the REQUEST_DATE entered • On or after the REQUEST_DATE entered • Between two dates that the user enters System returns records where the REQUEST _DATE matches the parameters specified by the user.
INTEREST_DATE	User enters the INTEREST_DATE User may specify search for records with a INTEREST_DATE: • That is an exact match for the INTEREST_DATE entered • On or before the INTEREST_DATE entered • On or after the INTEREST_DATE entered • Between two dates that the user enters System returns records where the INTEREST_DATE matches the parameters specified by the user.
SENSITIVE_RECORD	User enters the SENSITIVE_RECORD type by selecting from a drop down list or similar interface. User may select more than one SENSITIVE_RECORD type. System returns records where the SENSITIVE_RECORD type matches those specified by the user. Ability to use SENSITIVE_RECORD type as a parameter for a report will be limited to those users who have access to highly sensitive records
ILRR_CREATE_DATE	User enters the ILRR_CREATE_DATE User may specify search for records with a ILRR_CREATE_DATE • That is an exact match for the ILRR_CREATE_DATE entered • On or before the ILRR_CREATE_DATE entered • On or after the ILRR_CREATE_DATE entered • Between two dates that the user enters System returns records where the ILRR_CREATE_DATE matches the parameters specified by the user.
ILRR_UPDATE_DATE	User enters the ILRR_UPDATE_DATE User may specify search for records with a ILRR_UPDATE_DATE • That is an exact match for the ILRR_UPDATE_DATE entered • On or before the ILRR_UPDATE_DATE entered • On or after the ILRR_UPDATE_DATE entered • Between two dates that the user enters System returns records where the ILRR_UPDATE_DATE matches the parameters specified by the user.

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4. ILRR must allow the user to specify the type of report required. Report types available are:

    a. **Summary Report**. The Summary Report will provide the user with a list of all interest records that match the users parameters.

        i. The Summary Report will include the following information for each matching record:

            ILRR_RECORD_IDENTIFIER
            ISSUING_AGENCY_IDENTIFIER
            ISSUING_AGENCY_FILE_NUMBER
            INTEREST_HOLDER
            INTEREST_STATUS
            INTEREST_TYPE
            INTEREST_AGENCY
            GEOMETRY
            START_DATE
            END_DATE
            REQUEST_DATE
            INTEREST_DATE

        ii. The list of records returned by the Summary Report will be grouped and sorted as follows:

            INTEREST_STATUS (Active, Request, Inactive, Suspended)
            INTEREST_TYPE
            INTEREST_HOLDER

        iii. The user will be able to navigate to a "map viewer" which will display the location of each record.

        iv. The Summary Report will allow the user to select a specific record and view detailed record information.

    b. **Detailed Report**. The Detailed Report will return a detailed description of each interest that matches the user's parameters.

        i. The Detailed Report will include the following information for each matching record:

            ILRR_RECORD_IDENTIFIER
            ISSUING_AGENCY_IDENTIFIER
            ISSUING_AGENCY_FILE_NUMBER
            ISSUING_AGENCY_SYSTEM_ID
            ISSUING_AGENCY_SYSTEM
            INTEREST_HOLDER
            INTEREST_HOLDER_ADDRESS
            INTEREST_HOLDER_PHONE
            INTEREST_HOLDER_E-MAIL
            INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
            INTEREST_HOLDER_TYPE
            INTEREST_HOLDER_PERCENT

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INTEREST_HOLDER_CAPACITY

INTEREST_STATUS

INTEREST_TYPE

INTEREST_AGENCY

INTEREST_AGENCY_ADDRESS

INTEREST_AGENCY_PHONE

INTEREST_AGENCY_E-MAIL

INTEREST_THEME

AGREEMENT_TYPE

SURFACE_CLASS

INTEREST_ DESCRIPTION

CONDITIONS_ RESTRICTIONS

LOCATION_LEGAL_DESCRIPTION

GEOMETRY

GEOMETRY_ ACCURACY

GEOMETRY_ ACCURACY_UNIT

ELEVATION

START_DATE

END_DATE

TERM_DURATION

TERM_DURATION_ UNIT

TERM_DETAILS

REQUEST_DATE

INTEREST_DATE

SENSITIVE_RECORD

ILRR_CREATE_DATE

ILRR_UPDATE_DATE

   ii.   The list of records returned by the Detailed Report will be grouped and sorted as follows:

INTEREST_STATUS (Active, Request, Inactive, Suspended)

INTEREST_TYPE

INTEREST_HOLDER

   iii.   The user will be able to navigate to a "map viewer" which will display the location of each record.

      1.   The user will be able to view the location of a single interest record via the "map viewer"

      2.   The user will be able to view the location of all interest records contained within the Detailed Report

      3.   The user will be able to choose to view specific groups of interest records contained within the Detailed Report based on attributes of the interest.

  c. **Customized Report** – The customized report will allow the user to specify custom report contents.

i. The user will be able to specify the contents for their report, selecting one or more of the following attributes:

ILRR_RECORD_IDENTIFIER
ISSUING_AGENCY_IDENTIFIER
ISSUING_AGENCY_FILE_NUMBER
ISSUING_AGENCY_SYSTEM_ID
ISSUING_AGENCY_SYSTEM
INTEREST_HOLDER
INTEREST_HOLDER_ADDRESS
INTEREST_HOLDER_PHONE
INTEREST_HOLDER_E-MAIL
INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
INTEREST_HOLDER_TYPE
INTEREST_HOLDER_PERCENT
INTEREST_HOLDER_CAPACITY
INTEREST_STATUS
INTEREST_TYPE
INTEREST_AGENCY
INTEREST_AGENCY_ADDRESS
INTEREST_AGENCY_PHONE
INTEREST_AGENCY_E-MAIL
INTEREST_THEME
AGREEMENT_TYPE
SURFACE_CLASS
INTEREST_ DESCRIPTION
CONDITIONS_ RESTRICTIONS
LOCATION_LEGAL_DESCRIPTION
GEOMETRY
GEOMETRY_ ACCURACY
GEOMETRY_ ACCURACY_UNIT
ELEVATION
START_DATE
END_DATE
TERM_DURATION
TERM_DURATION_ UNIT
TERM_DETAILS
REQUEST_DATE
INTEREST_DATE
SENSITIVE_RECORD
ILRR_CREATE_DATE
ILRR_UPDATE_DATE

    ii.   The user will be able to specify the grouping and sorting order for the report, based on any of the attributes of the interest record

    iii.   The user will be able to navigate to a "map viewer" which will display the location of each record.

        1.   The user will be able to view the location of a single interest record via the "map viewer"

        2.   The user will be able to view the location of all interest records contained within the Report

        3.   The user will be able to choose to view specific groups of interest records contained within the Report based on attributes of interests.

5.   Users will be able to specify the output format for reports, selecting from:

- Web
- PDF
- RTF (Text)
- CSV (Spreadsheet)
- XML
- GML
- JPEG

6.   Every report generated by the ILRR will contain the following information, either in the header or footer:

    a.   Name of user who generated report

    b.   Date and time report was generated

    c.   Parameters of the report

7.   When viewing ILRR reports on-line the user must be able to switch from an attribute report (text) to a "map viewer" version or display both views of the information simultaneously.

8.   ILRR should have the ability to allow the user to define their own symbology (custom definition of colours, symbols) when displaying information using the "map viewer"

9.   If ILRR is unable to find any records that match the user's parameters the system will return a "No Matches" found message and provide the user with the ability to modify the report parameters.

10.   The records returned and data displayed by ILRR as part of a Report on Interests will be governed by the ILRR data access rules and the user's level of access.

11.   ILRR will maintain a history of run queries (reports), recording:

    a.   Date query executed

    b.   ID of user who executed

6.5.10 Save Query

1.   ILRR will allow users to save queries (Quick Search, Statusing Report or Report on Interests and Rights) so that the user may run the query again at a future date.

2.   When saving a query the user will be able to record:

    a.   Custom query name (QUERY_NAME)

      b.   Brief Description of the query (QUERY_DESCRIPTION)

3.   For all saved queries ILRR will retain the following:

      a.   All parameter settings defined by the user.

      b.   All output content settings defined by the user.

      c.   All output format settings defined by the user.

4.   For all saved queries ILRR will record:

      a.   The date the query was created (QUERY_CREATE_DATE)

      b.   The identification of the user who created the query (QUERY_CREATOR_ID)

5.   ILRR will only allow users with appropriate permissions to save queries.

6.   ILRR will allow users to designate one of three query types when saving a query:

      a.   **Personal Query**. Saved query will only be available to the user who created it.

      b.   **Organization Query**. Saved query will be available to any user associated with the organization to which the query creator belongs.

          i.   When user selects "Organization Query" when saving a query the ILRR will associate the query with a specific organization based on the user's profile.

         ii.   If the user is not associated with an organization the ILRR will return "Cannot Save Organization Query" message and allow the user to save the query as other type.

      c.   **Interest Record Query**. Saved query is associated with a specific interest record and is available to any ILRR user with permission to view the interest record.

          i.   When savi ng an Interest Record Query the ILRR will require the user to identify the specific ILRR interest record. User may enter ILRR_RECORD_IDENTIFER or may use "Quick Search" function to locate record.

         ii.   Once an Interest Record Query has been saved, ILRR will display a "link" to the query on the interest record when displayed.

7.   ILRR will provide users with a listing of all queries available to them. Queries will be grouped and sorted by:

      a.   Query type

      b.   Date query created

8.   ILRR will allow users to save copies of existing queries with a new name, description and query type.

6.5.11 Run Query

1.   ILRR will allow authorized users to execute saved queries.

2.   ILRR will provide users with a listing of all queries available to them. Queries will be grouped and sorted by:

      a.   Query type

      b.   Date query created

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3. An ILRR user's list of queries will contain:

    a. All queries created by the user

    b. All Organization Queries associated with the user's organization

    c. The user's list of queries will not contain Interest Record Queries except for those the user created.

4. ILRR will maintain a history of run queries, recording:

    a. Date query executed

    b. ID of user who executed

5. ILRR will allow users to execute saved queries by:

    a. Selecting desired saved query from the user's list of queries

    b. Selecting the desired saved Interest Record Query while viewing an interest record online.

6. ILRR will give users the option to view the query parameters prior to executing the query.

6.5.12 Modify Query

1. ILRR will allow authorized users to modify saved queries.

2. Users may only modify queries that they created. Should a user wish to modify a query created by another user they would first have to save the query under another name.

3. ILRR will allow the user to modify any of the query parameter, content and output format settings.

4. When a user has modified a saved query they may:

    a. Save using a new name. Original query is left unchanged.

    b. Save over the original query. Original query is modified.

    c. Exit without saving modified query. Original query is left unchanged and modified query is not saved.

6.5.13 Delete Query

5. ILRR will allow authorized users to delete saved queries.

6. Users may only delete queries that they created.

7. ILRR will provide the user with a warning when the user selects "Delete Query" and user will be required to provide confirmation prior to ILRR removing the query from the system.

8. Personal Queries will be deleted if the user is deleted from the system.

9. Queries that have not been executed for X length of time will be deleted.

6.5.14 Request Notification

1. ILRR could allow authorized users to submit requests for notification when specific events occur within the ILRR system.

2. User will be able to specify the type of event for which they require notification:

    a. **Change to a specific interest record**. User would specify the ILRR record for which they require notification. System would provide notification whenever this record is updated.

    b. **New or Updates to Interest Records Matching User's Parameters**. User would specify parameter for notification (same parameters as Report on Interests and Rights). System would provide notification whenever a new record is added or an existing record is modified that matches the user's parameters.

3. User will be able to specify the method of notification:

    a. E-mail

    b. Data

4. Users must be able to specify distribution addresses (e-mail) when creating a notification. Users must be able to specify one or more addresses.

5. User will be able to specify the frequency of notifications:

    a. **Real-time**. User receives notification each time an event occurs within ILRR that matches the user's parameters

    b. **Daily**. User receives summary of all events in ILRR that have occurred within a 24 hour period that match the user's parameters

    c. **Weekly**. User receives summary of all events in ILRR that have occurred within a seven day period that match the user's parameters

    d. **Monthly**. User receives summary of all events in ILRR that have occurred within a one month period that match the user's parameters

6. User will be able to specify an effective period for a specific notification by providing either a range of dates or an end date for the notifications. If no end date is provided the notification will continue indefinitely.

7. When a Notification Request is submitted ILRR must assign a Notification ID, Create Date and User ID to the notification record.

8. ILRR must provide the user with confirmation that a Notification Request has been accepted and provide the Notification ID.

9. ILRR must allow the user to view a list of their Notification Requests with the ability for the user to view Notification Request details.

10. ILRR should incorporate the Request Notification functionality into the Report on Interests and Rights functionality, allowing the user to create a report and then request notification of events that would change the information in the report as of the date it was created.

11. ILRR e-mail notifications should be parse-able.

6.5.15 Distribute Notifications

1. ILRR may be able to generate (create and send) a notification to a user when an event occurs for which a notification has been requested.

2. ILRR must be able to generate notification in the following formats:

   a. E-mail notification

   b. Data feed

3. Where a user has requested daily, weekly or monthly notifications ILRR must be able to consolidate all events into a single message.

4. ILRR notifications must include (for each Notification Request):

   a. Notification ID

   b. List of events that have occurred

   c. Link to impacted ILRR (URL) interest records

6.5.16 Modify Notification

1. ILRR may allow users to modify the parameters, notification method, frequency, effective period, and distribution address(es) of a Notification Request.

2. ILRR must allow the user to view a list of their Notification Requests with the ability for the user to select a Notification Request to modify.

3. When a Notification Request is modified ILRR must record a NOTIFICATION_ UPDATE_DATE.

4. ILRR must provide the user with confirmation that a modification to a Notification Request has been accepted.

6.5.17 Cancel Notification

1. ILRR may allow users to cancel (delete) Notification Requests

2. ILRR must allow the user to view a list of their Notification Requests with the ability for the user to select a Notification Request to cancel.

3. ILRR must provide the user with a warning when the user selects "Cancel Notification" and user will be required to provide confirmation prior to ILRR removing the Notification from the system.

4. If an interest record is deleted from ILRR (INTEREST_STATUS of Request), where a Notification Request exists requesting notice of changes to the record, ILRR will issue a notification to the user of the event and delete the Notification Request from the system.

5. Where a Notification Request has a specific effective period, ILRR will delete Notification Requests once the end date has passed.

6.5.18 Report Possible Data Quality Issue

1. ILRR must provide users with the ability to advise Data Providers when a possible data quality issue is identified.

2. ILRR must maintain a list of Data Provider Data Quality Coordinators with e-mail addresses for each Interest Granting Agency submitting data to the ILRR.

3. ILRR must allow users to submit an electronic notice of a possible data quality issue. User will be able to provide the following:

    a. ILRR_RECORD_INDENTIFIER(s) for records with possible data quality problems; or

    b. Description of region of Province with possible data quality problem (GEOMETRY, LOCATION_LEGAL_DESCRIPTION)

    c. Description of the issue

4. ILRR must forward the notice to the appropriate Data Quality Coordinator.

5. ILRR should maintain a record of notices submitted.

6. ILRR will not associate the notice with a specific interest record or otherwise flag the record as having a data quality issue.

6.5.19 Logon to ILRR

1. ILRR must provide ability for users to identify themselves prior to accessing the system.

2. ILRR should accommodate anonymous users through a "guest" or "public user" account. Data access and functionality will be limited for anonymous users.

3. ILRR must provide integration with IDIR and BCeID user accounts.

6.5.20 Log Off ILRR

4. ILRR must provide users with the ability to log off the system, thereby terminating their ILRR session.

5. ILRR should automatically terminate inactive sessions after X minutes (time-out).

6. ILRR should provide users with the ability re-logon to ILRR if their session has timed-out.

6.5.21 Create User Account

1. ILRR must provide ability for authorized users to create new user accounts.

2. ILRR must provide integration with IDIR and BCeID user accounts.

3. ILRR user accounts must be based on MSRM Person/Org standards.

4. ILRR must be able to associate a user account with an organization

5. ILRR must be able to designate data access roles to a specific user.

6. ILRR must be able to designate functional roles to a specific user.

6.5.22 Calculate User Fees

Note: If and how ILRR will calculate and collect User Fees is an outstanding issue that is awaiting Executive Steering Committee resolution. The following functionality is generic and will be expanded upon once a decision has been made on this issue. See Appendix F for additional information.

1. ILRR should be able to calculate user fees based on data consumption or duration of system use.

2. ILRR should be able to integrate with other Interest Granting Agencies' fee calculation and collection processes.

3. ILRR fee calculation methodology should be consistent with that applied to other MSRM data services (example: LRDW).

6.5.23 Maintain Domain Values

1. ILRR must provide authorized users with the ability to update domain values.

2. ILRR must perform data validation as described in Section 5.4.2 when domain records are added or updated.

6.6 ILRR Basic Expected Use Cases

The ILRR Basic Expected Use Cases further describe the functions of the ILRR application as identified through consultation with the ILRR stakeholders. These are not meant to represent the comprehensive ILRR Use Cases as it is anticipated further refinement of these Use Cases and identification of additional Use Cases will occur during the System Architecture phase of the project.

The consultation phase of the project identified the following Use Cases:

1. Register an Interest
2. Amend an Interest
3. Amend Interest Holder Information
4. Delete a Request
5. Determine Existing Interests (Statusing Report)
6. Search for Record (Quick Search)
7. Report on Interests or Requests
8. Save Query to User Account
9. Save Query to Request/Interest Record
10. Save Query to Organization
11. Run Query Saved to User Account
12. Run Query Saved to Request/Interest Record
13. Run Query Saved to Organization
14. Modify Query
15. Delete Query
16. Request Notification
17. Modify Notification Request
18. Distribute Notifications
19. Delete Active Notification Request
20. Delete Expired Notification Request
21. Notification of Possible Data Quality Issue
22. Logon to ILRR
23. Manually Log-Off ILRR
24. Time-Out of ILRR
25. Create User Account
26. Calculate User Fees
27. Maintain Domain Values

6.6.1 Use Case/Feature Matrix

The Uses Cases map to the System Features as follows:

Use Case \ System Feature	1. Register a Request	2. Amend a Request	3. Delete a Request	4. Determine Existing Interests (Statusing Report)	5. Register an Interest	6. Amend an Interest	7. Amend Interest Holder Information	8. Search for Record (Quick Search)	9. Report on Interests or Requests	10. Save Query	11. Run Query	12. Modify Query	13. Delete Query	14. Request Notification	15. Distribute Notification	16. Modify Notification	17. Cancel Notification	18. Report Possible Data Quality Issue	19. Logon to ILRR	20. Log Off ILRR	21. Create User Account	22. Calculate User Fees	23. Maintain Domain Values
1. Register an Interest	X				X																		
2. Amend an Interest		X				X																	
3. Amend Interest Holder Information							X																
4. Delete a Request			X																				
5. Determine Existing Interests (Statusing Report)				X																			
6. Search for Record (Quick Search)								X															
7. Report on Interests or Requests									X														
8. Save Query to User Account										X													
9. Save Query to Request/Interest Record										X													
10. Save Query to Organization										X													
11. Run Query Saved to User Account											X												

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Use Case / System Feature	1. Register a Request	2. Amend a Request	3. Delete a Request	4. Determine Existing Interests (Statusing Report)	5. Register an Interest	6. Amend an Interest	7. Amend Interest Holder Information	8. Search for Record (Quick Search)	9. Report on Interests or Requests	10. Save Query	11. Run Query	12. Modify Query	13. Delete Query	14. Request Notification	15. Distribute Notification	16. Modify Notification	17. Cancel Notification	18. Report Possible Data Quality Issue	19. Logon to ILRR	20. Log Off ILRR	21. Create User Account	22. Calculate User Fees	23. Maintain Domain Values
12. Run Query Saved to Request/Interest Record											X												
13. Run Query Saved to Organization											X												
14. Modify Query												X											
15. Delete Query													X										
16. Request Notification														X									
17. Modify Notification Request																X							
18. Distribute Notifications															X								
19. Delete Active Notification Request																	X						
20. Delete Expired Notification Request																	X						
21. Notification of Possible Data Quality Issue																		X					
22. Logon to ILRR																			X				
23. Manually Log-Off ILRR																				X			
24. Time-Out of ILRR																				X			
25. Create User Account																					X		
26. Calculate User Fees																						X	
27. Maintain Domain Values																							X

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6.6.2 Use Case Specification Overview

A Use Case is a narrative that describes the interaction of an Actor (user) with a system to complete a process. It is a widely used technique for capturing and documenting system requirements.

The ILRR Use Cases have been documented using the following standard format:

Name	A descriptive name for the use case.
Goal	Provides a description of what the use case will achieve.
Actor(s)	Represents any entity (may be users or other systems) that interact with the use case.
Preconditions	Defines any conditions that must be satisfied prior to the commencement of the use case.
Basic Flow	Lists the basic events that will occur when the use case is executed.
Post Condition	Defines the state that the system is expected to be in when the use case has been executed.
Exceptions	List of an exceptions that may occur during the Use Case and a description of how the exception is to be handled.
Comments	Lists any special requirements for the use case or unresolved issues.

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6.6.3 ILRR Basic Expected Use Case Detail

Name	*6.6.3.1 Register an Interest*
Goal	To register an interest record in the ILRR.
Actor(s)	Staff at BC Provincial Government Ministries and Agencies who are authorized to grant rights/interests. Operational Systems (BC Provincial Government Ministries and Agencies who are authorized to grant rights/interests.).
Preconditions	Identity of the Actor has been established (may limit Actors to recording specific types of interest Requests). The agency has granted (approved) a legal interest.
Basic Flow	**Automated Process** 1. Actor creates new interest in Agency system. 2. Agency System synchronizes with data with ILRR. May include the following processes: • ILRR validates Agency System identity. • ILRR accepts new interest record. • ILRR determines if there is an existing Request record for this interest. • If an existing Request is found, ILRR amends the base information and changes status to Registered. • If no Request is found, ILRR creates an Interest Registration record. • ILRR sends confirmation message to Agency System.

Alternate Flow	**Manual Process**:
	
	1. Actor searches for existing record with INTEREST_STATUS of "Request".
	2. If record is located:
	
	    a. Actor Amends/completes interest information. Data that may be updated/added:
	
	      • ISSUING_AGENCY_IDENTIFIER
	      • ISSUING_AGENCY_FILE_NUMBER
	      • ISSUING_AGENCY_SYSTEM_ID
	      • ISSUING_AGENCY_SYSTEM
	      • INTEREST_HOLDER
	      • INTEREST_HOLDER_ADDRESS
	      • INTEREST_HOLDER_PHONE
	      • INTEREST_HOLDER_E-MAIL
	      • INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
	      • INTEREST_HOLDER_TYPE
	      • INTEREST_HOLDER_PERCENT
	      • INTEREST_HOLDER_CAPACITY
	      • INTEREST_STATUS
	      • INTEREST_TYPE

- INTEREST_AGENCY
- INTEREST_AGENCY_ADDRESS
- INTEREST_AGENCY_PHONE
- INTEREST_AGENCY_E-MAIL
- INTEREST_THEME
- AGREEMENT_TYPE
- SURFACE_CLASS
- INTEREST_DESCRIPTION
- CONDITIONS_RESTRICTIONS
- LOCATION_LEGAL_DESCRIPTION
- GEOMETRY
- GEOMETRY_ACCURACY
- GEOMETRY_ACCURACY_UNIT
- ELEVATION
- START_DATE
- END_DATE
- TERM_DURATION
- TERM_DURATION_UNIT
- REQUEST_DATE
- INTEREST_DATE
- SENSITIVE_RECORD

   b. Actor selects – *Save as Interest.*

   c. ILRR performs basic data validation and accepts data.

   d. ILRR updates Interest record and updates ILRR_UPDATE_DATE.

   e. Actor receives confirmation message.

3. If Request is not located:

   a. Actor selects "Create New Interest".

   b. Actor enters interest information:

- ISSUING_AGENCY_IDENTIFIER
- ISSUING_AGENCY_FILE_NUMBER
- ISSUING_AGENCY_SYSTEM_ID
- ISSUING_A GENCY_SYSTEM
- INTEREST_HOLDER
- INTEREST_HOLDER_ADDRESS
- INTEREST_HOLDER_PHONE
- INTEREST_HOLDER_E-MAIL
- INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
- INTEREST_HOLDER_TYPE
- INTEREST_HOLDER_PERCENT
- INTEREST_HOLDER_CAPACITY
- INTEREST_STATUS

	- INTEREST_TYPE - INTEREST_AGENCY - INTEREST_AGENCY_ADDRESS - INTEREST_AGENCY_PHONE - INTEREST_AGENCY_E-MAIL - INTEREST_THEME - AGREEMENT_TYPE - SURFACE_CLASS - INTEREST_DESCRIPTION - CONDITIONS_RESTRICTIONS - LOCATION_LEGAL_DESCRIPTION - GEOMETRY - GEOMETRY_ACCURACY - GEOMETRY_ACCURACY_UNIT - ELEVATION - START_DATE - END_DATE - TERM_DURATION - TERM_DURATION_UNIT - REQUEST_DATE - INTEREST_DATE - SENSITIVE_RECORD c. Actor submits data (selects save). d. ILRR performs basic data validation and accepts data. e. ILRR creates record, and assigns values to ILRR_RECORD_IDENTIFIER and ILRR_CREATE_DATE. f. ILRR returns confirmation message.
Post Condition	Existing interest record has been updated to reflect new "Active" status or New interest record has been created.
Exceptions	Invalid data (example – non date entered in a date field). Insufficient data – minimum data set required to create record – need to define what this is?
Comments	Only the Agency that created the original request record may register it as an interest.

Name	*6.6.3.2 Amend an Interest*
Goal	Modify information in an Interest record to keep it synchronized with the Issuing Agency's operational system/records.
Actor(s)	Staff at BC Provincial Government Ministries and Agencies who are authorized to grant rights/interests.
	Operational Systems (BC Provincial Government Ministries and Agencies who are authorized to grant rights/interests.).
Preconditions	Actor has been identified.
	There is an existing interest record in ILRR.
	There has been a change to the interest in the Agency's operational system.
Basic Flow	**Automated Process**
	1. Actor modifies an Interest record in the Agency system.
	2. Agency System synchronizes with data with ILRR. May include the following processes:
	• ILRR validates Agency System identity.
	• ILRR accepts updated interest record.
	• ILRR determines if there is an existing interest record.
	• If an existing interest is found, ILRR replaces the original record with the updated information from the data file.
	• ILRR sends confirmation message to Agency System.
Alternate Flow	**Manual Process**
	1. Actor searches for existing interest.
	2. ILRR locates interest.
	3. Actor amends appropriate information.
	4. Actor selects – *Update Interest.*
	5. ILRR performs basic data validation and accepts data.
	6. ILRR updates Interest record.
	7. Actor receives confirmation message.
Post Condition	Interest record has been updated and is available for viewing.
Exceptions	Invalid data (example – non date entered in a date field).
	Insufficient data – minimum data set required to create record – need to define what this is?
Comments	Only the Agency that created the original Interest Record may amend the record.
	An Interest record cannot be deleted. It may be deactivated if the interest expires or is cancelled for any reason.

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Name	*6.6.3.3 Amend Interest Holder Information*
Goal	To update Interest Holder information (name, address) in the ILRR. Will allow for the updating of Interest Holder information where the interest holder has multiple Interest Records in the ILRR.
Actor(s)	Operational Systems (BC Provincial Government Ministries and Agencies who are authorized to accept requests for grant rights/interests.
Preconditions	Actor has been identified. There is an existing interest record in ILRR. There has been a change to the Interest Holder information in the Agency's operational system.

Basic Flow	1. Actor modifies an Interest Holder record in the Agency system.
	2. Agency System synchronizes with data with ILRR. May include the following processes:
	  • ILRR validates Agency System identity.
	  • ILRR accepts updated Interest Holder record.
	  • ILRR identifies all Interest Records associated with the Interest Holder.
	  • ILRR updates Interest Holder information for identified records.
	  • ILRR sends confirmation message to Agency System.

Post Condition	Interest Holder information has been updated for associated Interest Records in the ILRR database.
Exceptions	
Comments	The ILRR will not be maintaining a "client table", therefore it is likely that the same Interest Holder information will be part of multiple Interest Records. The purpose of this use case is to allow for a single message from an Agency operational system to update Interest Holder information in multiple Interest Records.

Name	*6.6.3.4 Delete a Request*
Goal	Remove an interest record with a status of "request" when the request has been withdrawn, cancelled or rejected.
Actor(s)	Staff at BC Provincial Government Ministries and Agencies who are authorized to delete request for grant rights/interests. Operational Systems (BC Provincial Government Ministries and Agencies who are authorized to accept requests for grant rights/interests.).
Preconditions	Actor has been identified. There is an existing request record in ILRR. The request has been withdrawn, rejected or otherwise cancelled and will no longer be considered for interest granting.

Basic Flow	**Automated Process**
	1. Actor indicates that a Request has been withdrawn, cancelled or rejected in the Agency system.
	2. Agency System synchronizes with data with ILRR. May include the following processes:
	• ILRR validates Agency System identity.
	• ILRR accepts "delete request" message.
	• ILRR locates request record.
	• ILRR deletes request record from database.
	• ILRR sends confirmation message to Agency System.
Alternate Flow	**Manual Process**
	1. Actor searches for existing request.
	2. ILRR locates request.
	3. Actor selects "Delete Request".
	4. ILRR asks for confirmation of delete action.
	5. Actor selects "Yes".
	6. ILRR deletes request record from database.
	7. Actor receives confirmation message.
Post Condition	Request has been deleted from the ILRR database and is no longer available to be viewed.
Exceptions	
Comments	Only the Agency that created the original interest record may delete that record.
	Only interest records with a status of "request" may be deleted from ILRR.

Name	*6.6.3.5 Determine Existing Interests (Statusing Report)*
Goal	Determine existing interests for a specific location.
	Determine pending (requests) interests for a specific location.
Actor(s)	Any ILRR user with permission to query ILRR.
Preconditions	An area of interest (location) has been identified.
	Identity of the Actor is established to allow:
	1. Access control
	2. Billing
Basic Flow	1. Actor specifies:
	a) Area of interest:
	Example of methods:
	• Map viewer
	• Lot number
	• Coordinates
	• PIDS
	• Geometry of existing ILRR Interest record

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2) System returns a summary listing of all records that intersect with the identified area of interest with the following data:

- ILRR_RECORD_IDENTIFIER
- ISSUING_AGENCY_IDENTIFIER
- ISSUING_AGENCY_FILE_NUMBER
- INTEREST_HOLDER
- INTEREST_STATUS
- INTEREST_TYPE
- INTEREST_AGENCY
- GEOMETRY
- START_DATE
- END_DATE
- REQUEST_DATE
- INTEREST_DATE

3) User selects a specific record and system displays entire record. Data to be displayed:

- ILRR_RECORD_IDENTIFIER
- ISSUING_AGENCY_IDENTIFIER
- ISSUING_AGENCY_FILE_NUMBER
- ISSUING_AGENCY_SYSTEM_ID
- ISSUING_AGENCY_SYSTEM
- INTEREST_HOLDER
- INTEREST_HOLDER_ADDRESS
- INTEREST_HOLDER_PHONE
- INTEREST_HOLDER_E-MAIL
- INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
- INTEREST_HOLDER_TYPE
- INTEREST_HOLDER_PERCENT
- INTEREST_HOLDER_CAPACITY
- INTEREST_STATUS
- INTEREST_TYPE
- INTEREST_AGENCY
- INTEREST_AGENCY_ADDRESS
- INTEREST_AGENCY_PHONE
- INTEREST_AGENCY_E-MAIL
- INTEREST_THEME
- AGREEMENT_TYPE
- SURFACE_CLASS
- INTEREST_DESCRIPTION
- CONDITIONS_RESTRICTIONS
- LOCATION_LEGAL_DESCRIPTION

<table>
<tr><td></td><td>

- GEOMETRY
- GEOMETRY_ACCURACY
- GEOMETRY_ACCURACY_UNIT
- ELEVATION
- START_DATE
- END_DATE
- TERM_DURATION
- TERM_DURATION_UNIT
- REQUEST_DATE
- INTEREST_DATE
- SENSITIVE_RECORD
- ILRR_CREATE_DATE
- ILRR_UPDATE_DATE

4) System presents the following options:
    a. Return to Summary List
    b. Save Query
    c. Create New Query
    d. Exit

And the Actor continues.

</td></tr>
</table>

Post Condition	Actor has the requested information.
Exceptions	Information not available. Actor may not have appropriate security access.
Comments	Statusing report will only return interest records with INTEREST_STATUS of "Requested" or "Active". Statusing report will have a default "buffer" of 100 M (or other distance to be determined) on the geometry of the area of interest provided by the user. Statusing report will group results by INTEREST_STATUS and sort results by INTEREST_TYPE.

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Name	*6.6.3.6 Search for Record (Quick Search)*
Goal	To allow the user to quickly locate a specific record or group of records.
Actor(s)	Any ILRR user with permission to query the ILRR.
Preconditions	Identity of the Actor is established. Actor has means of identifying a record (ILRR_RECORD_IDENTFIER, ISSUING_AGENCY_FILE_NUMBER or similar information).

Basic Flow	1. Actor specifies search parameters:
	  • ILRR_RECORD_IDENTIFIER
	  • ISSUING_AGENCY_IDENTIFIER
	  • ISSUING_AGENCY_FILE_NUMBER
	  • INTEREST_HOLDER
	  • START_DATE
	  • END_DATE
	  • REQUEST_DATE
	  • INTEREST_DATE
	
	2. System returns a summary listing of all records that match the search parameters with the following data:
	  • ILRR_RECORD_IDENTIFIER
	  • ISSUING_AGENCY_IDENTIFIER
	  • ISSUING_AGENCY_FILE_NUMBER
	  • INTEREST_HOLDER
	  • INTEREST_STATUS
	  • INTEREST_TYPE
	  • INTEREST_AGENCY
	  • GEOMETRY
	  • START_DATE
	  • END_DATE
	  • REQUEST_DATE
	  • INTEREST_DATE
	
	3. User selects a specific record and system displays entire record. Data to be displayed:
	  • ILRR_RECORD_IDENTIFIER
	  • ISSUING_AGENCY_IDENTIFIER
	  • ISSUING_AGENCY_FILE_NUMBER
	  • ISSUING_AGENCY_SYSTEM_ID
	  • ISSUING_AGENCY_SYSTEM
	  • INTEREST_HOLDER
	  • INTEREST_HOLDER_ADDRESS
	  • INTEREST_HOLDER_PHONE

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	• INTEREST_HOLDER_E-MAIL
	• INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
	• INTEREST_HOLDER_TYPE
	• INTEREST_HOLDER_PERCENT
	• INTEREST_HOLDER_CAPACITY
	• INTEREST_STATUS
	• INTEREST_TYPE
	• INTEREST_AGENCY
	• INTEREST_AGENCY_ADDRESS
	• INTEREST_AGENCY_PHONE
	• INTEREST_AGENCY_E-MAIL
	• INTEREST_THEME
	• AGREEMENT_TYPE
	• SURFACE_CLASS
	• INTEREST_DESCRIPTION
	• CONDITIONS_RESTRICTIONS
	• LOCATION_LEGAL_DESCRIPTION
	• GEOMETRY
	• GEOMETRY_ACCURACY
	• GEOMETRY_ACCURACY_UNIT
	• ELEVATION
	• START_DATE
	• END_DATE
	• TERM_DURATION
	• TERM_DURATION_UNIT
	• REQUEST_DATE
	• INTEREST_DATE
	• SENSITIVE_RECORD
	• ILRR_CREATE_DATE
	• ILRR_UPDATE_DATE
	4. System presents the following options:
	    e. Return to Summary List
	    f. Create New Search
	    g. Exit
	And the Actor continues.

Post Condition	Search has run and Actor may view requested record(s).
Exceptions	Search does not identify any matching records – No Matches Found message.
Comments	

Name	*6.6.3.7 Report on Interests and Requests*
Goal	Find interests based on users parameters.
Actor(s)	Any ILRR user with permission to query ILRR.
Preconditions	Identity of the Actor is established for the purposes of: 1. Access control 2. Billing
Basic Flow	1) Actor specifies parameters: • ILRR_RECORD_IDENTIFIER • ISSUING_AGENCY_IDENTIFIER • ISSUING_AGENCY_FILE_NUMBER • INTEREST_HOLDER • INTEREST_HOLDER_TYPE • INTEREST_STATUS • INTEREST_TYPE • INTEREST_AGENCY • INTEREST_THEME • AGREEMENT_TYPE • SURFACE_CLASS • START_DATE • END_DATE • REQUEST_DATE • INTEREST_DATE 2) Actor specifies area of interest: Example of methods • Map viewer • Lot number • Coordinates • PIDS • Geometry of existing ILRR Interest record 3) Actor specifies desired Spatial Relationship (one or more): • Intersect (overlap) • Adjoin (are next to) • Contains within 4) Actor selects output formats: • Web • PDF • RTF (Text) • CSV (Spreadsheet)

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- XML

5) Actor selects report type:

   a) Summary Report – data to be displayed (list grouped by INTEREST_STATUS, sorted by INTEREST_TYPE:

   - ILRR_RECORD_IDENTIFIER
   - ISSUING_AGENCY_IDENTIFIER
   - ISSUING_AGENCY_FILE_NUMBER
   - INTEREST_HOLDER
   - INTEREST_STATUS
   - INTEREST_TYPE
   - INTEREST_AGENCY
   - GEOMETRY
   - START_DATE
   - END_DATE
   - REQUEST_DATE
   - INTEREST_DATE

   b) Detailed Report – data to be displayed (list grouped by INTEREST_STATUS, sorted by INTEREST_TYPE:

   - ILRR_RECORD_IDENTIFIER
   - ISSUING_AGENCY_IDENTIFIER
   - ISSUING_AGENCY_FILE_NUMBER
   - ISSUING_AGENCY_SYSTEM_ID
   - ISSUING_AGENCY_SYSTEM
   - INTEREST_HOLDER
   - INTEREST_HOLDER_ADDRESS
   - INTEREST_HOLDER_PHONE
   - INTEREST_HOLDER_E-MAIL
   - INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
   - INTEREST_HOLDER_TYPE
   - INTEREST_HOLDER_PERCENT
   - INTEREST_HOLDER_CAPACITY
   - INTEREST_STATUS
   - INTEREST_TYPE
   - INTEREST_AGENCY
   - INTEREST_AGENCY_ADDRESS
   - INTEREST_AGENCY_PHONE
   - INTEREST_AGENCY_E-MAIL
   - INTEREST_THEME
   - AGREEMENT_TYPE
   - SURFACE_CLASS
   - INTEREST_DESCRIPTION

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- CONDITIONS_RESTRICTIONS
- LOCATION_LEGAL_DESCRIPTION
- GEOMETRY
- GEOMETRY_ACCURACY
- GEOMETRY_ACCURACY_UNIT
- ELEVATION
- START_DATE
- END_DATE
- TERM_DURATION
- TERM_DURATION_UNIT
- REQUEST_DATE
- INTEREST_DATE
- SENSITIVE_RECORD
- ILRR_CREATE_DATE
- ILRR_UPDATE_DATE

c) Custom Report – Actor selects data to be displayed and group/sort orders from:

- ILRR_RECORD_IDENTIFIER
- ISSUING_AGENCY_IDENTIFIER
- ISSUING_AGENCY_FILE_NUMBER
- ISSUING_AGENCY_SYSTEM_ID
- ISSUING_AGENCY_SYSTEM
- INTEREST_HOLDER
- INTEREST_HOLDER_ADDRESS
- INTEREST_HOLDER_PHONE
- INTEREST_HOLDER_E-MAIL
- INTEREST_HOLDER_BUSINESS_REGISTRATION_NUMBER
- INTEREST_HOLDER_TYPE
- INTEREST_HOLDER_PERCENT
- INTEREST_HOLDER_CAPACITY
- INTEREST_STATUS
- INTEREST_TYPE
- INTEREST_AGENCY
- INTEREST_AGENCY_ADDRESS
- INTEREST_AGENCY_PHONE
- INTEREST_AGENCY_E-MAIL
- INTEREST_THEME
- AGREEMENT_TYPE
- SURFACE_CLASS
- INTEREST_DESCRIPTION

- CONDITIONS_RESTRICTIONS
- LOCATION_LEGAL_DESCRIPTION
- GEOMETRY
- GEOMETRY_ACCURACY
- GEOMETRY_ACCURACY_UNIT
- ELEVATION
- START_DATE
- END_DATE
- TERM_DURATION
- TERM_DURATION_UNIT
- REQUEST_DATE
- INTEREST_DATE
- SENSITIVE_RECORD
- ILRR_CREATE_DATE
- ILRR_UPDATE_DATE

6) Actor selects "Run Report".
7) ILRR assesses reasonableness of the query based on user profile.
8) If acceptable:
    a) ILRR may calculate costs and return payment request from Actor.
    b) Actor enters payment information or agrees to pay.
    c) ILRR executes query and returns data in specified output format.
    d) Actor views data.
    e) ILRR presents the following options:
        i) Save query to user account
        ii) Save query to Request/Interest Record
        iii) Save query to Organization
        iv) Modify query
        v) Create new query
        vi) Exit
    f) Actor selects option and continues.
9) If not acceptable, ILRR presents error message and the following options:
    a) Modify query
    b) Delete query
    c) Create new query
    d) Exit

Post Condition	Query has run and information is available to the Actor.
Exceptions	
Comments	The data access model will be used to govern what data and what level of detail specific users will be able to view.

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Name	*6.6.3.8 Save Query to User Account*
Goal	To save the parameters of a query and associate it with a specific user account so that the Actor can return to ILRR at a later date and re-run the same query.
Actor(s)	Any ILRR user with permission to save queries.
Preconditions	Identity of the Actor has been established. Actor has created and run a query.
Basic Flow	1. Actor selects "Save Query to User Account". 2. System returns "Save Query to User Account" screen. 3. Actor enters a name and brief description of the query and selects "Save". 4. System saves query parameters and associates with the Actor's account. 5. System presents the following options: a. View Saved Queries b. Create new Query c. Exit 6. And the Actor continues.
Post Condition	The Actor's query parameters have been associated with a specific user account and saved to the database.
Exceptions	
Comments	Save query functionality may not be made available to the General Public.

Name	*6.6.3.9 Save Query to Request/Interest Record*
Goal	To save the parameters of a query to a specific Request or interest record so that any user with appropriate access privileges can re-run the same query.
Actor(s)	Any ILRR user with permission to save queries.
Preconditions	Identity of the User has been established. User has created and run a query.
Basic Flow	1. User selects "Save Query to Request/Interest Record". 2. System returns "Save Query to Request/Interest Record" screen. 3. User enters a name and brief description of the query and selects "Save". 4. System saves query parameters and associates with the Request or Interest record. 5. System presents the following options: a. View Saved Queries b. Create new Query c. Exit 6. And the user continues.

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Post Condition	The user's query parameters have been associated with a specific Request/Interest record and saved to the database.
Exceptions	
Comments	Save query functionality may not be made available to the General Public.

Name	*6.6.3.10 Save Query to Organization*
Goal	To save the parameters of a query so that any user associated with a specific organization with appropriate access privileges can re-run the same query.
Actor(s)	Any ILRR user with permission to save queries to an organization.
Preconditions	Identity of the User has been established. User has created and run a query.

Basic Flow	1. User selects "Save Query to Organization".
	2. System returns "Save Query to Organization" screen.
	3. User enters a name and brief description of the query and selects "Save".
	4. System saves query parameters and associates with the Organization.
	5. System presents the following options:
	    a. View Saved Queries
	    b. Create new Query
	    c. Exit
	And the user continues.

Post Condition	The user's query parameters have been associated with a specific organization and saved to the database. Query is now available to any user from that organization.
Exceptions	
Comments	Save query functionality may not be made available to the General Public.

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Name	*6.6.3.11 Run Query Saved to User Account*
Goal	Access and run a query that has previously been saved by a Actor to their user account.
Actor(s)	Any ILRR user with the ability to Save a Query.
Preconditions	Identity of the Actor has been established. Actor has at least one saved query.

Basic Flow	1. Actor selects "My Saved Queries".
	2. System returns a list of queries saved by the Actor.
	3. Actor selects desired query and selects "Run".
	4. ILRR may calculate costs and return payment request to Actor.
	5. Actor enters payment information or agrees to pay.
	6. ILRR executes query and returns data in specified output format. (need to specify the formatting options).
	7. Actor views data.
	8. ILRR presents the following options:
	   i) Modify query
	   ii) Create new query
	   iii) Delete query
	   iv) Exit
	9. Actor selects option and continues.

Post Condition	A saved query/report has been retrieved and the results are available for viewing.
Exceptions	
Comments	Save query functionality may not be made available to the General Public.

Name	*6.6.3.12 Run Query Saved to Request/Interest Record*
Goal	Access and run a query that has previously been saved to a Request or Interest Record.
Actor(s)	Any ILRR user with permission to query ILRR.
Preconditions	Identity of the Actor has been established. Request/Interest record has at least one saved query. Actor has accessed Request or Interest Record.
Basic Flow	1. Actor selects "Saved Queries for this Request/Interest". 2. System returns a list of queries saved to the Request/Interest record. 3. User selects desired query and selects "Run". 4. ILRR may calculate costs and return payment request to user. 5. User enters payment information or agrees to pay. 6. ILRR executes query and returns data in specified output format. (Need to specify the formatting options).

	7. Actor views data.
	8. ILRR presents the following options:
	a. Modify query
	b. Create new query
	c. Delete query
	d. Exit
	9. User selects option and continues.
Post Condition	A saved query/report has been retrieved and the results are available for viewing.
Exceptions	
Comments	Save query functionality may not be made available to the General Public.

Name	***6.6.3.13 Run Query Saved to Organization***
Goal	Access and run a query that has previously been saved by a Actor to their organization.
Actor(s)	Any ILRR Actor who is associated with an organization and has ability to Save a Query.
Preconditions	Identity of the Actor has been established. Actor has at least one saved query.

Basic Flow	1. Actor selects "My Organization's Queries".
	 2. System returns a list of queries saved to the Actor's organization.
	 3. Actor selects desired query and selects "Run".
	 4. ILRR may calculate costs and return payment request to Actor.
	 5. Actor enters payment information or agrees to pay.
	 6. ILRR executes query and returns data in specified output format. (need to specify the formatting options).
	 7. Actor views data.
	 8. ILRR presents the following options:
	     a. Modify query
	     b. Create new query
	     c. Delete query
	     d. Exit
	 9. Actor selects option and continues.

Post Condition	A saved query/report has been retrieved and the results are available for viewing.
Exceptions	
Comments	This functionality will only be available to users who are associated with organizations – not available to the general public.

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Name	*6.6.3.14 Modify Query*
Goal	Modify the parameters of an existing query.
Actor(s)	Any ILRR user with permission to save query.
Preconditions	Identity of the Actor has been established. Actor has accessed (newly created or saved) query.

Basic Flow	1. Actor selects "Modify Query".
	2. Actor specifies criteria: could be almost any of the mandatory fields – location, owner, theme, Interest (active and/or inactive), Request, dates (ranges, since, before, etc.).
	3. Actor selects output formats.
	4. Actor selects "Run Report".
	5. ILRR assesses reasonableness of the query based on user profile.
	6. If acceptable:
	   a. ILRR may calculate costs and return payment request to Actor.
	   b. Actor enters payment information or agrees to pay.
	   c. ILRR executes query and returns data in specified output format. (need to specify the formatting options).
	   d. Actor views data.
	   e. ILRR presents the following options:
	     i. Save query to user account
	     ii. Save query to Request/Interest Record
	     iii. Modify query
	     iv. Create new query
	     v. Exit
	   f. Actor selects option and continues.
	7. If not acceptable, ILRR presents error message and the following options:
	     i. Modify query
	     ii. Delete query
	     iii. Create new query
	     iv. Exit
	User selects option and continues.

Post Condition	A save query/report has been retrieved and the results are available for viewing.
Exceptions	
Comments	The user will not be able to modify the query unless they originally created it.

Name	*6.6.3.15 Delete Query*
Goal	Delete a query record from the database.
Actor(s)	Any ILRR user with permission to save queries.
Preconditions	Identity of the Actor has been established. Actor has accessed (newly created or saved) query.

Basic Flow	1. Actor selects "Delete Query".
	2. ILRR confirms that Actor is the creator of the query.
	3. If "Yes" ILRR deletes query record from database.
	4. If "No" ILRR returns "User cannot delete this query" message and the following options:
	    a. Create new query
	    b. Exit
	5. User selects option and continues.

Post Condition	The query record has been deleted from the database and is no longer available to users.
Exceptions	
Comments	User may only delete queries that they created.

Name	*6.6.3.16 Request Notification*

Goal	To set up notification request in ILRR so that Actor receives notifications when events of interest occur.
	
	Events of interest may include:
	• Change to a specific interest record.
	  o Explicitly select the attributes that you want to know if changed. (Would require that each attribute is date stamped)
	• Changes (amendments and new records) of a specific interest type
	  o May want to specify types of changes…for example, status changes, new requests, etc.
	• Changes to interests for a specific area. Ways of describing:
	  o Use map viewer to draw polygon
	  o Existing parcel
	  o Existing interest location
	  o Boundaries
	• New interests that intersect with the location of interests of a specific type.
	• Or a combination of the above.

Actor(s)	Any identified ILRR user with permission to create notification requests.
Pre-Conditions	Actor has been identified. Actor has identified an area of interest.

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Basic Flow	1. User defines the parameters for the notification.
	2. User defines the date range for notification.
	3. Specify frequency of notification.
	• Real-time
	• Daily
	• Weekly
	• Monthly
	4. Delivery Frequency.
	• E-mail
	• Data Feed
	5. User submits notification request to ILRR.
	6. ILRR validates request and returns confirmation (perhaps sends confirming e-mail).
	7. User continues.
Post Condition	ILRR has recorded the notification request and is ready to monitor the system for events of interest to the Actor.
Exceptions	
Comments	Data access controls would apply…if an event happens with an interest type that the user does not have permission to view then the user would not receive a notification.

Name	*6.6.3.17 Modify Notification Request*
Goal	To modify an existing Notification Request.
Actor(s)	Any user of the ILRR with permission to create notifications.
Pre-Conditions	The User has been identified.
	A Notification Request created by the user exists.
Basic Flow	1) Actor selects a Notification Request to be modified from a list of their Notification Requests.
	2) Actor modifies the parameters of the Notification Request.
	3) User submits modified notification request to ILRR.
	4) ILRR validates request and returns confirmation (perhaps sends confirming e-mail).
	5) User continues.
Post Condition	The Notification Request has been modified and ILRR is ready to monitor the system for events of interest to the Actor.
Exceptions	
Comments	Actor may only modify Notification Requests that they created.

Name	*6.6.3.18 Distribute Notifications*
Goal	To distribute a notification of an event in ILRR to a user who has requested notification.
Actor(s)	1) ILRR. 2) An ILRR user who has requested a notification.
Pre-Conditions	An event (new record, update to record) has occurred within ILRR. A notification exists in the system requesting notification of the event.

Basic Flow	**Real-time Notifications** – the user has requested immediate notification when an event occurs.
	
	1) When an Event (added or updated interest record) occurs that matches the parameters of a Notification Request where the user has specified "Real-Time" notification ILRR prepares Notification (in the format specified in the Notification Request) which includes:
	
	   a) Notification ID for the Notification Request for which the event(s) apply.
	
	   b) For each event:
	      i) ILRR_RECORD_ID for the interest record that has been added or updated.
	      ii) Hyperlink (URL) to the ILRR Interest Record.
	      iii) Date/Time of the event.
	
	2) ILRR sends the Notification to the location (address) specified in the Notification Request.
	
	3) User receives Notification.

Alternate Flow	**Periodic Notifications** – the user has requested notification on a daily, weekly or monthly basis.
	
	1) At a pre-determined point in time, ILRR searches for Events that match the parameters defined by a Notification Request.
	
	2) If ILRR finds an Event (or Events) that meet the Notification Request parameters, ILRR prepares Notification (in the format specified in the Notification Request) which includes:
	
	   a) Notification ID for the Notification Request for which the event(s) apply.
	
	   b) For each event:
	      i) ILRR_RECORD_ID for the interest record that has been added or updated.
	      ii) Hyperlink (URL) to the ILRR Interest Record.
	      iii) Date/Time of the event.
	
	3) ILRR sends the Notification to the location (address) specified in the Notification Request.
	
	4) User receives Notification.

Post Condition	The user has received notification that an event has occurred that matches their notification parameters.
Exceptions	

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Comments	

Name	*6.6.3.19 Delete Active Notification Request*
Goal	To delete an active Notification Request from ILRR.
Actor(s)	An ILRR user who has requested a notification.
Pre-Conditions	The User has been identified
	A Notification Request created by the user exists.
Basic Flow	1) Actor selects a Notification Request to be deleted from a list of their Notification Requests.
	2) Actor instructs the ILRR to delete the selected Notification Request.
	3) ILRR asks Actor for confirmation to delete Notification Request.
	4) Actor confirms delete instruction.
	5) ILRR deletes the Notification Request and provides Actor with confirmation that deletion has occurred.
Post Condition	The Notification Request has been removed from ILRR and no additional Notifications will be provided based on the request.
Exceptions	
Comments	Actor may only delete Notification Requests that they created.

Name	*6.6.3.20 Delete Expired Notification Request*
Goal	To delete an expired Notification Request from ILRR.
Actor(s)	ILRR
Pre-Conditions	A Notification Request created by the user exists and includes an Notification End Date.
	The Notification End Date is in the past.
Basic Flow	1) At a pre-determined points in time, ILRR searches for Notification Requests with Notification End Dates that are in the past.
	2) ILRR deletes the Notification Request.
Post Condition	The Notification Request has been removed from ILRR and no additional Notifications will be provided based on the request.
Exceptions	
Comments	

Name	*6.6.3.21 Notification of Possible Data Quality Issue*
Goal	To allow users of the ILRR to report possible data quality issues to the agency responsible for managing the interest.
Actor(s)	Any identified ILRR user.
Pre-Conditions	Actor has been identified. Actor has identified possible data quality problem in the ILRR.

Basic Flow	1) Actor selects "Data Quality Issue".
	2) ILRR returns "Data Quality Issue Notification" form.
	3) Actor enters the following information:
	   a) ILRR Identifier for record with possible data quality issue (may be more than one record); or
	   b) Area with possible data quality issue
	   c) Description of the possible issue
	4) Actor submits Data Quality Issue Notification.
	5) ILRR performs basic data validation (has the Actor provided enough information to identify the Agency responsible for the records?).
	   a) Passes validation:
	     i) ILRR returns confirmation message to Actor.
	     ii) ILRR send e-mail notification to Agency(s) responsible for the identified record(s) with the ILRR ID, Agency ID, Description of possible issue and name and contract information for the Actor that initiated the notification.
	     iii) Actor continues.
	   b) Fails Validation:
	     i) ILRR returns error message to Actor requesting more information.
	     ii) Actor revises notification and continues.

Post Condition	ILRR has recorded the notification request and is ready to monitor the system for events of interest to the Actor.
Exceptions	
Comments	

Name	*6.6.3.22 Logon to ILRR*
Goal	Validate Actor's name and password to allow access to the ILRR application
Actor(s)	Any ILRR Actor (Government, public, etc.).
Preconditions	Actor has ILRR account. Actor has navigated to the ILRR home page.

Basic Flow	1. Actor selects "Logon to ILRR" on ILRR home page.
	2. ILRR returns the Logon screen.
	3. Actor enters Actor name and password and selects "Logon" button (or Enter Key).
	4. ILRR validates Actor name and password.
	    a. If Actor name and password valid, ILRR returns the following options:
	        i. View Saved Queries
	        ii. Determine Existing Rights (Statusing Report)
	        iii. Create Interest Report (Advanced Query)
	        iv. Exit
	    b. If Actor name and password not valid, ILRR returns the following options:
	        i. Re-enter Actor name/password information
	        ii. Create new public account
	        iii. Exit
	5. And the Actor continues.

Post Condition	Actor's name and password have been validated and the Actor may now search the ILRR for information.
Exceptions	
Comments	

Name	*6.6.3.23 Manually Log Off ILRR*
Goal	To allow a user to terminate their ILRR session.
Actor(s)	Any ILRR user.
Pre-Conditions	Actor is logged into ILRR.
Basic Flow	1) Actor instructs ILRR to log them out of the system. 2) ILRR terminates the Actors session and returns a "Logged Off" message.
Post Condition	The Actor is not longer connected to the ILRR and is unable to interact with the system without logging back in.
Exceptions	
Comments	

Name	*6.6.3.24 Time-Out of ILRR*
Goal	To automatically terminate a user's ILRR session when the user has been inactive for a period of time.
Actor(s)	ILRR. Any ILRR user.
Pre-Conditions	Actor is logged into ILRR. Actor has been inactive in the system for a specific period of time.
Basic Flow	1) ILRR identifies that the Actor's session has been inactive for specific period of time. 2) ILRR terminates the Actor's session. 3) ILRR returns a "Timed Out" message and Log On screen.
Post Condition	The Actor is not longer connected to the ILRR and is unable to interact with the system without logging back in.
Exceptions	
Comments	Need to determine the length of time a session can be inactive before timing out.

Name	*6.6.3.25 Create User Account*
Goal	Create a user account to allow an individual access to the ILRR. Enables the creation of user accounts with specific security and data access privileges.
Actor(s)	ILRR Administrator. ILRR User with permission to create user accounts.
Preconditions	Actor is logged into the ILRR application.

Basic Flow	1) Actor selects "Create User Account".
	2) System returns "Create User Account" screen.
	3) Actor enters:
	    a) User Name
	    b) Organization
	    c) Security Group (if applicable)
	    d) Address
	    e) Phone
	    f) e-mail
	    g) User Name
	    h) Password
	4) System performs basic validation on data provided (password valid, no identical user account, etc.).
	5) System creates User Account record with requested security profile.
	6) System provides user with confirmation of account creation.

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Post Condition	A new user account has been created.
Exceptions	System identifies invalid password – user is prompted to provide a different password.
	System identifies potential duplicate user account – user is provided with message.
	User does not provide all required information – system prompts user for additional information.
Comments	

Name	*6.6.3.26 Calculate User Fees*
Goal	To calculate the fee for a transaction.
Actor(s)	
Preconditions	
Basic Flow	
Post Condition	
Exceptions	
Comments	*The ILRR Steering Committee and Core Working Group have identified the need to be able to calculate and collect fees from users of the ILRR. However, no consensus has been reach yet on a model for calculating fees. This use case will be fully developed once a fee model has been established.*

Name	*6.6.3.27 Maintain Domain Tables*
Goal	To allow users of the ILRR to update information in ILRR domain tables. Examples: • Interest_Types • Interest_Agencies.
Actor(s)	Any identified ILRR user with permission to modify domain tables.
Pre-Conditions	Actor has been identified.

Basic Flow	1) Actor selects appropriate domain table.
	2) Actor selects desired update action:
	   a) Add new record:
	     i) ILRR return "Add Record" screen.
	     ii) Actor enters new record information and submits to ILRR.
	     iii) ILRR performs basic data validation and returns confirmation of new record.
	     iv) Actor continues or exits.

	b) Modify existing record:
	i) Actor searches for desired record.
	ii) ILRR returns requested record.
	iii) Actor modifies record and submits to ILRR.
	iv) ILRR performs basic data validation and returns confirmation of new record.
	v) Actor continues or exits.
Post Condition	ILRR domain table has been updated.
Exceptions	
Comments	

6.7 User Interfaces

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.8 Hardware Interfaces

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.9 Software Interfaces

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.10 Communication Interfaces

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.11 User Documentation Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.12 Performance Requirements

Performance requirements are particular to specific use cases, complexity of the transaction, volume of data within the transactions, access characteristics (e.g. network speeds) and other factors. As such, meaningful performance requirements cannot be quantified in absolute terms.

However, the recognized performance requirements is for ILRR to have the performance characteristics of a typical ministry operational application. In other words, the are no particular aspects identified within the ILRR business operations that would require a higher performance standard.

6.13 Security Requirements

As is the case with the performance requirements, ILRR security is particular to the specific use case. Some of the use cases will require authentication and authorization – others will not (they are open to the public). For those that do require security, a flexible authorization model will be

required (refer to the Access Control section for details). Authentication for these use cases will be supported by the MSRM standards. Other aspects of standard security requirements (level of safeguarding against unauthorized access or denial of service attacks for example) are recognized to be within the capacity of the MSRM security model to support.

6.14 Software Quality Attributes

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.

6.15 Interfaces with Other Systems/Processes

Not part of this phase. High-level models will be delivered as part of the Technical Architecture phase.

7. Access/Security Requirements

The ILRR Data Access principles are currently under review by the ILRR Steering Committee. Once this review has been completed and the principles approved the User Classes and Security Matrixes will be reviewed and may modified.

7.1 Data Access Principles

The following principles will guide the control of access to data in the ILRR:

1. All information on legal rights and interests, requests for rights and interests, and notices of interest contained within the ILRR will be available to all BC Government organizations responsible for granting rights and interests regardless of the sensitivity of the data. Data access for Interest Granting Agencies may be defined in legislation or require data sharing agreements.

2. Sensitive information in ILRR may be made available to non-right granting BC Government organizations for research, planning and analysis based on their business need and will require data sharing agreements.

3. Sensitive information in ILRR may be made available to organizations outside of the BC government for research, planning and analysis based on their business need. Access requirements will be determined by the right granting organization with which the outside organization is affiliated and may require data sharing agreements.

4. Interest information contained within the ILRR will be considered to be non-sensitive and available to the General Public, except where:

    a. Release of the information to the General Public is contrary to the Freedom of Information and Protection of Privacy Act or other statues (For example, the Heritage Conservation
    Act).

    b. The Interest Granting Agency responsible for a record is able to demonstrate a business need for the information to be withheld from the General Public.

7.1.1 Sensitive Data

The ILRR will contain information that is of a sensitive nature that must not be available to all users of the system. Sensitive information may be:

- **Attribute-based**. Some attributes may represent information that should not be available to some users of the ILRR. It is most likely that the Freedom of Information and Protection of Privacy Act will define the sensitivity of specific attributes.

    o For example, Interest holder personal information (address, phone number) may not be available to the General Public.

- **Record-based**. Some records in the ILRR will represent interests (or requests for interests) that should not be available to some users of the ILRR due to the sensitive nature of the interest. Records may be defined as being of a sensitive nature where:

    o The record represents an interest type that is defined as being sensitive by legislation. An example of this is Archaeological Sites.

    o The record represents an interest that is in the planning stage (request status), during which the information is considered to be highly confidential. Release of this information could negatively impact negotiations, result in speculative acquisition of other overlapping interests, or cause financial hardship to

government or applicant. Examples of these types of interests are Treaty
Negotiation Lands and Highway Plans.

o   The record represents an interest type that normally would not be of a sensitive
    nature, but due to a special circumstance must be protected in this instance.

7.1.2 Data Access Functionality

In order to protect the sensitive nature of data within the ILRR, the system must:

1. Require that all users of the ILRR be identified prior to accessing the system. ILRR
    should accommodate anonymous users through a "guest" or "public user" account.

2. Require that all users be associated with a "User Class" that will be used by the system
    to determine the users access and view of specific attributes and records.

3. Have the ability to restrict specific user classes from accessing particular attributes.
    Unless an attribute has been specifically restricted it will be available to all users of the
    system (except for sensitive records)

4. Have the ability to designate records as sensitive based on:

    a. Interest Type

    b. Interest Type and Interest Status

5. Have the ability to classify a specific Interest Record as being sensitive, where the
    record's Interest Type or combination of Interest Type and Interest status would not
    normally be considered sensitive.

6. Be able to provide users with a view of (access to) specific attributes from a specific
    record based on the record's sensitivity, the user's "User Class" and the user's
    organization.

7. Be able to provide the following views of sensitive records:

    a. **Full**: User is able to access all attributes of the interest record (Geometry,
        Agency, Type and Content) except where attribute restrictions exist.

    b. **Existence**: User is able to view the Interest's Geometry, Agency, and Interest
        Type, but may not access other record attributes

    c. **Notice**: User receives a notification that a specific Interest Granting Agency may
        have an interest that matches the user's query parameters and provide Interest
        Granting Agency contact information. The user may not access any additional
        attributes of the record.

    d. **None**: User may not access any of the record's attributes. The record does not
        appear on any reports accessed by the user. The report will indicate that the
        record class is restricted to user type.

8. Allow for the creation of User Access matrixes for specific Interest Types, and Interest
    Type/Interest Status combinations that define the specific level of access provided for
    each User Class/Organization combination.

9. Treat interest records as not sensitive except where the record's Interest Type or Interest
    Type/Interest Status combination has been specifically designated as sensitive or the
    specific record has been designated as sensitive.

7.1.3 Privacy Impact Assessment

As the ILRR will contain personal and potentially sensitive information the system must comply with the Freedom of Information and Protection of Privacy Act. In order to ensure compliance with the Act, the ILRR Project should complete a Privacy Impact Assessment (PIA) before system design commences.

The Privacy Impact Assessment ("PIA") process is critical for a public body to properly assess, before any decision to proceed is made, whether a proposed program, policy or legislation has any privacy impact or complies with the Freedom of Information and Protection of Privacy Act. A public body should perform a PIA, in consultation with its privacy experts, at the earliest possible stages for each proposed program, policy or legislation. The PIA should be performed early in order to guide the decision on whether to proceed in light of any adverse privacy impact or concerns about compliance with the Act. The completed PIA should, in cases where the public body decides any privacy impact can be mitigated if it proceeds, be used to design the program, policy or legislation in a way that mitigates any privacy impact as far as possible.

The PIA process is administered by the Corporate Privacy and Information Access Branch (CPIAB) of the BC Ministry of Management Services. Additional information on the PIA process may be obtained at: http://www.mser.gov.bc.ca/foi_pop/PIA/PIAProcess.htm#DoINeedCompPia

The PIA tool is available at: http://www.mser.gov.bc.ca/foi_pop/PIA/PiaTemplate.htm

7.2 User Classes

The following represent preliminary User Classes for the ILRR and may be revised after approval of the Data Access Principles by the ILRR Steering Committee.

User Class	Description
Level 1	Users with a business need to access highly sensitive information stored in the ILRR Most likely users from an organization (Ministry, Agency, etc) with the authority to grant rights or interests.
Level 2	Users with a business need to access summarized moderately sensitive information stored in the ILRR Most likely users from a BC Government organization (Ministry, Agency, etc) that does not have the authority to grant interests or rights.
Level 3	Users with a business need to access summarized sensitive information stored in the ILRR Most likely users from an organization outside of the BC government that has a business need for access to information maintained in ILRR
Level 4	Users with no business need to access sensitive information stored in the ILRR Most likely the General Public
Data Provider	Provides information (data) to the ILRR on rights and interests. Has the ability to add, update and delete application records and add and update right/interest records. No read access.
Administrator	Individual(s) responsible for the maintenance of the ILRR. Will have unlimited access to the ILRR for the purposes on maintaining security profiles, etc.

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7.3 User/Function Security Matrix

The following represents the preliminary User/Function Security Matrix and may be revised after approval of the Data Access Principles by the ILRR Steering Committee.

ILRR users will have access to system functionality based on their user class. The following matrix defines the functionality available to each User Class:

Function (Use Case)	Level 1	Level 2	Level 3	Level 4	Data Provider	Administrator
1. Register an Interest					X	
2. Amend an Interest					X	
3. Amend Interest Holder Information					X	
4. Delete a Request					X	
5. Determine Existing Interests (Statusing Report)	X	X	X	X		
6. Search for Record (Quick Search)	X	X	X	X		
7. Report on Interests or Requests	X	X	X	X		
8. Save Query to User Account	X	X	X			
9. Save Query to Request/Interest Record	X	X	X			
10. Save Query to Organization	X	X	X			
11. Run Query Saved to User Account	X	X	X			
12. Run Query Saved to Request/Interest Record	X	X	X			
13. Run Query Saved to Organization	X	X	X			
14. Modify Query	X	X	X			
15. Delete Query	X	X	X			
16. Request Notification	X	X	X			
17. Modify Notification Request	X	X	X			
18. Distribute Notifications						X
19. Delete Active Notification Request	X	X	X			
20. Delete Expired Notification Request						X
21. Notification of Possible Data Quality Issue	X	X	X	X		
22. Logon to ILRR	X	X	X	X		
23. Manually Log-Off ILRR	X	X	X	X		
24. Time-Out of ILRR						X
25. Create User Account						X
26. Calculate User Fees						X
27. Maintain Domain Values						X

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7.4 User/Data Security Matrix

The following represents the preliminary User/Data Security Matrixes and may be revised after approval of the Data Access Principles by the ILRR Steering Committee.

7.4.1 Sensitive Data Attributes

User Class access to ILRR data attributes that have been designated as sensitive will be as follows:

User Class	Sensitive Data Attributes
Level 1	Yes
Level 2	No (default) Yes, with special permission
Level 3	No (default) Yes, with special permission
Level 4	No

7.4.2 Sensitive Records Based On Interest Type

ILRR will have the ability to designate all Interest Records of a specific Interest Type as being sensitive. The Interest Granting Agency responsible for the Interest Type will be required to create and maintain the following User/Data Security Matrix[11] for each Interest Type that is considered to be sensitive:

Interest Type:	Name of Interest Type			
Organization	**Level 1**	**Level 2**	**Level 3**	**Level 4**
Organization 1	Full	Full	Existence	None
Organization 2	Full	Existence	Notice	None
Organization 3	Existence	Existence	Notice	None
Organization 4	Full	Existence	None	None

7.4.3 Sensitive Records Based On Interest Type and Interest Status

ILRR will have the ability to designate all Interest Records of a specific Interest Type and Interest Status as being sensitive. The Interest Granting Agency responsible for the Interest Type/Interest Status combination will be required to create and maintain the following User/Data Security Matrix[12] for each Interest Type/Interest Type combination that is considered to be sensitive:

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[11] This matrix is meant as an example of a User/Data Security Matrix and does not represent an actual User/Data Security Matrix for any specific Interest Type

[12] This matrix is meant as an example of a User/Data Security Matrix and does not represent an actual User/Data Security Matrix for any specific Interest Type

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Interest Type:	Name of Interest Type			
Interest Status	Request, Active, Inactive or Suspended			
Organization	Level 1	Level 2	Level 3	Level 4
Organization 1	Full	Full	Existence	None
Organization 2	Full	Existence	Notice	None
Organization 3	Existence	Existence	Notice	None
Organization 4	Full	Existence	None	None

7.4.4 Unique Sensitive Records

On occasion, Interest Granting Agencies will wish to "flag" a specific record as being sensitive, although the records Interest Type or Interest Type/Interest Status combination would not normally be considered to be of a sensitive nature. When a specific record has been flagged as sensitive the following data access restrictions will apply:

User Class	Access to Unique Sensitive Record
Level 1	Full
Level 2	Existence
Level 3	Notice
Level 4	None

7.5 Application Availability

ILRR will be used by a broad range of stakeholders both within and outside government, many of whom anticipate accessing the ILRR outside of normal business hours. Stakeholder expectations for ILRR availability are as follows:

ILRR Application Availability	24 hours/day, 7 days/week on a best efforts basis. Downtime limited to less than 5 hours a month.
ILRR Support Availability	Normal Business Hours • Monday through Friday • 7:30 AM to 4:30 PM PST (Note – as BC encompasses two time zones support services should be available at the start of the business day in the Mountain Time Zone) • No support on statutory holidays

Note: Application availability, along with other non-functional requirements (latency, reliability), is contingent on the whether or not the ILRR will be considered a Legal Registry. If it is decided that ILRR will be a Legal Registry and that a right does not exist unless registered in the ILRR, then the requirements for availability, latency and reliability will be more stringent than if the ILRR is not a Legal Registry.

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7.6 Disaster Recovery Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

7.7 Cascade Delete Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

8. ILRR Impact Assessment

The realization of the ILRR vision will have significant impact on the processes currently followed to manage the granting and maintenance of interests for all Interest Granting Agencies and other stakeholders.

The following diagram describes the intersection of the ILRR with the three main interest management process areas:
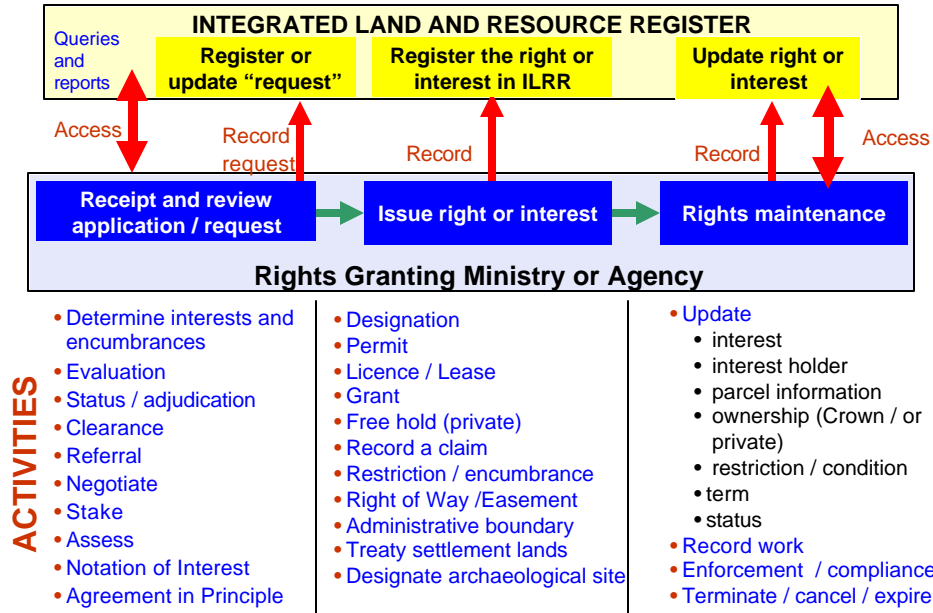
Implementation of the ILRR will require the integration of ILRR with the business processes of each Interest Granting Agency. The complexity and impact of this integration will vary by Interest Granting Agency and Agency-specific intersects and impacts are detailed in Appendix A. Section 8.1 and 8.2 describe generically the most common intersects and impacts that may be expected to occur as a result of the implementation of the ILRR. Section 8.3 deals with the impact of establishing ILRR as a "Legal Registry".

## 8.1 Business Process Model with ILRR Intersects

The diagram below illustrates the intersect points with ILLR for the Generic Interest Business process model as described in **Section 3.4, Current Interest Management Processes**. This model shows ten separate intersect points; the actual number of intersects varies across the Interest Granting Agencies. Descriptions of each intersect and its possible impact on the business process may be found in the following

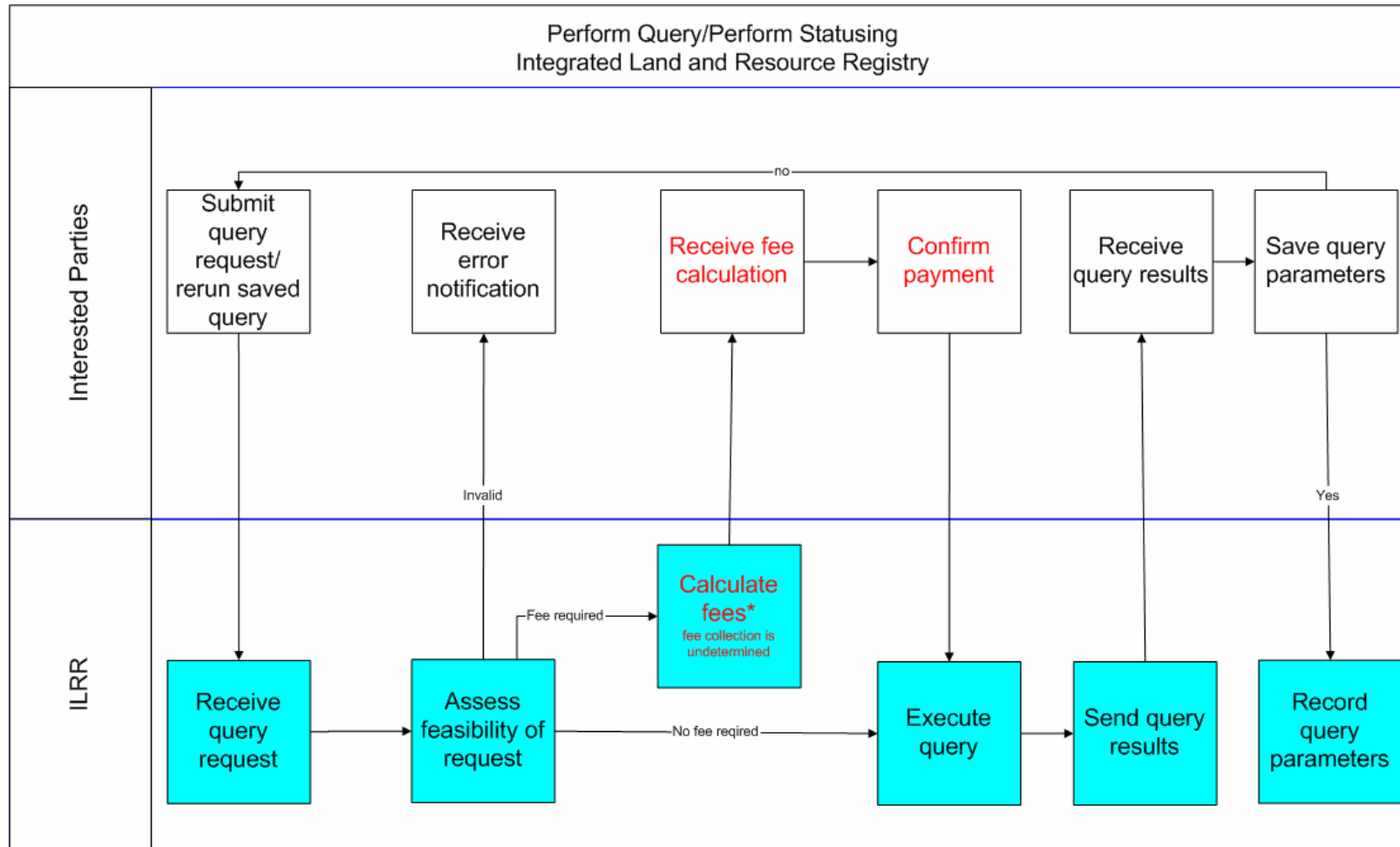ILRR Project - Generic Interest Business Process Model with ILRR Intesects
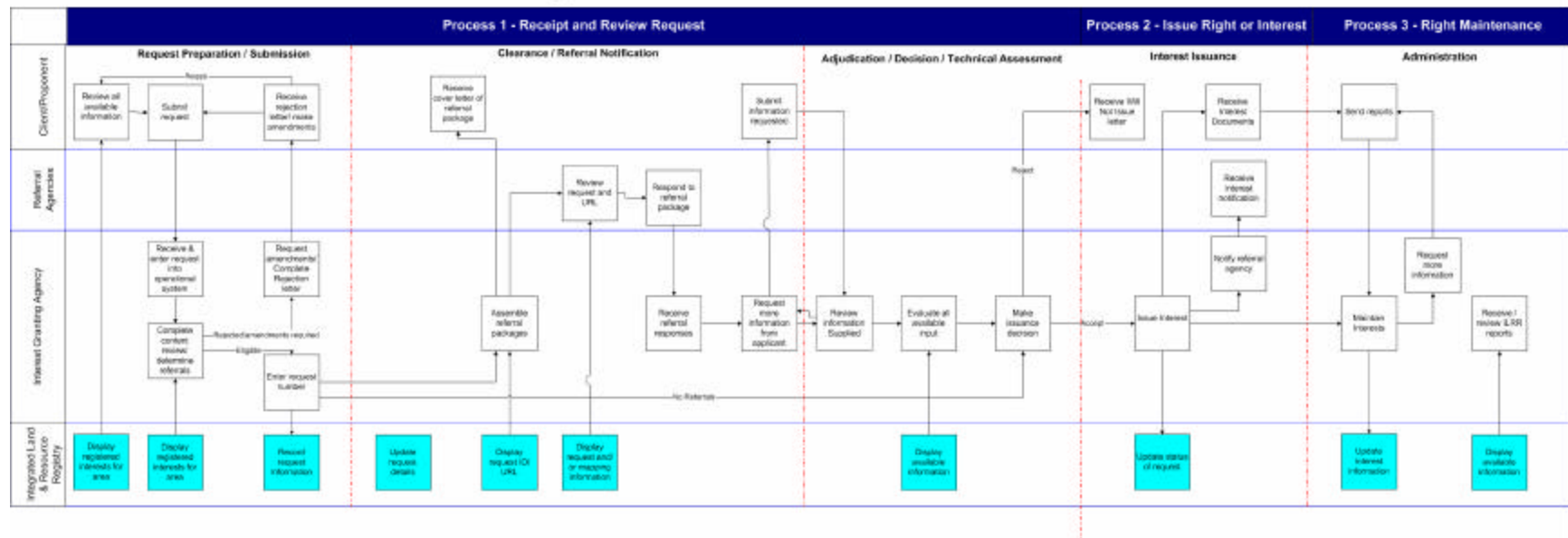
8.1.1 Register and Update an Interest Record

The following model further describes the interaction between the ILRR and an Interest Granting Agency to register and update an Interest record.
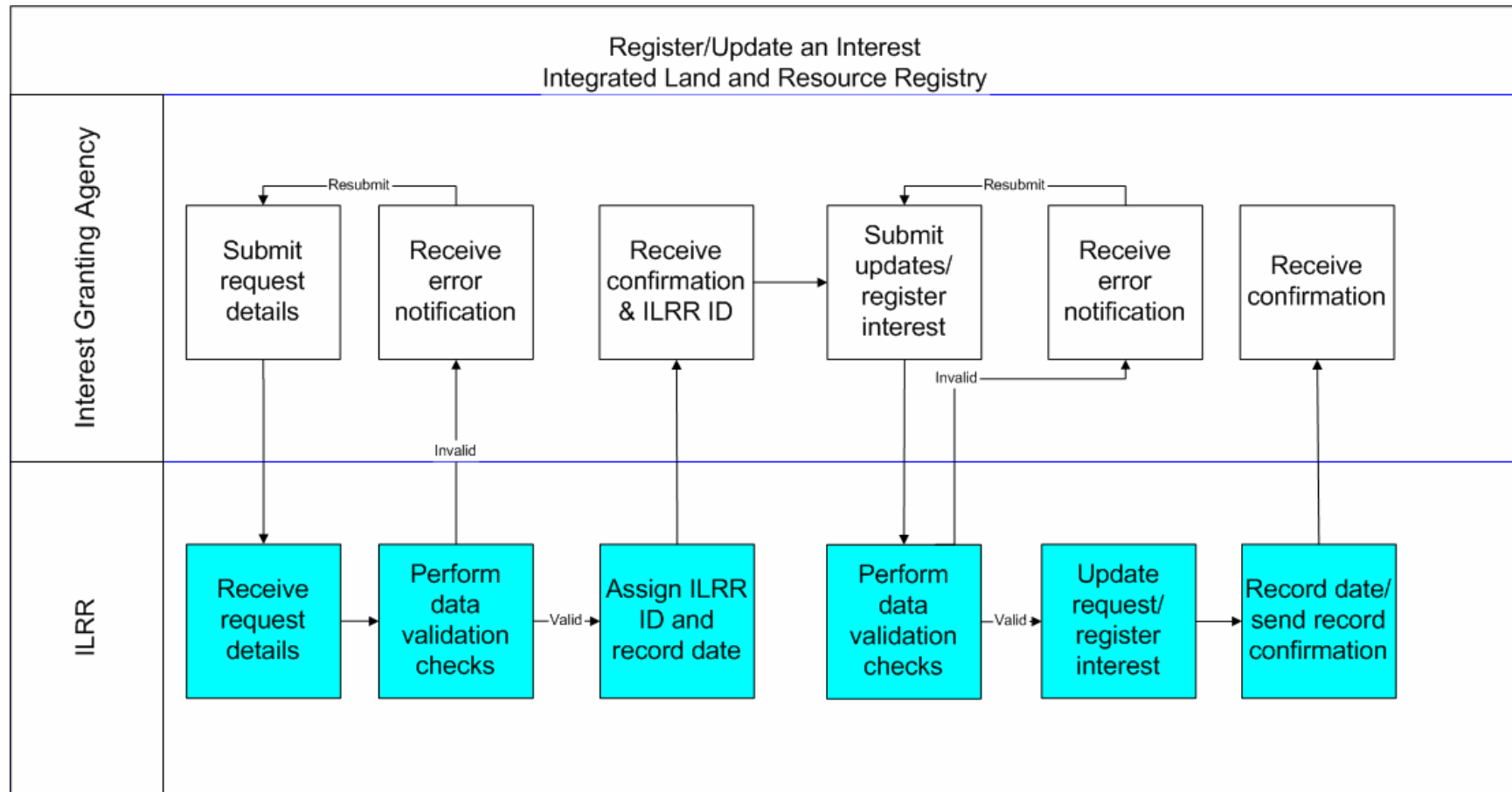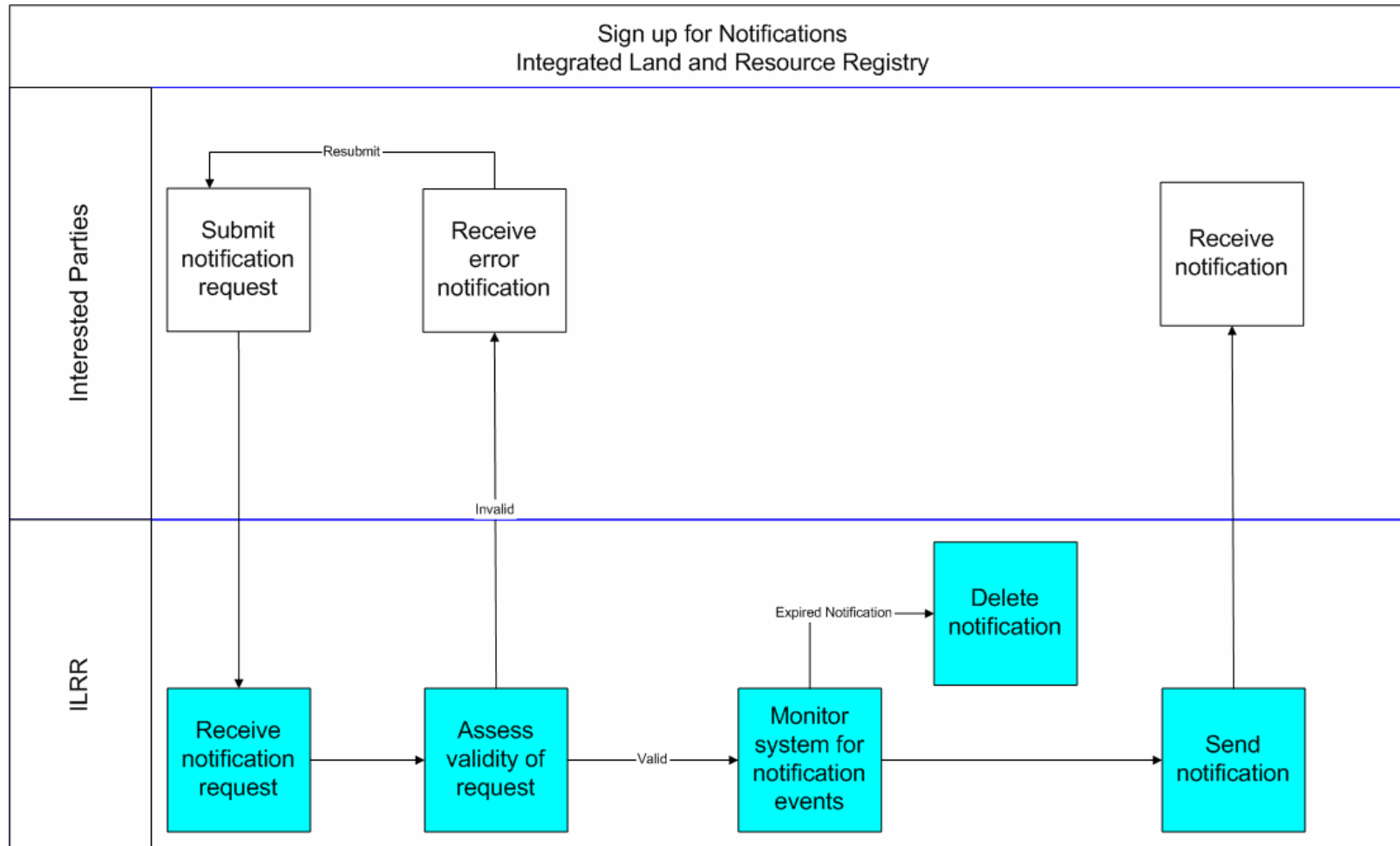
8.1.2 Query ILRR

The following model further describes the process for querying the ILRR.

8.1.3 Request and Receive Notification

The following model further describes the process for requesting and receiving notification of events within the ILRR.

8.2 ILRR Intersects and Impacts

Intersect Point		Intersect	Impact	Applicable System Features
1	Review all available information	Display registered interest for area	Implementation of the ILRR will provide clients/proponents with a consolidated source of information to support their development planning and interest request preparation. Possible impacts of this include: • Improved land/resource development planning • Improved request preparation • Reduction in the number of applications that are rejected due to obvious interest conflicts and/or lack of information **Strategies for Managing Impact(s):** As the impact of clients/proponents using the ILRR to support their business processes are very positive, every effort should be made to ensure that these stakeholders adopt the ILRR as quickly as possible. Strategies to support early adoption of the ILRR include: **Communications** • Interest Granting Agencies should participate in the ILRR rollout communication activities by informing existing interest holders and new clients/proponents about the ILRR. • Communication methods include direct e-mail to existing clients, providing information and link to ILRR on all Interest Granting Agency website and forms, and referring potential clients/proponents when inquiries are received. • The MSRM project team should look for opportunities to make presentation and demonstrate the ILRR to industry and other stakeholders. Possible events/opportunities would include industry conferences, publications, and association meetings. **System Usability** • Particular attention should be paid to the design and development of the user interface. • The interface must be intuitive, require little or no specialized knowledge and be easy to use or the ILRR will run the risk that stakeholders will not use the system. • During the design and development phase the design team should study similar applications that stakeholders have identified as being particularly user-friendly; for example, Map Place (MEM – Mineral titles). • It may be worth-while to involve a professional graphic designer who specializes in user interface design • Stakeholders from a variety of industries should be involved in design reviews and prototype testing.	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification • Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR

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Intersect Point	Intersect	Impact	Applicable System Features
1 Review all available information	Display registered interest for area	**(Continued from previous page)** **User Support** • Ongoing support services should be available to users of the system either via e-mail or phone. • ILRR should provide on-line tutorials, user manuals, data dictionaries, metadata and help files. User documentation should be written for a non-technical user and it should be easy to find specific information. • If possible, the MSRM project team should seek out opportunities to delivery workshops or demonstrations of the ILRR to potential users. Potential venues include conferences, other training activities, or MSRM sponsored events. **Data Quality** Poor data quality will result in users not integrating the ILRR into their business processes. The MSRM project team should ensure that not only does the project address data quality issues, but that the improvements in data quality are communicated to potential ILRR users.	
2 Complete content review/determine referrals	Display registered interest for area	The ILRR will support each Interest Granting Agency's initial review of requests and assist them in identifying potential individuals and organizations to include in the referral process. By consulting ILRR during the first review of a request the Interest Granting Agency will be able to: • Quickly identify if there are any obvious conflicts that would prevent the Interest Granting Agency from issuing the interest • Determine if any potential conflict may exist that would require consultation with other Interest Granting Agencies • Develop a list of Referral agencies to be included in the request evaluation. The impacts of having the ability to consult ILRR early in the interest request review process include: • Less time spent consolidating basic statusing information • Faster response request response time, particularly if obvious conflicts are identified • Enhanced ability to ensure that all individuals and organizations that might be affected by the granting of the interest are included in the referral process.	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification

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Intersect Point	Intersect	Impact	Applicable System Features
2	Complete content review/determine referrals	Display registered interest for area	**(Continued from previous page)** **Strategies for Managing Impact(s):** The impacts of Interest Granting Agencies referencing the ILRR early in their request review process are very positive. The ILRR will allow Interest Granting Agencies to expend less effort on basic data collection and spend less time processing request where an obvious impediment to granting the interest exists. Every effort should be made to ensure that Interest Granting Agencies integrate the ILRR into their existing request review processes to ensure that these benefits are realized. Strategies to support early adoption of the ILRR by Interest Granting Agency staff include: **Formal Integration with Interest Granting Agency Business Processes** • Interest Granting Agencies will need to commit to the integration of the ILRR into their existing processes. • Business process documentation and training will require modification to include the ILRR. • Staff will require training and support during the implementation to ensure a smooth adoption of the tool. **Communications** • In cooperation with the MSRM project team, each Agency should develop and implement a communication strategy focused on raising staff awareness of the ILRR, its functionalities and the positive impact using the tool will have on their ability to complete their work. **System Usability** • Particular attention should be paid to the design and development of the user interface for ILRR. • The interface must be intuitive, require little or no specialized knowledge and be easy to use or the ILRR will run the risk that stakeholders will not use the system. • During the design and development phase the design team should study similar applications that stakeholders have identified as being particularly user-friendly; for example, Map Place (MEM – Mineral titles). • It may be worth-while to involve a professional graphic designer who specializes in user interface design • Stakeholders from a variety of Interest Granting Agencies should be involved in design reviews and prototype testing.	• Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR

Intersect Point	Intersect	Impact	Applicable System Features
2 Complete content review/determine referrals	Display registered interest for area	**(Continued from previous page)** **User Support** • In conjunction with the MSRM project team, Interest Granting Agencies should provide all staff responsible for processing interest requests will initial training and on-going support to ensure that staff are able to leverage the ILRR tool • Ongoing support services should be available to users of the system either via e-mail or phone. • ILRR should provide on-line tutorials, user manuals, data dictionaries, metadata and help files. User documentation should be written for a non-technical user and it should be easy to find specific information. **Data Quality** Poor data quality will result in users not integrating the ILRR into their business processes. The MSRM project team should ensure that not only does the project address data quality issues, but that the improvements in data quality are communicated to potential ILRR users.	
3 Enter request number (record in operational system)	Record interest information	When an Interest Granting Agency formally accepts and records a request for an interest the Agency will need to transfer this information to the ILRR. Impacts of this requirement include: **Existing operational system** • Interface between the Interest Granting Agency's operational system and ILRR will need to be built. **No existing operation system** • Interest Granting Agency will need to acquire an operational system. This may involve the development of a new system or adoption of an existing system. • Alternatively, the ILRR may need to provide a facility for manual input of interest information. **Agency does not capture all attributes required by ILRR** • If an Interest Granting Agency is not currently capturing all the interest attributes identified as mandatory by ILRR the Agency will need to start recording this information. This would potentially represent a change to their business process and their operational system. • Clients/Proponents would be required to provide additional information on their requests. • Interest request forms (both paper and electronic) would require modifications to accommodate additional information.	• Register a Request

Intersect Point		Intersect	Impact	Applicable System Features
3	Enter request number (record in operational system)	Record interest information	**(Continued from previous page)** • Operational system would require modification to allow for capture of additional data attributes. It would be highly desirable if the operational system would enforce data capture of all mandatory ILRR data attributes. • Strategies would need to be developed for the handling of historical records. As it is not likely to be feasible to collect missing data for all historical interest records it may be necessary to make accommodations during the initiation ILRR data load to compensate for missing attributes. **Agency does not capture interest location information in a format compatible with ILRR** • Agency will be required to adopt new data capture practices to ensure that accurate spatial information is provided for all interests. • Strategies would need to be developed for the handling of historical records. As it is not likely to be feasible to digitize maps and other paper-based location descriptions it may be necessary to make accommodations during the initiation ILRR data load to compensate for missing spatial information. **Strategies for Managing Impact(s):** • ILRR should adopt a widely accepted standard for data transfer. • ILRR should establish a standard interface to which each Interest Granting Agency operational system would be mapped and connected. • Where an Interest Granting Agency does not have an existing operational system the Agency should investigate the feasibility of using another Agency's system. • Deficiencies in attribute and/or spatial data should be identified as soon as possible and plans developed and implemented to allow for the collection and recording of this information. Note: During the next phase of the project (Systems Architecture) a detailed mapping of each source system to the ILRR data requirements will be completed. This will provide each Interest Granting Agency with specific information on their particular attribute and spatial issues. • High-level Interest Granting Agency support for implementing business process and operational system change should be sought. • Interest Granting Agencies will need to establish team to manage the integration of ILRR with Agency business processes and systems. • MSRM ILRR project team should provide support and assistance with business and system re-engineering.	

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Intersect Point		Intersect	Impact	Applicable System Features
3	Enter request number (record in operational system)	Record interest information	**(Continued from previous page)** • Tools and resources for digitizing maps and other location information should be made available to Interest Granting Agencies. • Priorities should be established for the loading of historical interests into ILRR. Depending on the legal framework established for ILRR it may not be necessary to include inactive (expired) interest in the initial data load, reducing the data conversion effort. • Policies and procedures will need to be developed at each Agency to handle data loading errors and data quality issues and the Agency will need to make someone within the organization responsible for monitoring.	
4	Assemble referral packages	Display Request ID/URL	The ILRR will support the production of referral packages by providing Interest Granting Agencies with the ability to reference information in the ILRR within their referral requests. Interest Granting Agencies will be able to direct Referral Agencies to the ILRR where basic information, including a spatial representation will be available. In addition, the Interest Granting Agency could attach a Statusing Report to a particular request record, allowing the Referral Agencies to run the same report that the Interest Granting Agency is using. In some cases this will replace the need to distribute paper maps with referral requests. The impact of using ILRR as a reference source for the referral packages include: • Reduced effort to assemble referral packages – no copying application information or maps • Faster distribution of referral packages. Referral requests may be distributed electronically with a URL reference to ILRR. Faster distribution may result in faster responses. **Strategies for Managing Impacts are the same as for Intersect 2**	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification • Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR

Intersect Point		Intersect	Impact	Applicable System Features
5	Review referral request and URL	Display request and/ or mapping information	The ILRR will support the response to referral requests by providing Referral Agencies with a source of information regarding the interest request. Referral Agencies will be able to access the interest request record within ILRR, view a spatial depiction of the area under review and access additional information on other interests within the area. The impact of using ILRR as a reference source for Referral Agencies include: • Single source of information on requests for interests. • Ability to view both attribute and spatial information. • Consistent information provided for all referrals **Strategies for Managing Impacts are the same as for Intersect 2**	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification • Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR
6	All of Receive and Review Request process	Updated request details	If an interest request is modified or rejected anytime during the review process the ILRR will need to be updated. **Impacts and Strategies for Managing Impacts are the same as for Intersect 3**	• Amend a Request • Delete a Request • Amend Interest Holder Information

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Intersect Point	Intersect	Impact	Applicable System Features
7	Evaluate all available input	Display available information	Prior to making a final decision to grant a request the Interest Granting Agency may wish to consult ILRR to ensure that there have been no new interests recorded that could impact their decision. **Impacts and Strategies for Managing Impacts are the same as for Intersect 2**	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification • Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR
8	Issue Interest	Update status of request	When an interest is granted or rejected at the completion of the review process the ILRR will need to be updated. **Impacts and Strategies for Managing Impacts are the same as for Intersect 3**	• Register an Interest • Amend an Interest • Amend Interest Holder Information
9	Maintain interest	Update interest information	If a granted interest record is modified or expires he ILRR will need to be updated. **Impacts and Strategies for Managing Impacts are the same as for Intersect 3**	• Register an Interest • Amend an Interest • Amend Interest Holder Information

Intersect Point		Intersect	Impact	Applicable System Features
10	Receive/ review ILRR reports	Display available information	Interest Granting Agencies will use the ILRR as an ongoing source of information to support their interest management and land use planning activities. **Impacts and Strategies for Managing Impacts are the same as for Intersect 2.**	• Determine Existing Interests (Statusing Report) • Search for Record (Quick Search) • Report on Interests or Requests • Save Query • Run Query • Modify Query • Delete Query • Request Notification • Distribute Notification • Modify Notification • Cancel Notification • Report Possible Data Quality Issue • Logon to ILRR • Log Off ILRR

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8.3 Identification of Legislation, Regulation and Policy Changes

The establishment of ILRR as a "Legal Registry" will have a serious impact on the business processes of each Interest Granting Agency (see **Section 4.2.3** for a discussion on the establishment of a legal registry). As a "Legal Registry", the recording of an interest in the ILRR would become the definitive point where an interest assumes "legal" status. This would be a fundamental departure from how most interests currently achieve legal status, and would require significant change to the business processes for most (if not all) Interest Granting Agencies.

The creation of a legal registry would have the following impacts:

- **Legislation**
  - Section 3.3.2 provides a list of 31 separate Acts that enable the granting of rights and interests. In order to designate ILRR as the "Legal Registry" the government would need to review and amend each piece of legislation, or pass superceding legislation.

- **Regulation and Policy Impacts**
  - Each Interest Granting Agency would need to amend or draft new regulations and policies to align their operations with the incoming legislation.
  - The new (or amended) regulations and policies will need go through each Interest Granting Agency's internal approval process.
  - Once adopted, the new (or amended) regulations and policies will need to be communicated to Interest Granting Agency staff and other stakeholders.

- **Business Processes**
  - Each Interest Granting Agency would need to review and modify their existing business processes to ensure compliance with the legislation.
  - Business process changes would require documentation and communication to staff (and possibly clients) in the form of training or other information material.

- **Operational Systems**
  - Operational systems would need to be reviewed and potentially modified to ensure that they are able to support the ILRR. This may include:
    - System would need to be able to provide information on interests being granted in real-time.
    - System would need to be able to provide all attribute and spatial information required by ILRR.
    - System workflows may need to be modified to support changes to the Interest Granting Agency's business processes.

- **Organization Changes**
  - Individual stakeholder agencies may have to allocate human resources to fulfill the role of a "Registrar" who is responsible for the overall quality and completeness of agency data that is being provided to ILRR.

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9. Data Quality

The *ILRR Business Strategy and Transition Plan* identified data quality as being one of the most significant issues affecting the outcome of the project. The subsequent *Data Assessment Reports* outlined significant data quality issues with the following data sets:

- Crown cadastral parcel fabric and Crown land tenure information as defined in Tantalis

- Forest related tenures as defined in INCOSADA, FAMAP and FTAS

- Sub-surface related tenures as defined in MiDA and EnerGIS

- Water related tenures as defined in the WRIS (Water Rights Information System)

- Archaeology site information as defined in the Heritage Resource Information Application (HRIA)

- Parks and protected area information as defined in the Protected Areas Registry

As the ultimate success of ILRR is dependent on the users having confidence that the data provided by the ILRR is both complete and accurate, addressing the deficiencies in these data sets is of paramount importance. MSRM has recognized the seriousness of this issue and is taking steps to resolve these problems. The overall project plan includes a Data Quality Improvement stream, MSRM has hired a Data Quality Manager (Olga Kopriva) who will be responsible for overseeing the data quality improvement process, and approximately 60% of the overall project budget has been allocated to the data quality issue.

During the ILRR Project, Phase I (Business Requirements and Systems Architecture), additional work is being completed to further investigate and analyze the impact poor quality data will have on the usability of the ILRR and quantify the costs to resolve these issues. The goal is to provide the ILRR Data Quality Manager with additional information on the priority areas for improvement and preliminary estimates of the costs to resolve these problems.

9.1 Preliminary Data Quality Impact Assessment

Using the issues identified in the *Data Assessment Reports*, an initial assessment of the impact of known data quality issues on the usability of the ILRR was conducted. Members of the Core Working Group (CWG) and Northeast Working Group (NEWG) were asked to evaluate the impact each issue would have on their ability to confidently use information provided by the system.

Stakeholders were asked to rank the impact of each known problem in the following manner:

L	**Low -** Minor inconvenience. The user might note the issue, but it would not prevent the user from using the information contained within the Report on Interests.
M	**Medium -** Serious timescale or effort impact. The user would need to do additional work to validate the information in the report or collect additional information from other sources.
H	**High -** ILRR is unusable. The data quality issues are so serious that the information provided by the Report of Interests is of no value to the user. The user will need to go elsewhere for the information needed to support their business process.

In addition to assessing the impact of known data quality issues, stakeholders were also asked to contribute strategies for improving the quality of the data sets and identify any additional data quality problems.

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The outcome of this data quality impact assessment is a preliminary ranking of data quality improvement priorities and initial strategies for addressing these issues. Key findings of the preliminary assessment include:

- The data quality problems related to the Parcel Fabric and Crown Tenures represents the highest impact issues for stakeholders.

- Availability and accuracy of spatial information related to rights and tenures needs to be a major focus for the data quality improvement process.

- Not every data quality issue identified in the Data Assessment Reports will actually impact the usability of the ILRR. Subsequent to the development of the ILRR Conceptual Data Requirements it was recognized that a number of the known issues represent data that will not be included in the ILRR.

- Not all data quality issues were identified in the Data Assessment Reports. During the consultation process stakeholders identified additional significant problems, most notably in the Protected Areas and Contaminated Sites data sets.

- Since the completion of the Data Assessment Reports, data cleanup work has been conducted in several areas, resulting in improvements to the data quality.

The following section provides a list of the five highest impact data quality issues with strategies for data cleanup and business process change. **Appendix A - ILRR Stakeholder Reports** provides data quality improvement strategies for all of the known issues grouped by the Interest Granting Agency. Detailed responses to the preliminary data quality assessment may be found in **Appendix G - Data Quality Impact Assessment Results**

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9.2 Data Quality Issues, Priorities, and Strategies for Improvement

The following table identifies the five know data quality issues that the CWG and NEWG ranked as having the greatest impact on their ability to trust and use the ILRR. It also includes additional information on:

- Current data cleanup efforts

- Strategies to guide future improvement work

- Recommendations for business process improvements to ensure that new information captured by the Interest Granting Agency is of a quality sufficient to support the business requirements of the ILRR

Rank	Averaged Impact Rating	Area	Issue	Strategies for Data Quality Improvement
1	2.55	Archaeology Sites	Inaccurate location and spatial representation of Archaeological sites.	***Archaeological sites are being converted to more accurate polygon representations*** Efforts are underway to convert archaeological site locations that have traditionally been modeled as points to polygon representations that will more accurately reflect the location and boundary of sites.
2	2.50	Parcel Fabric and Crown Tenure	Missing Spatial Data (outside lower mainland)	***ICF is expected to resolve these issues in time for implementation in the Northeast*** Based on information gathered during the workshops and in various agency interview sessions, the general consensus is that the ICF initiative is expected to complete their data gathering and clean up work in time to support the initial implementation of ILRR in the Northeast. Of greater long term concern is the fact that large portions of the private cadastre for the Lower Mainland will not be available to ILRR during full scale implementation until data sharing agreements are negotiated with some municipal governments (e.g. City of Vancouver, City of Richmond). Agencies such as the Land Titles Office have indicated that the presence of this private cadastre is essential to ILRR being able to access their registry data using a spatial query approach. Due to the fact that the participation of individual municipalities in the ICIS initiative is outside the control of the Surveyor General Branch, it is difficult to suggest meaningful data quality improvement strategies for this data area.

Rank	Averaged Impact Rating	Area	Issue	Strategies for Data Quality Improvement
3	2.39	Parcel Fabric and Crown Tenure	Missing Tenure Records (attribute)	***Missing tenure records and attributes must be researched and entered into Tantalis*** A number of records or attributes were not brought across during conversion to the Tantalis system. To close "gaps" in the ILRR database, these records must be researched and entered into the Tantalis database.
4	2.35	Parcel Fabric and Crown Tenure	Missing Private Parcels in IPF (Spatial only)	***ICF is expected to resolve these issues in time for implementation in the Northeast*** Based on information gathered during the workshops and in various agency interview sessions, the general consensus is that the ICF initiative is expected to complete their data gathering and clean up work in time to support the initial implementation of ILRR in the Northeast. Of greater long term concern is the fact that large portions of the private cadastre for the Lower Mainland will not be available to ILRR during full scale implementation until data sharing agreements are negotiated with some municipal governments (e.g. City of Vancouver, City of Richmond). Agencies such as the Land Titles Office have indicated that the presence of this private cadastre is essential to ILRR being able to access their registry data using a spatial query approach. Due to the fact that the participation of individual municipalities in the ICIS initiative is outside the control of the Surveyor General Branch, it is difficult to suggest meaningful data quality improvement strategies for this data area.
5	2.35	Parcel Fabric and Crown Tenure	Missing Crown Grant attributes and images	***Missing tenure records and attributes must be researched and entered into Tantalis*** A number of records or attributes were not brought across during conversion to the Tantalis system. To close "gaps" in the ILRR database, these records must be researched and entered into the Tantalis database.

9.3 ILRR Data Quality Assurance Process

While the primary responsibility for ensuring that the data contained in the ILRR is of acceptable quality lies with the originating Interest Granting Agency, stakeholders identified the following ILRR-specific data quality assurance requirements:

- ILRR must provide basic data validation at the point of input. **Section 5.4.2 – ILRR Validation** provides a description of the validation rules to be enforced by ILRR.

- ILRR contributors should be required to conduct period audits of the completeness of their data in ILRR. The purpose of this audit is to ensure that the information in ILRR is an accurate reflection of the information in the Interest Granting Agency's operational system. It may be possible and/or desirable to include this requirement in any enabling legislation related to the ILRR.

- ILRR users must be able to provide the appropriate data source agency with notification if the user suspects that there may be a data quality issue related to a specific record or group of records within ILRR. **Section 6.5.18 – Report Possible Data Quality Issue** provides a description of this functionality.

9.4 Next Steps

During the Systems Architecture stage of this phase of the ILRR Project additional work will be completed to provide a more detailed and accurate assessment of the extent of data quality issues and associated costs to resolve them.

Questionnaires have been distributed to a broad group of stakeholders to gather additional information. The questionnaires are focused on two specific stakeholder groups and seek to answer the following questions:

Stakeholder Group 1: Data Custodians

Data Custodians are individuals who are responsible for specific data sets and have detailed knowledge of their data and supporting systems. Data Custodians have been asked to respond to the following questions:

- What is the current state of the data with regard to quality and completeness?

- What work is in progress/being planned to improve data quality?

- How severe are the data quality issues? (Percentage of data affected/defective?)

Stakeholder Group 2: Data Consumers

Data Consumers are individuals who use information from the ILRR to support their interest granting and management business processes. They have detailed knowledge of their business process and an understanding of the impact of poor data quality. Data Consumers have been asked to respond to the following questions:

- What is the impact of poor data quality on their business process?

- For a known data issue, how often will ILRR queries will be impacted (All of them? How many per month?)

The project team will follow up with each respondent with a telephone (or in-person) interview to further investigate their particular data quality requirements.

The outcome of this process will be a greater understanding of the scope of the data quality issues and their specific impact on the ILRR implementation.

10. ILRR Business Transition Plan

10.1 ILRR Business Transition Plan Overview

This section of the report focuses on the transition plan for each of the ILRR agencies, and discusses the type of activities that must occur within each agency to adapt their organization to use ILRR.

The following documents were consulted for background information on business transition issues that may effect the implementation of ILRR:

- "Business Strategy and Transition Plan, Integrated Registry Project, Version 3 - Final"

The stakeholder agencies consulted during the Business Requirements phase vary greatly in terms of the degree of business transition required to support the ILRR. Some agencies will need to make relatively few or only minor changes, while other transitions will be very challenging and may have profound impacts on the stakeholder business units.

Based on the project team's *very preliminary* assessment of ILRR stakeholder agencies, this section of the document identifies the relative complexity of each agency's required transition to support ILRR as "low", "moderate" or "high". This *Transition Complexity* ranking is based on the following considerations:

- **Business Processes**
    - o Degree to which current business processes support ILRR requirements

- **Organization**
    - o Centralized vs. distributed offices and staff
    - o Capacity of staff to support anticipated ILRR transition activities

- **Technology Environment**
    - o Expected ability of existing or planned technical systems environment to support ILRR requirements

- **Data Quality**
    - o Number of, and priority of data quality issues

- **Legislation**
    - o Complexity of legislative changes required to support ILRR requirements

Agencies with a Transition Complexity of "high" should be the subject of a rigorous transition planning exercise to ensure that ILRR business transition occurs in a managed, predictable way. Agencies with less Transition Complexity may not require as rigorous an approach to successfully meet the requirements of ILRR. In all cases, however, the guiding principles outlined in this section of the document should form the basis for the planning and execution of business transition activities within each ILRR stakeholder agency.

10.2 ILRR Business Transition Plan Scope

The key components that should form the basis of a comprehensive business transition strategy are:

1. Implementation Management/Coordination

2. Business Process Re-engineering

3. Communication

4. Training

5. Documentation

Each of these components is described below.

10.2.1 Implementation Management/Coordination

This component ensures that comprehensive planning and guidance occurs early in the transition process to integrate the various business and technical issues. Each activity within the business transition requires coordination and monitoring to ensure it happens in the right sequence, at the right time and at the right level of detail.

This component also confirms the appropriate overall transition approach to best meet the agency's unique needs. Possible options here include the "big bang" approach, parallel implementations, or regional phase-ins of transition components.

Once a transition approach is decided upon, a comprehensive implementation strategy must of developed which outlines which activities need to be undertaken during implementation, the approximate schedule and any key milestones. This plan provides an overall approach to the transition and an overall resource plan. This strategy is critical to successful transition planning and should always be developed early in the process.

10.2.2 Business Process Re-engineering

Effective business process re-engineering requires that the agency is well understood from a number of perspectives. An organizational Readiness Assessment includes an assessment of the suitability of the agency's technology and resources to implement the transition, determining the areas of biggest impact to the agency, and gauging and creating plans to mediate anticipated internal and external resistance to change.

The business transition team must work closely with the business unit managers to determine what processes will be affected, how they will be affected, and what changes are necessary to ensure a smooth transition to fully support the requirements of ILRR.

After determining how agency business processes will be affected, the business transition team must then develop the best ways to modify and/or reorganize them so that support for ILRR can be achieved with minimal disruption to ongoing business operations and with minimal undesirable impact to organizational structure. Where new procedures must affect an agency's organizational structure, the transition team must work with business unit managers to realign the agency with the new processes, and redefine roles and responsibilities to suit the new processes.

10.2.3 Communication

A Communication Strategy and Plan is developed in conjunction with the business unit managers that includes:

- What needs to be communicated to whom, how, and when?

- The purpose of each communication (e.g. information, solicit feedback, encourage specific behaviour)

- Method(s) of communication (e.g. printed matter, face-to-face communications, project Web site/ electronic bulletin board)

- Overall responsibility for executing elements of the plan

10.2.4 Training

Training needs analysis is conducted to investigate who needs to learn the new processes and/or system interfaces, what they need to learn based on their position, what their current computer skills are, and how they will interact with or support ILRR. This process helps define how much and what kind of training is required, and establishes a training curriculum based on performance needs.

Once the training requirements are well understood, a training strategy is developed to support agency transition to ILRR. The strategy outlines who needs to be trained and when, the recommended training approaches for each user group and the method and resources required to develop and maintain ongoing training.

Training materials are then developed in collaboration with business unit experts. These materials may include:

- Redesigned Business Process Handbooks

- System User Guides

- Online Help or Process Guides for Staff

One of the most cost effective ways to deliver business user training to an agency is to develop training material that can be used by an existing business "training lead". This approach is often referred to as "Train the Trainer" and, once the business Trainer has been mentored and provided with appropriate training material, it allows agencies to reduce their dependence on external support for ongoing user support or new training requirements due to organizational changes.

10.2.5 Documentation

Documentation will be critical to ILRR stakeholder agencies because it will provide an accurate record of the "to be" process and system environments with the vital information needed to keep them running properly.

Creation of documentation should be closely tied to the overall transition strategy and timetable, so that both the system functionality and new business processes are adequately documented prior to ILRR implementation.

10.3 ILRR Business Transition Plan Deliverables

The deliverables from the Business Transition process will vary by agency, but generally should include the following:

Business Transition Strategy Component	Deliverables
Implementation Management/ Coordination	• Transition Plan • Status Reports
Business Process Re-engineering	• Revised application submission standards • Revised process and related standards for processing of requests • Revised process and related standards for granting rights
Communication	• Internal Communication Plan • External Communication Plan
Training	• Re-engineered business process training for staff • ILRR user training for staff and clients
Documentation	• Revised business processes • System interfaces

10.4 ILRR Business Transition Plan Preliminary Timelines

The following Gantt chart shows the general expected sequence of the tasks contained within the components of a typical Business Transition Plan for ILRR stakeholder agencies. The legislative processes and data quality processes have been included to represent the business transition activities in the context of these other necessary processes.

ID	ⓘ	Task Name
1		**ILRR Stakeholder Agency Business Transition**
2	▦	**Start of Transition to ILRR**
3		**Implementation Management / Coordination**
4		Appoint ILRR Transition Manager
5		Establish ILRR Transition Committee
6		Develop detailed transition plan
7		Consult/review with SRM
8		Approve transition plan
9		Status meetings / internal communication
10		Implementation management / coordination complete
11		**Communication**
12		Develop communication plans
13		Implement communication plan
14		Communication complete
15		**Business Process Re-engineering**
16		Conduct readiness assessment
17		Define new processes
18		Implement new processes
19		Business Process re-engineering complete
20		**Communication**
21		Develop communication plans
22		Implement communication plan
23		Communication complete
24		**Documentation**
25		Document re-engineered business processes
26		Develop user guides / on line help support tools
27		**Training**
28		Conduct training needs analysis
29		Develop training strategy
30		Develop training materials
31		Conduct training
32		Training Complete
33		**Legislation (may be managed centrally by SRM)**
34		Define legal status of ILRR
35		Prepare legislative changes/additions, etc.
36		Due process
37		Legislation enacted
38		**Historical Data Conversion / QA**
39		Map data to ILRR
40		Develop detailed data quality strategy
41		Clean/convert/QA data
42		Load data into ILRR
43		Test
44		Accept
45	▦	**ILRR Transition Complete**

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10.5 Resource Requirements

The following resource requirements are anticipated to support the successful business transition of an ILRR stakeholder agency. Participants are identified, along with their expected role or function within a success business transition.

Resource	Role/Function
ILRR Business Transition Lead	• Oversee and coordinate agency business transition activities • Create and maintain the ILRR Business Transition Plan on behalf of the agency
ILRR Transition Committee	• Ensure that the broad interests and requirements of the entire agency are supported by the business transition plan • Assist the ILRR Business Transition Lead in achieving successful business transition within individual agency business units
Agency Business Unit Staff	• Participate in business process re-engineering sessions • Participate in training sessions for revised business processes • Support the internal and external communications plans • Support consultants in developing / confirming detailed business requirements
Agency Technical Staff	• Support consultants in developing detailed data quality / conversion strategy • Support consultants in developing technical specifications for ILRR system interfaces with operational agency systems

10.6 Summary of Transition Complexity Assessment for ILRR Stakeholder Agencies

This section of the report provides a summary of a *very preliminary* assessment of the anticipated complexity of business transition for ILRR stakeholder agencies. Analysis details are contained within **Appendix A**. The analysis in this section is based on information gathered during the Core Working Group sessions, the Northeast Working Group session and the high-level business process mapping interviews that were conducted with individual agencies.

Additional analysis is required to further describe the "as is" scenario for each agency from an organizational, data and technological perspective before a valid business transition approach can be developed for ILRR. In particular, the complexity of legislation issues and any legislative transition required to support ILRR requirements within agencies cannot be meaningfully addressed until the legal status and implications of ILRR implementation are more fully defined.

Agency Name	Transition Complexity
Land and Water British Columbia Inc.	High
Ministry of Attorney General and Minister Responsible for Treaty Negotiations, Treaty Negotiations Office	Moderate
Ministry of Energy and Mines, Titles Division, Mineral Titles	Low
Ministry of Energy and Mines, Titles Division, Oil and Gas Titles	Low
Ministry of Forests	High
Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department, Archaeology and Registry Services Branch	Low
Ministry of Sustainable Resource Management, Land Information Services Division, Registries and Titles Department, Surveyor General Branch	High
Ministry of Sustainable Resource Management, Land Information Services Division, Registry and Titles Department, Registry Services Section	Low
Ministry of Transportation	High
Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Fish and Wildlife Recreation and Allocation Branch	High
Ministry of Water, Land and Air Protection, Environmental Stewardship Division, Parks and Protected Areas Branch	Low
Oil and Gas Commission	Moderate
Crown Contaminated Sites Program	High
Ministry of Sustainable Resource Management, Resource Management Division	Moderate

11. Miscellaneous

11.1 Audit Checks

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

11.2 Archive/Purge Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

11.3 Warehousing Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

11.4 Technical Environment Overview

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

11.5 Performance Requirements

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

12. NEXT PHASE

12.1 Detailed Workplan

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

12.2 Resourcing

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

12.3 Time Scale

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

12.4 Costs

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

13. Sign-Off

The following signatures represent understanding of the materials contained in the Business Requirements deliverable for the Integrated Land and Resource Registry Project, and agreement to the scope and responsibilities described therein.

The sign-off will establish the first version (1.0) of this document. Subsequent elaboration of the Business Requirements will be managed through document version.

_____   Date _____

Dave Chater (MSRM Project Director)

_____   Date _____

Rosa Munzer (MSRM Senior Project Manager)

_____   Date _____

Simon Lanoix (Sierra Systems ILRR Project Manager)

Appendix A   ILRR Interest Granting Agency Reports

See file: ILRR_BusinessRequirements_AppendixA_V1-0.doc

Appendix B   ILRR Working Group Terms of Reference

See file: ILRR_BusinessRequirements_AppendixB_V1-0.doc

Appendix C   ILRR Business Requirements Consultation Process and Working Group Workshop Minutes

See file: ILRR_BusinessRequirements_AppendixC_V1-0.doc

Appendix D　ILRR Glossary

See file: ILRR_BusinessRequirements_AppendixD_V1-0.doc

Appendix E: Land and Resource Interests and Legislation

See file: ILRR_BusinessRequirements_AppendixE_V1-0.doc

Appendix F: ILRR Business Decisions Required

1. **Fee Calculations**. The ILRR Business Requirements specifies that ILRR must be able to support the calculation and collection of fees. Despite both the Core Working Group and Executive Steering Committee recommendation that the ILRR should support this functionality no consensus on a fee model has been reached.

   Possible fee models include:

   a. **Transaction Fee**. Users would be charged a fee based on the type and volume of information provided

   b. **Subscription Fee**. Users would pay a subscription fee, which could be hourly, monthly or annually-based.

   c. **Interest Registration Fee**: Interest Granting Agencies (or their clients) would pay a fee for each interest that is registered in ILRR.

   It should be noted that at the Northeast Working Group and Client User Group workshops there was strong consensus that ILRR should not charge user fees, as this might be a barrier to access, and prevent industry and other users from utilizing ILRR in support of development activities.

   In order to develop more comprehensive business and functional specifications a fee model for ILRR must be agreed upon. Possible input to the development of the fee model include:

   - **Similar project/products** - There are other projects underway at MSRM and within Government that are currently reviewing fee models. These models should be studied and possibly adopted if appropriate.

   - **ASD analysis** – over the next few months the project team will be studying the feasibility of implementing an ASD model for ILRR. The decisions made regarding ASD will impact the ILRR fee model.

2. **Data Access Principles.** The Core Working Group has identified a need to limit access to specific types of interest information as they main include sensitive information. However, there is no consensus on who should be able to view sensitive information or how this access should be controlled.

   Section 7 provides details of proposed data access principles that have been referred to the ILRR Steering Committee for guidance.

Appendix G: Data Quality Impact Assessment

See file: ILRR_BusinessRequirements_AppendixG_V1-0.doc

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Additional Appendices

Appendix H: Logical Entity Relationship Diagram (ERD)

Not part of this phase. Will be delivered as part of the Technical Architecture phase.

Appendix I: Entities and their Descriptions

Not part of this phase. Will be delivered as part of the Technical Architecture phase.

AppendixJ: Attributes and their Descriptions

Not part of this phase. Will be delivered as part of the Technical Architecture phase.

Appendix K: Context Diagram

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

Appendix L: Business Function Model

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

Appendix M: Function Hierarchy Diagram

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture

Appendix N: Process Model Diagram

Not part of this phase. Will be delivered as part of the Technical Architecture phase.

Appendix O: Detailed Work Plan (MS – Project)

Not within the scope of the ILRR Project, Phase I – Business Requirements and System Architecture.