

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 2019

Project Reference Number

NIA_SGN0136

Project Registration

Project Title

Incident Management (Stage 2 - Phase 2)

Project Reference Number

NIA_SGN0136

Project Licensee(s)

SGN

Project Start

January 2019

Project Duration

0 years and 8 months

Nominated Project Contact(s)

Oliver Machan

Project Budget

£165,104.00

Summary

Loss of supply incidents can affect hundreds or thousands of properties and the current software tools used to support the process of managing the incident response are not integrated or fit for purpose. More significantly, a major loss of supply incident (affecting 100,000 properties) will currently present significant challenges to a GDN in managing the incident.

Incidents that place a high demand on resources to investigate and manage are not limited to 'actual' loss of supply. In January 2013 the 'French Gas Cloud' resulted in a period of high call volumes to the national emergency number and onward to the GDN operational control centers. Subsequent investigation work was also carried out by regional depot staff. Approximately 50% of the cost of the incident was spent on admin staff having to capture and process data to ensure every customer had a visit or had some form of contact from a GDN. This also had an ongoing fiscal impact of other depot staff having to back-fill and additional assistance to maintain on-going depot activities during the incident.

A major incident (of any kind) will require the GDN to provide significant resources, and come at a considerable cost. Operations require a comprehensive solution to manage information and resources during a large-scale incident and to enable a quicker decision-making process on resource requirements. The information captured by the solution will also help to provide accurate cost information after the incident's resolution and onward recharge where appropriate to ensure the GB Gas customer is not paying for other companies' errors when working or operating near gas mains and assets.

Following the successful conclusion of Stage2 Phase 2 (http://www.smarternetworks.org/project/nia_sgn0123), which successfully delivered a Proof of Concept system, the next phase is to develop a Minimum Viable Product (MVP) that can be implemented into the networks.

Nominated Contact Email Address(es)

sgn.innovation@sgn.co.uk

Problem Being Solved

Loss of supply incidents can affect hundreds or thousands of properties and the current software tools used to support the process of managing the incident response are not integrated or fit for purpose. More significantly, a major loss of supply incident (affecting 100,000 properties) will currently present significant challenges to a GDN in managing the incident.

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Following the successful conclusion of Stage 2 Phase 1 (http://www.smarternetworks.org/project/nia_sgn0123), which successfully delivered a Proof of Concept system, the next phase is to develop a minimum viable product (MVP) that can be implemented into the business.

Method(s)

The project will follow a 4 stage method with acceptance of each stage's deliverables required prior to proceeding to the following stage :

Inception Stage - establishes the project with an agreed project approach, a structured plan/schedule, aligned project teams and signed contracts for subscription and project services

Elaboration Stage - establishes a project baseline in terms of detailed requirements, solution design and project planning (resources, schedules, deliverables, etc.). At the end of this stage, the initial business requirements and high level plan have been converted into a detailed solution design with an updated schedule tailored to the specific, validated requirements of this project.

Construction Stage - covers building the solution as agreed during the Elaboration stage – configuration of OCA, development of any custom integrations or middleware, unit testing, prototype review cycles and final system trialing. At the end of this phase, the solution has been configured and tested, and is presented in a "production ready" state for General purpose application (GPA), user acceptance testing (UAT) and go-live planning.

Transition Stage - takes the solution through user acceptance testing to a "go-live ready" state – The Client UAT, training, production environment upgrades, data migration and BAU support team transition. At the end of this stage, the full solution is available for GAP to operate in a live operational environment.

Using the outputs from Stage 2 Phase 1, Phase 2 is a continuation of the project which will deliver the following functions as an output at TRL 8 – a productionised MVP. The specific tasks to achieve this goal are:

- Requirements review from POC and analysis
- Update of existing solution design documentation
- Initial configuration of prototype and integration
- Address Base Plus API development with Noggin Middleware
- Noggin Middleware Hosting, setting and testing
- Prototype 1 Showcase
- Final Configuration & Integration
- Final build Showcase
- Support transition – Noggin & SGN

Scope

Included in this project is the following scope of activities:

- Functional Specification & Solution Design
- Configuration of OCA for MVP
- Development O/S Integration
- Showcases x 2 with 6 days allocated (3 days per prototype) for changes
- Test case definition
- Data Migration
- UAT Support

Objective(s)

The focus of Phase 2 is to develop and deploy a minimum viable product (MVP). This platform will represent a state of the art improvement over existing methods of major incident response management by improving safety, repeatability, efficiency and onward recharge where appropriate. It will set a new standard for the future of incident response and management. After trial completion, the product will be ready for immediate use.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

The project will be deemed successful if the MVP can manage information and resources during a large-scale incident. To succeed the MVP will have the following features:

- Record, organise, analyse and distribute information about incidents, actions, people and assets, managing relevant information in one place, securely and available for access from mobile devices (Making use of the SGN Mobile Incident Units where applicable)
- Easily share information and plan for incidents, issues and events
- Log events, decisions or actions, track tasks and manage requests and related actions, resources and escalations
- Manage related claims, work orders, checklists, preventative or corrective actions to ensure incident management processes are followed, and measures are implemented to address or prevent incidents
- Communicate to and from any number of stakeholders via email, SMS, voice and digital and social media
- Get strategic, tactical or operational overview of incident information, analyse and visualise data in tables, charts or maps, and drill down to precise detail
- Enforce and automate processes, workflows, actions, escalations, notifications or plans.

Project Partners and External Funding

Noggin IT Ltd

Potential for New Learning

This project is expected to provide all Network Licensees with a fundamental understanding of whether it is feasible to introduce a hybrid incident response platform, which will be capable of dealing with major gas related incidents.

Scale of Project

The solution will be able to manage small and large scale incidents of above >5000 customers.

Technology Readiness at Start

TRL5 Pilot Scale

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

Build and development will take place at vendor offices with visits to SGN staff and locations as and when required. Mock incidents will be carried out within SGN.

Revenue Allowed for the RIIO Settlement

There are no direct saving benefits anticipated.

Indicative Total NIA Project Expenditure

The total expenditure is £165,104, 90% of which (£148,594) will be recovered via the NIA funding mechanism in line with the funding conditions.

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 envisaged that deployment of this technology may lead to financial benefits in the following areas:

- More efficient use of resources during an incident
- Better customer visibility during an incident
- Full value recharge where a third party is responsible
- Reduction of administration post incident

Although the savings will vary with the size of the incident, the savings in administration post incident area was estimated to be £75,000 per year.

As the project progresses, the CBA will be refined and savings in all areas will be accurately estimated.

Please provide a calculation of the expected benefits the Solution

Analysing the last 5 years of incidents and consulting with Operational experts within SGN, the financial benefit has been estimated below:

Total Base Cost = £250,000 and Method Cost = £75,000
Financial benefit = £175,000

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

The potential outcome of this project is applicable across GDNs. All the GDNs will have an incident response requirements and function. The novel licencing model being developed should make it a more favourable option to each of the networks current base methods.

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

There are no costs associated with sharing the outputs and recommendations of this study with the other Network Licensees, which will be the first step to roll across GB.

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

As the platform to be developed will be a standalone cloud based system and enterprise agnostic, the system will be available to all Networks for utilisation.

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

The project aligns to the target area of Incident Response in regards to Emergency and Safety

- 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.

A review has been made of all Network Licensees and no other similar projects have been identified. Although there are other software products in the incident management arena, this solution offers full adoption to all networks.

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 delivered system will significantly change the way incidents are currently managed. By utilising software as a solution, resources will be used more effectively and savings will be made.

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

At the moment the OCA system would not be able to be utilised within the networks. Further development is required to get to a productionised system that can be used within business to manage large scale incidents.

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

This NIA project has a TRL of 4 and involves building, configuring and developing the product so that it can be used in emergency incidents.

This project has been approved by a senior member of staff

Yes