ESO

Data & Technology Advisory Group

Meeting 6 Minutes

Date:	24/01/2024	**Location:**	Virtual
Start:	13:00	**End:**	14:30

Participants

Attendee	Organisation
Sebastiaan Van Dort (Chair)	BSI – British Standards Institute
Ian Dunstan	Wales & West Utilities
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
Abbas Mahmood	Energy Networks Association
Ankit Patel	Arup
Jonathan Barcroft	ESO
James Edwards-Tombs	ESO
Divya Mahalingam (Facilitator)	ESO

Agenda

1.	**Apologies for absence**
2.	**Discussion: Minimum Viable Product**
3.	**Discussion: Technical Alignment Update**
4.	**Discussion: Security Requirements, Standards and Regulations**
5.	**Next meeting**
6.	**AOB**

Discussion and details

1.   Apologies for absence

- No absences

2.   Discussion: Minimum Viable Product

Reflection Points
- ***Does this representation of the component parts of the MVP cover the scope you would expect to see?***
- ***Should any elements be accelerated or decelerated?***

Discussion
- The ESO confirmed the work to date from the Common Framework workstream to accelerate development of the data sharing infrastructure, starting with outage planning pilot phase.
- This pilot would evolve into the MVP use case of strategic planning, extending the time horizons and adds data connections to systems while utilising the same base model and operational scenarios concepts.
- It was explained that the Virtual Energy System (VirtualES) use cases, including Advanced Dispatch Optimiser, Crowdflex and Powering Wales Renewably are evaluating the data that needs to be shared and developing the simulation, visualisation and optimisation tools that will form parts of the Virtual Energy System.
- It was suggested that the MVP data preparation requires more detailing in procedures and planning to handle requests within the new timescales.
- ESO explained that the existing technical alignment update covers data planning, such as:
  o What data products are required.
  o A visibility of data owner and who holds them.
  o Which partners we need to be in that next step of the project.
- It was also emphasised that MVP data planning will depend on which partners ESO will engage with and how it progresses.
- It was shared that the strategic planning will be a key step in the pilot study, where there will be a further exploration on how to extend the data requirement out into longer time horizons and into other vectors.
- Under the 'Alignment and Plan' phase in MVP, discussion moved to the following non-functional factors which require more clarity to achieve the complex and interlinked goals of the VirtualES and the Data Sharing Infrastructure (DSI) on which it depends.
  o How many data exchanges and of what size?
  o What are the security requirements?
  o What kind of role-based access control?
  o What availability levels are?
  o What is the system going to strive for?
  o What multi availability zones setup is required?
- It was suggested to consider non-functional requirements of MVP in the timeline proposal because it may significantly impact MVP architecture.
- It was agreed that the current functional specifications of MVP have the non-functional requirements with limited details, but going forward the aim would be to define them as things progress.
- Discussion moved to any thoughts or experience around data sharing agreements into projects and how we can achieve that into the VirtualES.
- ESO assured the group that work with MVP is resonated across external publications such as FSNR (Future Systems and Network Regulation), ENC (Electricity Networks Commissioner), ESO Digital Strategy & Action plan, which allows to check and understand the data needs, planning and preparation for the VirtualES.

- It was shared that some MVP constraints need more detailed explanation, for example:
  - Have you decided how the MVP will be built?
  - Who's going to build it?
  - When does that happen?
- ESO confirmed that, as part of their 'Alignment and Plan', it is to be decided what procurement strategy looks like for the pilot and MVP. Whether it's one piece of work or a collection of smaller pieces of work, which will cover some of the constraint points from the above.

Recommendation

- ESO to share and explain non-functional requirements of MVP.

3. **Discussion: Technical Alignment Update**

- Three technical workshops have been held with NDTP and their project partners to discuss the technical alignment between NDTP's Integration Architecture (IA) and the proposed Data Sharing Infrastructure (DSI) by Virtual Energy System. The workshops were also attended by Ofgem and DESNZ for a regulatory and policy perspective.

Reflection Point

- ***Can you share any best practice and challenges you've faced when implementing and scaling a complex infrastructure and services programme?***

Discussion

- The objective of the technical alignment in the VirtualES is to understand the technical design and development maturity of the data sharing infrastructure component parts with respect to interoperability, and to identify the integration dependencies between the National Digital Twin Programme (NDTP), Virtual Energy System and Trust Frameworks.
- ESO explained that the digital spine feasibility study also concluded that these functional components could be delivered by existing in-sector and cross-sector programmes, namely the NDTP as "Prepare", Open Energy as "Trust", and Virtual Energy System as "Share".
- It was suggested to collaborate with some related framework, such as the National Underground Asset Register (NUAR) project, which are built out data governance artefacts with high quality content.
- It was mentioned that the procurement discussion is probably going to have multiple parties involved, essential to ensure that they are well defined and aligned with the governance structures. This will require a cross party design authority, along with technical governance.
- It was advised to lend to agile approach for the VirtualES technical alignment because it's new, there is a lot to learn, and it is not replacing an existing system.
- It was concluded that the workshops included detailed technical reviews of the proposed application architecture of the DSI. Specific questions were prepared for NDTP around the technical implementation of the IA, and how it could be applied to the DSI, including interfaces with other elements e.g., the trust framework.

4. **Discussion: Security Requirements, Standards and Regulations**

- Across the energy sector there is wide-spread recognition that digitalisation of the sector brings in new risks and opportunities for the security and resilience of the overall system. Being security-minded and embedding digital security principles is recognised as essential to enabling safe digitalisation at scale.

Reflection Points

- ***Do you have any recommendations to support the outstanding areas of research?***
- ***Are there other standards or considerations to include in these requirements?***
- ***Do you consider any of these security services requirements need to be prioritised into the MVP?***
- ***Are there any additional details that you would want to be included in the definition of security standards and regulation?***

Discussion

- It was agreed that for security concerns, especially where CNI is involved, it is crucial to involve the National Protective Security Authority (NPSA).
- ESO confirmed that representatives from Ofgem and DESNZ were present in the workshops to tell us about the ongoing work and policies in the security space.
- It is important to regularly review and assess all data-sharing-related policies, procedures, and technologies within the organisation. The cybersecurity landscape, laws, and regulations change, and so do cyberthreats. Thus, assessing the effectiveness of implemented security controls should be a regular practice.
- Projects like Cyber Assessment Framework from the National Cyber Security Centre (NCSC) can support definition of security best practices and protocols.
- It was suggested that the security requirement isn't just a technical solution, it is also the process and governance piece that links into the trust framework. Attestation is considered a good way of putting it in terms of organisations being compliant with standards, having met a certain benchmark, how to monitor and mandate and assure that all fits under a trust framework.
- It was advised to distinguish between securing the system and securing the data, both can be easily misunderstood and accidentally ignored or diminished. This will allow to establish right licensing and standards in place.
- Making it clear to individuals where, when and how their data may be shared and for what purpose is essential in security standards.
- It was advised to ensure compliance with the NCSC's cyber security guidance, which covers important security and safety issues for storing and sharing data.
- Make it easy to collaborate on data protection impact assessments and sharing agreements.
- Provide transparency to data requesters about their responsibilities and what information is needed to consider and progress a data sharing request.
- Deliver continuous improvement programmes for data sharing, working with the Data Standards Authority or other cross-government bodies to identify common problems and solutions.
- It was discussed that keeping an inventory of the data organisation holds and establishing clear lines of accountability that follow metadata standards for sharing and publishing data will maximise the value of the data.
- The group discussed the requirement to be aware of and utilise quantum secure encryption. This was identified as an issue to consider in development of future systems and is being discussed by Ofgem in their regulatory activities.
- Provide clarity about the legal gateways that apply to data sharing infrastructure and focus on using existing legal gateways rather than creating new legislation.
- The group agreed on to engage regularly with data sharing teams across government, informally and through communities to share knowledge, experience and good practice.

5. Next meeting

- The next meeting will be held on Wednesday the 27th of March from 13:00 to 15:00.

6. AOB

- The Chair thanked the group for their attendance and contribution.