DATA AND DIGITALISATION

9 SEPTEMBER – 14:00-15:00

Scottish & Southern Electricity Networks

DSO Powering Change

HOUSEKEEPING

- We’re using Slido today to capture some of your thoughts and feedback.
- Please feel free to ask questions throughout the session via the Teams Q&A function.
- Today’s session will be recorded and will be made available after the event. The recording will stop for the Q&A session.

Video/webcams off

Mics on mute

Please stay on mute unless you are asking a question

Technical queries

If you have any technical questions let us know

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AGENDA

14:00 – 14:05	Welcome and Introduction – Zoe Farrell
14:05 – 14:20	Introduction to SSEN Network Data – Jeff Alexander, Ryan Westland
14:20 – 14:30	Network Map Future Vision and Area of Focus – Jeff Alexander, Ryan Westland
14:30 – 14:45	Network Map Demo and Next Steps – Dario Minissale, Jeff Alexander
14:45 – 15:00	Q & A

SSEN DISTRIBUTION

WHO WE ARE

We're Scottish and Southern Electricity Networks (SSEN) Distribution. We're the Distribution Network Operator (DNO) responsible for delivering power to almost 4 million homes and businesses across central southern England and the north of Scotland.

We serve some of the UK's most remote communities - and some of the most densely populated. Our two networks cover the greatest land mass of any UK DNO, covering 72 local authority areas and 75,000km² of extremely diverse terrain.

We're also at the forefront of delivering the decarbonised electricity system of the future, connecting new low-carbon technologies to the network. Through this, we're helping support sustainable economic growth for decades to come.

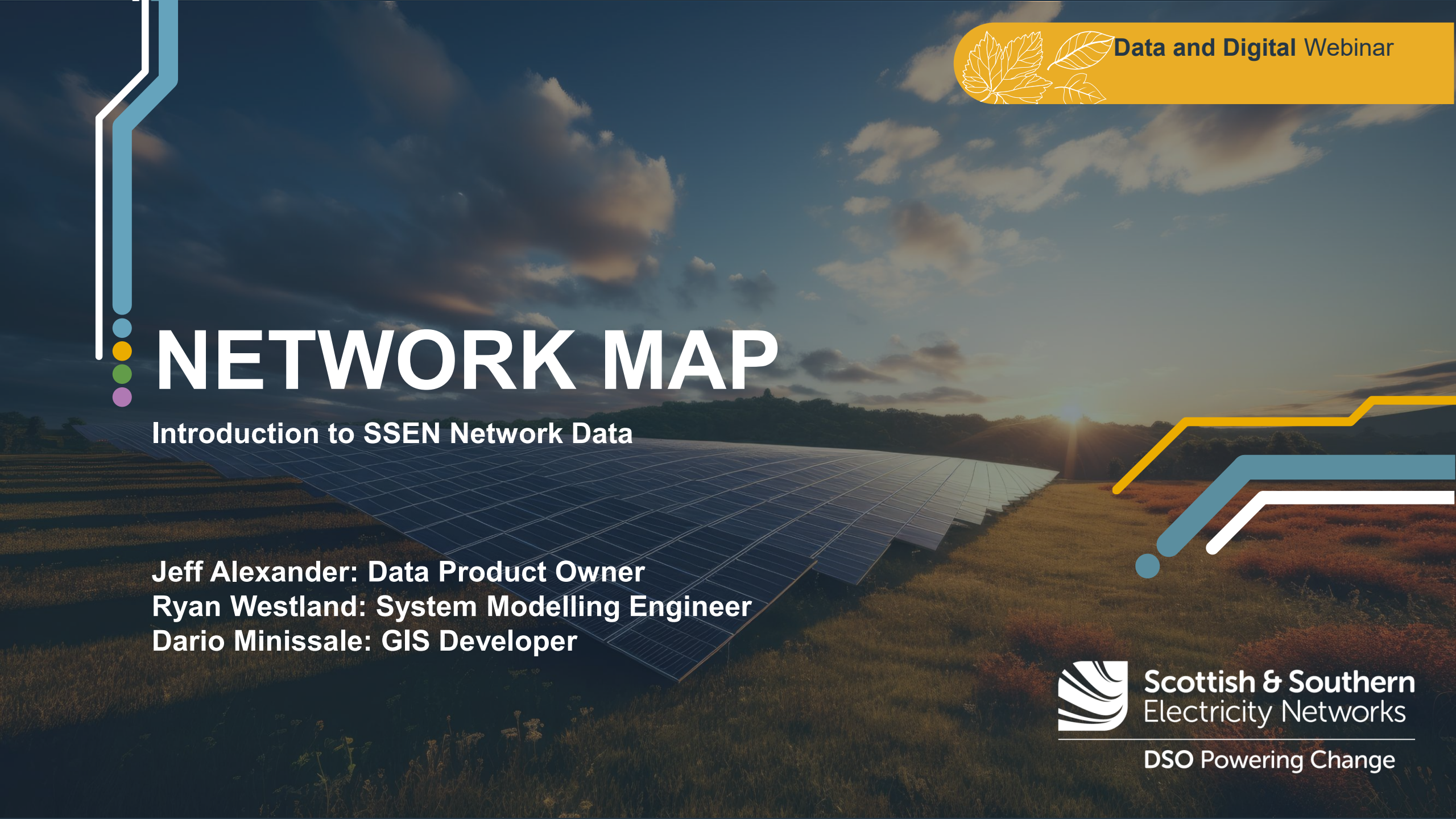
SSEN DISTRIBUTION NETWORK AT A GLANCE

Nearly **4 million** homes and businesses

Over **128,000km** of overhead lines and underground cables

Over **460km** of subsea cables powering our island communities

Over **4,400** employees across the country



Data and Digital Webinar

NETWORK MAP

Introduction to SSEN Network Data

Jeff Alexander: Data Product Owner
Ryan Westland: System Modelling Engineer
Dario Minissale: GIS Developer

Scottish & Southern Electricity Networks

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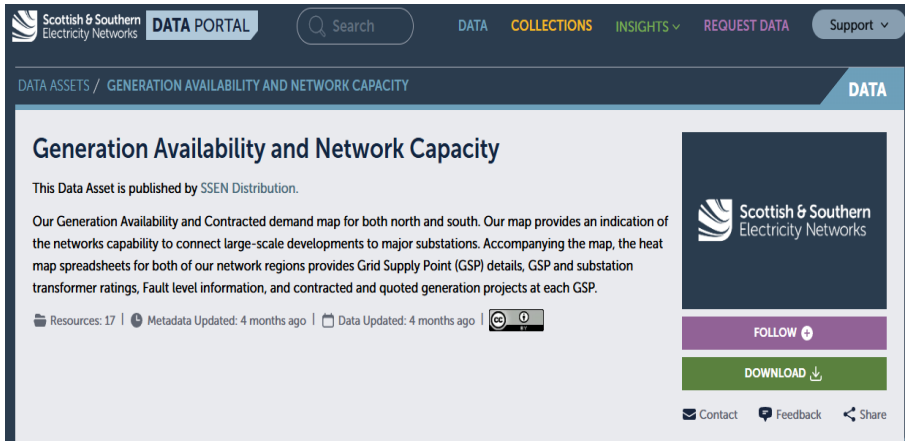
What data do we share on the network?

SSEN share network capacity and generation availability in 2 formats:

- Dataset (Source 1)
- Heatmap (Source 2)

Why do we share this data?

- To align with regulations
- To support connection opportunities
- To accelerate low carbon adoption
- To support innovative new solutions
- To enhance efficiency of the network



Source 1

Source 2

How can you gain value from Our Network Data?

Developers

Identify connection opportunities

Local Authorities

Support regional strategies

Consultants

Understand investment opportunities

Housing Associations

Identify renewable energy opportunities

Regulators

Evaluate policy and develop regulations

Academics & Researchers

Develop innovative solutions

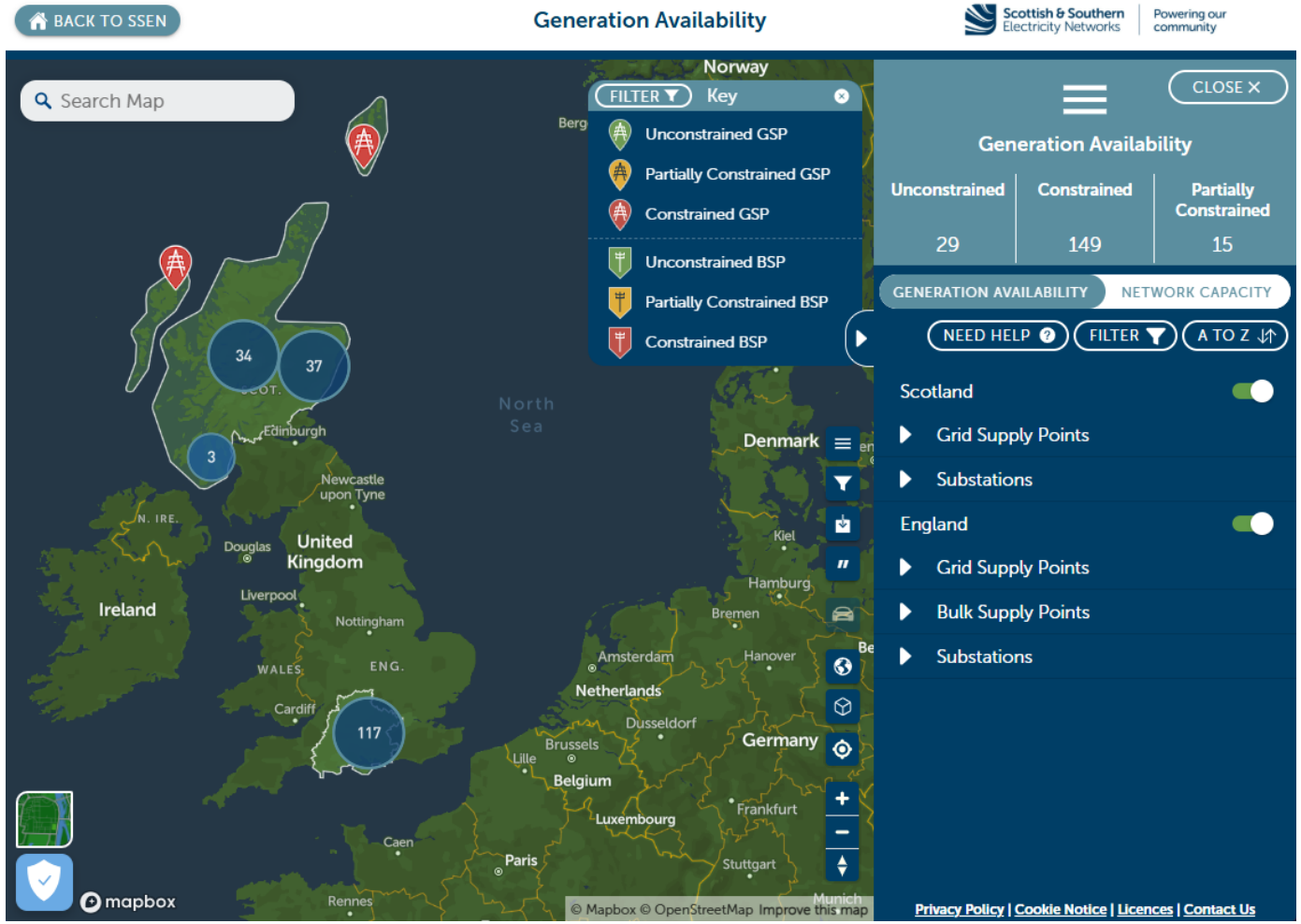
Current Heatmap – Purpose and Insights

What is the purpose of the heatmap?

Originally constructed to provide a geographic view to help users understand opportunities to connect generation to the network. Demand information has since been added.

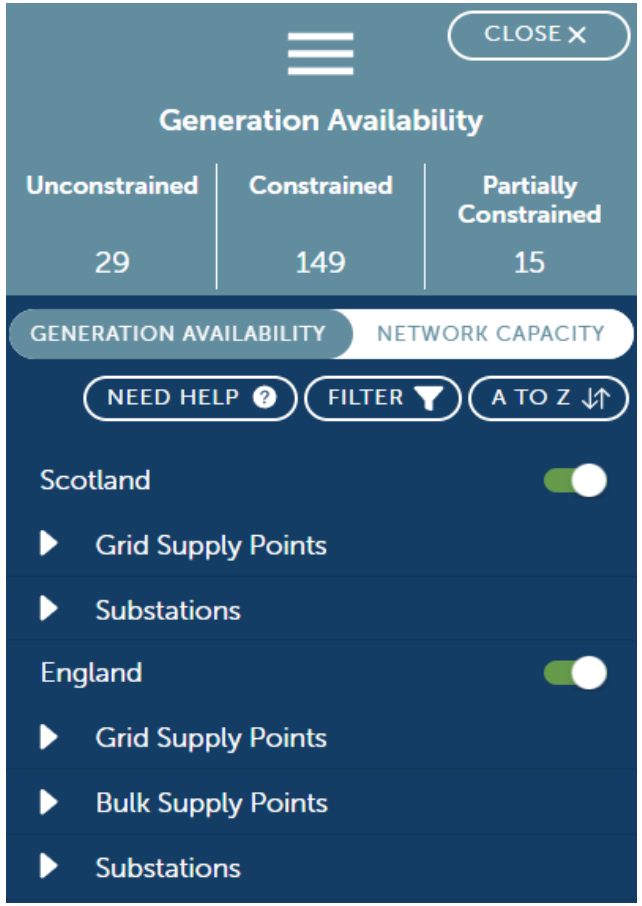
What can users learn from the existing heatmap?

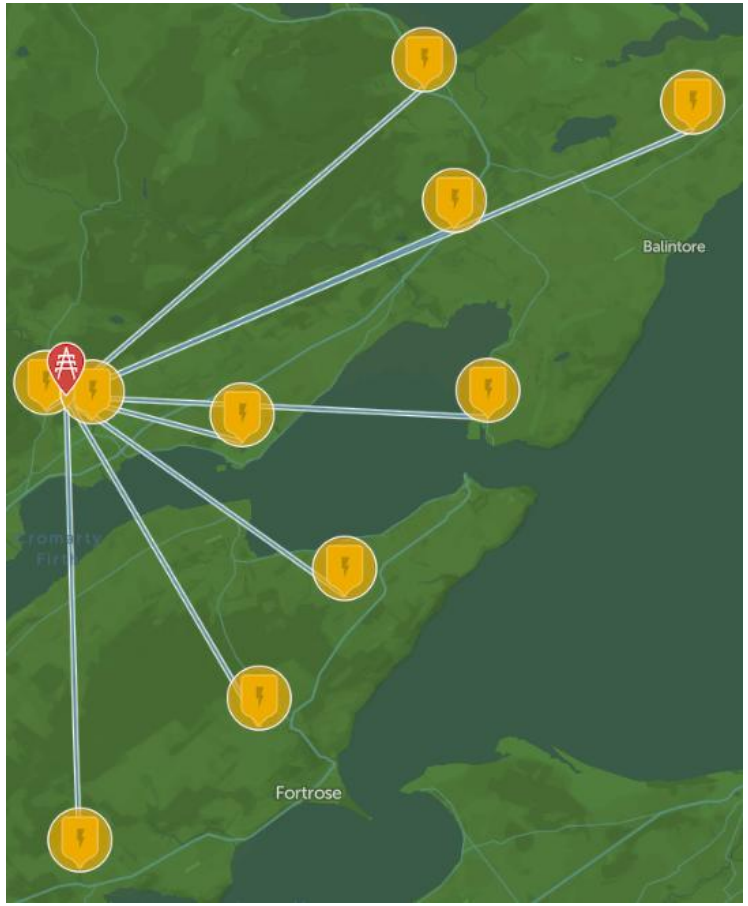
Users can find constraint information from Grid Supply Point down to Primary Substation Level, alongside details of planned network interventions



Current Heatmap – Features and Functionality

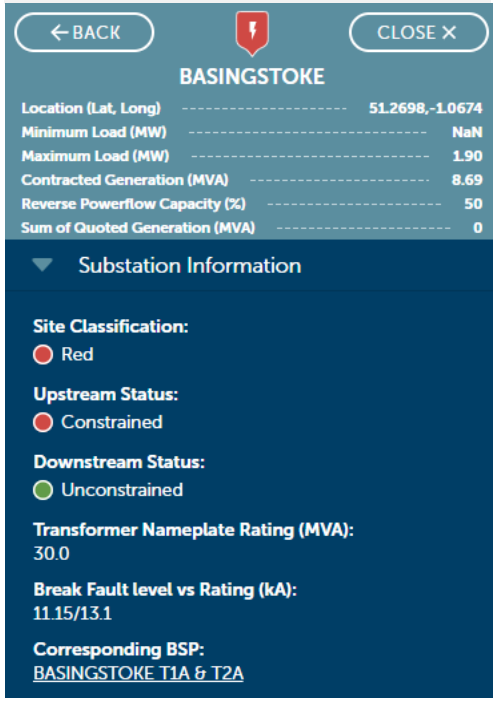
- Users can toggle between Generation Availability and Network Capacity (demand) insights. Drilling down from GSP, to BSP and Primary Substation data by license area.
- You can also navigate geographically to an area of the map where the GSP, BSP, and Substations are located.
- This view shows the network hierarchy, identifying which substations are downstream of a specific GSP / BSP.





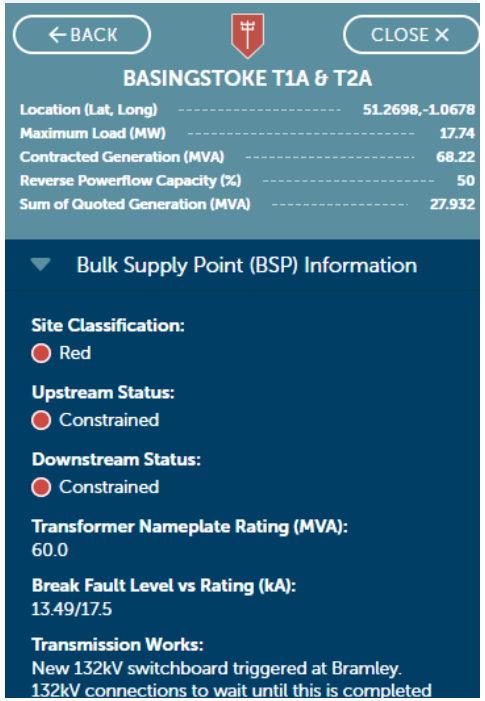
Current Heatmap – Detailed Insights

Primary View



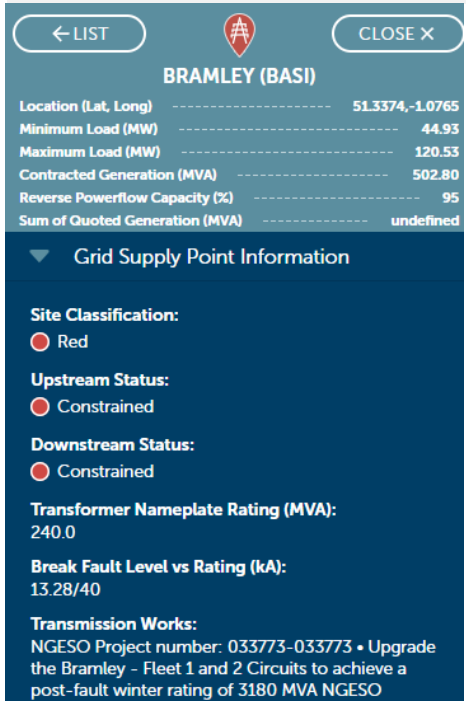
Links between network levels

BSP View



Links between network levels

GSP View



Tabular View (Available as a Download via the Heatmaps Website or SSEN Data Portal)

Bulk Supply Point Name	GSP Parent	Break Fault Level vs Rating (kA)	Location Latitude	Location Longitude	Location Grid Ref	Nameplate Rating (MVA)	Sum of Connected Generation (MW)	Minimum Load (MVA)	Maximum Load (MVA)	Contracted Generation (MW)	Reverse Powerflow Capability (%)	Upstream Constraints	Upstream Reinforcement Works	Upstream Reinforcement Completion Date	Downstream Constraints
BASINGSTOKE T1A & T2A	BRAMLEY (BASI)	13.49/17.5	51.269829	-1.0677684	SU 65132 52710	60	27.932	17.74	68.22	60	50	Constrained	New 132kV switchboard triggered at Bramley. 132kV connections to wait until this is completed	July 2031	Constrained

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Have you utilised the current heatmap tool?

ⓘ Start presenting to display the poll results on this slide.

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Were you able to locate the information you required through the current tool?

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How would you rate the overall design and layout of the existing heatmap

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How frequently do you use our network data?

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What additional insight would be of value for you to see?

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NETWORK MAP
Future Vision and Areas of Focus
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What is our vision for the network map?

Outline of SSEN's vision for the future network map

Vision

A tool that allows users to quickly and clearly:

- Identify capacity on our network
- Understand key growth areas
- View our network investment plans

Considerations

- Must be aligned with user needs
- Must be simple to use for all user types
- Must be capable of complex use cases

Technical Requirements

- A multi-layered mapping capability
- Updated dynamically
- Integrated with the SSEN data portal

What is driving our network map vision?

Overview of areas for improvement with SSEN's current mapping solution

We are developing a new solution based on feedback from our users

Areas considered for development (based on user feedback):

Data Accessibility	User Need Alignment	Data Insights	Data Visualisations
Data Consolidation	Data Refresh	Data Accuracy	Data Quality

What areas are we focused on based on feedback?

Areas of focus for development based on user feedback

Data Consolidation

A centralised view of network data

Data Summary

An interface to uncover insights at a glance

Data Accessibility

Support to help you understand our data

Data Visualisation

A clear picture of asset locations

Data Refinement

Enhancements in data quality and accuracy

Data Refresh

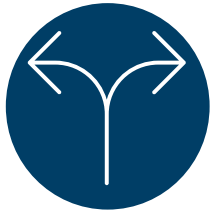
Network data updated at an enhanced frequency

What value will you gain from this change?

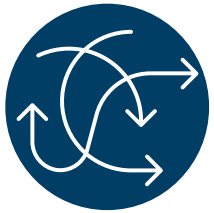
Overview of the value of SSENs Network Map

Save Time

Improve Understanding



Improve Decisions



Reduce Effort

Enhance Performance

Accelerate Progress

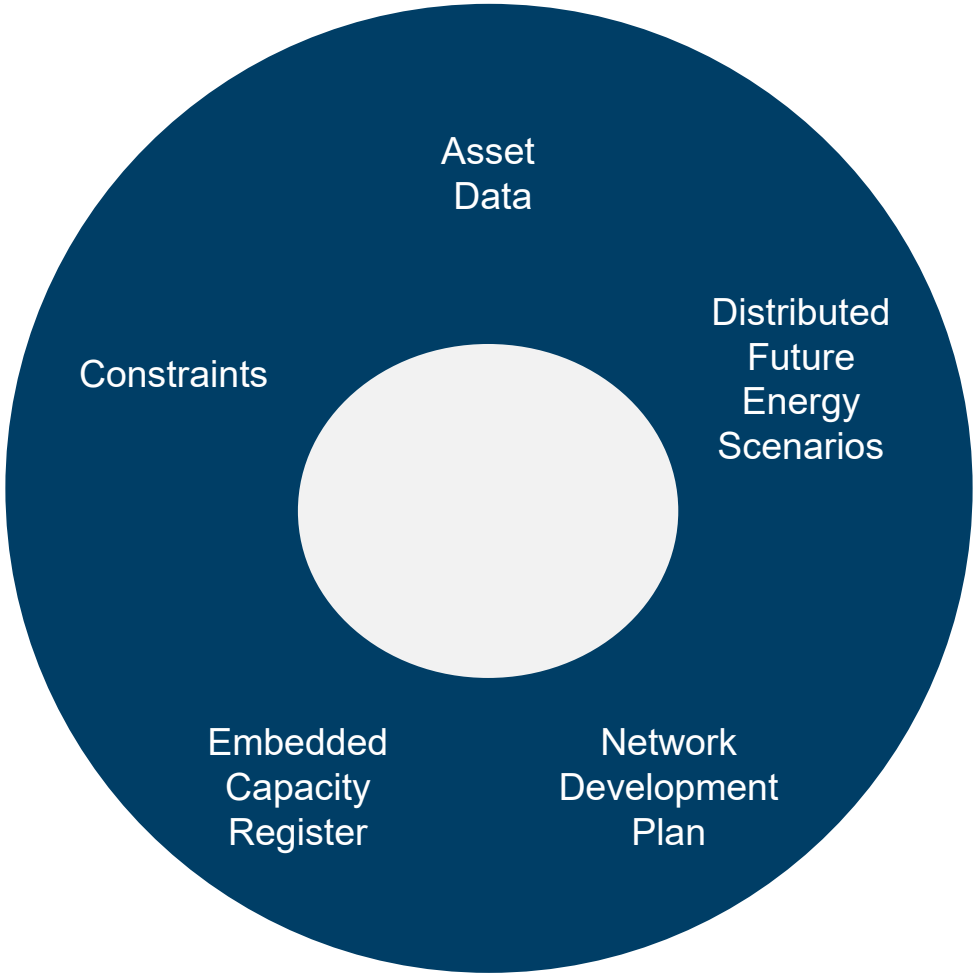
What is a centralised network view?

Asset Data

- Asset ratings
- Historic loading
- Substation connectivity
- Substation geographical boundaries
- GSP Technical Limits

Constraints

- Contracted positions for both demand and generation
- Flexibility requirements



Distributed Future Energy Scenarios

- Long term LCT adoption forecasts
- Scenario-based projections

Network Development Plan

- Reinforcement plans
- BSP and Primary Substation scenario-based headroom forecasts

Embedded Capacity Register

- Connected and accepted distributed energy sources
- Asset location, capacity, technology types, status

Updated dashboard views

Forecast Capacity & Headroom
Additional detail on changing substation capacity alongside headroom forecasts on a year-by-year basis

LTDS Information
CIM node references

LCT Connections
LCT connections and projections by area

Embedded Capacity Register
Detailed generation information

Flex Requirements
Detail of where we are procuring flexibility

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What level of value would you gain from a centralised view?

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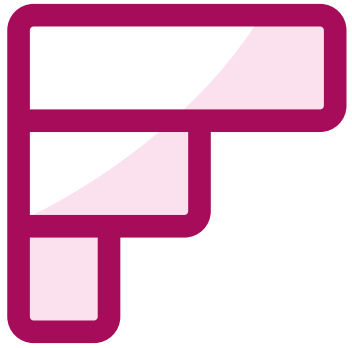

In order of priority which datasets would you like to see included in the centralised view?

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How would you utilise the new network map?

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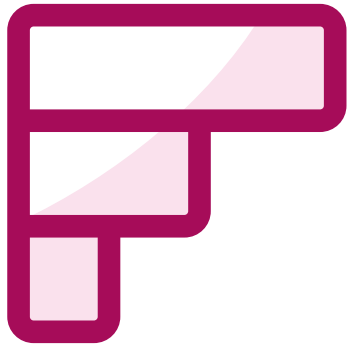

What should be our primary areas of focus for development?

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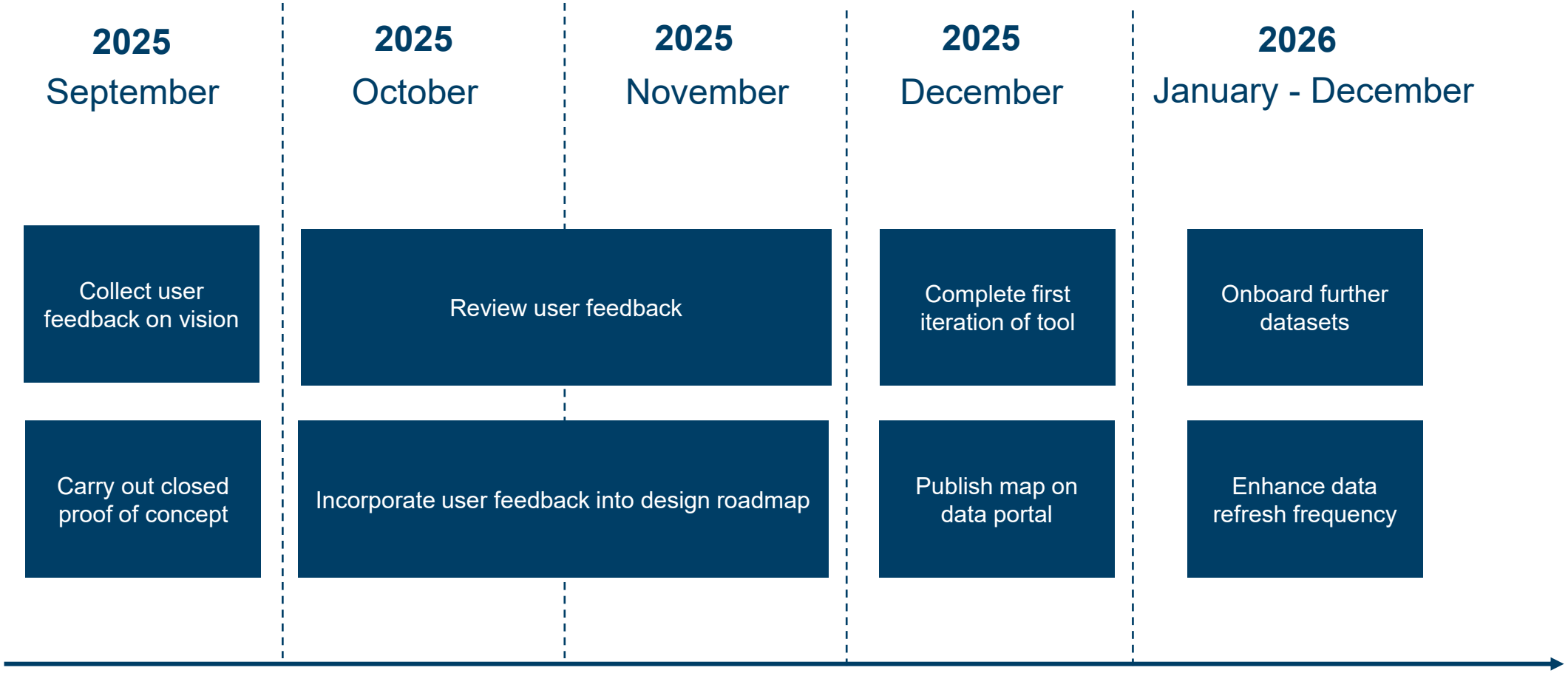
Immediate Next steps for development

Feedback Review	SSEN will review today's feedback and incorporate that into our design We will release a survey after the webinar to capture further feedback
Closed Session	SSEN will carry out a closed session with a small group of users
Follow Up Session	SSEN will arrange a follow up session to showcase the new solution

What is our long-term roadmap?

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On a scale of 1 - 5, with 1 being low and 5 being high, do you feel today has proved valuable and a good use of time?

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On a scale of 1 - 5, with 1 being low and 5 being high, do you believe your understanding of the network map and intended changes has improved?

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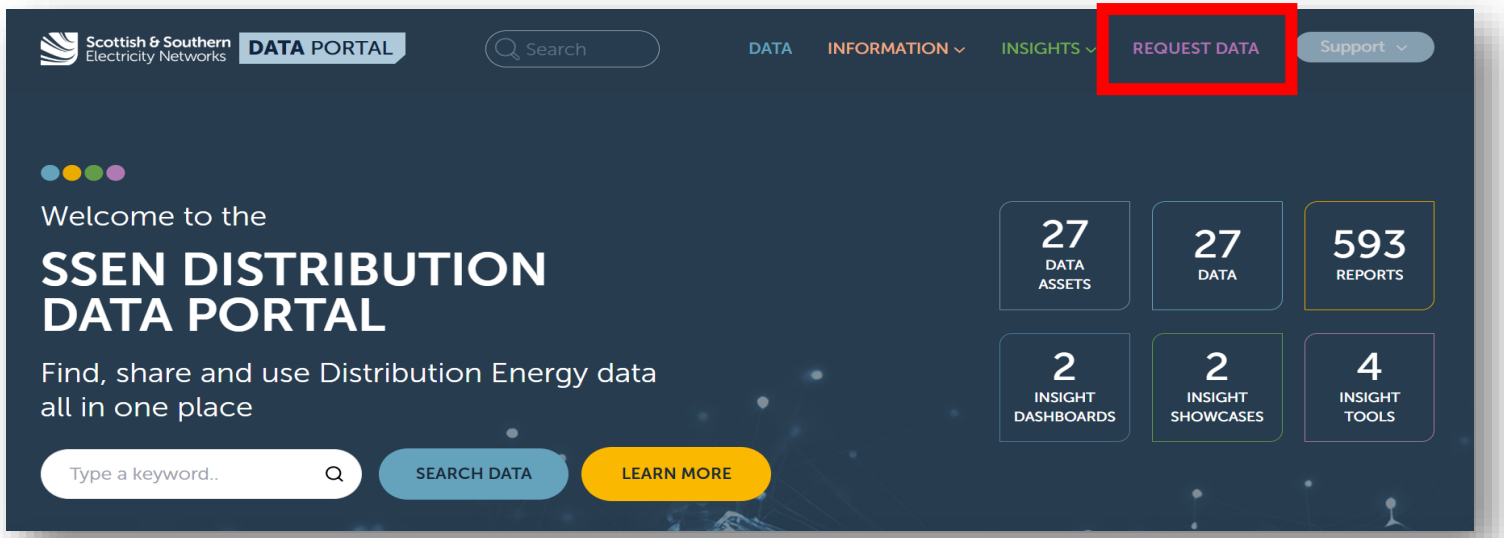
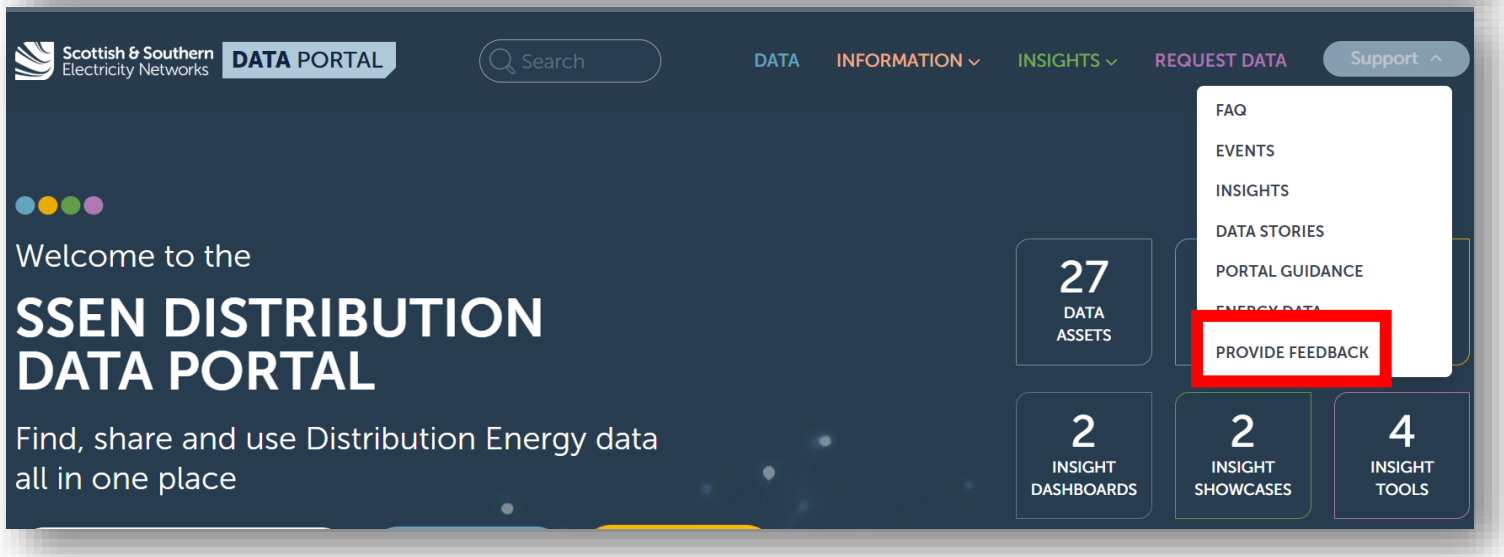
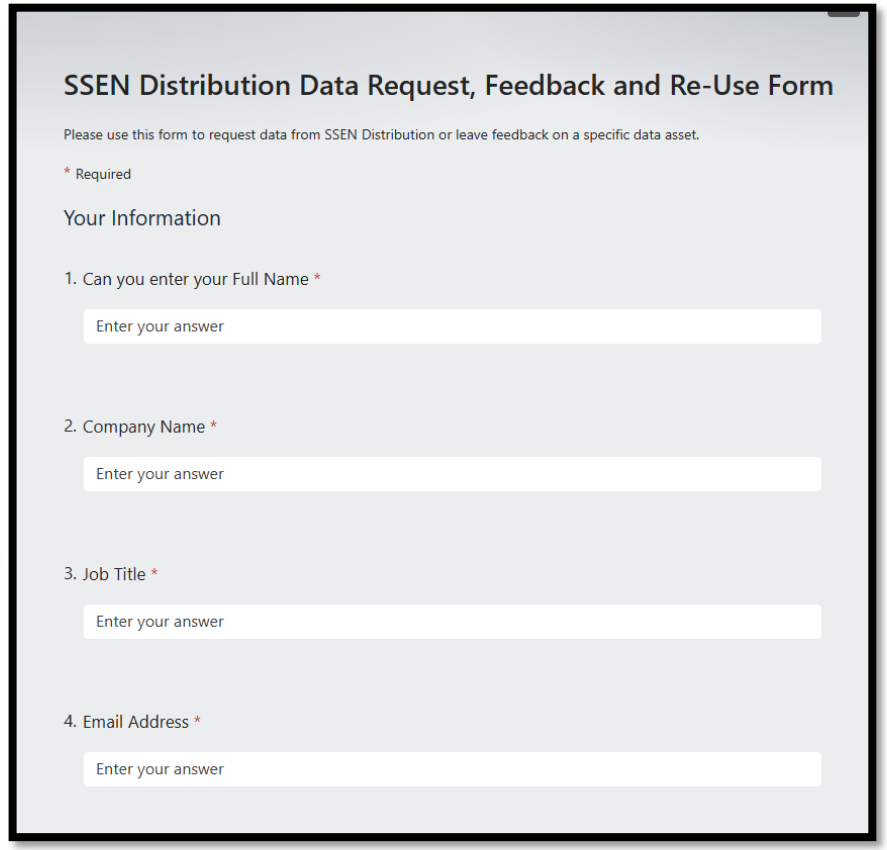
HOW TO CONTACT US





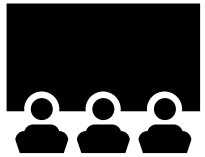


data@ssen.co.uk

How to learn more about our data

Learn more about our data by attending our data surgery events

The SSEN Data Sharing Team have carried out 3 data surgery events over the past year.



View details of our past events and recordings through the data portal

Aim to facilitate 2 quarterly data surgeries, dedicated to providing a deep dive into our Data Assets

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THANK YOU FOR JOINING US TODAY

DSO IN ACTION AUTUMN SERIES

Sign up to receive our DSO Newsletter

8 – 19 September