

NIA Project Registration and PEA Document

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.

Project Registration

Project Title

Carbon Portal

Project Reference

NIA_WPD_031

Project Licensee(s)

Western Power Distribution

Project Start Date

April 2018

Project Duration

0 years and 8 months

Nominated Project Contact(s)

Jonathan Berry

Project Budget

£149,135

Problem(s)

There is currently no ready access to WPD data for third party app developers and this renders further automation in the area of app provision both difficult as well as app creation being reliant on WPD itself at the moment. We also need to understand how best to interact with customers/users when developing and supporting apps in an area which will become much more important under the DSO operating model.

Method(s)

Mobile App data server enhancement and existing app refinement.
This is an IT project continuing the successful Carbon Tracer app development and initial operations, beyond the original scope of that project, to carry out further improvement and prototyping work. We will use the standard Agile IT development project methodology to implement a set of candidate changes according to evolving customer led view of how to enhance the existing Carbon Tracer app using user feedback which continues to be gathered. The data facilitation piece is the priority and the app enhancement work will be tailored to utilize the remaining budget once the data workstream is satisfactorily completed.

Scope

Expansion of initial Carbon Tracing App scope to cover external data access and add selected customer requested enhancements.
Refinement of existing app as a learning test bed.

Objectives(s)

Facilitate exploitation - make WPD operational data used by existing app(s) available for third party developers. Identify what other data could also be made available and by what means to support other (future) apps.
Refine the existing app to improve performance and visibility, and consolidate the position of the app in the Carbon footprint awareness space to better serve those customers already using it and encourage more users to join and use the app.
Essentially both elements are confirming WPDs commitment to the app landscape, considered vital for DNO operations.

Success Criteria

An updated app and creation of a new data service via which WPD can better serve customers are key success markers. Increased numbers and a more usable app interface will demonstrate improved user engagement and show that WPD is both committed the existing app and support for apps in general.

Technology Readiness Level at Start

TRL 2

Technology Readiness Level at Completion

TRL 6

Project Partners and External Funding

None. Using third party developer for app refinement and data management.

Potential for New Learning

Third party developer engagement and data dissemination via access portal.
Flush out licencing issues.
Improve user experience in apps.
Prepare for future apps (isolate re-usable elements).
Data sourcing and facilitation for live (API) access and internal processes for making this available externally.

Scale of Project

Small, follow on from existing project for maximizing return and exploitation of new capabilities.

Geographical Area

All WPD DNO regions.

Revenue Allowed for in the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

£149,135

Project Eligibility Assessment

Specific Requirements 1

1a. A 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 the GB the Network Licensee must justify repeating it as part of a Project) equipment (including control and communications systems and 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 Licensee's System

A specific novel commercial arrangement

Specific Requirements 2

2a. Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees

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

The project outcomes will inform network licencees as to how to make their internal data and processes able to support app development by third parties. User engagement in the customer facing app area will provide useful material on how users interact with apps and what they are looking for.

Please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the Project.

The Innovation Strategy contains several projects which would potentially benefit from the availability of a customer facing app for support, for example, DSM activities or electric car charging. These will almost certainly become an area of interest for future app developments and an expanded capability in this area provides a firm basis for these moves. We already have a core app development and support capability, but this now needs generalizing from the single app "bridgehead" where we are currently placed.

2b. Is the default IPR position being applied?

Yes

2c. Has the Potential to Deliver Net Financial Benefits to Customers?

Yes

X

Please provide an estimate of the saving if the Problem is solved.

Apps can direct users to the most advantageous times for EV charging etc. However these future applications of unknown number and type, cannot be readily estimated at this time. The Carbon Tracer app was £327k to develop, however this included over £155k for user engagement, marketing and high level functional design and GUI modelling with the help of the Carbon Trust. Without this cost, and others that result from reusable elements of the Carbon Tracer, we therefore estimate that a typical app will currently require a CAPEX expenditure of around £120k to design, develop and rollout - although this amount will vary considerably according to the specific "Requirements" in the system specification. This amount then shrinks further if the development work is carried out by third parties who are able to charge for the app on the basis of the user being able to make financial savings or other gains. The core cost to WPD and thus onward to customers is therefore likely to significantly decrease in such cases and be limited to the provision of and support for the data needed to power apps. This data support cost (CAPEX only element) is estimated at £30k per app, but again will depend on the functionality being supported and the data provision must anticipate the sort of data structures that would be required by these external developers.

Please provide a calculation of the expected financial benefits of a Development or Demonstration Project (not required for Research Projects). (Base Cost - Method Cost, Against Agreed Baseline).

Difficult to quantify as we are principally enabling third party app developers by providing them with data. The saving to WPD is therefore the app design and development cost, however. As an app budget would likely be expected to fall in the range 100 – 200k (depending on its nature) and the data preparation costs are estimated to be in the range £25-30k, the cost benefit falls in the range £75k – £175k per app. As noted above this is highly dependent on the functionality of the app and the ready availability of the data necessary for its operation.

Please provide an estimate of how replicable the Method is across GB in terms of the number of sites, the sort of site the method could be applied to, or the percentage of the Network Licensees system where it could be rolled-out.

IT app hosting can be standardized potentially even sharing host platforms for multiple applications. The processes, methods and even data can be shared/reused. There is no practical limit to what apps can be enabled/produced via these methods.

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

Once implemented, the pilot environment can be expanded at minimal cost to service additional data services and would require just an expanded host server at a cost of around £5k/annum (OPEX). There is no locational dependency.

2d. Does not Lead to Unnecessary Duplication

Yes

X

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

The app being used as the testbed is only the second of what may become several customer facing apps, and making these easier to produce is the aim of the project. Effectively a new more templated process for app production and pilot versions of hosted solutions will simplify future app production and mean that each app project does not then need to replicate previous ones and can even be implemented by external third party developers.

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

N/A

Additional Governance Requirements

Please identify

that the project is innovative (ie not business as usual) and has an unproven business case where the risk warrants a limited Research and Development or Demonstration Project to demonstrate its effectiveness

X

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

Apps and IT in general are not a core area of WPDs business so making this area open by rendering data accessible to third parties and supporting this app production process will be a significant enabling capability for any/all DNOs.

ii) Please identify why the Network Licensee will not fund such a Project as part of its business as usual activities

It is an IT/App development and leverage project and as such it is not part of WPDs core competency.

iii) Please identify why the Project can only be undertaken with the support of the NIA, including reference to the specific risks (eg commercial, technical, operational or regulatory) associated with the Project

Part 1 was NIA funded and involved Carbon Trust as a partner. The initial app premise is highly specialized even within the broader customer base, this specific area of interest will have limited support. However it is well known that Carbon Footprint awareness enablement is a key strategic development area, hence bringing this to the attention of the wider business and beyond that community, is a key NIA function.

Approved by senior member of staff