



And



Request for Proposals

**Offshore Newfoundland and Labrador:
Digital Technologies Roadmap including
Emissions Reduction Opportunities**

January 14, 2022

Contents

- Submission Deadline..... 3
- 1 Introduction 3
- 2 Objective of the Request for Proposal..... 3
- 3 Background 4
- 4 Scope of Work..... 4
- 5 Deliverables and Reporting..... 5
 - 5.1 Project Deliverables 5
 - 5.2 Project Governance and Meetings 5
- 6 Project Timelines..... 6
- 7 Proposal Selection..... 6
- 8 Administration 7
 - 8.1 General Instructions..... 7
 - 8.2 Proposal Requirements..... 7
 - 8.3 ERI Contact..... 8
 - 8.4 Discrepancies, Omissions or Clarifications..... 8
 - 8.5 Contract Requirements..... 8
 - 8.6 Liability 9
 - 8.7 Submission Instruction and Deadline 10

Submission Deadline

Proposals should be submitted by e-mail on or before **Friday, February 11th, 2022, 5:00 PM (Newfoundland Time)** to the address below with the project name in the email subject line.

Subject: Digital Technologies Roadmap Proposal
E-Mail: proposals@erinl.ca

1 Introduction

Energy Research & Innovation Newfoundland & Labrador (ERI), formally Petroleum Research Newfoundland and Labrador, is a not-for-profit organization that identifies collaborative research, development, and demonstration (RD&D) opportunities and facilitates projects on behalf of Newfoundland and Labrador's (NL's) offshore oil and gas industry. With safety as the foundation of our industry and the work we do, ERI directs RD&D to support the offshore industry's sustainability through technology development and innovation.

The Oil and Gas Corporation of Newfoundland and Labrador (OilCo) is a Crown Corporation tasked with maximizing the value of the province's resources at all stages of exploration, development, and production. Driving safe and environmentally responsible activities, OilCo is a participant in early-stage exploration and basin/prospect evaluations, as well as being responsible for the management of Newfoundland and Labrador's partnership interests in existing offshore assets and future investment in offshore developments.

2 Objective of the Request for Proposal

ERI, in collaboration with OilCo, by means of this Request for Proposals (RFP), is seeking Proposals from qualified Service Providers to form the basis for the negotiation of a Contract to execute the project as detailed in the Scope of Work (SOW).

The overall objective of this project is to develop a digital technologies roadmap to identify specific digital technologies in that can be implemented the NL offshore to improve international competitiveness.

The Digital Technologies Roadmap will identify existing, new and emerging digital technologies that could improve the international competitiveness of the Newfoundland and Labrador Offshore Oil and Gas Industry and how existing and future local technology companies may be able to assist with this objective. The Digital Technologies Roadmap should include details of the technology readiness levels of those technologies, the current gaps for implementation, the capital costs associated with their installation, potential annual operating cost savings, potential avoided GHG emissions and associated avoided carbon emission costs, cybersecurity issues, proprietary/commercial issues or other constraints, and other expected outcomes.

This project will advance the knowledge base for the implementation of digital technologies to improve the international competitiveness of the Newfoundland and Labrador Offshore Oil and Gas Industry

through facilitating engagement with the local and international service companies and mapping local technology sector companies that can assist in the implementation of the technologies identified. This information will help public and private decision makers understand the opportunity associated with implementing these technologies within Canada's offshore oil and gas industry and should support the growth of innovation capacity, activity, and investment in the ecosystem.

3 Background

The Newfoundland and Labrador Oil and Gas Industry must become a leader in the deployment of digital technologies and operating models that will deliver industry-leading safety and environmental performance (including reduced emissions) and a step change in productivity and cost-competitiveness. The technology and service sector in the province, and around the world, will increasingly leverage robotics, new sensors, connected devices, cloud computing, low-cost high-performance computing, edge computing, additive manufacturing, artificial intelligence, wearable technology, simulation, and visualization tools, blockchain and other emerging and currently unknown disruptive technologies to offer new products and services to the oil and gas industry. Technological change is outpacing traditional innovation cycles. The Newfoundland and Labrador offshore oil and gas industry, including the supply and service sector, must collectively become more agile in its pursuit of innovation to realize the full potential of steadily emerging digital technology.

On November 23rd, 2021, the Government of Newfoundland and Labrador announced projects funded through the NL Offshore Oil and Gas Industry Recovery Assistance Fund, including ERI's The Open Offshore Program. This Program consists of five related industry-led initiatives, specifically; (1) Develop a provincial offshore communications infrastructure strategy to provide ready access to high speed, low latency, and redundant bandwidth; (2) Identify the value proposition/feasibility of a regional metocean monitoring network; (3) Develop a data framework, implementation plan and pilots for the collection, analysis and distribution of offshore oil and gas data; (4) Identify offshore digitalization technologies that will improve efficiency and reduce or eliminate GHG emissions/costs, improving the industry's global competitiveness, and; (5) Establish working groups to cultivate alignment on initiatives between key offshore stakeholders on digitalization and related issues such as emissions reduction. This RFP forms the basis of a project within initiative 4.

4 Scope of Work

ERI have completed initial consultations and research to develop a framework and conditions for the industry to deploy digital solutions at an accelerated pace and to develop, test and validate solutions where gaps and local capacities align or can be developed in a viable timeframe, as well as to identify the most relevant digital technologies for the Newfoundland and Labrador operating region. This research did not focus on specific technologies that will be made available to the industry by the growing market for technology and services.

This Proposal will expand on ERI's initial consultations and research to develop a Digital Technologies Roadmap for prioritized technologies.

Within the scope of this project, the Service Provider will:

1. Develop a Project Execution Plan, including project assumptions and dependencies, project risks, project constraints, schedule and milestones, and success criteria;
2. Conduct a review of any local and international ongoing or completed research and development projects or roadmaps to assess current, new or emerging digital technologies;
3. Consult with Tier 1 technology suppliers and local technology innovators to identify and document digitalization technologies including readiness levels, capital costs of installation, annual cost savings, potential avoided GHG emissions and associated avoided carbon emission costs;
4. Provide case studies for each technology identified, from other relevant offshore jurisdictions including economic data, where possible;
5. Validate the technologies with key industry and supply chain stakeholders;
6. Prioritize technologies based on Return on Investment (ROI), experience in other jurisdictions, regulatory approval (safety and environmental protection) considerations, opportunity for supply chain participation and growth, access to data, security considerations, GHG emissions reductions, etc.;
7. Identify any potential leverage or linkage with innovation ecosystem organizations e.g., MI Holyrood, Digital Offshore Canada, Innovation Hub, etc.;
8. Identify implementation considerations for industry, government, regulators, supply chain and the local innovation ecosystem;
9. Identify potential investment requirements, if any, for local innovation technologies identified as potential priority technologies and provide international export opportunities;
10. Compile a Digital Technologies Roadmap for the NL offshore; and
11. Compile a final report documenting activities executed within the project and results obtained.

5 Deliverables and Reporting

5.1 Project Deliverables

Subject to revalidation and changes as the project is executed, the overall project deliverables, for review and approval of the Project Steering Committee, are anticipated to be:

1. Project Execution Plan;
2. Terms of Reference for the development of the roadmap;
3. Report documenting the relevant ongoing or completed research and development, and technologies
4. Digital Technologies Roadmap for the next ten (10) years including the quantification of specific digital technologies and associated costs and savings;
5. Implementation Plan; and
6. Final Report documenting the remaining information, steps taken, and results obtained.

Deliverables 3 – 6 will be shared with the Newfoundland and Labrador offshore supply chain through one or more workshops and otherwise made publicly available.

5.2 Project Governance and Meetings

A Project Steering Committee will be established to oversee the execution of the scope of work which will include the successful Service Provider, ERI Program Delivery Manager, and other representatives of ERI, OilCo, and others as required. Regular meetings will be scheduled to cover progress completed, discuss future work, evaluate project outcomes, and provide updates on any risks to the project SOW, schedule, or budget. The frequency of these meetings will be determined by ERI.

ERI and OilCo will also establish an Advisory Committee, which will include subject matter experts such as TechNL, to oversee the evaluation of the RFPs, offer technical advice, direction, and support on the execution of the project, and review project deliverables.

The successful Service Provider will be required to present project progress at various workshops with a wider audience of ERI members, OilCo representatives, subject matter experts, government, and industry representatives.

6 Project Timelines

RFP Release Date	January 14 th , 2022
Proposal Due Date	February 11 th , 2022
Project Kickoff	March 11 th , 2022
Draft Deliverables Due	September 23 rd , 2022
Final Deliverables Due	November 4 th , 2022
Project Completion	November 30 th , 2022

7 Proposal Selection

ERI and OilCo may consider the following criteria in the selection of the successful Service Provider:

- Knowledge and experience in relation to the work: demonstrated ability to meet expectations based on completion of similar projects and/or quality of previous works;
- Previous experience in GHG emission reductions through digital technologies;
- Understanding of the scope and objectives of the project: demonstrated comprehension of/adherence to the RFP;
- Proposed approach/workplan and schedule;
- Knowledge of and relevant experience within Newfoundland and Labrador's offshore oil and gas industry;
- Local Content; consideration given to degree of local activity (e.g. in-province proponent presence, and project team members identified);
- The number of person hours required to complete the work, the allocation of hours among tasks and the overall time to complete the work;
- The reasonableness and accuracy of the estimated costs to conduct the proposed project and the effort applied by the Service Provider relative to the time and resources used;
- Contribution to the development of Newfoundland and Labrador research and development capacity; and,
- Such other matters as ERI and OilCo considers appropriate in respect of the SOW.

8 Administration

8.1 General Instructions

The Service Provider shall prepare and submit the Proposal according to the instructions of this RFP.

The Service Provider shall not be reimbursed for any costs, expenses, or charges which the Service Provider incurs or is required to expend in its preparation of a Proposal. ERI and OilCo shall not be under any liability whatsoever for or in respect of payment of any said costs, expenses, or charges.

This Request for Proposals is not a tender call. The lowest cost Proposal will not necessarily be accepted. ERI and OilCo reserve the right to accept the Proposal which it deems most advantageous to accomplish the SOW and reserves the right to reject any or all Proposals, in each case without notice, and to not complete the project.

ERI, in collaboration with OilCo, reserves the right, at its sole discretion, to negotiate with any Service Provider it believes has the most advantageous Proposal or with any other Service Provider or Service Providers concurrently. In no event will ERI be required to offer any modified terms to any Service Provider prior to entering a Contract with the successful Service Provider. Notwithstanding the evaluation contained herein, ERI reserves the right to evaluate Proposals, negotiate the Contract and/or to execute the Project, in whatever fashion is, at ERI's sole discretion, most advantageous to ERI and OilCo.

8.2 Proposal Requirements

The Proposal must demonstrate how the Service Provider will fulfill the SOW and meet all proposal requirements as described herein. ERI and OilCo will evaluate the Proposal based on the Evaluation Criteria provided herein. The Proposal shall include:

- The official registered name and contact information (title, telephone number, and e-mail address) of the Service Provider and other parties who will be involved in the project;
- A listing of all key project team personnel, including a description of the roles and responsibilities of each team member, demonstrating their ability to complete the project;
- Detailed Curriculum Vitae and other supporting documents that demonstrate the identified resources possess the required expertise and experience;
- An Executive Summary presenting a high-level synopsis of the Service Provider's response to the RFP. The summary should be a brief overview of the proposal and should identify the main features and benefits of the proposed efforts to be undertaken;
- A Preliminary Project Execution Plan, including:
 - Description of the technical approach that will be taken to complete the SOW;
 - A description of the project management approach; including any third-party subcontractors that may be used, the specific tasks for which they will be responsible and a description of how the Project will proceed from beginning to end;
 - A Project Schedule showing the duration of major tasks, timing of milestones and completion date of Project deliverables;
 - A Project Budget that provides a detailed breakdown of all estimated costs for the work proposed and an overall project cost. The Project Budget breakdown shall:
 - Be in Canadian dollars;

- Include all costs associated with project management, administration, professional services, personnel, materials, travel, incidental costs, and contingency costs; and,
- Identify hours worked and cost per hour for all resources, including contractors, subcontractors, or technical experts; and,
- List and describe the identified assumptions, risks, and constraints of the project.

8.3 ERI Contact

Any questions regarding this RFP should be submitted by e-mail to the address below with the project name in the email subject line.

Subject: Digital Technologies Roadmap Proposal
E-Mail: proposals@erinl.ca

8.4 Discrepancies, Omissions or Clarifications

In responding to the RFP, the Service Provider shall be deemed to have satisfied itself as to the correctness and sufficiency of its Proposal as submitted. No Proposal shall be conditional upon the availability of labor, staff, equipment, materials, permits, authorizations, or anything whatsoever which the Service Provider is required to provide.

Should the Service Provider find discrepancies in or omissions from the RFP or have any doubts as to the meaning or intent of any part thereof, Service Provider shall notify ERI by e-mail as per Section 8.3. Questions and comments that are deemed to materially affect the RFP SOW, timeline, etc. or that may be of interest to all prospective Service Providers will be handled as an Addendum while the RFP is open and will be made available to all Service Providers on ERI's website and by email to the same persons as who were emailed the initial RFP information if the RFP was initially disseminated by email.

Any Proposal or part thereof which is incomplete, conditional, or obscure, contains additions not called for, contains irregularities of any kind, or does not fulfill the mandatory requirements listed in this RFP or does not offer sufficient information and opportunities to complete the SOW may be rejected by ERI in its sole discretion.

8.5 Contract Requirements

Any Contract resulting from this RFP shall be governed by the laws of the Province of Newfoundland and Labrador and shall be issued in the legal entity name of the successful Service Provider(s) exactly as that Service Provider's legal name is stated in the response document.

Any provision in the Proposal may be included in the Contract as a direct provision thereof. ERI has no liability unless and until a Contract is negotiated and signed. ERI does not guarantee or warrant that it and the successful Service Provider will successfully negotiate and execute a Contract. ERI will not be responsible for any of the successful Service Provider's legal costs associated with Contract development, negotiation, or execution.

The Contract will provide for the following minimum terms and condition:

- ERI's standard payment terms which are net 30 days from receipt of an invoice. All applicable taxes must be shown separately on all invoices. All invoices will be subject to a 10% holdback which will be released upon satisfactory completion of the Deliverables;
- The Contract shall be reimbursement based and all progress payments requested by the successful Service Provider must be supported by sufficient detail regarding the work completed, resources used, costs incurred, and hours worked and must be approved by ERI before payment;
- Throughout the Project period the successful Service Provider will be accountable to ERI for all deliverables;
- It will be the responsibility of the successful Service Provider to sub-contract all consultant(s) that will be used for the duration of the project;
- The successful Service Provider and consultant(s) will be expected to meet periodically with ERI, OilCo and the Steering Committee to review the project progress; and,
- No payment will be made for the cost of work incurred to remedy errors or omissions for which the Successful Service Provider is responsible.

In the event of a decision by ERI to terminate the project at any point after entering into a Contract with the successful Service Provider, liability to the successful Service Provider will extend only to those costs actually and properly incurred up to the time of such termination.

ERI may amend or replace any Contract that may emerge from this RFP to complete future work related to this project. ERI may also issue a subsequent Expression of Interest (EOI) and/or RFP to address any future work related to this project or subject matter area, without awarding such work to the successful Service Provider. The decision to amend or replace an existing Contract and/or to issue a subsequent EOI and/or RFP will be at the sole discretion of ERI.

8.6 Liability

No claim whatsoever shall be entertained arising out of a Service Provider's failure to study the RFP or to submit the required information as stated in Section 8.2.

The Service Provider shall not hold ERI or OilCo, or any of their officers, employees, assigns, independent contractors, subcontractors, agents, or representatives liable for any error or omission in any part of this RFP. While considerable effort has been made to ensure that all information contained in the RFP is accurate, ERI and OilCo do not represent or warrant that the information contained in this RFP, or any supplemental documents is accurate, comprehensive, or exhaustive. Nothing contained in this RFP is intended to relieve the Service Provider from forming its own opinions and conclusions with respect to the matters addressed in this RFP.

ERI, OilCo and any of their officers, employees, assigns, independent contractors, subcontractors, agents or representatives shall not be liable to the Service Provider or any of its officers, employees, assigns, independent contractors, subcontractors, agents or representatives for any losses (including damage for loss of anticipated profit), expenses, costs, claims, damages, including incidental, indirect, special or consequential damages, or liabilities arising out of or by reason of or attributable to this RFP or arising out of, submitting a Proposal, requesting clarification, the communication of any information contained in the Proposal to any party, or due to ERI and OilCo's selection or non-selection of any Proposal received, or as a result of the termination of this RFP or the cancellation of the project.

8.7 Submission Instruction and Deadline

Two or more Service Providers may choose to work cooperatively to address the needs of this RFP. Service Provider team arrangements may be desirable to enable the parties involved to complement each other's capabilities and expertise, while offering the best combination of performance, cost and deliverables to be provided under the RFP. ERI will recognize the integrity and validity of Service Provider team arrangements provided that:

- The arrangements are identified, and relationships are fully disclosed; and,
- A prime Service Provider is designated that will be fully responsible for all Contract performance and requirements.

The Proposal should be signed on the Service Provider's behalf by a duly authorized signing officer of the Service Provider and submitted in a manner consistent with the requirements of this RFP.

One (1) electronic copy of the Proposal should be submitted as a single package by email in PDF format and received by ERI on or before the closing date; Friday, **February 11th, 2022, 5:00 PM (Newfoundland Time)**.

Proposals should be submitted by e-mail to the address below with the project name in the email subject line.

Subject: Digital Technologies Roadmap Proposal

E-Mail: proposals@erinl.ca