



Expression of Interest

PI-led Submission to IERC Defined Calls

Background

Technology Centres are market focussed, industry collaborative research centres serving markets of scale, identified by industry and validated by Enterprise Ireland and IDA Ireland. Centres are highly visible focal points in the close to market research landscape anticipating future technology trends and opportunities for existing industry and acting as beacons for new foreign direct investment. Centres will form a key pillar of the research system by addressing an identified gap in the existing system. They will be managed in accordance with successful delivery to contracted KPI's and continued industry relevance.

The International Energy Research Centre is a key element of the government's energy research strategy, which, inter alia, aims to develop world class and world scale energy research capability in Ireland that contributes to Ireland's energy and enterprise policies and is directly relevant to industry, in Ireland and abroad.

Invitation to submit an expression of interest

The IERC invites interested Research Performing Organisations to submit a description of their proposed project, their professional suitability and their institutions capabilities for consideration by the Centre Steering Committee. The purpose of this exercise is to support Principal Investigators with the support of 2 or more collaborating industry partners to propose new project activities aligned to the research strategy and impact outcomes for IERC Type 2 collaborative projects. The IERC will assess the submission with respect to technical/commercial challenges identified and outlined in response to the specific challenges outlined below and that the proposing team has the relevant skillsets and capabilities required to address them. Further details of the evaluation criteria are outlined below.

Note: It is the responsibility of the applicant to ensure that proprietary knowledge is protected prior to the submission of any confidential information. IERC non-disclosure agreements are available on request from info@ierc.ie

The following document should be used to outline the proposed project aligned to one of the specific challenges below and provide a description of team capabilities and experiences in relevant domain areas. The respondent must identify a lead institution and PI for the entire project and demonstrate that individual’s suitability for the role.

Projects proposed should be multi-disciplinary in nature therefore submissions may involve the inclusion of one or more collaborating institutions. IERC T2 collaborative research projects require a consortium of two or more industry partners. The respondent must also identify two or more companies who are willing to join the IERC as members (through its membership model).

In addition to membership fees the industry partners must be willing to co-resource project activities in accordance with the IERC collaborative project funding requirements (10% minimum industry cash towards total cost of project and 25% minimum in-kind industry support). The IERC will co-resource the remaining costs of the RPO partners to a maximum of 65%. Further details on the industry membership fees and co-funding model are available directly from the IERC Business Development Manager. The contents of this EOI must be agreed with the industry partners in advance of submission to the IERC. An overview of the main steps in the defined call process is outlined in Figure 1 below:



Subject to successful EOI review, the PI and industry partners will be required to work collaboratively with the IERC Management team to complete a detailed project proposal and full costing. The full project proposal will be subjected to a confidential external peer review assessing financial, technical and commercial outcomes followed by funding approval and signoff by the IERC Steering Committee. The proposed duration of research projects are approximately 2 years with a total value (excluding RPO overheads) not exceeding €500k (subject to revision following full project costing with all partners).

Evaluation Criteria

The following general evaluation criteria will be applied to each expression of interest arising from this call:

1. Project - Commercial justification (Section 1: 1.1 – 1.4 & 1.9)
 - State business case
 - Describe motivations of proposed industry partners
2. Project - Technical relevance (Section 1: 1.5 – 1.8)
 - Outline impact on state of the art
 - Highlight IP potential
3. Applicant suitability (Section 2)
 - Lead PI technical expertise
 - Lead PI leadership experience
 - Comprehensive list of team capabilities as per project requirements
 - RPO track record

Following successful review, PI's and collaborating industry partners will be invited to meet with members of the IERC to discuss the proposal and a decision will be made regarding further development of a full proposal at that stage.

Submission Guidelines

The purpose of this defined call is to stimulate an outline proposal addressing one of the specific challenges below. Subject to successful selection of the EOI, the subsequent development of a fully scoped and costed proposal with the IERC team will be required. This call is non-binding and should be considered a working draft.

Fully completed expressions of Interest and any queries regarding the call text or application should be submitted to info@ierc.ie by 5pm on Friday 8th July 2016. Late applications will not be eligible.

Timelines:

Indicative timelines (subject to respective partner availability) are outlined below:

Activity	Indicative Timelines
EOI call launch	27 th May 2016
Information Webinar	TBD
Call close	8 th July 2016
Feedback on submissions	25 th July 2016
Workshop with IERC and Industry Partners	1 day TBD
Project planning (completion of fully scoped and costed proposal)	+8 weeks
External review of proposal	+4 weeks
Team response to review	+2 weeks
IERC Steering Committee review and signoff on funding	+2 weeks
Project start	+4 weeks

Theme: Low Carbon Heating and Cooling

Specific Challenge 1:

The EU Strategy on Heating and Cooling (2016) calls for ‘...innovative solutions to shift to a smart, efficient and sustainable heating and cooling system...’ in order to reduce carbon emissions and costs, and to improve air quality. In addition if Ireland is to meet its 2020 renewable energy targets then a great deal more needs to be done to decarbonise the supply of heat into buildings. The IERC is looking to fund projects that can deliver cost effective low carbon heating solutions for the residential housing sector that have the ability for large scale deployment. Solutions should not be confined to novel technologies but potentially include improved use of ICT and new models for deployment. Account must be taken of availability and security of fuel or energy supply, cost of deployment, and lifetime environmental performance improvements over typical current practice.

Theme: Energy Efficiency and Carbon Management (Retrofit)

Specific Challenge 2:

The Energy Efficiency Directive places energy savings requirements on EU countries’ buildings. This Requires EU countries to establish national plans for renovating overall building stock. The residential sector is key to delivering reductions in carbon emissions and moving to an economy that is environmentally sustainable.

Energy upgrades (including retrospective insulation and replacement of existing windows) of residential buildings (including single and multi-family buildings and social housing buildings) with improper mechanical ventilation leads to increased air tightness that has often been related with inadequate air exchange rates (i.e. fresh air supply). The result of which can eventually lead to unintended consequences such as mould growth and increased condensation risk, which can cause damage to the building fabric and negatively impact occupants’ wellbeing through poor indoor air quality.

Thus a key challenge remains, in the retrofitting of all types of residential buildings, in how to address ventilation for provision of acceptable indoor environmental quality with low energy consumption¹. The opportunities for beneficiaries (construction, developers, product manufacturers, home owners) are to realise the co-benefits of the retrofit at a cost effective price point. The IERC is looking to fund a project that develops demonstrable solutions to this issue, taking account of cost, air quality, fabric protection and high energy efficiency standards.

¹ See also the *Build Upon* project <http://buildupon.eu/>

Theme: Smart and Sustainable Communities

Specific Challenge 3: Advanced metering infrastructure enables the provision of new services to energy consumers. The proliferation of local and home area networks, intelligent devices and appliances and smart sensors in homes and commercial facilities has the potential to extend that service provision beyond the meter.

The challenge is to develop useful *energy services* and *related systems* that both maximise the business opportunity for the roll-out of smart technology and win support from energy consumers by providing real added value. These beyond-the-meter services may be provided by utilities or by other service providers and will unlock additional energy savings potentials. Such services may include provision of information services, energy and equipment management services, billing, marketing, demand management and aggregation services and identification of energy savings opportunities. Related systems may include systems used by service providers to provide such services or independent systems that provide information, make optimal decisions or undertake energy performance improvement actions on behalf of and in the best interests of the consumer. The IERC is looking for projects that develop new energy services, related systems and business models using smart technology that provide additional benefits to consumers, and that will accelerate real consumer interaction in the future energy market.

Section 1.0 Project Details

Please complete all sections in Calibri Font 12

1.1 Project Title

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1.2 Industry Collaborators (Minimum of 2)

*Repeat as required

Name	
Department	
Company name	
Position	
E-mail	
Tel	

Name	
Department	
Company name	
Position	
E-mail	
Tel	

1.3 Project Objectives (maximum 1 page)

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1.4 Business opportunity identified and significance to each industry collaborator (maximum 1 page)

1.5 Describe the state of the art and proposed impact of this project (maximum ½ page)

1.6 Proposed research required to comprehensively address the opportunity (maximum 3 pages)

- *Outline primary workstream areas and proposed research activities
- * Capabilities will be matched to this list in section 2.1

1.7 Describe Intellectual Property potential of the proposed research

1.8 Indicative summary costs of proposed research activities (subject to revision following full scoping and costing in conjunction with IERC at proposal planning stage)

Partner	Lead Research Institution	Collaborating Research Institution	Totals
Pay	€	€	
Capital equipment	€	€	
Consumables	€	€	
Domestic Travel	€	€	
International Travel	€	€	
Industry Cash commitments	TBD	TBD	
Totals	€ Total costs	€ Total Costs	

An IERC consortium requires a minimum of 2, preferably 3 industry partners. The partners will be required to share 10% cash and 25% In Kind contribution to the total cost of the project in proportions to be agreed by the partners.

Industry partners are expected to become members of the IERC in order to participate in an IERC project. For more details on the IERC industry membership model please contact: info@ierc.ie

All industry partners have confirmed their ability to meet the IERC consortium requirements.	Y
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Section 2.0 PI team, Institutional Details and Capabilities

2.1 Lead Principal Investigator

Name		
Department		
Institution		
E-mail		
Tel		
Do you hold a permanent contract (Y/N)		
If no, when does your current contract expire?		
Please indicate your gender (Male/Female)		

2.2 Bio of Lead PI including leadership, management experience and recent engagements with industry (max 1 page)

2.3 Co- Principal Investigators (*repeat as required)

Name		
Department		
Institution		
E-mail		
Tel		
Do you hold a permanent contract (Y/N)		
If no, when does your current contract expire?		
Please indicate your gender (Male/Female)		

Name		
Department		
Institution		
E-mail		
Tel		
Do you hold a permanent contract (Y/N)		
If no, when does your current contract expire?		
Please indicate your gender (Male/Female)		

2.4 Align proposed expertise to proposed research workstreams (maximum 1/2 page)

Workstream Title	Workstream Leader (PI/Industry Partner)	Relevant Expertise of Leader (and team if relevant)

2.5 Progenitor Projects (list any earlier related project(s) relevant to this call)

Funding Body	Grant Reference	Value of Award	Key Impacts

2.6 Progenitor and available IP

IP	Reference

2.7 What unique benefit does the lead institution/consortium offer versus other applicants?
(max 1/2 page)

Section 3: Signatures and Verification

All signatures must be original signatures and include signatures of all formal and informal collaborators based in 3rd level institutions, Research Performing Organisations and Industry Partners.

Signature of Principal Investigator (and collaborators, if applicable).

PRINCIPAL INVESTIGATOR:		DATE:	
ASSOCIATE INVESTIGATOR: * REPEAT AS REQUIRED		DATE:	
INDUSTRY COLLABORATOR 1		DATE:	
INDUSTRY COLLABORATOR 2		DATE:	
PERMANENT CONTRACT HOLDER <i>(REQUIRED IF THE PI DOES NOT HOLD A PERMANENT CONTRACT)</i>		DATE:	

Signature of TTO/Authorised Officers of the Designated Institutions.

	Lead Institution	Collaborating Institute (if any)
NAME:	_____	_____
POSITION:	_____	_____
SIGNATURE:	_____	_____
DATE:	_____	_____



The IERC acknowledges the support from both the Department of Enterprise Jobs and Innovation and the Department of Communications Energy and Natural Resources.