Ministry of Sustainable Resource Management

Integrated Land and Resource Registry Project

Phase 2 Project Statement
(May 10th, 2004 to March 31, 2005)

Version 1.0 July 1, 2004

Sierra
New thinking.

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TABLE OF CONTENTS

1. INTRODUCTION

1.1. Background

The Ministry of Sustainable Resource Management is currently engaged with the
Integrated Land and Resource Registry, a project to implement a spatially enabled
register of all legal interests on Crown and Private land. This project called ILRR will
assist government agencies and industry to quickly and accurately selecting areas of
operational interest, and to processing requests for land and resource rights and interests.

In preparation for ILRR development and implementation, the Ministry has conducted in
2002 a Business Strategy study. The results of the study - the Business Strategy and
Transition Plan - recommends implementing the ILRR in geographic increments,
beginning with the Northeast part of the Province to capitalize on oil and gas exploration
and revenue streams. Other activities that are currently underway in preparation for ILRR
implementation are data cleanup and data integration assessments.

Phase 1 of the ILRR technical solution portion of the project delivered two important
documents in order to set a solid foundation to construct and deploy this business
solution. Using an iterative consultative approach with land planners and potential users
of the ILRR business solution - Core Working Group (CWG), Northeast Working Group
(NEWG), Client User Group (CUG) and a Technical Working Group (TWG) - the
Business Requirements and the Systems Architecture documents were delivered in
February and May 2004 (respectively). The following figure outlines the approach
followed in Phase 1:
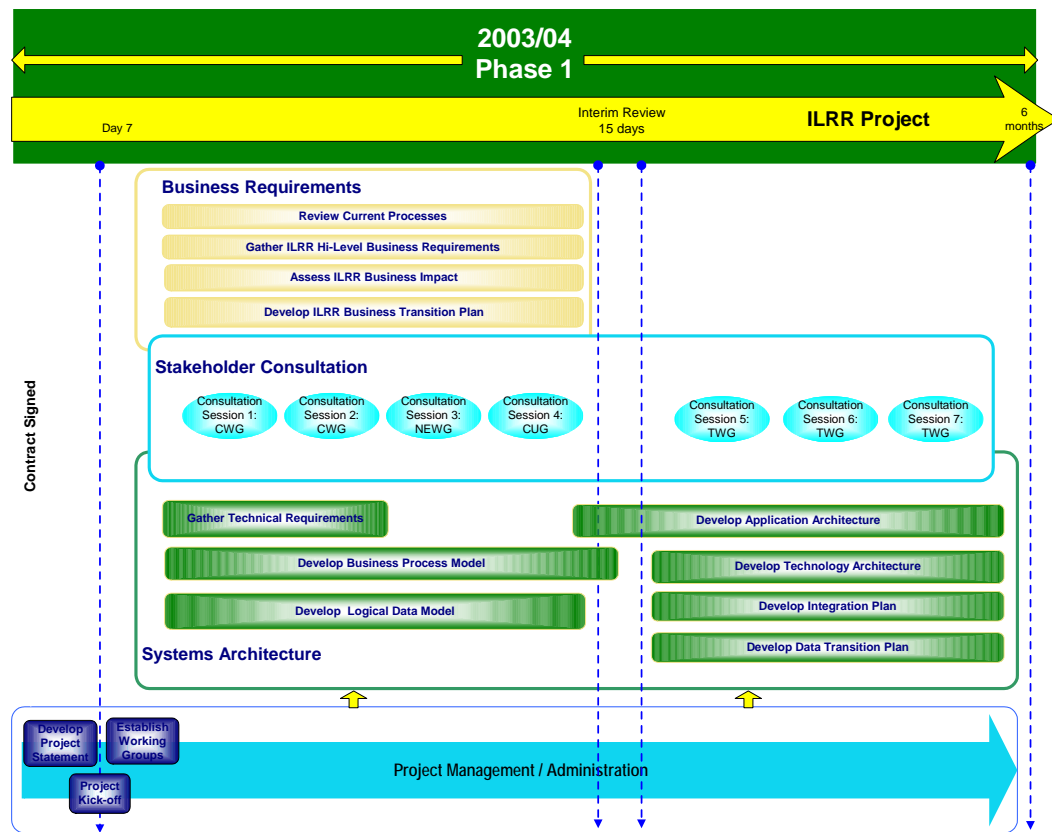
The two deliverables of Phase 1 consisted of the following:

- **Business Requirements –** a statement of high level business requirements, a statement of systems goals, objectives and principles, and a business process description that document current rights registration processes and how to best connect them to an Integrated Land and Resources Register.

- **Systems Architecture –** a business process model, logical data model and the application architecture and technical architecture that document the information technology requirements of the Integrated Land and Resources Register itself, and provide the initial blueprints for deployment. The systems architecture aligns with the ministry's architecture and proposes to re-use standard components/applications where cost beneficial to the ministry. As the systems architecture was developed, Sierra Systems and IMB worked closely together to identify candidate standards and/or reusable components that could be incorporated as standards into the ministry's architecture.

The Ministry, through the ILRR Executive Steering Committee has approved the Phase 1 deliverables and given the authorization to proceed with Phase 2.

1.2. ILRR Phase 2 Project Approach

The Ministry of Sustainable Resource Management is moving to consolidate land and resource rights registration into a single Integrated Land and Resources Register (ILRR). The ILRR will become the authoritative reference for land and resource rights, interests and designations information throughout the Province, eliminating duplication in business processes, and speeding up the tenure administration process across all areas of government.

The **Phase 2** ILRR Project Statement of Work proposes a five streamed approach in order to successfully implement the business solution in the Northeast quadrant of the province of British Columbia in April 2005.
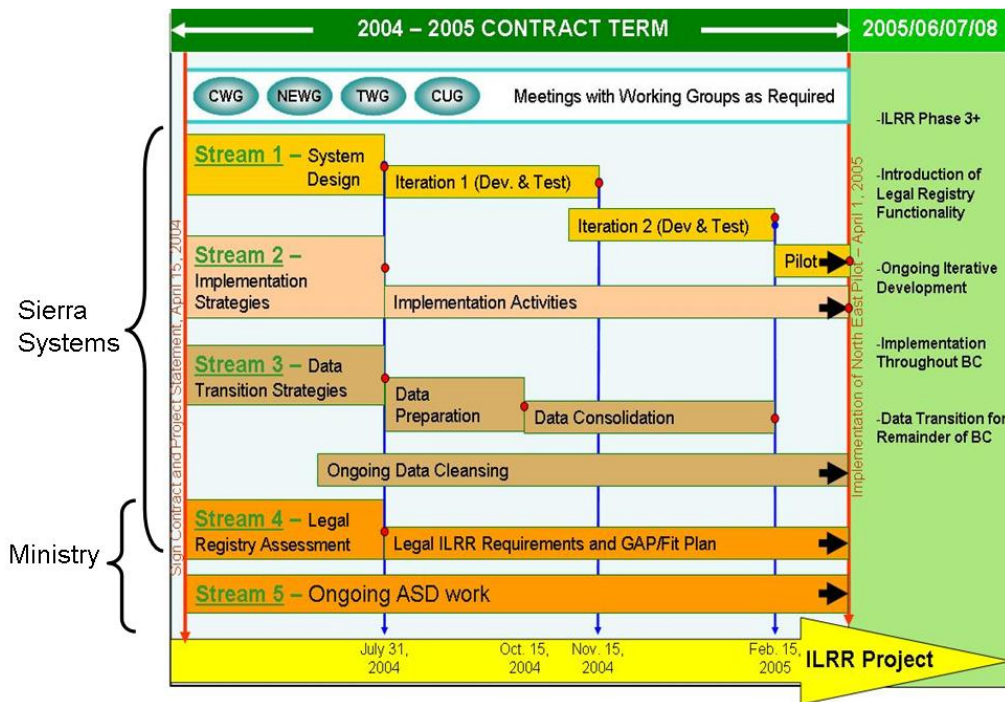
Stream 1 – ILRR Systems Design

How will the application be built and what will the ILRR application look like? The detailed design specification stream will include the following artifacts;

a) Use Case realizations and storyboards (screen mockups). These documents provide a detailed description of how the ILRR screens will operate and what they will look like,

b) Unified Modeling Language (UML) class (static) models and UML interaction (dynamic) models. These are detailed design specifications for the development language (J2EE) system components,

c) Physical Data Model, evolved from the logical data model delivered as part of Phase 1, and d) Updated Interface Control Documents (ICDs). Required for each external interface and which represents a contract for building both sides of the particular interface.

A first version of these ICDs will be delivered as part of the current contract.

This Stream will produce iterative prototypes (mock-ups), proof of concepts and various deliverables that will be presented to the working groups throughout Phase 2.

Stream 2 – ILRR Implementation Strategies

When the ILRR application is ready will the business be ready? The proposed implementation strategies will be tackled in three important stages during the fiscal 2004/5. This stream will evaluate the readiness of all business areas impacted by ILRR, then build strategies for each business operations in order to plan their business and technical transition. The third stage will be the building and 'actioning' a detailed implementation work plan(s) for each affected business operation.

This Stream will also be presenting a variety of workshops and one on one interviews to gain knowledge and understanding of the current state of the business and technical readiness as well as deliverables such as the implementation strategies (i.e. communications, support, testing, etc.) to the working groups in order to gain their support and understanding of their involvement throughout the preparation and deployment stage.

Stream 3 – Data Management, Support and Consolidation

Will the Data be ready and available for the North East? The ILRR Project Team will work to support the ministry on the transition of data required by the ILRR Project. The planning of this Stream is being coordinated and work plans will be incorporated in the technical work plan (design and build work plan). This stream will require several milestones during the data transition process. Early on in the process, the ILRR Project will need to consolidate small data sets to provide a proof of concept with the Systems Design storyboards (screen mockups). Later in the fall more data will be required to assist unit and integrated testing for the developers. Before January 31, 2005 the project team will need to have a complete set of data to perform user acceptance testing on the entire ILRR application during the months of February and March 2005. Finally, in late March 2005, a production ready data set will be transitioned and ready for the ILRR 'go-live' deployment to the North East.

In addition to the data preparation, this Stream will provide ongoing support to the Data Quality Manager at the ministry. This support will focus on the ongoing data conversion for the deployment of the Northeast by March 2005 as well as the deployment of the data sets for the Province in subsequent fiscal years.

Stream 4 – Legal Registry Assessment

What are the requirements of a Legal Register? This stream of the ILRR Phase 2 project will define the requirements for building and supporting a 'legal registry'. The initial stages of this Stream will be handled by the ministry's legal council. A framework for new legislation(s) will be drafted and provided to the project team for further analysis. Once the legislation is drafted, a series of consultations (existing working groups and individual interviews) activities in this stream will confirm and challenge both business and technical assumptions made in Phase 1 of the ILRR Project. This deliverable will be an addendum to the Phase 1 Business Requirements document.

Stream 5 – Business Model Compilation

What are the Business Operational Models. The project team will work closely with the ministry to identify a complex rules based model in order to provide the information and identification of the relevant information necessary for Ministry's future financial and organizational planning needs. This stream will also contribute to the Ministry's analysis of the potential ASD options for ILRR.

1.3. Assumptions

The estimated effort provided within this document is based on the following assumptions:

- All deliverables will be reviewed within 5 working days (unless otherwise stated) at which point they will be assumed correct. Any changes received after that point will me managed within a Change Request procedure and may cause delays and/or increase in costs.

- All tasks and activities assigned to Ministry of Sustainable Resource Management resources will be completed in a satisfactory and timely manner according to agreed timelines, so as to not adversely impact the project plan and schedule.

- A change control process established during project initiation will manage additions or changes to the project scope.

- MSRM will permit Sierra Systems access to all project-related documentation and information.

- MSRM will either schedule or help with the scheduling of workshops and provide facilities and equipment (if) necessary to run these workshops. Ministry project representatives will be available at the workshops to show support of the change management initiative.

- Ministry of Sustainable Resource Management resources will be available to provide review, feedback, direction and advice to the ILRR Project.

- Ministry of Sustainable Resource Management staff will provide the knowledge and assistance for reviewing and approving technical, business, and organizational requirements for the new system.

1.4. Standards

The ILRR Project will, at a minimum, follow the guidelines as outlined in the following standards as published by the Ministry of Sustainable Resource Management:

Area	Document	Version
Quality Assurance	SDLC STANDARDS	Version 1.0
	Quality Assurance Guidelines as described in Section 2.11 of this document.	April 22, 2002
Project Statement	SDLC STANDARDS	Version 1.1
	Project Statement Standard – this document	May 10, 2000
System Analysis	SDLC STANDARDS	Version 1.1
	Content outlined in Section 2.8	June 7, 2000
System Design	SDLC STANDARDS	Version 1.0
	Content outlined in Section 2.8	June 7, 2000
Risk Management	SDLC STANDARDS	Version 1.1
	Risk Management Standards – outlined in Appendix C.	February 12, 2002
Project Status Reporting	SDLC STANDARDS	Version 1.1
	Project Status Report – outlined in Appendix D.	September 20, 2000
Project Minutes	SIERRA STANDARDS	New
	Outlined in Appendix D.	

Stakeholder Consultation Process

The ILRR Project will continue to provide an iterative consultation approach. Working with the following working groups:

- The Core Working Group (CWG),

- The Northeast Working Group (NEWG),

- The Client Working Group (CWG), and

- The Technical Working Groups.

and reporting to the two main executive groups:

- The Project Advisory Committee, and

- The Executive Steering Committee.

The project team will continue building the awareness and relationships necessary to gain support for the ILRR. As the project team continues working with these working groups,

all stakeholder and user groups will have had an opportunity to provide input to the final system design and functionality.

The iterative approach will allow us to conduct comprehensive consultation with the full range of stakeholders within the short timelines set out by the Ministry.

Rational Unified Process (RUP) Based Methodology

As with the definition of the ILRR Business Requirements and Systems Architecture, the overall methodology will be based on the Rational Unified Process® (RUP®). RUP is widely regarded as one of the industry-leading standardized frameworks for systems delivery, and while this phase of the ILRR project is not a systems development project, there are RUP best practices that are relevant:

- **Use an Iterative Approach -** An iterative approach is generally superior to a linear or waterfall approach for many different reasons.

  - Risks are mitigated earlier, because elements are integrated progressively.

  - Changing requirements and tactics are accommodated.

  - Improving and refining the product is facilitated, resulting in a more robust product.

  - Organizations can learn from this approach and improve their process.

  - Reusability is increased.

- **Manage Requirements –** The requirements management is a systematic approach to finding, documenting, organizing, and tracking a system's changing requirements. We formally define requirements management as a systematic approach to both:

  - eliciting, organizing, and documenting the requirements of the system; and

  - establishing and maintaining agreement between the customer and the project team on the system's changing requirements.

- **Use Component Architectures -** Components are cohesive groups of code, in source or executable form, with well-defined interfaces and behaviours that provide strong encapsulation of their contents, and are, therefore, replaceable. Architectures based around components tend to reduce the effective size and complexity of the solution, and so are more robust and resilient.

- **Model Visually (UML) -** Visual modeling is the use of semantically rich, graphical and textual design notations to capture software designs. A notation, such as UML, allows the level of abstraction to be raised, while maintaining rigorous syntax and semantics. In this way, it improves communication in the design team, as the design is formed and reviewed, allowing the reader to reason about the design, and it provides an unambiguous basis for implementation.

- **Continuously Verify Quality -** Software problems are 100 to 1000 times more costly to find and repair after deployment. Verifying and managing quality

throughout the project's lifecycle is essential to achieving the right objectives at the right time.

- **Manage Change -** Managing change is more than just checking-in and checking-out files. It includes a disciplined approach to managing iterations and releases of software. It also means strictly controlling changes to the software.

Please refer to section 3.2 and 3.3 of the original ILRR Proposal for details of how RUP best practices will be applied to each stream.

1.5. Project Communications

It is important to us that our clients understand the status of their project. To ensure that all project members, ministry users and stakeholders understand the status of the project, the ILRR Project Team will continue with formal communication and progress reporting structure, including ongoing informal meetings with appropriate Ministry staff throughout the duration of the project.

The Implementation Stream will use a structured approach for this project. The following table identifies the communication mechanism and the intended audience appropriate for the level on information. The Communication Strategy will add/change this approach.

The two main areas of communication will continue as in the first Phase of the project:

- Communication within the project team including Ministry staff will continue to meet weekly to discuss all aspects of the project. This is particularly important given the short timeframe for the project. We propose meeting weekly with the Ministry Project Manager at which time we will present the bi-weekly status report and have a Q&A session.

- Communication with the stakeholder community. This includes anyone directly or indirectly involved or interested in the project. The style and method used here will be determined in the Consultation and Communication framework created as a part of the Implementation Strategies Stream.

Until the communication strategy is completed, the communication mechanism will continue with the following structure:

Communication Mechanism	Content	Target Audience	Frequency
Project Team Meeting	Detailed work plan level project status – review of activities, schedules, issues.	Project Team	Weekly
Project Managers Meeting	Detailed work plan level project status – review of activities, schedules, issues, and other PM topics.	Project Managers	Weekly
Steering Committee Meeting	High level information sessions to provide ILRR project update	Minimum of 3 meetings or as	After deliverables

Communication Mechanism	Content	Target Audience	Frequency
	and resolve any outstanding issues	required by risk / issue escalation	and as required
Status Reports (promote to Web)	Management level information about ongoing ILRR project progress.	Project Team, Ministry Users, Stakeholders, Public	Twice Monthly (1st and 15th of each month)
FAQs (promote to Web)	Bulletins and general information gathered during the project and promoted to the Web as often as possible.	Project Team, Ministry Users, Stakeholders, Public	Ongoing
Deliverables (promote to Web)	Deliverables of the project including; Project Statement and Stage work plans	Project Team, Ministry Users, Stakeholders, Public	As scheduled

1.6. Quality Assurance

Quality assurance is one of the key processes to meet Ministry standards as well as to ensure complete and accurate compilation of information to create a solid foundation for the next phase of the ILRR Project. For the ILRR project, time is of the essence, the quality assurance process will also help maintain focus on scope and schedule.

Each Stream of Phase 2 has its own quality assurance process. The process varies significantly for each stream. The project team is committed to providing ongoing reviews and checks within and at each milestone of the project.

1.7. Risk and Constraints

Risk management is a key element in project success. The ILRR Project Team will use a formal risk identification and management process as an integral part of the project management methodology. The proposed processes are consistent with the Ministry's standards.

The risk management plan will be maintained throughout the project and reviewed weekly with the Ministry Project Manager as part of the weekly status meeting. The risk management approach includes identifying risk areas of the project and establishing both preventative and contingency actions throughout the life of the project. These contingency actions are continually addresses and documented, making risk management a daily activity.

1.8. Project Management Processes

The project approach is supported by a well-defined set of project management activities, which include the following:

- **Project / Stage Work Plans**. The stage work plan(s) outlines the activities required for each resource to produce the project and stage deliverables. These activities will be clearly defined, accurately estimated, and managed at an appropriate level of detail. The stage plans will be reviewed regularly and updated throughout the project life cycle, as new information becomes known. The ILRR (Sierra) Project Manager will be responsible for ensuring all parties, have a complete and up-to-date understanding of the status of the project.

- **Work Packages**. Each activity is assigned to a person responsible in the form of a Work Package to ensure it is completed successfully. Work packages are part of the weekly reporting mechanism within the project team and contain items such as estimates, work to date and forecast. Other information such as work comments, issues and/or concerns are also identified in the work packages. Any issue or concern by members of the team is escalated to the Project Managers and make there way into the risk management process.

- **Risk Management**. The risk analysis and risk management plan will be regularly assessed and updated as the project progresses. The risk management approach includes identifying risk areas of the project and establishing both preventative and contingency actions. These actions are continually built back into the project plan, making risk management a daily activity.

- **Status Reporting**. To ensure consistent understanding of the status of the project, semi-monthly status reports will be prepared and summarized for the ILRR (ministry) Project Manager and Executives. The status reports will include descriptions of activities completed during the previous period, activities anticipated for the following period, and issues and problems requiring resolution.

- **Status Monitoring**. In addition to status reporting, meetings will be conducted with the Project Team and Project Managers on a regular basis. During these meetings, team members will provide an update of progress made as well as the estimated completion dates. Any issues and concerns identified during these meetings will be documented in the status reports.

- **Project Change Control**. To ensure timely and effective delivery of the project, scope will be tightly managed. Project change control procedures will be reviewed with the team at the beginning of the project, to ensure they are clearly understood. This review will help establish a common understanding of the need for project change control and the mechanism for implementing a change to the scope of the project, should that be required.

- **Project Audit**. As part of the quality assurance process, a formal project audit will be scheduled. The purpose of the audit is to ensure the project is on-track and within

budget, that project management practices are being implemented effectively, and that expected deliverables are being completed within the timeframe identified.

Change Control

A change refers to any modification and/or new development deviating from the latest approved project requirements and work plan(s). Change control refers to a series of procedures and development standards by which all development and modifications to production systems are measured and approved. All potential changes are compared against the latest approved project work plans in terms of functionality, schedule, cost, upgrade capability, maintainability, and resources. ILRR Project Managers will raise change requests based on input from team members.

- Category actions will be taken as follows:
    - Approved changes will be assigned to the appropriate project resource for further action; a change control log will be maintained throughout the project,
    - Rejected change requests will be placed on closed status in the change control log, along with an explanation for the rejection,

Scope Management

A change request can also be initiated whenever there is a need to change the scope of the project, as defined in the project charter. Scope change is acceptable, provided that:

- The need for the change is critical,
- The Project Managers agree that the new requirement or change is needed,
- The impact of the change has been analyzed and understood, and
- The resulting changes of the project (cost, timing, quality of deliverables, and human resources) are approved and properly implemented and reflected in the stage work plans.

Scope Management will be reviewed weekly by the Project Managers.

2. ILRR PHASE 2 – APPROACH

The ILRR Phase 2 approach will cover each stream of work independently of each other. The activities are both outlined in the independent stream section as well as in a 'Workplan' section were all activities are consolidated into one workplan.
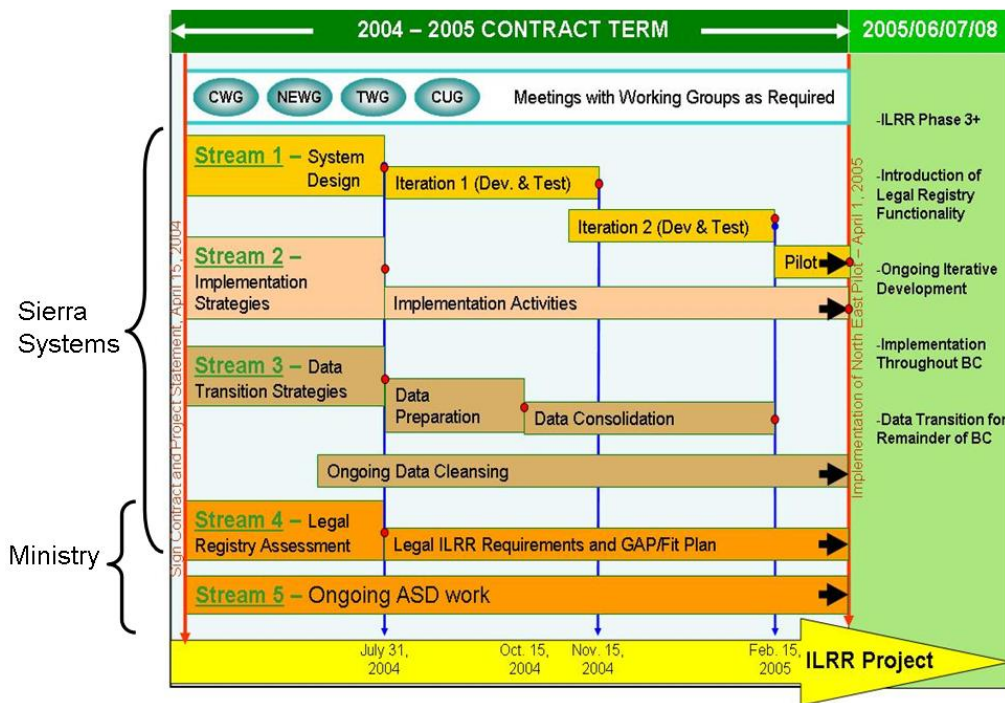
2.1. Activity Overview

A five stream approach will be carried out for this Phase of the ILRR Project:

Stream 1, ILRR Systems Design

Stream 2, ILRR Implementation Strategies

Stream 3, Data Management Support and Consolidation

Stream 4, Legal Registry Assessment

Stream 5, Operational Compilation Model

ILRR Systems Design and Build
The systems designs stream will produce iterative prototypes (mock-ups), proof of

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

concepts and various deliverables that will be presented to the working groups throughout the contract.

The detailed design specifications stream will include the following artefacts:

- Use Case realizations and storyboards (screen mockups). These documents provide a detailed description of how the ILRR screens will operate and what they will look like.

- UML class (static) models and UML interaction (dynamic) models. These are detailed design specifications for the J2EE system components.

- Physical Data Model, evolved from the logical data model delivered as part of Phase 1.

- Updated Interface Control Documents (ICDs).   Required for each external interface and which represents a contract for building both sides of the particular interface. A first version of these ICDs will be delivered as part of the current contract.

- Systems design and staging on Contractor's site.

ILRR Implementation Strategies

The ILRR implementation strategies stream will include the following activities to ensure the business areas will be ready for ILRR implementation:

- Evaluation of the readiness of all business areas impacted by ILRR.

- Build and deliver strategies for each business operations in order to plan their business and technical transition.

- Build and 'action' a detailed implementation work plan(s) for each affected business operation.

- Deliver a variety of workshops to gain knowledge and understanding of the current state of the business and technical readiness as well as deliverables such as the implementation strategies (i.e. communications, support, testing, etc.) to the working groups in order to gain their support and understanding of their involvement throughout the preparation and deployment stage.

Data Management, Support and Consolidation

The data management, support and consolidation steam will support the Ministry on the transition of data required by the ILRR system to ensure the data is ready and available for the Northeast implementation.

- Develop data management, support and consolidation work plans that will be incorporated in the technical work plan (design and build work plan).

- Early on in the process the ILRR Project will need to consolidate small data sets to provide a proof of concept with the Systems Design storyboards (screen mock-ups). In the Fall more data will be required to assist unit and integrated testing for the developers.

- Before January 31, 2005, the project team will need to have a complete set of data to perform user acceptance testing on the entire ILRR application during the months of February and March 2005. Finally, in late March 2005, a production ready data set will be transitioned and ready for the ILRR 'go-live' deployment to the North East.

- Provide ongoing support to the Data Quality Manager at the ministry. This support will focus on the ongoing data conversion for the deployment of the Northeast by March 2005 as well as the deployment of the data sets for the Province.

Legal Registry Assessment

The legal registry requirements stream will define the requirements for building and supporting a 'legal registry'.

- The initial stages of this Stream will be handled by the ministry's legal council. A framework for new legislation(s) will be drafted and provided to the project team for further analysis.

- Once the legislation is drafted, The Contractor shall deliver a series of consultation (existing working groups and individual interviews) activities in this stream to confirm and challenge both business and technical assumptions made in Phase 1 of the ILRR Project.

Operating Model Compilation

The operating model compilation stream will result in the development of operating models for the ILRR:

- The Contractor will work closely with the Ministry to develop a complex rules based model for the future operation of the ILRR and identify the relevant information for the Ministry's future fiscal and organizational planning needs.

- The Ministry will use the model to review options for the future operation and fiscal needs of the system ranging from Ministry operated to alternative service delivery options or combination of thereof.

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Management
Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2. Detailed Project Approach

This section includes a detailed ILRR Project Approach. Effort and cost for all activities until August 2004 are outlined in further sections (pricing and project plans).

Both in both of the Development and Implementation streams, the ILRR project will ensure close working relationship with the Land and Resource Data Warehouse (LRDW) through regularly scheduled information sessions and individual interviews. The synergy will be continuously reviewed for both Business and Technical overlaps in order to reduce duplication of effort.

2.2.1. ILRR Systems Design and Build

The ILRR System Design and Build stream will be carried out in 5 parts. The following tables outline the major tasks to be performed in each phase. This approach assumes that all of the functionality defined in the ILRR Business Requirements will be included in this delivery (tbc).

2.2.1.1. Part 1 – Application Design

An iterative process involving workgroup(s).

Task	Description
Storyboards	Screen mockups.
Elaborated Use Cases	The use cases included in the ILRR Business Requirements and ILRR System Architecture deliverables will be elaborated to include the following additional details: • Additional process steps, preconditions and post-conditions. • Exception handling. • System generated responses and messages. These use cases will be in support of the storyboards.
Review	A series of 3 or 4 (?) formal reviews.

2.2.1.2. Part 2 – Technical Design

The Technical Design phase follows the application design phase. The technical design document will be made up of uml models, component descriptions and interface control documents. These artefacts will be evolved from the ILRR System Architecture documents.

Task	Description
Technical design	A detailed technical design will be developed for each of the system's components defined in the ILRR System's Architecture document.
Quality Assurance	An internal quality assurance will be conducted to ensure completeness of design and adherence to standards.

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

Task	Description
Review	A review of the technical design will be conducted with Ministry representatives again to ensure completeness and standards adherence.

2.2.1.3. Part 3 – Prototypes

In parallel with the technical design phase, a series of 2 or 3 early prototypes will be developed. The purpose of these prototypes is to confirm requirements, confirm technology and for feasibility testing. The following components (as defined in the ILRR System's Architecture) are candidates for the prototypes:

- Registration pipeline.

- Query Execute with Legal Description

- Access Control

The value of this early prototype is that any unknowns or risks are discovered and mitigated early on in the project.

It is the intent that these prototypes will not be 'throw away' and will evolve into application components.

Task	Description
Setup Development Environment	Setup development environment. Sierra already has a MRSM standard environment however it will need to be extended to support the ILRR application development project.
Planning	This planning activity will be conducted in order to formalize the purpose and scope of the prototype.
Development	Develop working prototypes.
Review	A QA activity will be conducted to ensure adherence to standards and general quality. As necessary, the prototypes will then be demonstrated to the client; feedback will be solicited and then incorporated into the application design.

2.2.1.4. Part 4 – Development

The development phase will be organized into a number of parallel activities based on the application package structure outlined in the ILRR System Architecture. All development will be in accordance with the MSRM standards and conducted within the Sierra Victoria Development Centre.

Task	Description
Application Development	
Code Review	Before delivery, an internal audit will be conducted for each application package.

Ministry of Sustainable Resource
Management
Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.1.5. Part 5 – Testing

Testing is covered in the Implementation Stream. It is outlined here to demonstrate the overlap and integration of all streams into one overall approach. The Leads of each Stream will be working in concert through the development and deployment during Phase 2 of the ILRR Project (and indeed through the life of the entire project).

Task	Description
Unit Testing	Based on the requirements document (use cases) a series of component-specific unit tests will be developed and executed. Testing results will be logged and made available. This testing will be conducted in the development environment. This testing will depend on suitable test data being available (from the Data Management Stream).
Integration Testing	Once unit testing has been completed, a set of full integration tests will be conducted. These tests will also be based on the functional requirements. The integration testing will be conducted in a dedicated testing environment. Again it is assumed that a test environment including suitable test data will be made available. Sierra will provide assistance with the first development to the test application migration. It is assumed that subsequent migrations will be the Ministry's responsibility.
User Acceptance Testing	Sierra will provide one-time application training in preparation for the User Acceptance Testing. Sierra will also provide application support during the testing period.

2.2.1.6. Systems Design and Build Work Plan

The work plan covers the first two parts of this technical stream as well as the requirements stream and will be re-visited and elaborated for the future parts before July 31 2004, October 31 2004, and finally February 15 2005. The October 31st and February 15th work plan reviews will forecast work breakdown at a high level for fiscal 2005/6. The technical work plan also includes the Data Management Stream in order to maintain consistency.

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

ID	Task Name	Work
1	ILRR Phase II	2,929.5 hrs
2	Rampup	127.5 hrs
3		
4	Technical Architect	297 hrs
5		
6	Business Analysis Work	802.5 hrs
7	Application Design	577.5 hrs
8	Storyboards/Use cases	577.5 hrs
9	Application Design Workshop	67.5 hrs
10	Prepare for workshop	37.5 hrs
11	Attend workshop	30 hrs
12	Interation 1	167.5 hrs
13	Develop storyboards & use cases	115 hrs
14	Review	52.5 hrs
15	Interation 2	91.25 hrs
16	Develop storyboards & use cases	80 hrs
17	Review	11.25 hrs
18	Interation 3	153.75 hrs
19	Develop storyboards & use cases	30 hrs
20	Develop demo	112.5 hrs
21	Review	11.25 hrs
22	Application Integration Analysis	97.5 hrs
23	Identify existing statusing tools	22.5 hrs
24	Update Impact Assessment	75 hrs
25	Administration Design	225 hrs
26	Fees	150 hrs
27	Account Management	75 hrs
28	Deliverable: Application Design	0 hrs
29		
30		
31	Proof of Concepts	682.5 hrs
32	Team kickoff meeting	15 hrs
33	Setup Development Environment	105 hrs
34	Setup servers	75 hrs
35	Development Standards	30 hrs
36	Prototype Development	562.5 hrs
37	End to end Prototype	165 hrs
38	Planning/design	30 hrs
39	Development	112.5 hrs
40	Review	22.5 hrs
41	IMF Prototype	127.5 hrs
42	Planning/design	30 hrs
43	Development	75 hrs
44	Review	22.5 hrs
45	Query Prototype	112.5 hrs
46	Planning/design	30 hrs
47	Development	60 hrs
48	Review	22.5 hrs
49	Registration Pipeline Prototype	157.5 hrs
50	Planning/design	22.5 hrs
51	Development	112.5 hrs
52	Review	22.5 hrs
53		
54	Technical Design	1,020 hrs
55	Registration Pipeline Package	225 hrs
56	Registration Pipeline	112.5 hrs
57	Administration Package	195 hrs
58	Publication Acquirer	37.5 hrs
59	Audit Log Viewer	22.5 hrs
60	Reconciliation Component	75 hrs
61	Administration Screens	37.5 hrs
62	Data Problem Notification	22.5 hrs
63	Query Package	525 hrs
64	Security components	75 hrs
65	Reporting Tool	75 hrs
66	Query Maintenance	112.5 hrs
67	Map Viewer Package	75 hrs
68	Map Viewer	75 hrs
69	Deliverable: Technical Design	0 hrs

Ministry of Sustainable Resource
Management
Integrated Land and Resource
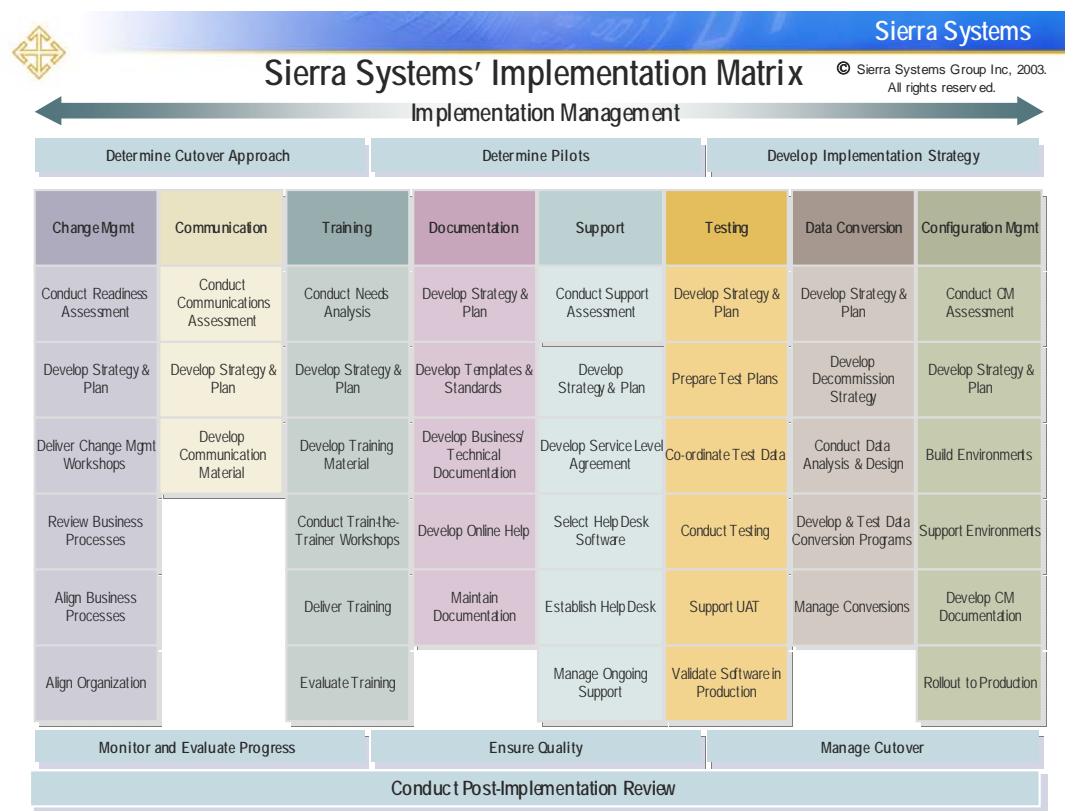Registry Project

**ILRR Phase 2 –
Approach**

2.2.2. Implementation Methodology

Implementation is comprised of many activities that:

- Prepare an organization for a new system

- Ensure that the system is technically ready for its new users.

These activities are developed and delivered well before the system is actually "ready" for use. Implementation planning begins as soon as detailed requirements are defined, and continues in the form of change management activities and post-rollout support.

We define *implementation* as a process where "both business and technical activities are given equal focus to ensure project implementation success". We include a combination of nine streams under an umbrella we call *implementation services*, managed by an overall implementation manager. The implementation manager monitors and provides expert assistance to all streams to ensure a smooth transition of a stable technical solution into our client's organization. The diagram below depicts Sierra Systems implementation services model.

Sierra Systems

Sierra Systems' Implementation Matrix
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Implementation Management

| Determine Cutover Approach | | | Determine Pilots | | | Develop Implementation Strategy | |

Change Mgmt	Communication	Training	Documentation	Support	Testing	Data Conversion	Configuration Mgmt
Conduct Readiness Assessment	Conduct Communications Assessment	Conduct Needs Analysis	Develop Strategy & Plan	Conduct Support Assessment	Develop Strategy & Plan	Develop Strategy & Plan	Conduct CM Assessment
Develop Strategy & Plan	Develop Strategy & Plan	Develop Strategy & Plan	Develop Templates & Standards	Develop Strategy & Plan	Prepare Test Plans	Develop Decommission Strategy	Develop Strategy & Plan
Deliver Change Mgmt Workshops	Develop Communication Material	Develop Training Material	Develop Business/ Technical Documentation	Develop Service Level Agreement	Co-ordinate Test Data	Conduct Data Analysis & Design	Build Environments
Review Business Processes		Conduct Train-the-Trainer Workshops	Develop Online Help	Select Help Desk Software	Conduct Testing	Develop & Test Data Conversion Programs	Support Environments
Align Business Processes		Deliver Training	Maintain Documentation	Establish Help Desk	Support UAT	Manage Conversions	Develop CM Documentation
Align Organization		Evaluate Training		Manage Ongoing Support	Validate Software in Production		Rollout to Production

| Monitor and Evaluate Progress | | | Ensure Quality | | | Manage Cutover | |

| Conduct Post-Implementation Review |

Sierra Systems favours a methodology-based approach to implementation that groups related activities into streams. The vertical streams in the model represent both the business and technical areas. Within each vertical stream are the major activities for that

stream. Implementation management is the umbrella stream under which all other streams are pulled together.

All streams begin with information gathering and the development of a strategy and plan. The strategy is a comprehensive document outlining the assumptions, constraints, overall approach, methodology, tools, techniques and resources. The strategy is accompanied by a project plan outlining resourcing, effort and timing.

2.2.2.1. Introduction

To meet the needs of the ILRR project, we have altered the implementation services model to align with a staged approach shown below.
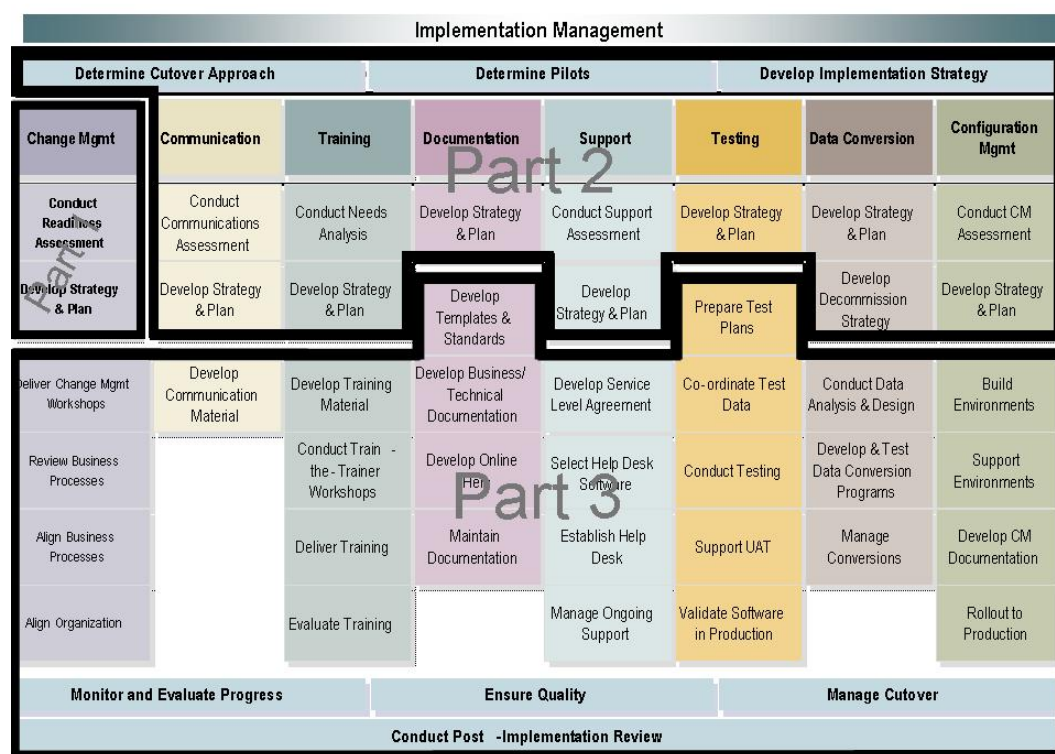
The approach divides the activities within the implementation model into 3 parts. It is important to note that implementation activities begin as soon as business requirements are complete, and as such, Stage 1 should begin as soon as possible. The three stages are:

- Part 1: Conduct Organizational Readiness Assessment (ORA) and develop Change Management Strategy.

- Part 2: Develop detailed Stream Strategies and overall Implementation Strategy and Project Plan

- Part 3: Execute Stream Strategies

Ministry of Sustainable Resource
Management
Integrated Land and Resource
Registry Project

ILRR Phase 2 –
Approach

Activities performed during Part 1 and Part 2 are essential inputs to the Overall Implementation Strategy. This global strategy is required to outline which activities will be undertaken during implementation, the approximate schedule, key milestones, cutover approach, pilot requirements and overall resourcing requirements.

2.2.2.2. Part 1: Conduct Organizational Readiness Assessment

The first part proposed in the statement of work is the conducting of an Organizational Readiness Assessment (ORA), and the development of the Change Management Strategy. Deliverables such as Fujitsu's Data Assessment Reports and their ILRR Business Strategy and Transition Plan, as well as Sierra's ILRR Business Requirements document will be used as direct input to determine the appropriate method and approach for the ORA.

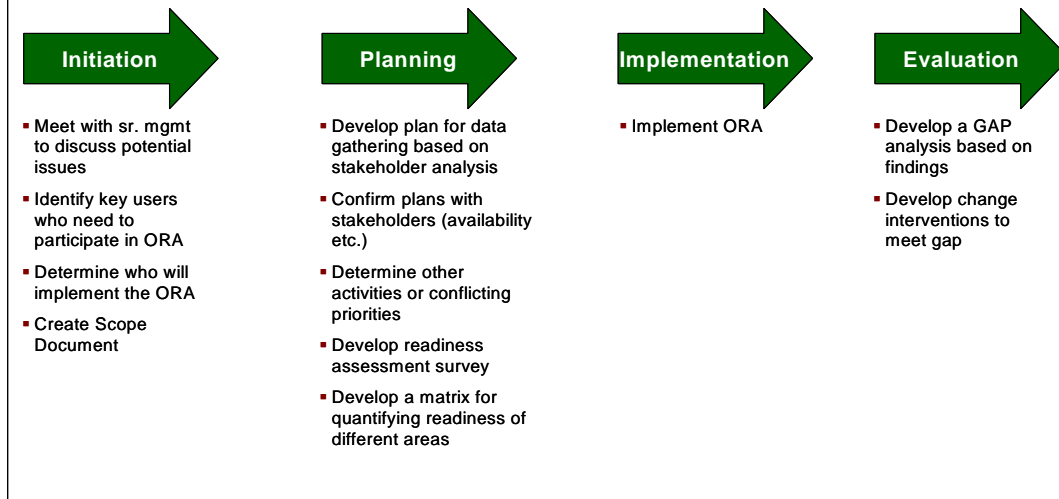### 2.2.2.2.1. What is an Organizational Readiness Assessment?

The Organizational Readiness Assessment is used to help the Implementation team understand the organization's technical, business and human capacity to accommodate the new system. This understanding is necessary in order to develop an appropriate Change Management Strategy that will address any deficiencies in these areas that might compromise implementation success, thereby reducing overall project risk.

Unlike other Implementation activities where an assessment of capability may be easy to determine, it is recommended that an ORA always be undertaken. While some ministries and agencies may have a high level understanding of the change that will be introduced by the new system, a detailed assessment of the individuals who will ultimately use the system across all affected ministries and agencies is required, so appropriate implementation strategies can be determined.

A number of methods may be used to assess the organization's readiness and capacity for change. In developing the assessment tool, the questions will focus on discovering the organization's current state in following the areas:

- Business-project organization, department organization and organization culture

- People-capability, availability, skill level

- Process-business processes, change management

- Information and Data Readiness-information/data readiness, data conversion, data management

- Technical Readiness

Organizational Readiness Activities

Initiation → **Planning** → **Implementation** → **Evaluation**

Initiation
- Meet with sr. mgmt to discuss potential issues
- Identify key users who need to participate in ORA
- Determine who will implement the ORA
- Create Scope Document

Planning
- Develop plan for data gathering based on stakeholder analysis
- Confirm plans with stakeholders (availability etc.)
- Determine other activities or conflicting priorities
- Develop readiness assessment survey
- Develop a matrix for quantifying readiness of different areas

Implementation
- Implement ORA

Evaluation
- Develop a GAP analysis based on findings
- Develop change interventions to meet gap

The diagram above illustrates the steps required to perform the ORA.

2.2.2.2.2. Initiation

Initiation involves a series of meetings with Ministry of Sustainable Resource Management, project team and Ministry representatives to determine the logistical details relating to the Implementation of the ORA and the type of questions that need to be asked. This will ensure that all parties understand the impacts and expectations of the Change Management process, and also to reach agreement on the direction of change activities.

An estimate of the number of stakeholders who will be affected by the system, and thus need to be involved (to a greater or lesser degree) in the Change Management activities will be made. These numbers will be confirmed during the initial meetings as they provide an idea of the scope of the ORA and the effort that will be required to conduct it. We anticipate that much of this section of the ORA can be determined through review of the Business Requirements document.

2.2.2.2.3. Planning

During the Planning phase of the ORA, the assessment tool and method of capturing the data are developed. Workshops are scheduled and workshop materials developed.

2.2.2.2.4. Implementation

During the Implementation phase, workshops and focus groups are held with stakeholders using the prepared assessment tools. All feedback provided during these workshops is documented.

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Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.2.2.5. Evaluation

Once all the information has been gathered from the various assessment activities, it is consolidated and analyzed. The results of the ORA and subsequent recommendations that are made, will shape the change management strategy and form the basis of the change management process. All ORA results and associated recommendations are presented for approval.

2.2.2.2.6. Develop Change Management Strategy and Plan

The ORA results and agreed upon recommendations will be used to develop the Change Management Strategy. The Change Management Strategy addresses the following:

- **What** is the Background, Objectives, Scope, Constraints and Assumptions with regards to Change Management?

- **What** is the organization's Vision for Change?

- **Who** is the audience and what is their readiness, willingness and ability to change?

- **Where** are the anticipated areas of biggest impact and possible resistance?

- **What** methods (change interventions) will be employed to prepare the audience?

- **What** methods (evaluation) will be used to ensure that our efforts are successful?

- **When** will the change interventions take place and at what frequency?

- **How** will we achieve our plan – what resources and effort are required from both Sierra Systems and the organization?

2.2.2.2.7. Deliverables:

- Organizational Readiness Assessment Workshops and Results

- Change Management Strategy

The Phase 1 deliverables assist in defining the effort that will be required for Phase 2. As well, they provide input to the Overall Implementation Strategy.

2.2.2.3. Part 2: Develop Stream Strategies and Overall Implementation Strategy

The objective of Part 2 of the ILRR implementation approach is to develop an Overall Implementation Strategy that will outline which activities will be undertaken during implementation, the approximate schedule and key milestones. During this phase detailed strategies in the remaining seven streams are developed, and cutover approach and pilots determined. The stream strategies describe the methods, activities constraints, assumptions, tools and resourcing for each stream.

An example of what would be contained in the Overall Implementation Strategy follows:

Ministry of Sustainable Resource
Management
Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.2.4. Implementation Strategy

- Introduction

- Purpose

- Objectives of the Implementation

- Assumptions

- Constraints/Challenges

- Scope

- Overall implementation methodology

- Implementation streams and relative methods

- Implementation Monitoring and Project Controls

- Evaluation and Feedback Mechanism

- Implementation Cutover and Pilots

- Key Milestones and Schedule

- Overall resourcing plan

2.2.2.5. Deliverables:

- Overall Implementation Strategy

- Communications Strategy

- Training Strategy

- Documentation Strategy

- Support Strategy

- Testing Strategy

- Data Conversion Strategy

- Configuration Management Strategy

Part 2 strategies will be used to determine the effort for the balance of the implementation
activities.

2.2.2.6. Part 3: Execute the Strategies

During Part 3, streams are staffed and activities executed according to the detailed
strategies developed in Part 2. These activities are then managed through to final
cutover.

2.2.2.6.1. Deliverables:

- Dependent upon strategies outlined in Part 2.

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.2.7. ILRR Implementation Work Plan

The work plan is detailed until the creation of all implementation strategies and will be re-visited and elaborated to include all implementation activities detailed in the strategies. The re-work of the plans will be done in conjunction with the other streams on July 31 2004, October 31 2004, and finally February 15 2005. The October 31st and February 15th reviews will project the work breakdown at a high level for fiscal 2005/6.

ID	Task Name	Work	Resource/Timeline
1	**Implementation Management**	**132.37 hrs**	
2	Overall Implementation Management	12.07 hrs	E Rutherford[2%]
3	Review Implementation approach	4.8 hrs	E Rutherford[80%]
4	Develop implementation Strategy	90 hrs	E Rutherford[50%]
5	Client reviews first draft Implementation Strategy	10.5 hrs	R Munzer[20%]
6	Incorporate changes and finalise	15 hrs	E Rutherford[50%]
7	**Change Management**	**627.97 hrs**	
8	Prepare for ORA	92.38 hrs	E Rutherford[16%],L Vlasveld
9	Implement ORA	189 hrs	L Vlasveld[80%],E Rutherford[40%]
10	Evaluate ORA & develop strategy	98.05 hrs	L Vlasveld[80%],E Rutherford[10%]
11	Present ORA findings to Project Sponsor	6 hrs	E Rutherford,L Vlasveld
12	Complete Change Management Strategy	75 hrs	E Rutherford[25%],L Vlasveld
13	Client reviews first draft Change Management Strategy	10.5 hrs	R Munzer[20%]
14	Incorporate changes and finalise	18.75 hrs	L Vlasveld
15	**Communications**	**225.38 hrs**	
16	Communications Assessment	37.5 hrs	E Rutherford,L Vlasveld
17	Develop Communications Strategy	69 hrs	E Rutherford[80%],L Vlasveld[60%]
18	Client reviews first draft Communications Strategy	10.5 hrs	R Munzer[20%]
19	Incorporate changes and finalise	6.37 hrs	L Vlasveld[3%],E Rutherford[2%]
20	Communication Management	102 hrs	L Vlasveld[20%]
21	**Training and Documentation**	**114.08 hrs**	
22	Training Needs Analysis	18.75 hrs	E Rutherford[20%]
23	Develop Training Strategy	69.83 hrs	E Rutherford[30%],S Sadoway[70%]
24	Client reviews first draft Training/Documentation Strategy	10.5 hrs	R Munzer[20%]
25	Incorporate changes and finalise	15 hrs	E Rutherford[50%]
26	**Support**	**133.2 hrs**	
27	Assess Support Needs	46.2 hrs	L Vlasveld[2%],E Rutherford[15%]
28	Develop Support Strategy	67.5 hrs	E Rutherford[20%]
29	Client reviews first draft Support Strategy	10.5 hrs	R Munzer[20%]
30	Incorporate changes and finalise	9 hrs	E Rutherford[50%]
31	**Testing**	**306.18 hrs**	
32	Testing Needs Analysis	56.8 hrs	S Sadoway[20%],J Webber[10%],E Rutherford[10%]
33	Develop Testing Strategy	84.38 hrs	S Sadoway[80%],E Rutherford[20%]
34	Client reviews first draft Test Strategy	10.5 hrs	R Munzer[20%]
35	Incorporate changes and finalise	42 hrs	S Sadoway[80%]
36	Develop detailed Test Plan	112.5 hrs	J Webber
37	**Configuration Management**	**280.5 hrs**	
38	Conduct Config Management Assessment	112.5 hrs	Config Lead[80%],Development Lead[20%]
39	Develop Strategy	112.5 hrs	Config Lead[50%],Development Lead[25%]
40	Client reviews first draft Configuration Mgmt Strategy	10.5 hrs	R Munzer[20%]
41	Incorporate changes and finalise	45 hrs	Config Lead[80%],Development Lead[20%]

Timeline header: 2003 Nov Dec | Qtr 1, 2004 Jan Feb Mar | Qtr 2, 2004 Apr May Jun | Qtr 3, 2004 Jul Aug Sep | Qtr 4, 2004 Oct Nov Dec | Qtr 1, 2005 Jan Feb Mar | Qtr 2, 2005 Apr May Jun | Qtr 3, 2005 Jul Aug Sep | Qtr 4, 2005 Oct Nov

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2.2.3. Data Management, Support and Consolidation

2.2.3.1. Responsibilities / Milestones:

Review Acquire Module Tools and Operational System Requirements

To support the data transfer from operational systems to the ILRR input process (Web Services), a data management module will be first prototyped and then developed for each operational system required to submit data directly to the ILRR. It is anticipated that this data management module will have common processes (and development code) between many operational systems. Having said this it is also anticipated that the module will vary greatly in complexity between simple data sets (and/or 'good' operational systems) and complex data sets (and/or 'bad' operational systems). This stream will not remove responsibility from these organizations but will provide support to enable an easier transition process by January or February 2005. It is also understood by the project team that some organizations are not in a position to complete the data management module, other mechanisms for data management will be investigated to support these operations until such time that a data management process can be implemented.

Initial data proof of concept for support of Systems Design storyboards (July 2004)

To support a proof of concept for the Systems Design storyboards, a representative data set must be assembled. This data set will support the delivery of a proof of concept for selected use cases based on the approved ILRR Business Requirements.

Assemble data sets to support unit and integration testing of ILRR system components (October 2004)

Data sets required to support unit testing of code modules and integration testing of ILRR system components will be assembled. The specific data sets required will be determined through consultation with the ILRR Technical Architect.

Assemble data sets to support user acceptance testing of ILRR application (January 2005)

User acceptance testing will require that a representative data set be assembled that reflects the anticipated production environment for the ILRR in March 2005. This data set will support testing of the full range of system functionality, as well as provide a reasonable basis for assessing system performance.

Implement production ILRR data set for the Northeast deployment (March 2005)

The full production data set required to support ILRR deployment in the Northeast will be implemented for March 2005. The specific data sets to be included in the first production release of ILRR will be determined through consultation with the ILRR Senior Project Manager and the ILRR Data Quality Manager.

Ministry of Sustainable Resource
Management
Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.3.2. Task Areas:

Support the alignment of ILRR data quality improvement efforts with line agency data improvement initiatives

This task area includes providing support to the ILRR Senior Project Manager and the ILRR Manager of Data Quality and Conversion in ensuring the alignment of ILRR data quality improvement efforts with line agency data work plans and related ongoing or planned data management initiatives.

Specifically, the ILRR Project Team will provide consultative support by identifying relevant line agency data initiatives and related stakeholders and providing any additional supporting information required to facilitate senior level coordination of activities.

Developing detailed evaluation criteria for candidate ILRR data improvement projects

The ILRR Data Quality and Conversion Manager has already begun work in this area. The ILRR Project Team will provide support in order to complete the final version of these criteria.

Assisting line agencies with designing cost effective data improvement methodologies for candidate data project submissions

This task area includes providing support to line agencies in developing methodologies to address their ILRR data quality issues. Also included here is support for agencies in completing their project proposals for ILRR funding. This work will include a detailed assessment of the nature of data deficiencies and the formulation of specific methodologies for resolution of the problems. Methodologies may include the use of either existing or new custom automated tools to improve the efficiency of the process.

Assisting with the evaluation and selection of candidate ILRR data improvement projects for management / funding support

The ILRR Project Team will provide consultative support to the ILRR Data Quality and Conversion Manager and the ILRR Data Quality Assessment Committee to assess data project proposals and document the outcome of proposal review sessions. Assistance will also be provided to line agencies that are asked to revise their proposals based on suggestions from the Data Quality Assessment Committee.

Detailed design and implementation of data automation / clean up methodologies or routines for data sets

Assistance will be provided to agencies to implement their approved data quality projects. This assistance may take the form of detailed design and implementation of data automation tools, documentation of operator procedures for data clean up, or some combination of the above. The support required by each agency will vary greatly depending on the nature and scope of their data quality issues.

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Development of data quality assurance / ILRR data acceptance procedures and related automated routines

Data quality assurance procedures will be developed to verify that processed data sets are meeting or exceeding data quality expectations described in their project proposals. This will be handled, to the extent that is feasible, by automated data QA routines that must be developed. Additional data QA will be required to ensure that data sets support the business and technical requirements of the ILRR production environment.

Contract administration, management and coordination of data quality work performed by Ministry staff or additional consultants

This task area includes providing "as needed" support to the ILRR Data Quality and Conversion Manager in the day-to-day administration and management of data quality work being performed to support ILRR implementation.

Develop Revised ILRR Data Management Plan

In the spring of 2005, a revised Data Management Plan should be developed in conjunction with the ILRR Data Quality Manager that describes the sequence and timing of remaining data quality tasks required to support full ILRR implementation during 2005-2007.

2.2.3.3. Data Management, Support and Consolidation – Work Plan

The work plan for the data management, support and consolidation is integrated into the technical (design and build) work plan. The Implementation Stream will also be overlapping this data management stream and will provide guidance. The Data Management activities and work plan will be re-visited and elaborated to include all data conversion/consolidation activities detailed once the strategy has been compiled. Further elaboration of the work plan will be done in conjunction with the other streams on July 31, October 31, and finally February 15 2005. The October 31st and February 15th reviews will project the work breakdown at a high level for fiscal 2005/6.

ID	ℹ	Task Name	Duration
1		**ILRR Phase 2 - Data Management Stream**	**229 days?**
2		Complete Data Transition Plan (DM-DATAMAP)	33 days?
3		History Decision Request (DM-HISTORY)	21 days?
4		Data Management ILRR Transition (DM-ILRR)	77 days?
5		Data Assembly Support (DM-ASSEMBLY)	77 days?
6		Data Load (DM-DATALOAD)	77 days?
7		Prototyping of Data Acquirers (DM-PACQ)	72 days?
8		General Administration (DM-ADMIN)	77 days?
9		Install and Test COTS Environment (DM-COTSENV)	224 days?
10		Integration Plan (DM-INTGPLN)	33 days?
11		Logical Data Model (DM-LOGDB)	38 days?
12		Physical Database (DM-PHYDB)	153 days?
13		Data Management Stream Project Management (DM-PMADMIN)	77 days?
14		Data Management Stream Coordination (DM-STREAMCOORD)	77 days?

Ministry of Sustainable Resource
Management
Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

2.2.4. Legal Registry Requirements

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:

- Legal status will 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.

- 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.

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

2.2.4.1. Part I - Development of Legal Registry Framework

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

The best-known system of title registration is the Torrens system, which was recommended as a model 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 ILRR is not contemplating, however, the guarantee principle from the Torrens System.

2.2.4.1.1. Drafting ILRR Legislation

The ministry will tackle these first activities to determine if a legal model that 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.

2.2.4.1.2. Part 1 Deliverables

A draft of the legislation with the anticipated framework for the Legal Registry.

2.2.4.2. Part 2 - Legal Registry Business Requirements

Once a legal framework has been drafted for the ILRR, analysis work will be required to identify any changes or additions to the business requirements that will be needed to support the framework.

- 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.

2.2.4.3. Part 4 - Legal Registry Architecture/Design

Once a legal framework has been established for the ILRR and additional business requirements documented and approved, additional work will be required to identify any architectural and/or design changes required to support the framework. This activity could be conducted in parallel with the drafting and enactment of legislation.

For example:

- 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.

2.2.4.3.1. Part 4 Activities

The activities for Part 4 will be defined at the conclusion of Part 2.

2.2.4.4. Part 5 – Legal Registry Enhancement Development and Implementation

The activities for Part 5 will be defined at the conclusion of Part 4.

2.2.4.5. Part 6 - Legal Registry Implementation, Agency Business Process Changes

The activities for Part 6 would be defined at the conclusion of Part 5.

2.2.4.6. Legal Requirements Work Plan

The work plan is not yet defined and will be compiled when the draft legislation is delivered to the project team in late summer 2004. At that stage reviews of the work plan will be conducted and forecasting will occur at a high level for both the remainder of fiscal 2004/05 and fiscal 2005/6.

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2 –
Approach**

## 2.2.5. Operational Model Compilation

The project will work closely with the ministry to identify a complex rules based model and provide the information necessary for the executives to review the possibility of an Alternative Solution Delivery (ASD) approach to the ILRR.

No work plans are in place or activities identified outside of the brainstorming sessions between members of the project team and ministry resources to create draft business model structures for project executives by the end of the summer 2004.
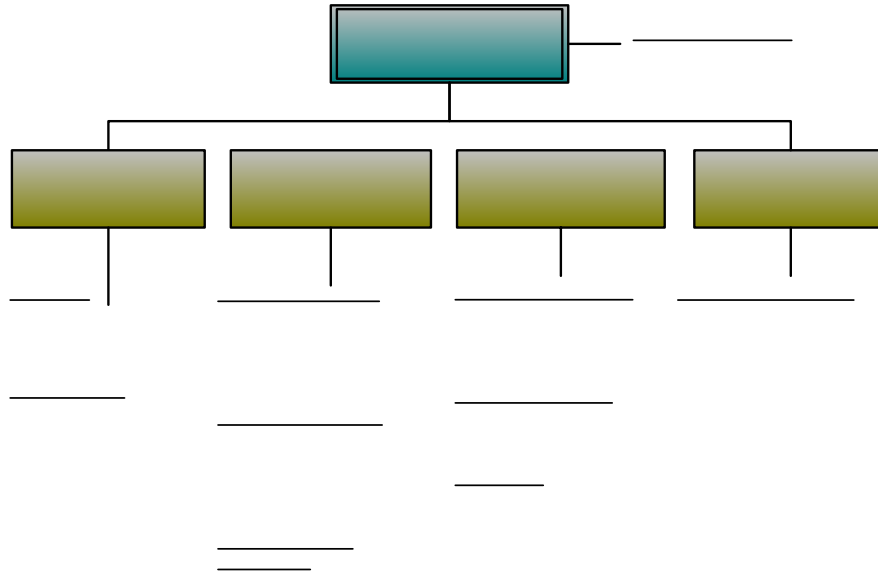
3. ILRR PHASE 2 PROJECT TEAM

Sierra Systems and its partners are committed to providing the best possible resources for the ILRR Project. This second phase of the project will see continuous involvement from all resources involved in Phase 1.

The project team will be as follows:
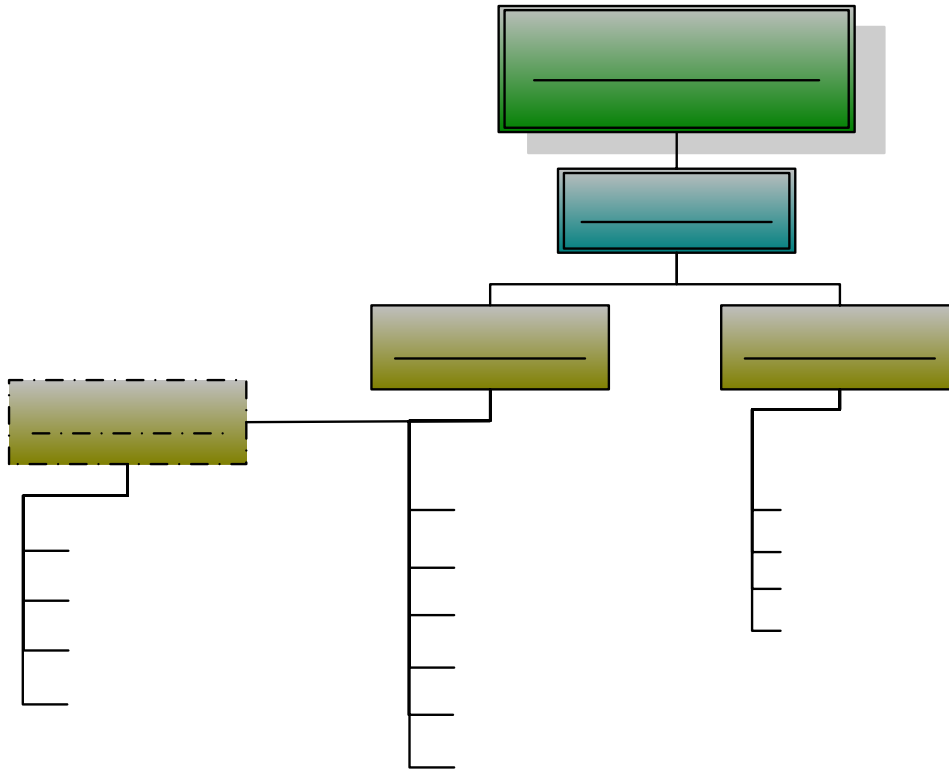
As the project grows and requires additional resources, the Sierra Project Manager will provide an outline and resume of each resource proposed. In order to keep this process to a minimum, new resources will be introduced at key milestones in the Stage Work Plan (July 31, October 31, and February 15) where possible.

The following is a chart identifying the contracting project team as defined for the first two to four months of Phase 2:

Ministry of Sustainable Resource
Management

Integrated Land and Resource
Registry Project

**ILRR Phase 2
Project Team**

Resumes of proposed (known) resources for Phase 2 will be made available upon request
from the ministry.

Requi
L
Eliz
Va

Int. BA
Marjory
Shelley
Barb C

Facilita
Pat Wil

4. PROJECT STAGES

The ILRR Phase II Project approach contains 4 stages with specified review dates to implement the business solution in the Northeast.

ILRR Phase II will be delivered in stages with key review dates as follows:

STAGE	*REVIEW DATE*	*MINISTRY APPROVALS*
Contract signed	Date contract signed plus 5 work days	Project Statement.
Stage 1 May 17, 2004 to Jul. 31, 2004	July 31, 2004	Stage 1 deliverables. Stage 2 Work Plan.
Stage 2 July 31, 2004 to Oct. 31, 2004	October 31, 2004	Stage 2 deliverables. Stage 3 Work Plan.
Stage 3 Nov. 1, 2004 to Feb. 15, 2005	February 15, 2005	Stage 3 deliverables. Stage 4 Work Plan.
Stage 4 Feb. 16, 2005 to Mar. 31, 2005	March 31, 2005	Stage 4 deliverables.

5. ILRR PRICING

It is Sierra Systems' practice to invoice monthly for actual time expended and expenses incurred. Resources will be billed on an hourly basis accompanied by a detailed timesheet describing activities. Travel will be pre-approved by the Ministry of Sustainable Resource Management and billed (dispersed) at cost to the Ministry. It is Sierra Systems' policy to bill for half of any travel time incurred by consultants. Every attempt will be made to make travel and living expenses as cost effective as possible. Costs that are sometimes outlined in days of effort are based on an 7.5 hour working day in the Victoria location.

Pricing for phase 2 of the implementation approach is provided in the attached worksheet. The total estimates for Phase 2 provided by Sierra are approximate and should not be considered final until appropriate levels of information is provided. Each Stream of Phase 2 will be re-visited and provided for approval to the ministry. Key dates for re-estimation and review by the ministry are:

- *July 31, 2004* – This is deemed a key date for several reasons. The ILRR Design will be well on it's way (possibly completed), the Implementation Strategies will be completed, and the Data Management Plan will be well established.

- *October 31, 2004* – This will be another key date. The ILRR will have a functional prototype in place, the implementation stream will understand the scope of this engagement, and the data management will also be aware of any issues. This date will permit the last reality check before the full commitment to deploying in the Northeast.

- *February 15, 2005* – On this date the project team will provide workplans and cost estimates for the following phase(s). A better understanding of the deployment strategy (for the remaining areas of BC) will be put forward.

5.1.1. Rates

The proposed rate structure is based on roles. Each resource will be labelled with a rate and will be billed at this rate for the duration of Phase 2. If resources fill more than one role on the project, the lesser rate will be used for billing.

Role	Resource Name	Rate (per hr)
Project Manager	Simon Lanoix	
Facilitator	Pat Willmott	
Sr. Business Analyst	Elizabeth Vannan	
	Marjory Porter	
Technical Lead	Rob Frame	

Role	Resource Name	Rate (per hr)
Sr. Developers	Kevin Ji	
	Natasha Vitshas	
	Cam Trent	
	Others…..	
Int. Developers	Brad Worsfold	
	Megan Olesky	
	James Gagan	
	Barb Coppen	
	Shelley Lah	
	Peter Neilson	
DBA	Serhiy Bobovnyk	
	Steve McIntosh	
Tech. Support	Rada Marijanovic	
Project Office	Theresa Fransen	
Implementation Lead	Evelyn Rutherford	
Implementation Specialist	Linda Vlasveld	
	Susan Sadoway	
	Diana Syrotuck	
Implementation Support	Jody Webber	
	Lori Voyer	
Data Management Lead	John Samulski	
Data Specialist	Dave van Blankenstein	
	Curtis Archer	
Testers	TBA	

Rates include the hardware, software and technical support required to provide
development and (unit/integration) testing environments. A staging environment will be
required in the next 3 to 4 months and is not included in these rates. Although owned by
the ministry, it is our recommendation that the staging (production like) environment
reside on Sierra Systems site during the development and testing period. The staging
environment would be migrated with the production code for UAT in January/February
2005.

5.1.2. Expenses

It is Sierra Systems' practice to invoice monthly for actual time expended and expenses incurred. Taxes, if any, are in addition to the above quoted fees and will be added to the extent required by law.

Where a resource is being billed on an hourly basis, appropriate travel will be pre-approved by the Ministry of Sustainable Resource Management. Travel and living expenses will be disbursed at cost. It is Sierra Systems' policy to bill for half of any travel time incurred by consultants. Every attempt will be made to make travel and living expenses as cost effective as possible.

Prices are based on an 7.5 hour working day in the Victoria location. Any travel will require ministry approval and will be billed at cost.

5.1.3. Forecast

The attached spreadsheets represent to current forecast (effort based) and will be updated every three months. The forecast spreadsheet will be reviewed weekly by the Ministry and Sierra Project Managers.

As identified earlier, the spreadsheets identify the first four months of work for each stream of the ILRR Phase 2 Project. Before each key re-estimation dates (July 31, 2004 / October 31, 2004 / and February 15, 2005) this spreadsheet will be re-visited and forecasts will be extracted from the approved detailed plans. No work will be undertaken before approval from the ministry.

Resource Overview

ILRR Phase to Cost Overview	Forecast Utilization (days)			
	May-04	*Jun-04*	*Jul-04*	*Aug-04*
Project Management				
Simon Lanoix	83.50	120.00	120.00	100.00
Project Administration				
Tech and Admin Support				
Serhiy Bobovnik / Steve McIntosh	30.00	120.00	30.00	30.00
Rada Marijanovik	30.00	30.00	30.00	30.00
Theresa Fransen	5.00	10.00	10.00	10.00
Pat Willmott	0	0	0	0
Stream 1 - Technical Design and System Build				
Technical Lead and Prototyping				
Rob Frame	103.50	155.00	165.00	150.00
Elizabeth Vannan	32.50	150.00	100.00	100.00
Marjory Porter	22.00	96.00	90.00	86.00
James Gagan	32.00	150.00	140.00	140.00
Cam Trent	64.50	115.00	130.00	150.00
Kevin Ji	11.00	130.00	125.00	150.00
Peter Neilson		75.00	100.00	100.00
Barb Coppen		75.00	100.00	100.00
Meggan Olesky		25.00	60.00	75.00
Natasha Vitshas	61.00	155.00	165.00	150.00
Stream 2 - Implementation				
ORA & Implementation Strategies				
Evelyn Rutherford	101.00	100.00	100.00	100.00
Linda Vlasveld	115.00	142.00	138.00	135.00
Susan Sadoway		78.00	130.00	145.00
Jody Webber	30.50	0	0	120.00
Stream 3 - Data Management				
Data Management Support				
John Samulski	60.00	110.00	110.00	110.00
Test Data Consolidation				
Dave van Blankenstein	73.50	100.00	145.00	150.00
Curtis Archer		50.00	130.00	150.00
Operational System(s) Data Transfer				
TBA				
Stream 4 - Legal Requirements				
Not required until (approx.) Sept 2004				
Elizabeth Vannan	0.00	0.00	0.00	0.00
Stream 5 - Business Models				
First Draft Business Model(s)				
Ken Davidson	25.00	45.00	45.00	45.00
Nikki Sandhu	40.00	50.00	50.00	50.00
Undetermined				
Total Hours	***855.00***	***1991.00***	***2318.00***	***2458.50***

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New thinking.

Deliverable Overview

The overview table below shows cost roll-up by Stream and Deliverable:

*Due to confidentiality this table has been removed from the web version of this document.

Comments on Project Statement Impact (for any 'Y' in the above table)

Deliverable	Comments

Appendix A. Sign-Off Page

_____   Date JUY 6/04
Dave Chater, Director Integrated Registry (Project Sponsor)

_____   Date July 6, 2004
Rosa Munzer (Ministry Sr. Project Manager)

_____   Date July 2, 2004
Simon Lanoix (Sierra Systems Project Manager)

Appendix B. Project Statement Revision Log

Version	Date	Description	Distribution	Author	Organization
Version 1.0	June 29, 2004	ILRR Phase 2 Project Statement – draft delivered for review	Rosa Munzer	Simon Lanoix	Sierra Systems