

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

Jan 2022

Project Reference Number

NIA_NGN_338

Project Registration

Project Title

Street Score 2

Project Reference Number

NIA_NGN_338

Project Licensee(s)

Northern Gas Networks

Project Start

February 2022

Project Duration

1 year and 0 months

Nominated Project Contact(s)

Steve Dacre SDacre@northerngas.co.uk

Project Budget

£328,119.00

Summary

Street Score 2 will take the concepts outlined in Street Score 1 and accelerate them forward to representative field testing through several design/test cycles. Initially, selected customer groups and network operatives will review the concepts and add to/improve them. A number of these will be taken forward and further designed. These will then be reviewed again by the working groups, and a smaller number moved into a prototype stage. Once these prototypes have been created, a validation session will be held. This will allow participants to test the prototypes in a simulated working environment. To conclude, this feedback will be taken and used to identify the routes forward to field use for the concepts.

Third Party Collaborators

Energy Innovation Centre

Steer Energy

Nominated Contact Email Address(es)

innovation@northerngas.co.uk

Problem Being Solved

Customers in vulnerable situations and the wider public often find journeys through and around Street works a challenge. When travelling through street works, there is an inevitable level of inconvenience caused by the works. However, the public's tolerance level quickly diminishes if there are avoidable obstructions or signage is unclear.

Through the data gathered by Steer Energy during the Street Score 1 Project (concept development), completed in March 2021, funded by SGN, NGN, and WWU, it was clear that vulnerable individuals, carers and advocates are unhappy with the current way street works are designed and wish for more accessible works.

A number of ancillary conversations were carried out with Advocacy groups and individuals to gain deeper knowledge. In addition, almost 40 street works sites visited in order to gain perspective on typical arrangements and challenges.

The suggested improvements included:

- Signage with Clearer Information
- Design works around the most vulnerable (and adversely affected) first.
- More education/training for staff to understand the needs of vulnerable groups navigating the works.
- More stable ramps
- More consideration of the pedestrian experience
- Fewer diversions onto busy roads
- Better assisted crossings to lessen confusion and even danger for pedestrians

This proposal for Street Score 2 will aim to take the multiple concepts outlined in StreetScore 1 and accelerate them forward to field testing through a design / test cycle.

Method(s)

Initially, selected customer groups and network operatives will review the concepts and add to/improve them by attending specific key stakeholder engagements. These stakeholders have previously been identified as the best source for representation, in Street Score 1. A number of these, and possible additional ideas will be taken forward and further designed. The concepts will then be reviewed again by the working groups, and a smaller number moved into a prototype stage. Once these prototypes have been created, a validation session will be held. This will allow participants to test the prototypes in a simulated working environment utilising findings from live street works examples where possible. To conclude, this feedback will be taken and used to identify the routes forward for these concepts in the field.

Data Quality Statement

The project will ensure that data is of sufficient quality to deliver project objectives by engaging and testing prototypes/revised concepts with the customer advocacy groups identified as part of Street Score 1, this will provide additional stakeholder led validation. Using these already established groups will result in consistency in the data that is being captured and presented as part of the project findings as well as ensuring that the project team, led by Steer Energy, can deliver the project objectives to a high standard.

Measurement Quality Statement

The project will collect data directly from consumers and customer advocacy groups that are key stakeholders in the consumer vulnerability space. This data will be communicated and reviewed with the wider project team regularly to ensure transparency and consistency. Through engagement with informed and established stakeholder groups, the resulting action will ensure that in consistency in the data that is being captured and presented as part of the project findings is paramount as well as ensuring that the project team, led by Steer Energy, can deliver the project objectives to a high standard.

Scope

The overall scope is the engineering development of Street Score 2 – Inclusive of bring ideas and concepts to conducting design development and prototype development. This is achieved by.

- Recruiting, engaging and sharing information from Street Score 1 with the various interested parties
- Gather the responses and collate further ideas/concepts
- Interact with 30-50 different stakeholders
- Document design and review with feedback
- Develop a number of prototypes and review

Objective(s)

Stage 1

Recruit and properly engage with the required stakeholders, users and network staff into the project. - Project team constructed

Stage 2

Provide the information from Street Score 1 to the various interested parties. - Information shared with relevant stakeholders

Gather information from parties' responses and collect further ideas / concepts. - Information collected and documented

Intend for interactions with around 30-50 different stakeholders, all with competing and often diverging requirements. - Record and report on number of stakeholders engaged

Stage 3

Conduct design development and review loops with the project stakeholders. - Document design development and review loops with recorded feedback

Stage 4

Undertake a number of prototype development and review loops with the project stakeholders. - Prototype and demonstrated around five different concepts.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

This project has been input into the ENA Consumer Vulnerability Impact Assessment Tool and there are no negative impacts on consumers in vulnerable situations therefore there is no need to take mitigation measures.

Success Criteria

The project will be deemed a success if the following are achieved:

- A short summary report (i.e., 30 pages max). Ancillary documentation that has been developed to back up the findings will also be provided at the end of the work.
- A range of designed and tested products and systems in order to minimize disruption to vulnerable customers and the wider public.
- A range of methodologies for communication with customers for Operatives and wider company.
- A methodology for "scoring" street works in order to provide Operatives with a methodology to improve their layout.
- "Buy-in" from a number of Operational individuals to this work, leading to a higher chance of embedding the work longer term within the organization.
- Insight from a group of individuals and advocacy groups to potentially be utilized in improving other areas of customer delivery.
- "Route to market" will be highlighted (ie. trying to identify who might manufacture, etc) and the potential costs involved
- Further understanding of the challenges for vulnerable customers and the wider public when travelling through street works.

Project Partners and External Funding

The project partner for this project is Steer Energy and the project will be wholly funded via NIA.

The EIC will facilitate this project.

Funding licensees include NGN, Cadent, WWU, SGN, SSEN and NPg.

Potential for New Learning

Utility companies will develop better means of working with communities to action the required operations when it comes to street works. Street Score 2 will provide further understandings of the challenges for vulnerable customers and the wider public when travelling through street works. Additionally, the project team will gain an insight from a group of individuals and advocacy groups to

potentially be utilized in improving other areas of customer delivery.

All reports will be published on the ENA Smarter Networks Portal.

Scale of Project

The project will be delivered as detailed and will bring significant advances in knowledge relating to street works and their effect / impact on consumers in vulnerable situations. If the scale was lessened, it would significantly reduce the benefit received from the project.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL5 Pilot Scale

Geographical Area

The project is research based and is GB wide

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

Total external costs: £246,099.65

Total NIA expenditure: £328,118.53

NGN external cost: £39,183.33

NGN internal cost: £13,061.11

NGN total NIA expenditure: £52,244.44

WWU external cost: £44,683.33

WWU internal cost: £14,894.44

WWU total NIA expenditure: £59,577.77

SGN external cost: £44,683

SGN internal cost: £14,880

SGN total NIA expenditure: £59,563

Cadent external cost: £39,183.33

Cadent internal cost: £13,061.11

Cadent total NIA expenditure: £52,244.44

SSEN external cost: £39,183.33

SSEN internal cost: £13,061.11

SSEN total NIA expenditure: £52,244.44

NPg external cost: £39,183.33

NPg internal cost: £13,061.11

NPg total NIA expenditure: £52,244.44

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:

This phase should deliver a range of designed and tested products and systems to minimise disruption to customers in vulnerable situations and the wider public. Fundamental to the success will be collaborating with a “customer user group” of selected vulnerable individuals, carers, advocacy groups, and a similar group of LNO stakeholders. Having this real-world feedback and improving these concepts’ designs through this interaction will hugely benefit the value created. This will also provide opportunities for insight from a group of individuals and advocacy groups that could be utilised to improve other areas of customer delivery.

There is a significant behavioural element to addressing the challenges of making street works suitable for all. It’s clear that “being human”, providing empathy, understanding, and assistance is crucial, no matter the technology, products, or processes developed to provide this

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)

N/A

Please provide a calculation of the expected benefits the Solution

The aim of the project is not necessarily to see financial benefits but to improve the experience of vulnerable customers and the wider public, when navigating through street works. In addition, the project has the ability to provide the below benefits:

- Financial – possibility of reduced fines for street works
- Health and safety - Advise guidelines and regulations regarding street works. Improved customer safety whilst navigating through street works and fewer member of public incidents.
- Customer – improved customer experience with street works
- Community – improved engagement between network operators and community groups

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

Project reporting will quantify the scale and cost of the opportunity of implementation taken from this project.

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

Roll out cost are not within scope as the end TRL level is 5

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 learnings from this project could be adopted by other Network licenses. However, the cost and methodology to roll this is out have not yet been developed

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

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.

A thorough check has been completed of the Smarter Networks Portal and no similar projects have been identified. All networks were informed of the project via a project notification form on huddle and no issues of duplication have arisen.

Steer Energy were selected as provider to develop the Street Score1 project through a call for innovation on the EIC portal. Street Score 2 is a follow-on project to the first project to further develop, test and define possible outputs from Street Score1. 3 GDN's were party to Street Score1, with all GDN's and one DNO now party to StreetScore2.

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

This project places customers at the heart, redefining the design of the street works to improve the overall customer experience. Historically, the safety of street works has been the key driver, but as the industry is committed to increasing its wider social responsibility, customer experience should also be considered in the navigation of street works. This particularly applies to customers in vulnerable situations who may find navigating through our StreetWorks difficult or impossible, the project will include R&D, user testing with user groups and representatives from disability groups to ensure that possible solutions address specific needs of customers who may encounter or travel through street works.

Relevant Foreground IPR

The project and the resultant outcomes/deliverables will conform to the default treatment of IPR as set out under the agreed NIA Governance (where the default requirements address two types of IPR: Background IPR and Foreground IPR)

Data Access Details

For all data access requests, please follow the guidance set out in Northern Gas Networks Innovation Data Sharing Policy.
<https://www.northerngasnetworks.co.uk/ngn-you/the-future/our-funding/>

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

The scale of the issues at hand is unknown and therefore there is a high level of uncertainty associated with the project which would be beyond the network licensees' risk appetites. This piece of work is to better understand the opportunities for improvement and alternative methods. We are sure that however small or incremental changes are made to current processes, this will have a positive impact upon customers who traverse street works and ultimately improve wellbeing by reducing stress or anxiety experienced by the customer.

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

The high-level risk associated with the low TRL project is beyond the current risk appetites of networks. NIA will allow us to complete this project to better inform future decisions and opportunities. The issue of street works and customers in vulnerable situations has never previously been addressed and lived experience and feedback clearly shows that this is an increasing and constantly developing area which needs development.

This project has been approved by a senior member of staff

Yes