ESO

Technology & Governance Advisory Group

Meeting 7 Minutes

Date:	27/03/2024	**Location:**	Virtual
Start:	13:00	**End:**	14:30

Participants

Attendee	Organisation
Sebastiaan Van Dort (Chair)	BSI – British Standards Institute
Tom Pollock	Northern Gas Networks
Dr Priya M Bhagavathy	Power Networks Demonstration Centre
Erwin Frank-Schultz	IBM
Prof Gareth Taylor	Brunel Institute of Power Systems
Claire Addison	Flexitricity
Barbara Bormann	Drax
Prof Chris Budd	University of Bath
Gea Mikic	Icebreaker One
Kevin Reeves	KJR Digital
Ali Nicholl	IOTICS
Ankit Patel	Arup
Jonathan Barcroft	ESO
James Edwards-Tombs (Facilitator)	ESO

Agenda

1.	**Apologies for absence**
2.	**Discussion: Technical user journey of the Data Sharing Infrastructure (DSI)**
3.	**Discussion: Pilot phase success criteria**
4.	**Discussion: Operating environment required capabilities**
5.	**Next meeting**

6. AOB

Discussion and details

1. Apologies for absence

- Ian Dunstan - Wales & West Utilities
- Abbas Mahmood - Energy Networks Association
- Divya Mahalingam - ESO

2. Discussion: Technical user journey of the Data Sharing Infrastructure (DSI)

Reflection Points

- ***What would you consider proportionate monitoring at each stage for system performance, security & future improvements?***
- ***How to ensure that A2 terms and C2 licences are compatible, are there examples of successful implementations or issues to be aware of?***

Discussion

- ESO thanked everyone for allowing the groups to be combined and explained the focus on the technical user journey of the Data Sharing Infrastructure (DSI), pilot phase success criteria, and required capabilities.
- A question was raised about aligning the technical user journey with the legal and commercial user journey.
- It was mentioned that there is a plan to produce a combined narrative that covers the full end-to-end process, including elements of the legal process and operational planning scenarios.
- It was discussed that there have been discussions around ensuring compliance with configuration and access requirements for the Data Preparation Nodes (DPN), and the possibility of remote automated tests. The use of AI for anomaly detection and monitoring was also mentioned.
- The alignment to data standards, such as the Common Information Model and the information exchange standard, was discussed. The need for explicit definitions and considerations of compatibility was highlighted.
- ESO explained that there is ongoing work with BSI and Ofgem regarding the Common Information Model, and further developments are expected.
- The importance of automated assurance and compliance, particularly in relation to data governance tools and AI, was highlighted. Anomaly detection and monitoring were mentioned as effective methods.
- It was mentioned that there have been discussions on monitoring the configuration and access requirements for Data Preparation Nodes (DPN) and the possibility of remote automated tests.
- The group discussed on defining proportionate monitoring and ensuring compatibility between A2 and C2. It was noted that proportionality would depend on SLAs and agreements, and that monitoring identity and metadata about access could assist in ensuring compatibility.
- The need for symmetry in confirming identity and obligations between data providers and consumers was emphasised, along with the importance of avoiding spoofing and ensuring mirror matching and brokered engagements.
- The importance of proportionate monitoring and ensuring compatibility between A2 and C2 was acknowledged, and further exploration and analysis were suggested.

3. **Discussion: Pilot phase success criteria**

- The pilot will provide an opportunity to rapidly develop and demonstrate the proposed DSI and to collect user feedback. This feedback will be used for refining future phases including the MVP.

Reflection Points

- ***Are there any elements of this scope that you feel need to be refined or deferred?***
- ***Does this scope sufficiently demonstrate what users need to see in this initial phase of development?***

Discussion

- To ensure scalability post pilot the programme should review lessons learned and share experience with other organisations.
- It was mentioned that there would be a period of review and demonstration between the pilot and MVP, and the output of the pilot would form the starting point for the MVP.
- The group highlighted the importance of ease of adoption and scalability, both in terms of technical aspects and governance frameworks.
- The question of how to assess the scalability of the pilot and the need for security analysis and risk mitigation were discussed.
- It was suggested that even if the pilot does not have to build everything at a high level design, there should be documentation of the risks and how they have been addressed.

Use Cases success criteria

Reflection Point

- ***How far into simulation & calculation is required to demonstrate the capabilities of the DSI?***

Discussion

- The pilot will focus on an operational planning use case, focusing on a well-defined industry process with clear data products.
- The ESO's role is to coordinate between DNO and TO networks to deliver a safe, secure and economic operational plan.
- This planning information will be combined with the base network models from each network to provide a shared representation of the expected system configurations to allow for engineering assessments to take place.
- Information sharing currently takes place as diagrams and text descriptions which are then manually transposed into network models.
- It was emphasised that the chosen use case should be inherently deliverable, allowing for immediate testing of the data sharing structure.
- It was suggested that the pilot should show the sharing of data between organisations, with a focus on the data sharing process rather than complex simulations. The provision of time-stamped information that can be rerun as real, with appropriate access classifications, was proposed.
- The goal was to focus on how data sharing is managed securely, directed, monitored, and maintained, while minimising time and effort spent on non-essential User Interface (UI) features. It was suggested that a UI, even if it was a simple one, should be provided to demonstrate that the data sharing is happening effectively and efficiently.
- A participant mentioned that gas is a major player in the energy sector and highlighted the importance of considering its integration in the future, even if it is not included in the current pilot.
- It was agreed that the need to test data formats and ensure compatibility with gas frameworks to avoid complications in the future.
- It was concluded that in addition to gas, indirect players and dependencies should be considered, such as interoperability models and dependencies on specific flows or platforms.

Data Preparation Node (DPN) success criteria

Reflection Points

- ***What learning points would be helpful from pilot to inform RIIO3 business planning and preparation for wider adoption?***
- ***What level of manual intervention would be considered appropriate for the pilot of DPN e.g., if sample data was to be manually connected into the DPN instead of system interfaces?***

Discussion

- There is a need to consider data maturity levels and the ability of organisations to implement a standard DPN.
- It was mentioned that there is a need for an evolution in data maturity and it is important to capture dependencies and interoperability in the success criteria.
- It was agreed the importance of machine-to-machine data sharing and the need to avoid manual intervention as much as possible.
- The need for governance considerations and the challenges of manual validation of data.
- It was indicated the need to consider roles, licensing, and governance in relation to manual intervention.
- The group acknowledged the importance of organisational maturity and the flexibility needed to handle different levels of maturity.
- It was mentioned the principle of flexibility in the architecture principles, allowing organisations to connect at their current maturity level and providing basic connectors or modules for those at lower maturity levels.
- It was concluded that the need to monitor implementation and ensure options are not closed off.

Data Sharing Mechanism (DSM) success criteria

Reflection Point

- ***Are you aware of any organisational roles which may be necessary for the deployment and configurations of DPN & DSM (e.g., legal or security)***

Discussion

- It was discussed that the pilot phase aims to demonstrate the initial capability of the data sharing mechanism and provide guidance on registration with the DSM.
- It was examined whether there are any organisational roles necessary for the deployment and configuration of the DPN and DSM, particularly in the areas of legal and security.
- The group emphasised the need for legal oversight and security considerations in data sharing initiatives. The legal involvement is often required for data sharing projects and the importance of ensuring the right safeguards are in place for internet-facing systems was mentioned.
- It was mentioned the need for compliance oversight to ensure alignment with data best practices.
- It was discussed if organisations already have the necessary roles in place for legal and security, or if additional hiring may be required. It was acknowledged that different organisations may have different policies and approaches.
- It was checked about the potential impact of involving legal departments on timelines and budgets, considering the potential for extensive timelines.
- ESO mentioned the importance of staying close to the initial objectives of the pilot, acknowledging data sharing agreements with regulated networks could be easier to achieve than wider sector agreements.

Services to operate DSI

- Data Sharing Infrastructure could be described as a Software as a Service (SaaS) solution. SaaS solution is when users subscribe and access the platform's functionalities on a recurring basis, typically over the cloud.

Reflection Point

- ***What do you consider to be the key interactions between these DSI roles and any existing sectoral roles?***

Discussion

- It was stated that the DSI isn't just a SaaS solution, it needs to offer additional services to support data consumers and producers in their journey for sharing of data.
- To support the defined services needed to operate the DSI, the following roles are proposed:
  - Security Authority
  - Trust Authority
  - Operations Authority
  - Infrastructure Authority
  - Data Authority
  - Standards Authority
- Discussion moved to concerns about labelling the DSI as Software as a Service (SaaS), suggesting that it may be closer to Infrastructure as a Service (IaaS) or a hosted service.
- It was highlighted the interoperation with external authorities and the need for compliance, which aligns more with infrastructure as a service.
- The aspiration for the DSI not matching the traditional SaaS model was agreed and the importance of providing multiple ways to access the central infrastructure was stressed.
- The group acknowledged the concerns and agreed that the DSI could have some SaaS elements, but it is primarily a central infrastructure. It was suggested to provide multiple access methods, including APIs and open-source options.

4. Discussion: Operating environment required capabilities

Reflection Point

- ***Are there any critical gaps in capability and maturity?***

Discussion

- The need for multiple access methods was emphasised in defining the operating environment and the group expressed the need for behavioural change and implementation steps to ensure successful adoption of the DSI.
- ESO agreed with the feedback on the roles and responsibilities.
- It was discussed possible separation of the roles of issuing and verifying identities and certificates from the compliance and monitoring aspects. The practicality of separating these functions in the context of security classification and it was highlighted the need for an organisation to accelerate the process of verifiable credentials and identity management.

5. Next meeting

- The next meeting will be held on Wednesday the 22nd of May from 13:00 to 14:30.

6. AOB

- The Chair welcomed the new members to the group and thanked all for their attendance and contribution.