

NIA Project Registration and PEA Document

Date of Submission

Mar 2023

Project Reference Number

NIA_SPEN_0083

Project Registration

Project Title

Open Innovation Phase 2

Project Reference Number

NIA_SPEN_0083

Project Licensee(s)

SP Energy Networks Distribution

Project Start

April 2023

Project Duration

1 year and 1 month

Nominated Project Contact(s)

Andrew McDiarmid

Project Budget

£150,000.00

Summary

This project will look to trial the use of hackathons to solve issues in processes and algorithms used in our systems, and to improve the efficiency and speed of these algorithms.

Nominated Contact Email Address(es)

innovate@spenergynetworks.co.uk

Problem Being Solved

In the first phase of the Open Innovation project (Trial of Open Innovation Model in the Utilities Sector, NIA_SPT_1505), we trialed the use of internal innovation campaigns with solver communities to solve specific challenges, and produce further innovation projects to develop these solutions further. One aspect that was not looked at however was the use of Open Innovation models to solve problems and inefficiencies in our processes and algorithms.

Method(s)

In this phase of the project, we will look to identify challenge areas where we can use Hackathons and other Open Innovation tools to improve processes and algorithms, and provide new and innovative solutions to provide new insight into our assets.

Hackathon events are intensive sessions where groups of engineers work together to solve a particular challenge. Within the session, the solutions are developed and tested progressively, before they are presented at the end of the session. All of the solutions developed at the session are then assessed by an expert panel, who can then take the best solutions forward to develop them further before trialling them.

We will identify potential challenges within SP Energy Networks, focussing on the challenges posed by our data and the digitalisation of our processes and assets.

In addition to this, we will continue some of the work in finding challenges from the Open Innovation Phase 1 project, with work to choose an appropriate partner to disseminate other challenges for SMEs to be carried out.

Scope

This project will cover the development of a number of challenges focussing on data and digitalisation within SP Energy Networks. The exact number, and the nature of these challenges, will be able to be determined once the project is initiated, with a process of challenge identification to be carried out using the internal system. In addition, we will be identifying partners to assist with the organisation of these Hackathons.

Objective(s)

1. Develop a framework for identifying appropriate challenges which can be worked on in hackathons while ensuring safety with robust checks.
2. Develop a series of challenges for these Hackathons, and track the benefits of the improvements made in each challenge.
3. Review the efficacy of the hackathons for developing solutions across each area, and develop knowledge to allow future hackathons to be run and leveraged where the most benefit can be found.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

N/A

Success Criteria

The delivery of the above objectives, within budget and within agreed timelines, as is reasonable depending on the knowledge at this stage of the development phase.

The project will be managed within SPEN applying due diligence and best practices where appropriate.

Project Partners and External Funding

Project Partners will be determined through the process of this project.

Potential for New Learning

This project will provide useful information on the use of hackathons to solve some of the key data and digitalisation problems and challenges that networks face. This will be disseminated in the standard ways for NIA projects.

Scale of Project

The project will initially run on a limited scale, with a limited number of challenges pursued over the project period, to ensure that the benefits of these challenges being solved can be realised.

Technology Readiness at Start

TRL7 Inactive Commissioning

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

N/A

Revenue Allowed for the RIIO Settlement

0

Indicative Total NIA Project Expenditure

£150,000

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)

The savings which can be found through this project will be determined through the project lifespan, as this will be dependent on which challenges are addressed.

Please provide a calculation of the expected benefits the Solution

N/A, as per the above.

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

This project can be replicated by all network licencees across the UK; the method for solving challenges can be used across a wide range of contexts.

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

This cost will be determined through the project, as this will establish the cost of the process, from identifying challenges through to delivering a solution.

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

RIO-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. 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 (RIO-1 only)

N/A

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.

To the best of our knowledge, through a search of the SmarterNetworks portal, there are no similar projects being carried out, and there is 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

The project is innovative as, to the best of our knowledge, this has not been trialled in the utilities sector. The method of solving data and digitalisation issues is untried in this sector.

Relevant Foreground IPR

N/A

Data Access Details

The SP Energy Networks data sharing policy can be found [here](#).

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

While the Phase 1 of the Open Innovation project was successful, the use of the techniques to solve data and digitalisation problems rather than physical challenges presents additional risks.

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

There are additional risks to running this challenge; ensuring that sufficient information is provided to allow solutions to be developed while ensuring no risks to data and operational security occur will be a major issue faced.

This project has been approved by a senior member of staff

☒ Yes