Notes on Completion: Please refer to the appropriate NIA Governance Document to assist in the completion of this form. The full completed submission should not exceed 6 pages in total.

NIA Project Registration and PEA Document

Date of Submission

Sep 2015

Project Reference Number

NIA_SPT_1505

Project Registration

Project Title

Trial of Open Innovation Model in the Utilities Sector

Project Reference Number

NIA_SPT_1505

Project Licensee(s)

SP Energy Networks Transmission

Project Start

October 2015

Project Duration

6 years and 3 months

Nominated Project Contact(s)

James Yu (Future Networks Manager)

Project Budget

£1,375,000.00

Summary

The scope of this NIA project is to test, review and exploit an OI model.

A staged approached is to be initialised in testing and reviewing the OI concept to make sure that it is fit for purpose and can suit the nature of the utilities sector such that innovation can be carried out in a reliable, coordinated, efficient and cost effective manner.

Stage 1 – Planning and Approving (2-4 *months*)

Develop an appropriate business model through appropriate internal and external stakeholder engagement.

Internal – Consider the asset supply chain for deeper company innovation engagement. This will include engaging with various departments such as System Planning, Transmission operations, System Analysis and Regulations.

External - Look outside the business and sector for a wider innovation approach and locate potential businesses/universities…etc. that show capabilities in providing promising innovation solutions.

Stage 2 – Delivery (18 *months*)

This will involve delivering the programme, to meet internal and external stakeholder requirements. We will measure the success of the program based on the number of challenges faced.

External resources such as contractors and/or equipment will be required in the development of the programme. The individuals will be required to assure the plan is followed with weekly updates informing the external/internal teams of the progress. SPEN will initially targeted two to three business challenges per year that will benefit from the Open Innovation programme and look to increase the use of SME's in the process.

One of the initial projects will address the business challenge of transmission tower foundation condition monitoring where every year a large sum of money is invested inspecting the foundations of our circuit towers. The costs include the hiring contractors to assess these foundations manually. Consequently, we are looking for a non-intrusive and more efficient method.

Stage 3 – Review and further improvement(12 *months*)

This will involve looking over the programme. The programme will have to be thoroughly checked and analysed to assure key considerations such as IPR (Intellectual Property) arrangements and UK innovation governance are consistent so that Electricity licensees can benefit from this model. Furthermore, the programme will have to be built in a sustainable manner to deliver long term benefits which are not just applicable to ScottishPower but relevant to other stakeholders.

Stage 4 – Follow up and sustainable operation (12 *months*)

This is the final stage and will involve maintaining the programme at a high level. Measures will be put in place to ensure that the programme is continually improved and remains relevant. Along with this, a regular review within the company and with external stakeholders will be carried out to fine tune the mechanism as well as the scope. We will start with a test case within the six months of launching the programme and get operational experience from this model.

Third Party Collaborators

University of Strathclyde

Nominated Contact Email Address(es)

innovate@spenergynetworks.co.uk

Problem Being Solved

It is recognised that innovation should not always be carried out by a single party and that no one company or department has all the good ideas. Sometimes, the most innovative and game-changing ideas can come from outwith the sector. In addition, it can be time and resource challenging to develop and deliver suitable projects within the business. Innovation development and deployment can be further adversely impacted by lack of appropriate in-house skills or competence. With widely distributed knowledge and skills it is more difficult for companies to go it alone.

Method(s)

The method proposed for evaluation and deployment, to address the aforementioned problem, is the Scottish Enterprises (SE) Open Innovation (OI) model. Using the model SE seek to find companies their perfect development or R&D partner and put a lot of time and effort into pairing up potential partners.

OI recognises that the skills and resources needed for innovation are spread out amongst a diverse group of talented people and organisations.

OI aims, through the collaborative effort of parnership of local governments, universities, business support services, and other public bodies to deliver a diverse and dynamic programme of innovation activities.

Scope

The scope of this NIA project is to test, review and exploit an OI model.

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Objective(s)

Objective

Development of Business Plan

Details

Create a business plan that will be the main guidance into the necessary requirements in working with SME'S. This essentially will be to drive the planning and approval stages forward, arranging meetings/updates

KPI

Check every month to keep on track

Objective

Development of OI Business Plan

Details

Develop a business plan that will identify internal/external needs and develop different strategies if none currently exist. Its main purpose is to guiding the innovation project towards completion.

KPI

Check every month to keep on track

Objective

Number of Challenges

Details

Would aim to consistently provide 2-3 business challenges per year that can be resolved with the help of an SME(s). We would assess the challenges arising and completed

KPI

2-3 per annum

Objective

Number of SMEs engaged

Details

Engage with a sufficient number of SME's per project, allowing various solutions and options to be assessed.

KPI

Minimum 5 per project

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

- Developing an OI model and project programme that is fit for purpose and suits the nature of the utilities sector
- Ensure that collaborative innovation is undertaken in a reliable, coordinated, efficient and cost effective manner
- Identification of two or three business challenges a year, that will benefit from the Open Innovation programme, and innovative products, processes or services well suited to addressing these challenges

Project Partners and External Funding

Scottish Enterprise will be a Project Partner

SP Energy Networks has secured a £308,000 Open Innovation Programme Award from Scottish Enterprise

Potential for New Learning

The potential for new learning is considered to be significant if the objectives of the OI programme are realised as this will ensure deeper company engagement and a wider external innovation approach to solutions to address business challenges.

Scale of Project

This will depend on a positive evaluation of the Open Innovation Programme and the subsequent extent of deployment.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

The primary focus for Scottish Enterprise will be on engagement with Scottish SMEs.

Revenue Allowed for the RIIO Settlement

None

Indicative Total NIA Project Expenditure

£292,000

Project Eligibility Assessment Part 1

There are slightly differing requirements for RIIO-1 and RIIO-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RIIO-2 / RIIO-1).

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations (Please complete sections 3.1.1 and 3.1.2 for RIIO-2 projects only)

Please answer **at least one** of the following:

How the Project has the potential to facilitate the energy system transition:

n/a

How the Project has potential to benefit consumer in vulnerable situations:

n/a

Requirement 2 / 2b

Has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

Please provide an estimate of the saving if the Problem is solved (RIIO-1 projects only)

Innovative solutions to business challenges will be evaluated against a range of criteria including their potential to deliver net financial benefits to customers.

Please provide a calculation of the expected benefits the Solution

Not applicable at this stage.

Please provide an estimate of how replicable the Method is across GB

This will be dependent on the innovative solutions to business challenges taken forward and, consequently, it is not possible, at this stage, to provide and estimate of how replicable the Method is across GB

Please provide an outline of the costs of rolling out the Method across GB.

Not applicable as this stage in evaluation of the OI model

Requirement 3 / 1

Involve Research, Development or Demonstration

A RIIO-1 NIA Project must have the potential to have a Direct Impact on a Network Licensee's network or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

☑ A specific piece of new (i.e. unproven in GB, or where a method has been trialled outside GB the Network Licensee must justify repeating it as part of a project) equipment (including control and communications system software).

☑ A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)

☑ A specific novel operational practice directly related to the operation of the Network Licensees system

☐ A specific novel commercial arrangement

RIIO-2 Projects

☐ A specific piece of new equipment (including monitoring, control and communications systems and software)

☐ A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is unproven

☐ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)

☐ A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology

☐ A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution

☐ A specific novel commercial arrangement

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

The business challenges to be addressed are likely to be common to the Sector such as the initial project area identified for consideration which will address the non-intrusive condition assessment of steel tower foundations. Consequently, it is considered that the learning realised will be applicable to all relevant Network Licensees.

Or, please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the project (RIIO-1 only)

n/a

☑ Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees

Is the default IPR position being applied?

☑ Yes

Project Eligibility Assessment Part 2

Not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed.

Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

Unique innovative solutions will be sought to address business challenges. Potential solutions will be checked against on-going activities within the Sector to ensure no unnecessary duplication.

If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

n/a

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

n/a

Relevant Foreground IPR

n/a

Data Access Details

n/a

Please identify why the Network Licensees will not fund the project as apart of it's business and usual activities

n/a

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks(e.g. commercial, technical, operational or regulatory) associated with the project

n/a

This project has been approved by a senior member of staff

☑ Yes