

## Vulnerability & Carbon Monoxide Allowance (VCMA)

Project Eligibility Assessment (PEA)  
CO Partnership Ecosystem –  
Reducing health disparities through  
data.

---

Kate Ravenscroft – Safeguarding Specialist

February 2024

**Updated August 2024**



## Gas Network Vulnerability & Carbon Monoxide Allowance (VCMA) Governance Document - Project Eligibility Criteria

<b>Section 1 - Eligibility criteria for company-specific projects (other than condemned essential gas appliance repair and replacement)</b>	
In order to qualify as a VCMA project, a project must:	
<b>VCMA Eligibility Criteria</b>	<b>Criteria Satisfied (Yes/No)</b>
<b>a)</b> Have a positive, or a forecasted positive, Social Return on Investment (SROI) and Net Present Value (NPV) including for the gas consumers funding the VCMA Project (GDNs should use a common SROI model.	<b>Yes</b>
<b>b)</b> Either: <ul style="list-style-type: none"> <li><b>i.</b> Provide support to consumers in vulnerable situations, and relate to energy safeguarding, or</li> <li><b>ii.</b> Provide awareness on the dangers of CO, or</li> <li><b>iii.</b> Reduce the risk of harm caused by CO;</li> </ul>	<b>Yes</b>
<b>c)</b> Have defined outcomes and the associated actions to achieve these;	<b>Yes</b>
<b>d)</b> Go beyond activities that are funded through other price control mechanism(s) or required through license obligations; and	<b>Yes</b>
<b>e)</b> Not be delivered through other external funding sources directly accessed by a GDN, including through other government (national, devolved or local) funding.	<b>Yes</b>
<b>Section 2 - Eligibility criteria for company-specific essential gas appliance servicing</b>	
To qualify as a VCMA Project, essential gas appliance servicing must meet the following criteria:	
<b>a)</b> Either: <ul style="list-style-type: none"> <li><b>i.</b> A GDN has had to isolate and condemn an essential gas appliance following a supply interruption or as part of its emergency service role; or</li> <li><b>ii.</b> A GDN or its Project Partner has identified an essential gas appliance which has not been serviced in the last 12 months in the owner-occupied home of a customer in a Vulnerable Situation where an occupier of the property suffers from a permanent or temporary health condition that makes them more vulnerable to health risks associated with cold homes; or</li> <li><b>iii.</b> A GDN or its Project Partner has identified an essential gas appliance which has not been serviced in the last 12 months in a tenant-occupied home of a customer in a Vulnerable Situation where it is the tenant's responsibility to maintain the essential gas appliance, where an occupier of the property suffers from a permanent or temporary health condition that</li> </ul>	<b>N/A</b>

makes them more vulnerable to health risks associated with cold homes.	
b) The household cannot afford to service the essential gas appliance, which is assessed against criteria consistent with the Energy Company Obligation (ECO4) Guidance: Delivery document 1 (see Appendix 1).	N/A
c) Sufficient funding is not available from other sources (including a social or private landlord, national, devolved, local government funding) to fund the essential gas appliance service.	N/A

<b>Section 3 - Eligibility criteria for Collaborative VCMA Projects</b>	
To qualify as a Collaborative VCMA project, a project must:	
a) Meet the above company-specific and boiler repair and replace (if applicable) project eligibility criteria;	N/A
b) Have the potential to benefit consumers on the participating networks; and	N/A
c) Involve two, or more, gas distribution companies.	N/A

### Gas Network Vulnerability and Carbon Monoxide Allowance (VCMA) Governance Document - Project Registration Table 2

Information Required	Description
Project Title	CO Partnership Ecosystem
Funding GDN(s)	Cadent - company specific project across all five Cadent networks
New / Updated (indicate as appropriate)	New
Role of GDN(s) *For Collaborative VCMA Projects only	Not applicable – Cadent company-specific project
Date of PEA Submission	February 2024 <b>Updated August 2024</b>
VCMA Project Contact Name, email and Number	Contact Name: Phil Burrows Role: Head of Customer Vulnerability & Social Programme Delivery Email: <a href="mailto:phil.m.burrows@Cadentgas.com">phil.m.burrows@Cadentgas.com</a> Number: 07773 545451
Total Cost (£k)	Partner costs: £733,950.00 Graduate support costs: £27,000.00 Project management costs (4%): £30,438.00  <b>Updated August 2024</b> Additional costs for Transition Phase Sia Partners Costs: £199,200.00 Alarm provision costs: £68,000.00

<sup>1</sup>[What business ecosystem means and why it matters | EY UK](#)

	<p>NEA Training Delivery: £13,049.00  Leaflet printing &amp; distribution: £2,212.59  <b>TOTAL additional costs: £282,461.59</b>  Additional project management costs (4%): £11,298.50</p>				
<b>Total VCMA Funding Required (£k)</b>	<p>£791,388.00  <b>Updated August 2024</b>  £1,085,148.09</p>				
<b>Problem(s)</b>	<p>Cadent has been heavily involved in attempting to reduce the impact of CO poisoning on households, especially customers in vulnerable situations, for more than a decade. However, understanding the true breadth of the issue, whether that is the number of deaths attributed specifically to CO, CO as a contributor to early death, long term or short-term ill health, or the number of workdays lost each year due to spillage, has always been challenging.</p> <p>It is a multifaceted problem, requiring clarity and structure in data collection, collation, storage, and reporting in an area where multiple organisations are working. Networks like Cadent, suppliers, contractors, health trusts, fire services, policy organisations and many more have all been working to solve the issue, yet given the scale and fragmentation of the problem, it has been challenging to fully scope the problem and track the improvements of any initiatives.</p> <p>Many of the GDNs' current social value proxies are based on public health data that is several years old and determines the risk of a customer experiencing CO by comparing the number of CO related deaths/injuries against the country's population (e.g., 30.3 UK deaths per year). We believe that CO fatalities/injuries are under reported, and this project will provide more accurate data to inform GDNs' social value proxies by improving the identification of CO occurrences.</p>				
<b>Scope and Objectives</b>	<p>Given the success of work on our fuel poverty Partnership Ecosystem, creating a consortium of partners, all aligned on the outcome they are looking to drive, and the process planned to get there, Cadent has partnered with Sia Partners to lead the development of a CO focused Partnership Ecosystem.</p> <p><b>What is an Ecosystem?</b></p> <p>"A business ecosystem is a purposeful business arrangement between two or more entities (the members) to create and share in collective value for a common set of customers. Every business ecosystem has participants, and at least one member acts as the orchestrator of the participants. All members in a business ecosystem, whether orchestrators or participants, have their brands present in the value propositions."<sup>1</sup></p> <p><b>Who are the Ecosystem partners?</b></p> <table border="1"> <tr> <td><b>Gas Distribution Networks</b></td> <td> <p>Cadent Gas  SGN (Scotia Gas Networks)  Northern Gas Networks  Wales &amp; West</p> </td> </tr> <tr> <td><b>Fire &amp; Rescue Services</b></td> <td> <p>London Fire Brigade (LFB)  National Fire Chiefs Council (NFCC)</p> </td> </tr> </table>	<b>Gas Distribution Networks</b>	<p>Cadent Gas  SGN (Scotia Gas Networks)  Northern Gas Networks  Wales &amp; West</p>	<b>Fire &amp; Rescue Services</b>	<p>London Fire Brigade (LFB)  National Fire Chiefs Council (NFCC)</p>
<b>Gas Distribution Networks</b>	<p>Cadent Gas  SGN (Scotia Gas Networks)  Northern Gas Networks  Wales &amp; West</p>				
<b>Fire &amp; Rescue Services</b>	<p>London Fire Brigade (LFB)  National Fire Chiefs Council (NFCC)</p>				

<sup>1</sup>[What business ecosystem means and why it matters | EY UK](#)

	West Midlands Fire & Rescue Service (WMFS)
<b>Insurance</b>	HomeServe
<b>Alarm Manufacturers</b>	Aico Council of Gas Detection and Environmental Monitoring (CoGDEM) FireAngel
<b>Healthcare</b>	National Poisons Information Service (NPIS) NHS England Royal College of Practitioners (RCP) Northern Ambulance Alliance St George's NHS Trust
<b>Government and Regulatory Bodies</b>	Building Safety Regulator (BSR) Department of Levelling Up, Housing and Communities (DLUHC) Health and Safety Executive (HSE) UK Health Security Agency (UKHSA) Office for Health Improvement & Disparities Office for National Statistics (ONS) Public Health Wales Department for Energy Security and Net Zero (DESNZ) Department for Business and Trade (DBT)
<b>Other</b>	Heating Equipment Testing and Approvals Scheme (HETAS) Boat Safety Scheme (BSS) Alliance of London Local Authorities Egnida Marine Accident Investigations Branch (MAIB) Home Office Google Carbon Monoxide Research Trust (CORT) National Energy Action (NEA) Institution of Gas Engineers and Managers (IGEM)

**The CO Partnership Ecosystem aims to:**

Develop a data-driven understanding of the true prevalence of CO poisoning from gas and solid fuel within domestic dwellings (including non-typical and unregulated dwellings of all tenure types), and the corresponding impact to society.

Through this improved understanding of CO data, the CO Partnership Ecosystem will aim to deliver solutions that achieve one or more of the following outcomes:

1. Reduce the time a customer is exposed to CO.
2. Improve the rate (%) of CO diagnosis.
3. Improve the rate (%) of resolving CO spillage at source.
4. Address the cause of CO spillage and move to prevention.
5. Reduce the cost to society from CO exposure.

**Building the ecosystem:**

To build the ecosystem, Sia Partners engaged with a variety of stakeholders to understand their challenges to minimising CO

	<p>risk to customers and their views on taking a collaborative ecosystem approach to addressing CO challenges. A summary of the activities taken to build the ecosystem are:</p> <ul style="list-style-type: none"> <li>• Identify a list of widespread, commonly encountered opportunities (CO problem areas) that could be addressed within the scope of the work.</li> <li>• Define the scope and reach of the ecosystem stakeholders, and the partners needed to deliver against those goals.</li> <li>• Identify and engage potential partners and agree a roadmap to success.</li> <li>• Define ways of working, including roles and responsibilities for all partners.</li> </ul> <p><b>Updated August 2024</b></p> <p>The transition phase will deliver the following:</p> <p>Develop the current data platform:</p> <ul style="list-style-type: none"> <li>• Enrich the current data in the data platform</li> <li>• Add in additional data from partners as it becomes available</li> </ul> <p>Deliver the remainder of the demonstrator:</p> <ul style="list-style-type: none"> <li>• Current demonstrator to be delivered and completed by December 2024.</li> <li>• Adding in additional data from partners as it becomes available</li> </ul> <p>Establish and agree the future funding model beyond December 2024</p> <ul style="list-style-type: none"> <li>• Engaging with chosen stakeholders (beyond Cadent) who have the best fit for providing sequential funding for the ongoing running of the Carbon Monoxide platform</li> </ul> <p>Programme Management support</p> <p>Ensure overall programme management of the Carbon Monoxide Partnership Ecosystem workload, this includes;</p> <ul style="list-style-type: none"> <li>• Managing the engagement with COPE monthly / bi-monthly Steering Committee</li> <li>• Onboarding new stakeholders (e.g. healthcare providers) onto the Data Platform and Carbon Monoxide Partnership Ecosystem</li> </ul>
<p><b>Why the Project is Being Funded Through the VCMA</b></p>	<p><b>A. The project is forecasted to have a positive SROI.</b></p> <p>Regarding social return on investment, the project has a point of difference when compared to the majority of Cadent funded VCMA projects. Cadent and SIA Partners have analysed past and current Cadent fuel poverty initiatives to understand the average SROI ratio that was achieved when working in on a 1-2-1 basis. We believe that the CO partnership ecosystem approach has the potential to increase the SROI ratio on each pound spent by Cadent and other funding partners in the community.</p> <p>Cadent’s and the other GDNs’ social value proxies are based on historic public health statistics on CO. Due to</p>

<sup>1</sup>[What business ecosystem means and why it matters | EY UK](#)

the previous limitations on data sharing cross-industry, we believe these statistics to be under-reported. The project's objective of improving our understanding the true prevalence of CO will update these statistics that feed into the GDNs' social value proxies.

**B. The project will either:**

- I. Provide to consumers in vulnerable situations, and relate to energy safeguarding, or**
- II. Provide awareness on the dangers of carbon monoxide,**
- or**
- III. Reduce the risk of harm caused by carbon monoxide.**

The project relates to the provision of support to consumers in vulnerable situations and relates to Carbon Monoxide awareness and reduction of risk of harm caused by Carbon Monoxide.

The CO Partnership Ecosystem project will design an approach that maximises the support delivered to consumers living in vulnerable situations, by directing funding, resources, and insight towards the common goal of raising awareness and reducing the risk of harm caused by carbon monoxide. The platform developed during Phase 1 has provided numerous insights on CO and has allowed the Partnership Ecosystem to define a number of insight led solutions that will minimise CO risk for customers and enable the implementation of proactive measures for vulnerable customers.

**C. The project has defined outcomes and the associated actions to achieve them.**

This project has clearly defined outcomes and associated outcomes, the meeting of which will quantify success. Further information on the project's outcomes and associated actions can be found in the relevant section below.

**D. The project goes beyond the activities funded through other price control mechanisms or required by licence obligations**

We believe that this project goes outside of activities funded through other price control mechanisms due to:  
a) the types of support proposed to be delivered to consumers in vulnerable situations, and  
b) the method in which this support will be delivered (i.e., through a partner ecosystem approach).

**E. Not be delivered through other external funding sources**

Directly accessed by a GDN, including through other government (national, devolved, or local) funding. Phase

	one of the project will be solely delivered with Cadent's VCMA funding.
<b>Evidence of Stakeholder/Customer Support</b>	<p>Cadent has been heavily involved in working to reduce the impact of CO poisoning on households, especially vulnerable customers, for more than a decade. However, understanding the true breadth of the issue, whether that is the number of deaths attributed to CO, or the number of workdays lost each year due to leaks, has always been challenging.</p> <p>It is a multifaceted problem, requiring clarity and structure in data collection, collation, storage, and reporting in an area where multiple organisations are working. Networks like Cadent, suppliers, contractors, health trusts, fire services, policy organisations and many more have all been working to solve the issue, yet given the scale and fragmentation of the problem, it has been challenging to fully scope the problem and track the improvements of any initiatives.</p> <p>Throughout the RIIO-2 business planning process each GDN engaged extensively with customers and expert stakeholders to inform their customer vulnerability strategies.</p> <p>Common themes amongst all findings relate to high levels of customer support for GDNs utilising a wide range of techniques to raise awareness of CO, including the national helpline.</p> <p>All GDNs have customer challenge forums in place which have supported customer vulnerability strategies and advocated increased awareness being facilitated of the matters included in this scope.</p> <p>Research from Energy UK's 'CO Be Alarmed!' campaign reveals that over 17 million people in Britain are at risk from CO poisoning as they do not have a CO alarm in their home – despite nine in ten (94%) saying they are aware of the risk.</p> <p>Although this survey suggests awareness of CO is high, the evidence from our surveys on the ground so far during RIIO-2 suggests that knowledge is low.</p> <p>Of 8,000 people surveyed in 2020 45% didn't know that CO doesn't have a smell, and only 42% had a working audible CO alarm. Cadent conducted a series of engagement activities to gather stakeholder feedback on our RIIO-2 proposals, including carbon monoxide.</p> <p>Participants at our deliberative workshops, focus groups, and our domestic survey were consistently supportive of us raising awareness of CO and providing CO alarms to customers, particularly those in vulnerable situations. Participants in our focus groups were concerned that customer awareness of the full dangers of CO is low. Participants across all these events highlighted that the safety of employees and the public is their highest or joint-highest priority.</p>
<b>Information Required</b>	<b>Description</b>
<b>Outcomes, Associated Actions and Success Criteria</b>	The Partnership Ecosystem will be based on the following outcomes:

<sup>1</sup>[What business ecosystem means and why it matters | EY UK](#)



1. Partnership Ecosystem partners are agreed and engaged in providing data and working collaboratively towards the vision of ecosystem.
2. Programme delivery plan, including objectives, delivery/activity plan and deliverables defined and agreed with partners.
3. A roadmap of demonstrator projects (trials) identified and informed by the data driven insights of the platform.
4. An innovative insight led trial, co-designed with the Partnership Ecosystem stakeholders, and delivered with tangible outcomes ideally achieved by June, the trial may however continue after June if applicable.
5. A funding model and a scale up plan delivered to ensure that the CO Partnership Ecosystem is designed and planned to be a self-sustaining ecosystem that continues beyond June.
6. Funding opportunities secured to deliver other trials beyond June.
7. Content created for the CO Research Trust conference in June '24. Handover for BAU to Cadent with limited or no knowledge gaps remaining.

The following outcomes are specific to the trial to be delivered by June, and beyond:

1. A standardised process is developed with GDNs and fire and rescue services to improve data collection (on CO incidents, appliances at risk of CO and vulnerable customers) and the response to such incidents.
2. GDNs and fire and rescue services have increased resource efficiency and minimised costs due to avoided unnecessary visits.
3. Collation and collection of industry wide data.
4. Hard-to-reach and vulnerable customers are better informed of the risks of CO, energy advice and income maximisation.
5. GDNs and fire and rescue services have early insights on issues that are increasing risks of CO.
6. Local community groups and organisations are utilising their trusted relationships with hard-to-reach and vulnerable households to increase their awareness and knowledge of CO.

Alarm manufacturers, GDNs, fire and rescue services and other stakeholders are collaboratively working to ensure that alarms are fit to meet the needs of vulnerable customers. The success of the trial will be measured by:

	<ol style="list-style-type: none"> <li>1. 35 community members are trained to deliver energy efficiency advice, CO awareness and income max advice. These community members will aim to reach hard-to-reach and vulnerable customers via trusted grassroots and local organisations.</li> <li>2. 400 vulnerable and hard-to-reach customers are provided with CO awareness, energy efficiency and income max advice during workshops/focus groups.</li> <li>3. 151 Gateway alarms provided to vulnerable customers, those with sensory needs and those with inadequate alarms.</li> <li>4. 151 customers will receive an upgrade to a standard heat alarm to a combined Heat/Carbon Monoxide Alarm</li> <li>5. 40 environment sensors to better understand those at risk of damp, mould and fuel poverty, and to ensure proactive measures are applied to minimise customer risks to damp and mould.</li> <li>6. 500 vulnerable customers with appliances identified to be at risk and faulty will be referred to our SBtM programme for fully funded boiler and appliance servicing, to minimise their exposure to CO.</li> <li>7. 15,000 households will be provided with CO awareness, and energy efficiency and income max advice via leaflets.</li> </ol>
<p><b>Project Partners and Third Parties Involved</b></p>	<p>Cadent will principally deliver the project in partnership with energy and utilities consultants at SIA Partners.</p> <p>Other partners involved are:</p> <p><b>GDNs:</b></p> <ul style="list-style-type: none"> <li>• SGN</li> <li>• Cadent</li> <li>• Wales &amp; West Utilities</li> <li>• Northern Gas Networks</li> </ul> <p><b>Fire &amp; Rescue Services:</b></p> <ul style="list-style-type: none"> <li>• London Fire Brigade (LFB)</li> <li>• National Fire Chiefs Council (NFCC)</li> <li>• West Midlands Fire &amp; Rescue Service (WMFS)</li> </ul> <p><b>Insurance:</b></p> <ul style="list-style-type: none"> <li>• HomeServe</li> </ul> <p><b>Alarm Manufacturers:</b></p> <ul style="list-style-type: none"> <li>• Aico</li> <li>• Council of Gas Detection and Environmental Monitoring (CoGDEM)</li> <li>• FireAngel</li> </ul> <p><b>Healthcare:</b></p> <ul style="list-style-type: none"> <li>• National Poisons Information Service (NPIS)</li> <li>• NHS England</li> <li>• Royal College of Practitioners (RCP)</li> </ul>

<sup>1</sup>[What business ecosystem means and why it matters | EY UK](#)

	<ul style="list-style-type: none"> <li>• Northern Ambulance Alliance</li> <li>• St George's NHS Trust</li> </ul> <p><b>Government and Regulatory Bodies:</b></p> <ul style="list-style-type: none"> <li>• Building Safety Regulator (BSR)</li> <li>• Department of Levelling Up, Housing and Communities (DLUHC)</li> <li>• Health and Safety Executive (HSE)</li> <li>• UK Health Security Agency (UKHSA)</li> <li>• Office for Health Improvement &amp; Disparities</li> <li>• Office for National Statistics (ONS)</li> <li>• Public Health Wales</li> <li>• Department for Energy Security and Net Zero (DESNZ)</li> <li>• Department for Business and Trade (DBT)</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>• Heating Equipment Testing and Approvals Scheme (HETAS)</li> <li>• Boat Safety Scheme (BSS)</li> <li>• Alliance of London Local Authorities</li> <li>• Egnida</li> <li>• Marine Accident Investigations Branch (MAIB)</li> <li>• Home Office</li> <li>• Google</li> <li>• Carbon Monoxide Research Trust (CORT)</li> <li>• National Energy Action (NEA)</li> <li>• Institution of Gas Engineers and Managers (IGEM)</li> </ul>
<p><b>Potential for New Learning</b></p>	<p>We believe that this project offers Cadent and the wider industry opportunities for significant learning, including:</p> <ul style="list-style-type: none"> <li>• Understanding the true prevalence of CO.</li> <li>• Understanding where in the customer to patient pathway data is captured and how it could/should be shared.</li> <li>• Understanding how the partnership ecosystem approach works to minimise CO risks to customers.</li> <li>• Bringing data together right across the industry</li> </ul> <p>Firstly, the project aims to design and ultimately test the benefits of a new way of working through the partner ecosystem approach. Energy networks have traditionally delivered their CO awareness initiatives via a one-to-one relationship with a single partner. This has resulted in scenarios where the partner has not had the expertise to offer services to serve all of the of the customers' needs, has not had a full range of data available or have been unable to use all of their expertise due to restrictions such as regulatory boundaries.</p> <p>The partner ecosystem approach will create a cohesive "patchwork" of funding and capabilities that should allow delivery partners to access a range of expertise and data and not be confined to the usual regulatory boundaries.</p> <p>Our hypothesis is that the project should show an increased SROI ratio, through the reduction in duplication, economies of scale, and maximising of benefits to individual customers.</p> <p>Secondly, the project will test the compatibility of funding pots and</p>

	<p>regulation between GDNs and DNOs. The partner ecosystem aims to engage and feature organisations from across the industry, including different types of energy network.</p> <p>DNOs and GDNs have different regulatory incentives and governance documents across GD2 and ED2, and the partner ecosystem project will test an approach that directs different regulatory allowances at a common deliverable. Cadent and SIA Partners aim to capture both the benefits and restrictions of this approach, and the outputs will help influence policy debate and business planning for future price controls.</p> <p>Additionally, the project will provide Cadent with learning on how value is apportioned.</p> <p>Cadent has worked with the other GDNs to deliver collaborative Vulnerability and Carbon Monoxide Allowance projects through the first two years of GD2. On these projects, value is typically apportioned based on factors such as the proportion of funding provided by each network company or the split of forecasted outputs by network area.</p> <p>Cadent and SIA Partners aim to apply a more advanced method for apportioning value that considers non-financial contributions (e.g., data) and referrals etc.</p>
<p><b>Scale of VCMA Project and SROI Calculations, including NPV</b></p>	<p><b>Background</b></p> <p>The numbers of CO incidents within the U.K. are under reported; making it difficult for CO related interventions to demonstrate that they have been successful in reducing incidents and improving overall outcomes for customers and stakeholders.</p> <p>This project utilises an investment of £763,308 from the VCMA. Through this project, a holistic and new way of working was developed to allow for several stakeholders to come together and share their data and knowledge on CO.</p> <p>A critical achievement of this CO Partnership Ecosystem has been the development of a data sharing platform, that allows for new insights to be generated from CO data being shared for the first time. The insights identified to date have been used to inform several trials that can be delivered. A roadmap for the trials has been developed, and the ecosystem will aim to identify funding and resource opportunities to deliver the various trials in the future.</p> <p>An enriched understanding of CO data (through the data sharing platform and the establishment of the Partnership Ecosystem) will allow Cadent to:</p> <ol style="list-style-type: none"> <li>1. Collaborate with GDNs and other key stakeholders (e.g., fire and rescue services) to improve current approaches to tracking, documenting and addressing CO alerts, ensuring that customers are provided with timely and appropriate support to address potential CO spillage and receive medical attention.</li> <li>2. Collaborate with GDNs and other key stakeholders to implement targeted and strategic interventions (based on insights outlined from the data (e.g., CO hotspot</li> </ol>

areas, appliance status, vulnerable households and (health and economic) impact of CO etc) that will aim to:

- a. Minimise CO incidents.
- b. Minimise alerts of battery failure.
- c. Reduce societal costs of CO exposure to stakeholders and customers.

The SROI outlined below focuses on the quantitative benefits forecasted from delivering a trial (described below) with tangible outcomes by June. However, the trial is likely to continue beyond June, to ensure that the maximum benefits are realised for customers and stakeholders involved.

As the data sharing platform is still in development and the data provided is continuously improving, the quantitative benefits from the platform have not yet been defined. However, the platform has demonstrated various qualitative benefits, and has informed various trials aimed at reducing CO risk to customers, and costs to society from CO exposure.

**The CO platform has allowed stakeholders to access further insights on CO, such as:**

3. The total number of CO incidents occurring in England, Scotland and Wales.
4. High and lower-level exposures of CO (the latter has not previously been accounted for) within the U.K.
5. The societal costs of CO incidents to customers and stakeholders.

**The following benefits have been identified from using the platform:**

1. The visualisations and the maps shown in the platform can allow GDNs and fire and rescue services to better implement proactive measures in response to CO incidents and alerts.
2. The platform will be used to support GDNs with their GD3 submission.
3. The platform will help GDNs with their strategy writing and will allow them to explore and refine their CO alarm distribution strategy.
4. The platform will provide GDNs and fire and rescue services clearer direction on where to focus their CO awareness media campaigns.
5. The platform will help GDNs with their vulnerability and operational strategies around CO.
6. The platform has highlighted the need for further engagement and work to address battery failure issues.
7. Alarm manufacturers indicated that the platform would help them to collaborate with GDNs to better understand

and address the reasons for battery failure incidents (as reported by GDNs).

**The following key insights have been identified from having access to shared CO data in the platform:**

1. Access to shared data has allowed Sia Partners to provide early insights on the costs associated with CO exposure. The estimated yearly costs of CO incidents (subject to change) are outlined below:
  - a. Fire rescue services are currently spending approximately £1,223,164 (on average) annually to respond to CO callouts. Of this figure, approximately 35% is attributed to faulty alarms (e.g., battery failure).
  - b. GDNs could be spending approximately £3,000,000 annually to respond to CO callouts. An estimated 28% of this is attributed to battery failures.
2. There are gaps in the CO incidents data reported by fire and rescue services at a national level. Data analysis in the platform has shown that a portion of incidents are likely to be underreported at this level.
3. 35% of all CO alarm soundings reported by all GDNs are due to battery failure where no CO is evident. When reviewing the data in greater detail (i.e. free text collected by gas engineers), it appears that many of these battery failure incidents are due to other issues such as an end-of-life alarm. This finding indicates that too many vulnerable households are unknowingly living with inadequate CO alarms so are at higher risk of CO exposure.
4. The current process to document and report on CO incidents varies across stakeholders. A holistic approach needs to be implemented for capturing CO incidents to ensure that individuals are provided with the best protection and safety against CO.

The above insights from the platform (1-4) have been used to trial 'a standardised CO incident response process across GDNs and fire and rescue services' that aims to:

1. Capture the reasons behind alarm soundings, ensuring that vulnerable customers are proactively protected from CO risks.
2. Enable proactive mitigation measures that:
  - a. Decrease the risk of CO exposure for vulnerable customers (e.g. IoT alarms).
  - b. Detect early signs of mould in vulnerable households, to allow for proactive intervention.

- c. Minimise unnecessary CO attendance by GDNs and FRS, improving their resources and efficiency.

This trial will be delivered from March with tangible outcomes planned by June, in time for the CORT conference. The trial will likely continue beyond June, to allow for benefits to be tested in the winter period - where CO incidents and damp and mould risks are likely to be higher.

Updated August 2024

The initial results of the project were presented at the CORT Conference as planned. The project was extended to the end of December 2024 in order to complete a transition phase

As part of the trial:

1. **A standardised process will be developed to improve data collection of CO incidents, appliances at risk of CO and vulnerable customers.** This process will ensure that stakeholders are providing the most appropriate and strategic measures for their customers and depending on their needs.
2. **35 community members will be trained to deliver energy efficiency, CO awareness and income max advice to hard-to-reach and vulnerable customers.** Trained experts will likely consist of trusted members within the vulnerable neighbourhoods. For instance, community members could be working for community faith groups, family groups and or local authorities.
3. **400 vulnerable and hard-to-reach customers will be provided with CO awareness, energy efficiency and income max advice during workshops/focus groups.** The trained community members will support GDNs and fire and rescue to refer customers to the workshops.
4. **250 Internet of Things (IoT) alarms provided to vulnerable customers, those with sensory needs and those with inadequate alarms. ~50 of these customers will receive IoT CO alarms and environment sensors to better understand those at risk of damp, mould and fuel poverty, and to ensure proactive measures are applied to minimise customer risks to damp and mould.**
5. **500 low income, vulnerable and hard-to-reach customers with faulty and or at-risk appliances will be provided with free boiler and appliance checks and servicing,** to minimise their exposure to CO.
6. **24,000 households will be provided with CO awareness, and energy efficiency and income max advice via leaflets.**

**Updated August 2024**

**Additional Outcomes**

	<p>7. Enriched data platform ready to be shared and used by chosen stakeholders</p> <p>8. Completed demonstrator project with clear pathway for final outcomes to be reported to Cadent</p> <p>9. Transition funding pathways agreed and signed-off by Cadent, ready for new funding arrangements from parties beyond Cadent from January'25 onwards.</p> <p>Ultimately, the outcomes of this trial will outline the benefits and challenges of:</p> <ol style="list-style-type: none"> <li>1. Implementing a cross-sector and standardised process for documenting and responding to CO risks and providing proactive measures to those in need.</li> <li>2. IoT alarms in minimising the risks of CO exposure for vulnerable customers and those with sensory needs, and for ensuring that GDNs and fire and rescue services have early insights that can allow for early detection of CO.</li> </ol> <p>The Partnership Ecosystem is forecasted to have a positive SROI, the outcomes of which are provided below:</p> <p><b>Year 1 &amp; 5 reporting figures</b></p> <p><b>Gross Present Value:</b></p> <ul style="list-style-type: none"> <li>➤ 1-year gross present value: £2,719,829.09</li> <li>➤ 5-year gross present value: £3,770,642.47</li> </ul> <p><b>Net Present Value:</b></p> <ul style="list-style-type: none"> <li>➤ 1- year net present value: £1,673,612</li> <li>➤ 5-year net present value: £2,724,425.01</li> </ul> <p><b>SROI (1-year):£1.60</b>  <b>SROI (5-year): £2.60</b></p>
<p><b>VCMA Project Start and End Date</b></p>	<p>July 2023 to June 2024  <b>Updated August 2024</b>  July 2023 to December 2024</p>
<p><b>Geographical Area</b></p>	<p>UK wide</p>
<p><b>Internal governance and project management evidence</b></p>	<p>Description of GDN(s) review of proposal and project sign-off, with details on how the project will be managed.</p>



## Gas Network Vulnerability and Carbon Monoxide Allowance (VCMA) Governance Document - PEA Control Table

In order to ensure that a VCMA project is registered in accordance with the Ofgem VCMA governance document (incl. project eligibility assessment), the below table should be completed as part of the project registration process.	
Stage 1: Sustainability and Social Purpose Team PEA Peer Review	
Date Immediate Team Peer Review Completed: 23/12/2024	Review Completed By: Gurvinder Dosanjh
Stage 2: Sustainability and Social Purpose Team Management Review	
Date Management Review Completed: 23/12/2024	Review Completed By: Gemma Norton
Step 3: Head of Consumer Vulnerabilities programme Sign-Off: Phil Burrows	
Director of Sustainability and Social Purpose Sign-Off Date: 18/02/25	
Step 4: Upload PEA Document to the Website & Notification Email Sent to Ofgem ( <a href="mailto:vcma@ofgem.gov.uk">vcma@ofgem.gov.uk</a> )	
Date that PEA Document Uploaded to the Website: February 2025	
Date that Notification Email Sent to Ofgem: February 2025	