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NIA Project Registration and PEA Document

Date of Submission

Feb 2014

Project Reference Number

NIA_NGET0108

Project Registration

Project Title

Incident Investigation Review

Project Reference Number

NIA_NGET0108

Project Licensee(s)

National Grid Electricity Transmission

Project Start

August 2013

Project Duration

1 year and 7 months

Nominated Project Contact(s)

Andy Buxton

Project Budget

£285,000.00

Summary

This is a review of current Incident Investigation Procedure in order to reduce repeat incidents by improving the quality of incident investigations. This will ensure that NGET share learning generated by each incident that can be applied across the business in order to prevent incident re-occurrence, ultimately making the process more efficient and less costly in human, monetary and reputation terms.

Nominated Contact Email Address(es)

box.NG.ETInnovation@nationalgrid.com

Problem Being Solved

- World class safety performance is an aspiration of NGET and is key output under RIIO.
- NGET are having repeat Safety, Environmental and Asset incidents which have an effect on safety performance and system outages. Failure to learn from near misses and previous incidents can result in future major injury/asset damage which may affect the general public and workforce.
- Currently, NGET cannot easily identify appropriate root cause(s) and trends effectively and is therefore not extracting sufficient learning from incidents to prevent reoccurrence.
- The current process is time consuming and does not clearly identify trends and appropriate corrective actions
- The current process does not address Human Factors appropriately.

Method(s)

Development

Stage 1

- Trial of the root cause analysis tools and an enhanced data capture front end process.
- If successful, the new tools will be implemented and used to enable NGET to identify the appropriate incident root cause(s) and more effectively identify corrective actions as well as to address Human Factors in a more appropriate way with regards to Incident Investigations. It is expected to be more efficient and easier to use.

Stage 2

- Redesign of existing systems (Incident Management System, IMS) to incorporate the root cause analysis fields. In addition, improvements to current IMS system, specifically fields to capture data more appropriately following an incident to ensure we are capturing sufficient information for trending and embedded learning.

Stage 3

- New technologies for inputting initial information to the system, reducing requirement of the current SHE incident desk and time consumed to report incidents. This will encourage the reporting of incidents for better investigations and sharing of learning.

Scope

This is a review of current Incident Investigation Procedure in order to reduce repeat incidents by improving the quality of incident investigations. This will ensure that NGET share learning generated by each incident that can be applied across the business in order to prevent incident re-occurrence, ultimately making the process more efficient and less costly in human, monetary and reputation terms.

Objective(s)

To avoid repeat incidents by introducing improved and more efficient investigation tools which identify root cause(s) and identify appropriate corrective actions. Also, to address Human Factors more appropriately within Incident Investigations.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

This project will be successful if we capture more accurate data for trending following an incident and to identify the appropriate corrective actions more efficiently. In addition, the new tool implementation and training will allow for better learning from these incidents and investigations, with the goal of safety improvements and by reducing repeat incidents.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

Initially, this will be a pilot scheme to test the effectiveness of the root cause analysis tools. If successful, the root cause analysis tools will be implemented. This will require front and back end changes to the fields in the current Incident Management System in order to capture information and root causes more efficiently and to mirror the root cause analysis tools. This will also require training for the employees who will be using the new root cause analysis tools. In addition, the introduction of new technologies will need to be implemented to enable the reporting of incidents easier and more efficient. This includes inputting information directly to the SHE Incident Desk rather than calling in so more incidents are reported, trended and actions tracked.

In the first instance, only Stage 1 is funded. Stage 2 is to be re-assessed pending results of Stage 1.

Technology Readiness at Start

TRL6 Large Scale

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

This project is being delivered in Warwick.

Revenue Allowed for the RIIO Settlement

Zero

Indicative Total NIA Project Expenditure

£285,000

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)

This problem is mostly safety based, therefore reputational and falls into the 'doing the right thing' category. Safety is a key performance indicator for National Grid, and is welcomed by employees, shareholders and general public. Therefore, there is an unquantifiable cost associated with this area.

Please provide a calculation of the expected benefits the Solution

Base cost = £7.7m

Method Cost = £7.1m (anticipated total cost)

B-M= £600K

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

This can be applied to the whole of the GB Transmission System.

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

This is not applicable. The costs of deployment for this work will have been covered in the project through software purchase and training. This will be sufficient to ensure roll out into National Grid.

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

n/a

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

This project addresses the following areas of the innovation strategy:

Safety : Safe Working Practices

- 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.

n/a

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