



Digitalisation Strategy Action Plan

December 2024

In March this year, we published our updated Digitalisation Strategy and, as we look forward to GD3, we are refocusing our strategic roadmap to ensure we are set up to meet the challenges of the next few years.

This Digitalisation Strategy Action Plan (DSAP) has been revisited to reflect our updated approach and priorities for the remainder of GD2.

Underpinning our Digitalisation Strategy are the building blocks outlined below which have informed our overall approach, priorities and outcomes that will be enabled.

Our digital and data ambition
 To make a positive impact on society, the communities we serve and our vulnerable customers by delivering excellence in the provision of safe and efficient services. We will accelerate decarbonised energy solutions to create a shared net zero future by modernising our business to become data-driven and digital at our heart.

3. Our business outcomes	Stakeholder and societal value Our digital and data products and services are inclusive, secure, sustainable and reliable. They deliver recognisable value to our customers and stakeholders.	Regulatory obligations SGN sustainably meets Ofgem’s expectations on Data Best Practice, Interoperability, AI and Digital Twin solutions, and aligns to legal mandates.	Business transformation Modernisation programme achieves performance gains by rebuilding legacy business processes as modern digital and data enabled processes.	Business excellence Data, analytics and AI allows us to drive performance gains in a broad range of business activity and address our most difficult problems.	Future of Energy and innovation We pilot and implement new technologies to bring about future performance gains and influence regulators and legislators.
	Data sharing platform Allows automated access to our data sets, internally and externally, under open data or published under licence.		Analytics and reporting platform Allows people at SGN to analyse our data sets to derive insight and used to produce business performance reports.		Innovation platforms Platforms to support AI, Digital Twin and IoT which enable testing and adoption of these technologies.
2. Our platforms and capabilities	Data lake and integration layer Data storage and plumbing that allows data sets to be accessed by other platforms				
	High-quality data Data owners take accountability for the quality and completeness of data. We apply Q-FAIR principles (Quality, Findability, Accessibility, Interoperability and Reusability) to our data.	Digital and data governance We govern our digital solutions and strategic data assets to ensure they are fit for purpose and deliver value. We develop and embed comprehensive digital and data governance framework.			People with digital and data skills Our people understand the value of data and how to utilise digital solutions. They have the requisite technical and data skills to deliver the outcomes for our stakeholders and organisation.
1. Getting the basics right	Secure by design Our digital solutions and platforms are designed with cybersecurity built in.				

We have designed this action plan to share details on the initiatives we will be undertaking through GD2 in line with our strategic building blocks.

Our strategic outcomes

Stakeholder and societal value

Our digital and data products and services are inclusive, secure, sustainable and reliable. They deliver recognisable value to our customers and stakeholders.

Regulatory obligation

SGN sustainably meets Ofgem's expectations on Data Best Practice, Interoperability, AI and Digital Twin solutions, and aligns to legal mandates.

Business transformation

Modernisation programme achieves performance gains by rebuilding legacy business processes as modern digital and data enabled processes.

Business excellence

Data, analytics and AI allows us to drive performance gains in a broad range of business activity and address our most difficult problems.

Future of Energy and innovation

We pilot and implement new technologies to bring about future performance gains and influence regulators and legislators.

Our strategic building blocks

Getting the basics right

The key foundational step in our digitalisation strategy is 'Getting the Basics right'.

In doing this, we will build essential skills and processes for creating high-quality data that is secure and well governed, that our employees can use to derive valuable business insight and our stakeholders can rely on.

We emphasise accountability for the quality and completeness of data and ensure our employees possess the necessary skills to analyse data effectively and derive valuable insights.

Digitalisation and our customers

Digital solutions undoubtedly have a role to play in how we identify, connect and engage with our vulnerable customers and we utilise digital and data solutions appropriately to ensure we deliver the services and outcomes that are right for our vulnerable customer groups.

Platforms and capabilities

In line with our commitment to establish digital foundations by 'Getting the basics right', we are dedicated to advancing and enhancing our capabilities in handling technical data. By developing our cloud data platforms, we aim to unlock the full potential of our data and foster innovative, data-driven solutions, enabling us to optimally harness our data skills. These robust platforms will not only enhance the storage, management, analysis, and sharing of data but will also play a pivotal role in supporting decision making both within our organisation and, through opening access to our data, by our stakeholders.

Future of Energy and innovation

Digitalisation, and the shift toward data-driven gas networks, will increase as the decarbonised energy system of the future develops. Our innovation team will be able to use our digital platforms and capabilities to better explore and evaluate new data capture and sharing methods and use them to bring value to our customers and stakeholders

Enterprise Data Management

Getting the basics right

Stakeholder and societal value

Regulatory obligation

Business excellence

Future of Energy and innovation

Start date: April 2022 | End date: March 2026

SGN has been on a journey to maturing its overarching data governance & management capability which focusses on our people, processes, technology and data.

A key part of this has been the investment in Talend data management platform which is enabling us to identify, describe and monitor our critical data assets as well as implement specific requirements from the Data Best Practice Guidelines (DBPG) such as implementing the Dublin Core metadata standard and embedding Quality, Findability, Interoperability & Reusability (Q-FAIR) principles.

We have established our Enterprise Data Management team who are continuing to develop their expertise, embed our data governance framework and catalogue our critical data assets.

We are continuing to establish and deliver key foundational data governance and management capabilities to enable both our external and internal data consumers getting the value and insights from our strategic data assets.

Benefits and measures

Critical data assets identified & catalogued in line with DBPG

- Updates on the number data domains processed and data owners on-boarded by Enterprise Data Management team and subsequent coverage of critical data asset identification.

We are investing in applying Q-FAIR principles to our critical data assets

- Updates on the number of critical data assets identified are being kite-marked to indicate level QFAIR principles that have been applied.

December 2024 update

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Since June we have continued our 'Getting the Basics Right' journey in advance of GD3 and the continued focus on digital and data transformation for SGN but also across the energy sector.

Progress over the last six months includes:

- Revisiting and updating our data capability roadmap to encapsulate requirements across the enterprise as SGN undertakes its Transformation programme
- Collaborating with our GDN peers in establishing common data definitions and formats in line with DBPG principles 2 and 8; this is the first data set but establishes a repeatable set of approaches and processes for ongoing activities.
- Mobilising expansion of SGN's data governance framework, including Data Ownership forums, to ensure our critical data assets are governed and managed appropriate to enable our strategic outcomes.

June 2024 update

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In the last six months, we have:

- Published two further Open Data assets in line with Data Best Practice Guidelines, on our Open Data Portal.
- Mobilised our Data Operations (DataOps) programme which will further support data management maturity through data assets stored within our data sharing platform and services.
- Critical data asset identification and cataloguing and data quality assessment is continuing, in line with DBPG and Q-FAIR principles.
- Data domains prioritised are network assets and people data assets. This is in line with business strategic and stakeholder priorities.
- Next phase of data governance rollout has been delivered with data domain aligned governance roles, responsibilities and forums in place.

Transformation Programme

Getting the basics right

Platforms and capabilities

Business transformation

Business excellence

Start date: 2024 | End date: GD3

Our Transformation programme is the conduit through which SGN delivers all its business transformation projects to realise organisation-wide benefits as we pivot towards maximising the productivity of our front-line functions and people.

This will lead to a fundamental review of our organisation, processes, technology platforms, data structures, and the technologies that integrate them.

Benefits and measures

The Transformation programme will deliver the following outcomes:

- Investing in our people to improve their capabilities, boost productivity, fine-tune our operating model and optimise the use of technology
- Eliminate waste by operating smarter using the right mix of labour, data, technology and innovation
- Develop planning-led organisation to set us up for the future of energy
- Optimised core capabilities, unlocking effectiveness and productivity benefits

December 2024 update

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Our Transformation programme has secured board approval for initiatives to improve operational safety, productively, and cost-effectiveness. A key component of this is the digital refresh of our field services, in line with our GD3 business plans, which includes digitising, improving and enhancing our productivity and front-line staff experience.

This will include:

- Digitise and automate core frontline operational processes.
- Replace outdated scheduling systems.
- Enhance customer communication capabilities.
- Enable field staff to work smartly using mobile devices.

June 2024 update

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SGN has continued to undertake a full and detailed review of the priorities, outcomes and benefits associated with undertaking our Transformation programme. This has been essential given the complexity and foundational nature of our ambition.

We have defined the following transformation principles, which underpin and direct the workstreams and deliverables that are being shaped:

- Pivoting the whole organisation to maximise the productivity of the frontline.
- Eliminate waste, unproductive time and inefficient handoffs.
- Shift to a leaner and more strategic back office.
- Standardise end-to-end processes, consistent across SGN and in line with regulation.
- Be enabled by simple and integrated data and digitisation – creating a single pane of glass.

Data Operations (DataOps) Capability Establishment Programme

Getting the basics right

Platforms and capabilities

Stakeholder and societal value

Regulatory obligation

Business excellence

Future of Energy and innovation

Start date: April 2022 | End date: March 2026

SGN has been awarded investment through Ofgem's ReOpener mechanism to establish a DataOps capability.

The primary use case has been informed by our external Data Users and Stakeholders who require an easy-to-use service when requesting, searching and accessing our data.

Our DataOps programme will mature our current service offering via SGN's Open Data Portal to securely deliver a one-stop-shop for a variety of Open and Shared data assets in formats to suit our data stakeholders. By centralising this capability, we will be introducing greater efficiencies in managing these data assets and their compliance with Data Best Practice Guidelines and Q-FAIR (Quality, Findability, Accessibility, Interoperability, Reusability) principles.

The DataOps capability will also provide our internal data consumers with the same service benefits, thus delivering data assets in an efficient, secure and timely fashion.

This initiative has a number of workstreams which we will be mobilising and delivering throughout GD2, and which will establish key foundations as we enter GD3.

Benefits and measures

We are investing in establishing DataOps capability to improve the products and services we offer our data users and in line with DBPG:

- All open data assets are being served via DataOps function.
- Shared data assets are transitioning to the DataOps function as the scope of data assets in our data lake increases.
- We have implemented our next generation Data Sharing Platform which enables data users to access data assets in formats that they required, ie API.

We are engaging with and listening to our stakeholders to ensure we are delivering the products and services they need in the way they need them:

- We will provide details of our stakeholder plans, the events held, feedback received and our resulting plans.

We are investing in our people to ensure they have the right digital and data skills to deliver the right outcomes for our stakeholders and organisation:

- We will share information on our plans for communication, training, and development pathways for our staff, along with updates on progress.

December 2024 update

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We have mobilised the following four workstreams for the programme:

- **Data Best Practice Guidance**
Process improvement to mature compliance with DBPG.
- **Data Sharing Platform**
Upgrading our open data sharing platform and experience.
- **Robust Data Foundations**
Target Operating Model review covering roles, ways of working, technology and tools to design, develop and share data products and services.

Increase the range of data assets available in our data lake for sharing and insights.

- **Actionable Insights**
Enhancing services and products to release the value of our data.

We will bring the remaining workstreams online next year.

June 2024 update

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The programme has been mobilised and aligned to SGN's delivery governance framework.

Workstreams to deliver the DataOps capability and benefits are being planned out in detail but will enable the following outcomes:

- Extending and maturing DBPG alignment across more data assets, not least more Open Data Assets.
- Improved data sharing platform and services.
- Increasing scope of data assets within centralised, governed and secure data lake.
- Delivering data services aligned to stakeholder and business data user needs through engagement with key stakeholders.
- Upskilled data users.

We will adopt a delivery approach appropriate to each workstream – agile/waterfall – and will advise on the progress, outcomes and benefits realised as they are delivered.

Digitalisation and our customers

Digitalisation and our customers

Stakeholder and societal value

Regulatory obligation

Start date: April 2022 | End date: March 2026

Customers are at the heart of what we do and as part of our vulnerability support strategy, we aim to help 500,000 vulnerable customers use energy safely, efficiently and affordably between 2021 and 2026.

Our strategy incorporates both digital solutions to enable our most vulnerable customers to access the support and services they need, but also alternative access routes to support services ensuring we reach those for whom digital solutions would not be appropriate.

We have developed 'beyond the meter' support services with our operational staff as they go about their day-to-day business, as well as building collaborative partnerships with other energy networks and third-sector organisations to offer an array of Additional Services for our most vulnerable customers.

In addition to being British Standard BSI 18477 Inclusive Service accredited, we have recently achieved ISO 22458 Kitemark (Energy Sector) for accessible services.

To better understand the impact of our vulnerability strategy today, and to help us plan into the future, we are conducting research with Sustainability First/Centre for Sustainable Energy. This will help us to map out the barriers we forecast will block a fair and just energy transition and is informing our vulnerability strategy for GD3.

For more information on our Vulnerability and Carbon Monoxide Allowance strategic initiatives, read our [VCMA Annual Report 2023](#). Our online digital services can be accessed [here](#).

December 2024 update

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In October 2024, through the dedication and commitment of our people and the development of our extensive Safe and Warm partnership network we achieved our revised ambition to support 500,000 vulnerable households use energy safely, efficiently and affordably, 18 months ahead of target. The key foundation to ensuring we're delivering to those most vulnerable is an understanding of who is most in need. This has come from good quality data and insights and the development of supporting tools including our 'SGN Vulnerability Index' developed with Energy Savings Trust. We now have an established partnership network of over 120 community organisations who work together to support vulnerable households in energy crisis today, with a view of supporting these same customers into energy resilience in a fair and just energy transition.

We have included further statistics on positive impact our Vulnerable Customer Strategy Development and Services have had on the next page.

June 2024 update

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We are currently working with the National Energy Action (NEA) a fuel poverty charity to survey our partner-delivered services across both our network areas to understand how the support has impacted the lived experience of vulnerable households.

As a result of our services, we've seen a significant shift in people who couldn't previously keep their home comfortably warm at all now being able to do so, albeit still with difficulty. The number of households who were unable to keep their home warm reduced from 53% to 27% after our support. Meanwhile, the number of households who are now able to easily heat their home during the colder months increased from 9% to 20%.

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Digitalisation and our customers

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Total Additional Services requested for GD2 (04/21) to October 2024 (covers both self-referral and staff referral)

Additional service	Number of services requested
Priority Services Register	16,575
CO alarm referral	5,447
Emergency top up (gas/electricity)	3,240
Energy advice	2,832
Food essential pack/Tesco voucher	3,293
Safe and Well visits	2,433
Care and Repair	1,887
Careline Support Service	1,973
Scope Energy Hub	1,456
Befriending service	703
Fuel voucher scheme and financial support services (21/22)	272
Locking cooker valve	395
Hearing impaired CO and fire alarm system	461
Verbal warning CO and smoke alarm	333
Mental health and money advice	543
Total	41,843

Vulnerability programme - outcomes for customers from April 2021 to October 2024

£46,212,587
Social Value

517,499
households supported

1,050,728
unique services provided

81,602
PSR customers registered

543
Care & Repair scheme repairs

98,418
energy advice sessions

87,546
crisis funds (food and fuel)

183,989
income max checks

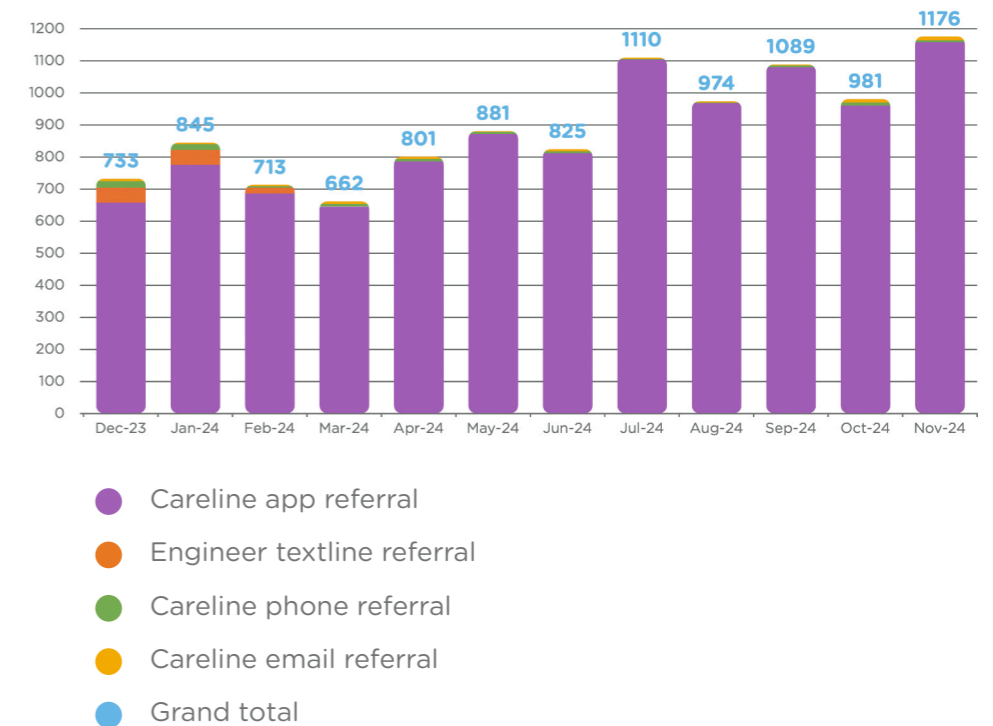
2,486
fuel poor gas connections

58,014
home safety interventions

46,673
carbon monoxide alarms

231,437
carbon monoxide safety sessions

Referrals through Careline app, Engineer Textline, emails and Careline calls



Future of energy and innovation

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Future of Energy and innovation

Our research into hydrogen production and distribution, carbon storage, and other innovative technologies aims to transform the gas system into the world's first green gas distribution network.

For the remaining part of the RIIO GD2 period, we plan to transform our approach to innovation, adopting an 'Innovation as a Service' model. This shift will primarily support our team in enhancing our operational performance. As part of this new strategy, we will streamline our innovation portfolio by reducing the number of active projects, concentrating our resources on those initiatives that significantly impact safety, efficiency, decarbonisation, or customer needs.

To read more about our Future of Energy and Innovation initiatives, visit [our website](#).

Benefits and measures

We are supporting innovation across the sector by participating in initiatives designed to transform the energy landscape. We are doing this in collaboration with our energy network peers and government stakeholders utilising schemes such as the Strategic Innovation Fund and the Network Innovation Allowance:

- We will provide updates on the innovation initiatives we are working on along with the outcomes and benefits they are aiming to realise for net zero and our communities.

Intelligent gas grid – strategic innovation fund beta

Start date: August 2023 | End date: August 2026

Strategic Innovation Fund beta phase – Data & Digitalisation Challenge

The principal innovation underscoring the project is use of data-driven techniques, based on ML and AI technology, acting in combination with remote pressure control and network extremity monitoring equipment deployed to networks in a distributed digitalised architecture.

Benefits identified are around Cost Reduction in operating the networks; these benefits will be delivered progressively from 2026 onwards as the solution is rolled out as business as usual. Further information can be found [here](#).

December 2024 update

Phase one field trials of Intelligent Control (Upredict) are currently underway across three of SGN's networks in the south and a fourth network is expected to join the field trials shortly.

The project's Technical Consultant have now formalised a Digital Assurance process to support the trialling of Anomaly Detection and the project team are working closely to finalise trial expectations.

A suitable Biomethane site has now been identified and data is being captured to support the progression to field trial of the Utonomys Biomethane Injection Solution in the latter part of 2025.

June 2024 update

Using Utonomy's remote control pressure system as the enabling technology, the project idea is to collect and use network data alongside external data such as weather to develop machine learning and AI applications that optimise network pressures and provide insights on network performance.

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Future of energy and innovation

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Predictive safety interventions – strategic innovation fund beta

Start date: August 2023 | End date: February 2025

Strategic Innovation Fund beta phase – Data & Digitalisation Challenge

The PSI Beta project is fully aligned with the SIF Beta Challenge for Data and Digitalisation, and successful project completion will deliver the next generation of user driven digital products, services, and processes. The project will create a predictive safety model in the gas sector and ready to take to the wider energy sector and utility sector globally, aligned with the Beta challenge phase.

Benefits identified are reduction of injuries and incidents; improved risk visibility across network operations, and lower cost to capture data about indicator events. Further information can be found [here](#).

December 2024 update

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Training for all key operational staff has taken place which ensures that our staff are fully equipped to integrate PSI into their daily working practices. During training, feedback has been sought and is being used to refine PSI features. Full benefits gained from the tool are to be measured in April next year; however tangible improvements in efficiency and safety practices are already being noted.

June 2024 update

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Currently, the process for reducing lost-time injuries involves a large manual data-capture effort and experimental process changes. By the nature of this process, a worksite is already unsafe before anything is done to prevent it. Instead of waiting for a site to become unsafe, FYLD and SGN want to analyse which conditions contribute the most to worksite safety, then multiply them throughout the network.

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H100 Fife – network innovation competition

Start date: April 2020 | End date: March 2027

Network Innovation Competition – Net zero and energy system transition

The H100 Fife project aims to pioneer a 'first of its kind' demonstration of a 100% hydrogen network, intending to serve 300 customers in Fife. The project is designed to provide critical evidence supporting the future role of the gas distribution network in achieving net zero, aligning with the UK government's ten-point plan and the Scottish government's Hydrogen Policy. The project will comprise of an end-to-end system, including power generation, hydrogen production, storage, pressure reduction, odourisation, distribution and customer connections to serve domestic hydrogen meters and appliances.

It will make the most of our existing natural gas infrastructure, making the transition to net zero faster and more affordable than other low-carbon solutions. Further information can be found [here](#).

December 2024 update

Updates on our three key workstreams:

- **Upstream hydrogen production:** The construction of our hydrogen production and storage facility at Fife Energy Park is making great progress, including the installation of essential infrastructure for the electrolyser building, management building, and energy centre.
- **Midstream hydrogen distribution network:** We have completed our construction of the world-first 100% green hydrogen gas distribution network. The 8.4km pipe runs from our hydrogen production and storage facility and past the 1,000 homes that can take part in the project. The new network has been built to ensure the same safety and reliability standards expected from the natural gas systems and enables customers in Buckhaven and Denbeath to choose whether to connect to hydrogen in summer 2025 or stay connected to natural gas.
- **Downstream Customer Marketing and in-home works:** We have been visiting customers at home, launching a new social media campaign, and increasing the visibility of the project in the network area. So far, we have received a great response from the local community as 165 customers have signed their Customer Connection Agreements. We are also continuing to carry out more in home surveys, which ensures customers have all the information they need to help create a smooth transition to hydrogen in their homes.
- **Supporting the Community:** We have been continuing the hydrogen education programme and teaching young students about the production of green hydrogen via electrolysis and how it is happening in Fife.
- During the festive period, many households and local organisations face extra challenges. We have been engaging with local groups to understand how best to support their efforts. This December we are attending various community events and working with charities to help them continue their vital work and collaborating on initiatives to ensure families can continue to use their much-needed facilities.

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H100 Fife – network innovation competition

June 2024 update

Three workstreams are in progress:

- **Upstream hydrogen production:** This has transitioned from the development stage to the construction phase as works commenced on site in relation to the hydrogen demonstration facility. The H100 Fife site is planned for completion in September 2024.
- **Midstream hydrogen distribution network:** We have appointed the contractor to build and commission the distribution network. Construction commenced in May 2023 and is due for completion in June 2024.
- **Downstream Customer Marketing and in-home works:** We currently have 367 (as of June 2023) project registrations. The consumer engagement has been considerable and has resulted in a close relationship with the local community which continues to grow via activities such as sponsoring local events and engaging with key local stakeholders.

Our ‘Getting the basics right’ success criteria for GD2

As part of our Digitalisation Strategy published in March 2024, we included details on the success measures we’d be adopting and reporting on as part of this DSAP publication.

Success looks like

Our critical data assets are being identified and catalogued in line with Data Best Practice Guidelines requirements.

We are investing in applying QFAIR principles to our critical data assets and they are trusted.

We are investing in establishing Data Operations (DataOps) capability to improve the products and services we offer our data users and in line with Data Best Practice Guidelines.

We are engaging with and listening to our stakeholders to ensure we are delivering the products and services they need in the way they need them.

We are investing in our people to ensure they have the right digital and data skills to deliver the right outcomes for our stakeholders and organisation.

We are supporting innovation across the sector by participating in initiatives designed to transform the energy landscape. We are doing this in collaboration with our energy network peers and government stakeholders utilising schemes such as the Strategic Innovation Fund and the Network Innovation Allowance.

Measure

Updates on the number data domains processed and data owners on-boarded by Enterprise Data Management team and subsequent coverage of critical data asset identification.

Updates on the number of critical data assets identified are being kite-marked to indicate level QFAIR principles that have been applied.

- All open data assets are being served via DataOps function.
- Shared data assets are transitioning to the DataOps function as the scope of data assets in our data lake increases.
- We have implemented our next generation Data Sharing Platform which enables data users to access data assets in formats that they required, ie API.

We will provide details of our stakeholder plans, the events held, feedback received and our resulting plans.

We will share information on our plans for communication, training, and development pathways for our staff, along with updates on progress.

We will provide updates on the innovation initiatives we are working on along with the outcomes and benefits they are aiming to realise for net zero and our communities.

Initiative(s) aligned to

[Enterprise Data Management](#)

[Enterprise Data Management](#)

[Data Operations \(DataOps\) capability establishment](#)

[Data Operations \(DataOps\) capability establishment](#)

[Data Operations \(DataOps\) capability establishment](#)


[Future of energy and innovation](#)



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