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NIA Project Registration and PEA Document

Date of Submission

Dec 2019

Project Reference Number

NIA_WWU_063

Project Registration

Project Title

Ramp Up

Project Reference Number

NIA_WWU_063

Project Licensee(s)

Wales & West Utilities

Project Start

December 2019

Project Duration

2 years and 4 months

Nominated Project Contact(s)

Jake Sami

Project Budget

£44,667.00

Summary

A project to design and test an improved footway transition walk board design, to make it easier for vulnerable customers to navigate from the footway to the carriageway and vice versa around our street works

Nominated Contact Email Address(es)

innovation@wwutilities.co.uk

Problem Being Solved

A challenge was highlighted at the WWU Customer conference highlighting the accessibility for vulnerable customers when a pavement is dug up as part of street works activity. The common method of transferring pedestrians from the closed pavement during the work is by using kerb ramps. The kerb ramps are placed between the footway and carriageway when a temporary walkway is erected to allow pedestrians to navigate through the works.

However, these ramps can create challenges for customers using mobility scooters and wheelchairs as the edge 'lip' can cause the mobility aids to slip or lose balance, and topple over. Additionally, ramps placed at sharp inclines can make it difficult to turn a corner, introducing a health and safety risk, particularly when the customer is moving onto a roadway.

Therefore, an improved footway transition board design is required to allow customers using mobility scooters or wheelchairs to travel through the works more easily and with a lower risk of an accident occurring.

Method(s)

FrazerNash and a consortium of manufacturers consisting of Hahn Plastics, Maclellan Rubber and Oxford Plastics will deliver a successful innovation project to design, manufacture and test new prototype footway transition boards to improve the lives of those people most impacted by what we do. For the vulnerable confined to wheelchairs and mobility scooters, for example simply

negotiating one of our street works sites can be challenging. The charity Whizz-Kidz, who provide disabled children with mobility equipment for more independent living, will help in the evaluation and testing of the prototype solutions.

The methodology for the delivery of this project will follow the process below & will be co-ordinated via the Energy Innovation Centre

1. Hold a requirements workshop
2. Generate concept designs
3. Detailed product design
4. Prototype manufacture
5. Product test & reporting

Scope

The proposed project will run for 4 months to deliver a prototype product and to carry out a test of the prototype.

We will have a better understanding of how the prototype footway transition boards can be progressed to be:

- Fit for purpose and trusted by users who need them most
- Affordable for use not only by collaborating parties but more widely across utilities and other sectors
- Handled, stored and used to help drive adoption

All design and manufacture will be completed within the first 12 weeks and a relevant site for testing the boards will be agreed. The outputs of the testing will be contained in a report.

The next steps for a potential solution for this problem will only become apparent when trials are conducted.

Objective(s)

To design, manufacture and test an improved footway transition walk board design, to make it easier for vulnerable customers to navigate from the footway to the carriageway and vice versa around our street works

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

Success of the project will be to develop a range of ramps that can be tested to evaluate what improvements can be made to current practices

Project Partners and External Funding

This project is being funded via NIA with project partners Energy Innovation Centre, Frazer Nash Consultancy, MacLellan Rubber

Other project partners in addition to the above list are Hahn Plastics, Oxford Plastics, Cadent, Northern Gas Networks, Northern Powergrid and SP Energy Networks

Potential for New Learning

Working closely with organisations such as Whizz-Kidz should provide a valuable insight into perceptions of street works from the point of view of a wheelchair or mobility scooter user. Working with Whizz-Kidz may also generate ideas for opportunities to improve accessibility in other aspects of the network operators' operations.

The project aims to deliver a number of tested prototype board walk solutions which will provide greater accessibility to mobility scooter and wheelchair users than the current walk board solution

Scale of Project

The scale of the project will be to test prototype boards in a controlled environment.

Technology Readiness at Start

TRL2 Invention and Research

Technology Readiness at End

TRL6 Large Scale

Geographical Area

The innovation is applicable to the entire UK. A specific trial location will be identified during the project.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

External: £33,500

Internal: £11,167

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)

It is anticipated that costs will be avoided if this project is a success, however the primary benefit of this project is safety for vulnerable customers. It is estimated there could be saving of around £36k for utility customers.

Please provide a calculation of the expected benefits the Solution

Whilst we are unable to confirm exact numbers of incidents involving wheelchairs and mobility scooters, if we assume there is one incident per month on a roadworks site in the UK & the average cost of personal injury claim is £6k, there would be a saving of £72k. If these ramps were to avoid half of the instances there would be a saving of £36k across utility companies in the UK.

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

The method would be fully replicable across GB.

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

Unit costs are currently unknown as the project will develop ramps as part of the project, so it is unclear what roll out costs would look like.

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 trialed 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

All networks will use the 'Red Book' when setting out their street works sites and will have the same issues for vulnerable customers. This project has formed a collaboration with 5 network licensee partners, 3 manufacturers and the Energy Innovation Centre. The output of this project has the potential to deliver real benefits to all our customers, ensuring they can safely navigate our street works sites.

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.

There are no similar projects identified on the smarter networks portal.

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

With an increasing focus on vulnerable customers by networks the issue of footway transition walk boards has been brought to the forefront. This project will look to design a brand new facility with a firm focus on vulnerable customers, something that has not been done before. The inclusion of the charity will deliver first hand evaluation to ensure the solution is fit for purpose and not like anything currently available to the networks.

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

This project did not form part of the RIIO GD1. It requires funding outside of this.

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

We have not found any available options that could solve the problem the networks face to assist vulnerable customers navigate our street works sites. The problem was shared through an EIC 'Call for innovation' to see what was available in the market place. This call was circulated to over 7,100 SME's as well as being published on social media streams. This project was constructed from the responses to that call for innovation. Using NIA funding helps us to collaborate widely for better problem solving and allows us to explore new avenues to find the correct solution to solve the issues faced. The use of NIA also means that all findings will be shared with other networks who are not collaborating directly within the project.

This project has been approved by a senior member of staff

Yes