

Terms of Reference

Proof of concept trial for automated on-board gas monitoring

Proposals due: 5pm AEST 11 April 2023

Submit through the LiveCorp Bright Idea Platform

The Livestock Export Program (LEP)

The Australian Livestock Export Corporation (LiveCorp) is the rural Research and Development Corporation for the livestock export industry in Australia. LiveCorp's mandate is to provide research, development, extension (RD&E) and marketing services that maximise the productivity, sustainability and competitiveness of Australia's livestock export industry.

Meat & Livestock Australia (MLA) is the Research and Development Corporation representing Australia's livestock producers.

LiveCorp and MLA have an active collaboration through a joint program, known as the Livestock Export Program (LEP). The LEP delivers animal welfare improvements in Australia and overseas markets through funding programs in:

- Livestock management, health and welfare
- Market access and development
- Supply chain improvements
- Communication and stakeholder relationships
- Research, development and extension

Project background

The accumulated manure and urine from sheep on livestock export vessels form a 'pad' that provides a comfortable resting place during the voyage. Under certain conditions, there is a risk that ammonia can be emitted from the pad and concentrations in the air can increase. Similarly, ammonia can be emitted from manure and urine from cattle during export. At certain concentrations, ammonia can cause irritation for workers and livestock.

Other gases that may be emitted from machinery (such as carbon dioxide and monoxide), can also have negative consequences on livestock and on-board personnel in high concentrations.

Autonomous gas monitoring technologies from other industries, such as poultry or mining, may be a potential solution to this challenge.

The LEP has engaged Impact Innovation to develop an [Open Innovation Pipeline](#) to allow multiple small-scale technology trials to satisfy the livestock export industry's desire for practical and immediate solutions to common supply chain problems. The Innovation Pipeline enables the LEP RD&E Program to leverage existing technology solutions or provide an avenue to trial novel solutions and technology through short,

sharp projects. The open innovation approach will ensure that technology solutions can be identified faster and trialled within industry sooner, compared to the traditional research process.

These Terms of Reference (ToR) apply to one of the projects that Impact Innovation and the LEP will progress as part of the Open Innovation Pipeline. As such, responses to this ToR are expected to outline a three (3) month pilot project, or Proof of Concept (PoC) trial, that translates an existing solution to benefit the livestock export industry.

The intended benefits of this project to the livestock export industry include:

- Enabling early intervention in the event of ammonia (and other gas) emissions on livestock export vessels
- Improved safety for workers and livestock on board.

If the Proof of Concept (PoC) trial is successful, it may be selected to progress to a larger scale project, where appropriate.

Objectives

The primary objective is to automate the process of monitoring ammonia (and other gas) levels during livestock export to allow for early intervention. This solution should be able to be validated within a three-month PoC trial.

Outputs

Through interaction with stakeholders of the Livestock Export RD&E Program, and liaison with LEP management, the successful tenderer will provide a potential solution to the problem described in the Project Background. It is expected that the project outputs include detection systems to automatically monitor ammonia (and other gases) during livestock export.

The successful tenderer should specifically produce:

- A final report detailing:
 - The viability and success of the solution
 - Recommendations for the implementation of project outcomes to industry.
- Tenderers must work with Impact Innovation to develop materials in support of extension and adoption of the findings to the LEP's stakeholders.

Methodology

Applications must detail the methodology that tenderers propose to use to deliver against the project objectives.

Responses must include a description of how the solution will address the challenge outlined in the Project Background within the three (3) month project timeline.

Furthermore, the Tenderer should outline any resources or access to livestock export facilities required to complete the project.

Selection Criteria

To align expectations for the three (3) month project timeline, Tenderers are required to respond to the following project selection criteria in addition to the proposed project methodology.

1. How mature is the proposed solution - e.g., how many customers are currently using it (or have used it) in a livestock production environment, and for how long?
2. If relevant, provide the contact details of a reference customer for LiveCorp to contact regarding their experiences using your solution.
3. Describe in reasonable detail how the solution will be adapted to suit the challenge in the context of the livestock export industry.
4. Describe how the solution will be supported during industry implementation, including how urgent/critical issues will be addressed, and by whom.
5. If relevant, describe the process for making changes to the solution, should the pilot project discover there is a need to do so, both during implementation and when operating in a livestock production environment.
6. If the solution collects data, describe the privacy and data collection policies, including who owns and can access the data that is collected, how it will be used, where it will be stored, and if will be shared with other parties.
7. Indicate if data may be incorporated into other industry databases through an Application Programming Interface (API) etc.
8. Provide indicative pricing for the total annual cost of developing, implementing, and supporting the solution.

Integrated solutions that address multiple Terms of Reference will be looked upon favourably.

Fees and proposal format

The Proposal should include an outline of the proposed plan, deliverables and fees in a table with the below elements (this may be elaborated on in keeping with the proposal's design).

Milestones				
Milestone	Milestone Details	Date Complete	Research/ Service Organisation Fees	Expenses
Milestone 1	<i>[Insert details of the Milestone that must be achieved, such as the provision of a Service or Deliverable or a particular stage of the Project that must be met]</i>	<i>[Insert the date by which the Milestone will be met]</i>	<i>[Insert the funds payable to the Research Organisation for this Milestone or particular rates/material basis]</i>	<i>[Insert the funds for expenses incurred by the Research Organisation for this Milestone or particular rates/material basis]</i>

If travel fees are to be sought separately to the costs of the project, an estimate of this cost should also be included (which will be reimbursed by the LEP based on actual expenditure).

Project timing

It is anticipated that the project will be delivered within a 3-month time frame in mid-2023. This timeframe includes the development of the final report for the pilot project. The tenderer should indicate if more/less time will be required.

Budget

The tender response should include all resources and personnel required to undertake the project together with a complete budget. This includes any subcontractors, their details, roles and expected fees.

Capacity to deliver project

Tenderers should demonstrate the skills and qualifications that position the proposed team as being the most appropriate for the project execution. The submission should also detail two examples of previous work completed that is relevant to this project.

Tender selection

In line with governance requirements to deliver value for money, this project will be put out for tender to identify the best placed consultant to deliver the ToR.

The two most appropriate proposals will then be asked to make a brief presentation to the Livestock Export RD&E Program Management Committee.

The Management Committee will then select the proposal that offers the most appropriate project plan and demonstrates the best value for money. They may also ask tenderers to supply further details (if required).

Terms of Agreement

Where no previously negotiated agreement is in place, unless stated otherwise, all terms of the standard agreement (which you can find [here](#)) will be deemed to be accepted by the tenderer. If the tenderer is proposing any variations to those terms, the tenderer must identify the clause, detail the reasons for non-acceptance and, if appropriate, provide the tenderer's proposed alternative wording to the clause.

The Tenderer should advise in the proposal what background Intellectual Property (IP) will be introduced to the project, or if they intend to seek any ownership of the final IP created in this trial.

Other terms

Impact Innovation will be acting on behalf of the LEP in the day-to-day management and completion of the PoC trial with the successful applicant.

The LEP may seek to use the successful tenderers branding/logo (in line with style guides and branding/logo requirements) on the final outputs.

Confidentiality

The terms and details of any proposal will be treated as confidential.

Conflict of interest

Where tenderers identify that a conflict of interest might arise in the provision of goods or services contemplated by this request for tender, tenderers are to identify that potential conflict of interest in their tender.

Further information

If you have questions regarding this project, contact:

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Appendix 1 – Standard Research & Development Services Agreement