



WWU GD3 Triangulation Assurance Document

Redacted version

10/12/2024

Introduction to this document

Wales & West Utilities (WWU) is in the process of developing its RII0-GD3 Business Plan, underpinned by a rigorous assurance approach that aligns with regulatory guidelines and emphasises the delivery of a high-quality, accurate plan for submission to Ofgem by the end of 2024.

In developing the business plan, WWU must clearly demonstrate that its strategies, plans, and investments are shaped by customers' and stakeholders' wants, needs, and preferences – this information is sought via a comprehensive engagement programme.

Due to the breadth, depth, and volume of feedback gathered by WWU's engagement, both recently and throughout the GD2 period, this information must be systematically triangulated to extract clear needs, preferences, and actionable insight. WWU employs Sirio's AI Triangulation Platform (here also referred to as 'AI Tool') – a state-of-the-art tool enabling rapid, flexible, and thorough triangulation of insights while maintaining a high standard of accuracy – to fulfil its triangulation needs.

This document is part of the wider assurance process and aims to demonstrate the precision, quality, and robustness of the insight triangulation performed via Sirio's AI solution, demonstrating that the tool satisfies the broader assurance checks.

Accordingly, this assurance document provides:

- An overview of the AI tool and its functionalities.
- A description of the end-to-end triangulation process and quality assurance measures applied by the AI tool (and the Sirio team implementing the tool) at each stage of this process.
- Two illustrative examples demonstrate the tool's accuracy and reliability in insight triangulation.
- An overarching assurance statement.
- A summary of Sirio's expertise in triangulating feedback from customer and stakeholder engagement to inform the development of energy networks' regulatory business plans.

Please note that this document was redacted to protect commercially sensitive intellectual property.

Introduction to the AI tool

Sirio's AI Triangulation Platform is an innovative, cloud-based solution designed to enable energy networks to shape their strategies, operations, and business plans around the needs of customers and stakeholders with enhanced efficiency and cost-effectiveness.

By leveraging bespoke algorithms and advanced artificial intelligence, the platform represents a transformative approach to the collection, storage, and triangulation of feedback from customers and stakeholders. This cutting-edge tool, informed by Sirio's deep subject matter expertise, was purpose-built to address the challenges networks face in extracting actionable insights from vast volumes of information collected across diverse touchpoints and in varied formats.

Historically, networks have relied on manual triangulation, conducted either internally or through external experts. This traditional approach has presented five critical limitations:

1. Resource-intensiveness for internal resources and costs if external resources are used.
2. Long timeframes are required to extract insight from raw evidence.
3. The static nature of the insights extracted makes it nearly impossible to add new feedback once the existing content has been triangulated.

4. Dependence of triangulation on a central database of engagement evidence, which the networks often do not possess.
5. Variation in the approach to triangulation across analysts/teams.

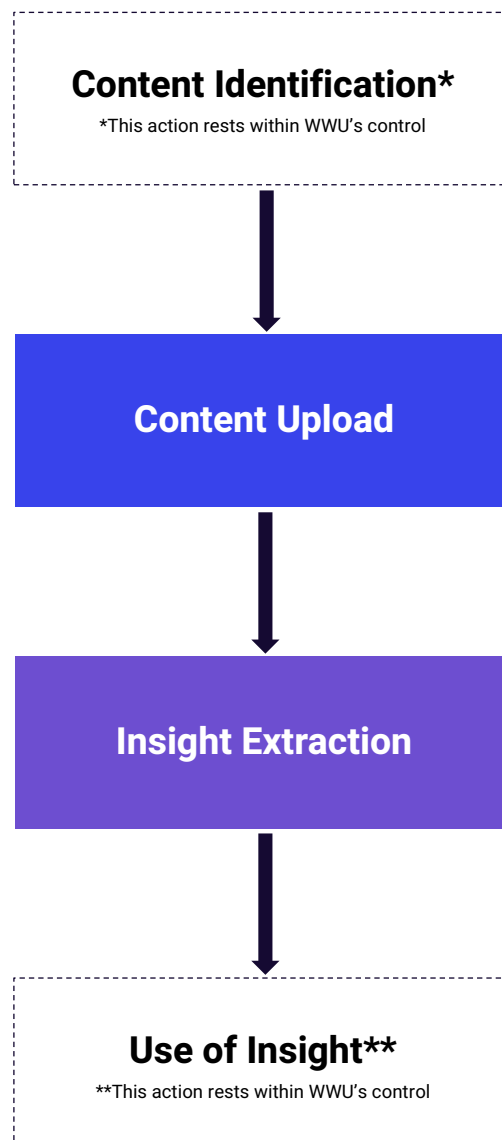
The platform automates the extraction and precise categorisation of all feedback into an accessible database, dramatically enhancing the speed and efficiency of insight generation. With advanced AI capabilities, the platform reduces processing times from days or weeks to mere seconds, while algorithms ensure that all feedback is consistently weighted and interpreted, increasing confidence in the reliability of the insights extracted from the tool.

The tool is accessed by WWU through a secure web-based application. All the underlying data that WWU has selected for upload on the tool is stored in a secure cloud environment for the sole use of specific users defined by the business.

A team of Sirio experts is supporting WWU's use of the tool in the context of the GD3 Business Plan development. For this reason, quality assurance measures are implemented at both a tool level (automated by bespoke functionalities) and manually by the Sirio team.

End-to-end triangulation process

The triangulation process powered by Sirio's AI Tool can be divided into four distinct phases. The diagram below offers an overview of these phases and is followed by a detailed explanation of each; these include how accuracy, quality, and credibility of triangulation are ensured at every stage.



Content Identification

This phase is fully managed by the WWU team and is outside the scope of the AI tool or the activities managed by the Sirio team supporting the use of the tool in the context of the GD3 Business Plan development. During this initial step, the WWU project team is responsible for identifying and compiling material that captures stakeholders' and customers' wants, needs, and preferences.

This generally includes (i) engagement activities specifically commissioned for the GD3 plan, (ii) ongoing business-as-usual (BAU) engagement, and (iii) third-party reports reflecting primary or secondary stakeholder perspectives on key topics.

Content Upload

As WWU identifies relevant material on customers' and stakeholders' views and preferences, this is shared with the Sirio team, which oversees and validates the upload of this information on the tool.

The process for uploading new content involves the following steps:

1. WWU shares files containing stakeholder and/or customer views on relevant issues. These files include reports, transcripts, and event summaries with the Sirio team, which are securely stored on the AI tool's cloud.
 - **Quality assurance:** Sirio's team reviews each file to confirm accessibility and resolve any formatting issues. This ensures the AI tool can correctly process every file without missing important details.
2. A bespoke cloud-based system extracts all the content of the document.
 - **Quality assurance:** The extracted content undergoes manual quality spot checks to ensure accurate capture of information. This is done to ensure that extraction was performed correctly and that no details/content was missed during processing.
 - **Quality Assurance:** Based on the quality of data extraction, adjustments are made to the tool to ensure it accurately captures all relevant material moving forward. This step is critical as it enables the tool to achieve high levels of accuracy and quality.
3. The extracted content is added to a structured database that acts as a single repository of all WWU's engagement feedback.
 - **Quality assurance:** Checks for errors and spelling are performed both manually and through a spell-check algorithm. This process ensures accurate data capture to enhance the clarity and readability of feedback, minimising the risk of misinterpretations of statements and figures by the AI tool.
 - **Compliance assurance:** A thorough review for the presence of personal information is conducted to ensure GDPR compliance, with any identified data promptly and manually removed.
4. Each entry of the database is tagged with relevant metadata, which plays a vital role in the accuracy and completeness of the tool's outputs.
 - **Quality Assurance:** Metadata tagging is conducted via a manual process. Tagging accuracy is verified through a cell-by-cell quality check of the database by a senior member of Sirio's team.

Sirio oversees each stage of the content upload process to ensure high levels of accuracy and quality in the inputs that are leveraged by the tool to generate triangulated insight used by WWU's decision-makers.

Insight Extraction

The interface of the AI tool is a simple chatbot where triangulated insight is provided as an answer to a question, along with the list of source documents that were used to generate the response.

The process for extracting insight via the AI tool's interface includes the following steps:

5. The user submits a query through the AI tool's chat interface.
6. The AI tool identifies all information in the database relevant to the query and generates a response based on a set of predefined parameters carefully selected by Sirio to guide answer structure, format and presentation.
7. The response is displayed in the chat interface, along with extracts of the files uploaded by WWU that are used to generate the answer.
 - **Quality assurance:** Through a bespoke testing environment, Sirio's development team continuously monitors the AI Tool's performance to ensure it produces outputs that align with WWU's desired formats and provide clear references to relevant feedback from stakeholders and customers. This approach guarantees that the insights are comprehensive, well-presented, and actionable.

Sirio's team regularly and routinely reviews the quality, accuracy, and completeness of the outputs provided by the AI tool to ensure that they meet the set internal standards and WWU's requirements.

The process consists of the following checks:

1. Does the answer cover the question in full based on the information available on the database?
2. Does the answer contain any information not relevant to the question?
3. Does the answer use the expected sources or types of sources?
4. Are all the key elements mentioned in the answer reflected in the sources presented by the tool as relevant?
5. How many source excerpts are directly linked to the answer, and how many were deemed relevant by the tool to provide context to the question?

Two examples of how this process is undertaken are presented in the 'Examples' section below.

Use of Insight

Similar to the 'Content Identification' phase of the triangulation process, this stage is entirely managed by the WWU team and is outside the scope of the AI tool or the support provided by the Sirio team. In this phase, WWU leverages insights triangulated by the AI tool to inform the development of the RIIO-GD3 business plan and address broader business requirements. The process employed by WWU to leverage this insight may vary depending on the use case.

Examples

The following examples illustrate how the AI tool formulates answers based on the content of the database and how Sirio's team conducts the triangulation quality assurance described above. In each example, the first table presents the question posed and the AI tool's unedited response. The second table provides details of the sources used to generate the response: the left column lists the source names, while the right column contains the relevant extracts selected from the database to support the answer above.

Example 1

Question	What are the customers' concerns on the use of hydrogen in their homes?
Answer	<p>Customers have expressed a range of concerns regarding the use of hydrogen in their homes, which can be categorised into several key themes:</p> <p>Cost Concerns:</p> <ul style="list-style-type: none"> - Customers are worried about the financial implications of transitioning to hydrogen, including the costs of new appliances and infrastructure changes (Content: "Customers hold significant concerns about the impact of the new commitment on their bills and the necessary changes within their homes"). - There is anxiety over rising energy costs and whether hydrogen will be more cost-effective compared to current fuels (Content: "Cost considerations are pivotal in this discourse"). <p>Safety Concerns:</p> <ul style="list-style-type: none"> - Safety is a major concern, with apprehensions about hydrogen's flammability, storage, and the potential for leaks or explosions (Content: "Safety concerns figure prominently in the discussions"). - Historical references, such as the Hindenburg disaster, amplify fears about hydrogen's safety (Content: "Specific examples mentioned include references to hydrogen as 'rocket fuel' or recalling catastrophic events such as the Hindenburg disaster"). <p>Lack of Information and Understanding:</p> <ul style="list-style-type: none"> - There is a significant lack of public knowledge and understanding about hydrogen, leading to uncertainty and fear (Content: "Many spoke of not knowing where to go to educate themselves"). - Customers desire more information on hydrogen's environmental benefits and cost-effectiveness compared to natural gas (Content: "There were calls for more detailed information, specifically regarding the associated costs and the environmental benefits of hydrogen"). <p>Disruption Concerns:</p> <ul style="list-style-type: none"> - Customers are concerned about the potential disruptions during the transition to hydrogen, including the duration and degree of these disruptions (Content: "Additionally, there is a strong desire for minimal disruption when transitioning to hydrogen"). <p>Environmental and Sustainability Concerns:</p> <ul style="list-style-type: none"> - Questions about the sustainability of hydrogen and its environmental credentials are prevalent (Content: "Important concerns include the sustainability of hydrogen, which demands further clarification regarding its production and environmental credentials"). <p>Technical and Practical Concerns:</p> <ul style="list-style-type: none"> - Concerns about the technical feasibility of hydrogen systems and the potential need for increased ventilation in homes (Content: "The storage of hydrogen emerges as another significant concern, with attendees questioning how it would be safely managed"). <p>These concerns highlight the need for comprehensive education and communication strategies to address customer apprehensions and provide clear, reliable information about hydrogen as a potential energy source for homes.</p>

Source Name	Source Excerpt
<p>PE21199 Understanding consumers' attitudes to safety measures when using 100% hydrogen in the home v1.0</p>	<p>Recommendations emphasise the need for an educational initiative to address the lack of understanding and concerns about hydrogen as a potential future fuel source in homes. Important concerns include the sustainability of hydrogen, which demands further clarification regarding its production and environmental credentials.</p> <p>Cost is a significant consideration, particularly in the current economic climate, with the public seeking information on whether switching to hydrogen will reduce their bills, and if incentives or assistance for the necessary appliance purchases will be available.</p>

<p>PE21199 Understanding consumers' attitudes to safety measures when using 100_ hydrogen in the home v1.0</p>	<p>Safety concerns figure prominently in the discussions. Attendees voice multiple safety-related apprehensions about using hydrogen in homes. These concerns span three major areas: the flammability of hydrogen, its storage, and the associated changes needed for the home. Specific examples mentioned include references to hydrogen as "rocket fuel" or recalling catastrophic events such as the Hindenburg disaster or incidents depicted in films like "Glass Onion (2022)." The storage of hydrogen emerges as another significant concern, with attendees questioning how it would be safely managed. Furthermore, many attendees feel that the necessity for increased ventilation amplifies the perception of hydrogen as a potentially more dangerous option.</p>
<p>PE21199 Understanding consumers' attitudes to safety measures when using 100_ hydrogen in the home v1.0</p>	<p>The subsequent portion of the text provides general feedback from the survey. Respondents overall found the topic engaging, prompting them to consider alternatives to natural gas. Despite the interest, there were concerns and queries particularly regarding the safety of using hydrogen in homes. Additionally, there were calls for more detailed information, specifically regarding the associated costs and the environmental benefits of hydrogen, such as whether hydrogen is more cost-effective or environmentally friendly compared to natural gas. These comments reflect a need for increased public education about the potential benefits and drawbacks of transitioning to hydrogen as an energy source.</p>
<p>WWU Citizen Panel Full Report_V1</p>	<p>Customers hold significant concerns about the impact of the new commitment on their bills and the necessary changes within their homes, particularly the anticipated rise in costs linked to implementing hydrogen appliances. This concern stems partly from the substantial figure of £150 million, which is perceived as a large sum spread over three decades. The uncertainty about whether this cost amount is already included in their current bills or if additional funds will need to be raised compounds their anxiety. Additionally, customers express worry not only for their financial well-being but also for others, especially in the current challenging economic climate. They have raised questions about potential disruptions, seeking clarity on the duration and degree of these disruptions, especially for vulnerable individuals or those relying on energy for medical purposes. To effectively engage with audiences, customers advocate for a multi-faceted communication approach that includes door-to-door leaflets, local town bulletins, and potentially emails. They emphasise that partnerships are critically important, suggesting that the company should collaborate with local or central governments to reach out to individuals, and possibly secure funding for some of the required work. There's a recognition of potential customer collaboration, where informed customers could assist their neighbours or help manage the disruption. Notably, the customers voiced that last discussions involved low carbon hydrogen and the need to replace boilers with hybrid systems; a pressing inquiry was whether the company would assist in managing the rising bills during this transition. Another crucial point brought up was the necessity of informing people about the reasons and benefits behind these changes, differentiating the new solutions like plastic pipes from previous ones, hence ensuring transparency and understanding among the customers.</p>
<p>PE21199 Understanding consumers' attitudes to safety measures when using 100_ hydrogen in the home v1.0</p>	<p>Additionally, there is a strong desire for minimal disruption when transitioning to hydrogen. This sentiment is evident from the varied sessions irrespective of homeownership status. The attendees emphasize that the switchover to hydrogen should be as smooth as possible. Queries are raised regarding the duration of the switching process, with a preference for a quick and seamless transition allowing people to continue their daily routines with minimal interruptions. Furthermore, there is an insistence on limiting the changes required to homes, acknowledging the complexity and scale of work involved if extensive modifications were necessary.</p>
<p>WWU Citizens Panel report Decarbonisation of home heat March 2022 FINAL</p>	<p>Many spoke of not knowing where to go to educate themselves. They were concerned about the lack of certainty about hydrogen in particular. For example, Its cost to households and the economy and how it will be rolled out across the UK. Some Members were concerned about whether it really will turn out to be more environmentally friendly than natural gas.</p>

<p>PE21199 Understanding consumers' attitudes to safety measures when using 100% hydrogen in the home v1.0</p>	<p>Cost considerations are pivotal in this discourse. The attendees reached a general consensus that cost is a significant issue, especially given the current economic climate. There is an understanding that adopting hydrogen inevitably entails added expenses, precluding inaction. This provokes key questions, including whether hydrogen will be more cost-effective to purchase, whether more hydrogen will be required for cooking and heating compared to current fuels, and if there will be incentives to offset the high costs of modifying homes or acquiring new appliances to accommodate hydrogen.</p>
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Example 2

<p>Question</p>	<p>How can WWU design their reward schemes so to reflect what colleagues want?</p>
<p>Answer</p>	<p>Based on the provided content, WWU can design their reward schemes to reflect what colleagues want by considering the following key themes and suggestions:</p> <p>Key Themes:</p> <ol style="list-style-type: none"> 1. Job Security and Career Progression 2. Love for the Job 3. Work-Life Balance and Flexibility 4. Financial Wellbeing <p>Detailed Recommendations:</p> <ol style="list-style-type: none"> 1. Job Security and Career Progression <ul style="list-style-type: none"> - Security: Emphasise job security as a core component of the reward scheme, as employees value knowing their job is safe in an unsettled world. <ul style="list-style-type: none"> - <i>"They talk about security and a fundamental need to know their job is a safe and attractive proposition in an increasingly unsettled world."</i> - Career Development: Incorporate opportunities for career progression and internal mobility into the reward scheme. <ul style="list-style-type: none"> - <i>"They also recognise and appreciate the opportunities to progress within the business. Many shared stories of promotion or other internal mobility opportunities they had been afforded."</i> - Development Plans: Make development plans a mandatory part of the performance review process to encourage employees to take ownership of their development. <ul style="list-style-type: none"> - <i>"WWU could consider making development plans a mandatory part of the performance review process to encourage employees to take more ownership of their own development."</i> 2. Love for the Job <ul style="list-style-type: none"> - Job Satisfaction: Recognize and reward the intrinsic motivation employees have for their work, particularly in operations. <ul style="list-style-type: none"> - <i>"Colleagues are also motivated by the job at hand. Simply, they love what they do. This is particularly felt in operations - though it was a present and recurring theme across the whole business."</i> 3. Work-Life Balance and Flexibility <ul style="list-style-type: none"> - Flexibility: Offer flexible working arrangements to accommodate individual preferences for work-life balance or work-life integration. <ul style="list-style-type: none"> - <i>"Do individual employees prefer work-life balance or work-life integration, and how can WWU accommodate both preferences?"</i> - Autonomy: Provide employees with the autonomy to choose an approach that works best for them, rather than mandating one-size-fits-all policies. <ul style="list-style-type: none"> - <i>"Once WWU better understands the desires of its employees, it should not mandate one-size-fits-all policies, but give each employee the autonomy to choose an approach that works best for them."</i>

	<p>4. Financial Wellbeing</p> <ul style="list-style-type: none"> - Competitive Salaries: Ensure that salaries are competitive to attract and retain talent. <ul style="list-style-type: none"> - <i>"Some were in favour of a holistic approach that promoted wider career benefits and the role of the gas industry in combatting climate change, whereas others stressed that competitive salaries would be key."</i> - Benefit Spend: Improve the value derived from benefit spending to better reflect the diverse financial needs of the workforce. <ul style="list-style-type: none"> - <i>"In addressing these aspects of employees' financial wellbeing; WWU should improve the value as both it and employees service from benefit spend. The benefit arrangements will also better reflect the diverse financial needs of the workforce."</i> <p>Outlier Views:</p> <ul style="list-style-type: none"> - Feeling 'Stuck': Address concerns from employees who feel 'stuck' at certain roles or levels, such as FCO. <ul style="list-style-type: none"> - <i>"There is a slight caution here with some colleagues feeling 'stuck' and that there are ceilings when you reach a certain role/level e.g. FCO."</i> <p>By integrating these themes and recommendations into their reward schemes, WWU can better align with what colleagues want, thereby enhancing employee satisfaction and retention.</p>
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Source Name	Source Excerpt
WWU_EVP_Insights_Report_Aug22_v1 - Copy	When colleagues talk about why they either joined WWU or chose to stay at WWU, broadly, their reasons align with recent employee talent trends. At the core of it, they talk about security and a fundamental need to know their job is safe - an attractive proposition in an increasingly unsettled world. They also recognise and appreciate the opportunities to progress within the business. Many shared stories of promotion or other internal mobility opportunities they had been afforded. There is a slight caution here with some colleagues feeling 'stuck' and that there are ceilings when you reach a certain role/level e.g. FCO. Colleagues are also motivated by the job at hand. Simply, they love what they do. This is particularly felt in operations - though it was a present and recurring theme across the whole business. To simplify, " I love what I do, I like my team, and I feel my job is safe".
WWU Sustainability Strategy Workshop - Feedback Report_	Stakeholders were broadly split around how WWU should best attract and retain talent. Some were in favour of a holistic approach that promoted wider career benefits and the role of the gas industry in combatting climate change, whereas others stressed that competitive salaries would be. There were also many calls to engage with schools and roll out apprenticeships more widely. Partnerships with local charities were favoured, but diverging opinions emerged around the aims of this collaboration, with suggestions ranging from enhancing community trust to promoting inclusive employment or delivering public education campaigns about new technologies. Different views were expressed on how WWU should increase diversity, equity, and inclusion within its teams. Strategies ranged from promoting gender diversity and using non-discriminatory language to flexible working arrangements. Some industry representatives suggested active engagement with educational institutions in order to improve job visibility for younger generations.
WWU Employer of Choice Qualitative Follow-up - Findings report v1	WWU could consider making development plans a mandatory part of the performance review process to encourage employees to take more ownership of their own development.
WWU Employer of Choice Secondary Research - Findings report v1	WWU must actively listen to employees on individual priorities, grievances, worries, and needs in terms of work-life balance. For example: do individual employees prefer work-life balance or work-life integration, and how can WWU accommodate both preferences? What kinds of flexibility do operational staff want, and how does it compare to other benefits? Properly training and empowering managers to be able to facilitate these discussions on a one-to-one basis without managers feeling judged is essential. Autonomy is key. Once WWU better understands the desires of its employees, it should not mandate one-size-fits-all policies but give each employee the autonomy to choose an approach that works best for them. Do not forget the less vocal employees. Caregivers, for example, are not as neat or marketable a demographic as Gen Z. They may also be less demanding of employers. However, caregivers could gain more than other demographic groups through a reshaping of work-life priorities and principles.

Overarching Assurance Statement

At Sirio, we prioritise the accuracy and reliability of our AI tool's responses through comprehensive model training, testing, and refinement processes. Our solution is intentionally designed to operate without internet access, ensuring that all information used in chat interactions comes solely from the documents and data within our secure database. This approach prevents the generation of speculative or fabricated responses that could arise from external sources. If the tool cannot find sufficient or relevant data to address a query, it will clearly acknowledge this limitation, thereby avoiding the risk of delivering inaccurate or misleading information.

Sirio's expertise in engagement feedback triangulation

Sirio is a boutique consultancy that operates at the intersection of customers, policy-makers and the energy industry. Our mission is to facilitate a smooth and effective energy system transition by bringing customers' and stakeholders' needs to the fore of decision-making across the industry. We work towards our mission by aligning our clients' strategies and operations to the needs of customers and stakeholders, enhancing business results and improving outcomes for society. We have a successful track record in supporting energy networks in designing, developing and refining regulatory business plans around stakeholder needs via the extraction of insight gathered from engagement and research programmes. Key examples include:

- Sirio managed the end-to-end engagement and triangulation programme conducted by SP Energy Networks to support the development of their RIIO-ED2 Business Plan. Sirio's involvement ranged from designing the engagement strategy, managing the delivery of engagement by SPEN staff and third parties, triangulating the feedback gathered from this engagement to extract actionable insight, and supporting SPEN decision-makers in implementing this feedback to shape business plan commitments, strategies and consumer value propositions.
- Sirio team members were also previously involved in the extraction of triangulated insight from engagement feedback aimed at supporting the development of RIIO-GD2/ED2 business plans for Wales & West Utilities, Cadent and UK Power Networks.

Sirio's expertise in insight triangulation and its use in operational and strategic decision-making is encapsulated in the innovative AI Triangulation Platform. Recognising the paradigm-shifting potential of this solution, several networks are implementing or considering its use, including Cadent Gas, SP Energy Networks, Northern Powergrid, Northern Gas Networks and UK Power Networks.

The logo for Sirio features the word "sirio" in a bold, white, sans-serif font. Above the letters "i" and "r" is a horizontal bar composed of three segments: a blue segment on the left, a dark blue segment in the middle, and a purple segment on the right.

sirio

www.sirio-strategies.com

3rd floor, 86-90 Paul Street,
EC2A 4NE, London