ARUP

8 Fitzroy Street
London
W1T 4BJ
United Kingdom

t +44 20 7636 1531

arup.com

By email
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Dear Jeff,

Call for Input on Governance of a Data Sharing Infrastructure

Arup welcome this Call for Input, and the continued desire to accelerate the digitalisation of the energy sector as quickly as possible to enable the sector to meet its net zero obligations.

We consider this digitalisation to be a socio-technical problem, and that the development of clear governance roles within the sector is necessary.

As put forward in the Digital Spine Feasibility Study, there is a clear need for common digital infrastructure, such as the Data Sharing Infrastructure, to be developed to improve system wide coordination and interoperability of the energy system.

Arup are committed to contribute to this digitalisation and are happy to engage further on this topic.

Yours sincerely

Simon Evans
Global Digital Energy Leader

d   +44 20 7755 5291
e   simon.evans@arup.com

Q1 - Do you see potential uses for the DSI within your day-to-day operation in the energy sector?

The potential uses of the Data Sharing Infrastructure (DSI) within our day-to-day operations in the energy sector are significant.

Arup's multidisciplinary experts are deeply involved in supporting stakeholders across the energy sector. Our growing involvement in driving the 2030 net-zero transition of the UK energy grid spans from helping with offshore wind site identification to promoting decarbonisation measures such as heat network zoning and supporting policy formulation and much more. However, we often encounter the limitations of the fragmented and siloed energy data landscape.

The DSI offers the potential to transform our daily work and that of our clients by enhancing data sharing and integration, fostering innovation, and supporting the ongoing efforts to transition to a sustainable and resilient energy system.

For years, our engagement with the sector has highlighted how facilitating data sharing and interoperability can be transformative. This was a key finding in 2022 when we engaged with stakeholders across generation, transmission, distribution, retail, consumption, academia, and international digital twin case studies as part of the Virtual Energy System benchmarking study. That research identified 24 high-level use cases that could be enabled by a DSI.

These voices have only grown louder as we engaged with 100+ organisations and individuals as part of the Digital Spine Feasibility Study in 2023. Through this work, Arup, Energy Systems Catapult and the University of Bath detailed numerous short term and long term 'problem spaces' where a robust data sharing infrastructure can add value to various energy sector players, including policy makers, consumers, and system operators, while also linking to other sectors beyond energy.

Of the 15 use cases explored in detail, DSI can also enable many immediate strategic initiatives for the sector, such as supporting the growth of electricity flexibility markets. Here, the DSI can improve the timely exchange of information to better understand, use, and incentivise the reliance on and provision of flexible assets.

With our multidisciplinary expertise, we recognise that the ability to get access to whole-system view models to analyse problems and opportunities and to underpin our research and design activity with richer information, will substantially enhance our ability to provide advanced strategic advice and play our part in realising positive energy transition outcomes.

Q2 - Do you have any comments on the funding mentioned within this section?

We understand the rationale of Ofgem's position regarding the funding and development of the DSI MVP. Using the System Operator's baseline funding mechanisms for near-term funding up to 2028 is a prudent approach to ensure the successful delivery of this sector-wide initiative, with appropriate controls to ensure value for money for both the sector and consumers.

At the same time, we believe it will be crucial to retain the agility of other funding mechanisms during the MVP phase, especially as additional use cases start to be developed outside of the core infrastructure. This will help mitigate risks and adapt to evolving requirements and opportunities. Such additional activities would benefit from continued consideration of other funding sources on a per need basis, such as a combination of the Strategic Innovation Fund (SIF) and the System Operator's Network Innovation Allowance (NIA).

These funding sources could be particularly valuable to enable timely delivery of DSI critical dependencies, such as work on data standards and licensing, which are essential for specifying core DSI requirements. These agile funding mechanisms have proven effective in delivering low-cost projects that add incremental value to the DSI proposals.

For long-term funding beyond 2028, we concur with the need to explore various cost recovery mechanisms to maintain financial sustainability while minimising the impact on consumer bills. This balanced approach will help ensure the continued growth and viability of the DSI operation in the sector.

As the DSI target operating model is established and tested in action, it can be expected that learning and new insights will emerge which will generate feedback on the funding strategy and plans. We suggest that current funding plans should allow mechanisms for this insight to be incorporated independently of a specific date (2028). This approach of supporting the DSI target operating model to mature in an iterative fashion and enabling a versatile approach to funding will better support actions for DSI development and adoption, and therefore drive realisation of target outcomes.

Q3 - Do you have any comments on the timeline shown?

We believe the timeline outlined encompasses the key milestones associated with DSI development and implementation.

We appreciate that the development of the DSI is a socio-technical problem. We believe it is viable to manage the technical development within the timescales shown. When considering the socio aspects of the DSI development, introduction, and adoption, we believe much attention and cross-industry support will be needed to help navigate the challenges that may emerge.

Q4 - Do you agree with our short-term governance structure model where the Interim DSI Coordinator is responsible for leading the short-term governance (2024 – 2028) of the DSI?

We agree that an Interim DSI Coordinator should be responsible for leading the short-term governance. We believe this would be effective for the following reasons:

- It would help tailor the governance structure to the immediate needs and challenges of delivering the DSI for the sector, providing the necessary flexibility and responsiveness.

- Establishing a purpose-driven governance vehicle would help ensure focus on progressing the initiative, avoiding conflicts of interest that might arise.

- It would allow for concentrated effort on the DSI development and transition into operation, ensuring that committed resources and attention are maintained and managing potential conflicting demand from other areas.

We also welcome to see flexibility in terms of moving the interim governance model into an enduring or evolved governance model before 2028. Adaptability will be crucial for ensuring that the governance structure remains effective and relevant as the DSI is delivered, adopted and evolved.

There are specific areas of the proposed governance structure that could benefit from further clarification and expansion, which we identified as critical during our engagement when developing the "Digital Spine Feasibility Study" (September 2023), and "Delivering Energy Sector Digitalisation" (March 2024) reports. Overall, however, the proposal well aligns with the outcomes of our extensive dialogue with industry and government.

Q5 - If not, state your reasons and propose an alternative governance model or improvements to our proposed solution.

N/A

Q6 - Are there any additional governance roles that are not covered by the proposed governance model? If so, what are these?

The proposed roles and responsibilities in Figure 5 do not fully capture the breadth of the scope described in the consultation for the Interim DSI operator. Seven additional roles and responsibilities have been described: use case oversight, delivery oversight, stakeholder engagement, cross-sector integration, data standards and sharing, monitoring and evaluation, and knowledge base management. It would be beneficial to reflect these in the table going forward.

In addition to the presented roles, and as mentioned in previous responses, we believe there could be some roles missing, specifically around:

- **Coordination**: Ensuring coordination between different governance functions, data and digitalization legislation, regulation, and other initiatives across the energy sector.

- **Adoption and user support**: Overseeing the adoption and uptake across energy sector actors, facilitating input, and reaching consensus across the industry.

- **Finance**: Managing funds and evaluating funding routes and applications.

To help identify the roles needed for an Interim DSI coordinator, we recommend Ofgem consider the report developed by Arup, Energy System Catapult, and Zühlke titled "Delivering Energy Sector Digitalisation" (March 2024), which examines the coordination of digital investment across the energy sector. The role of a Digitalisation Orchestrator is outlined in the picture below, offering insight into how the Interim DSI coordinator's scope could translate into organisational roles.
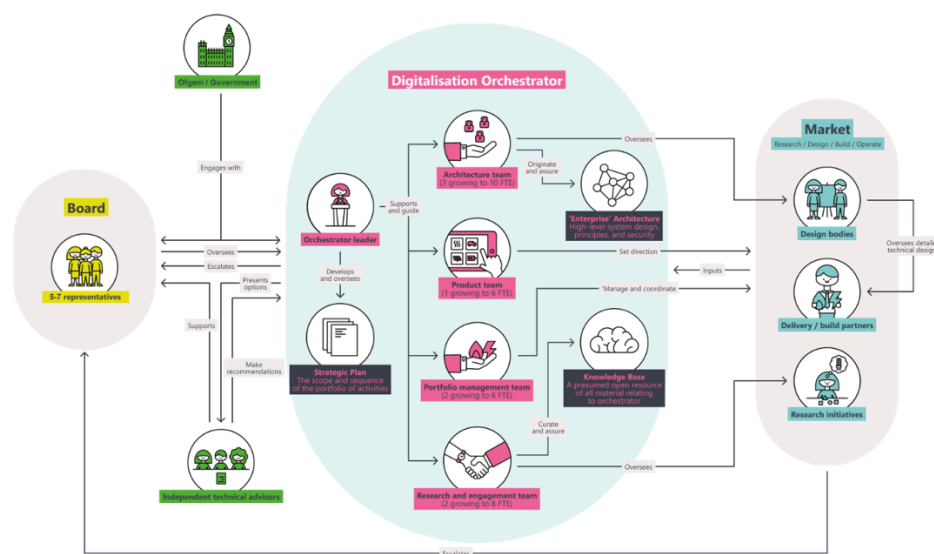
Q7 - Do you agree with the responsibilities of the interim DSI Coordinator? Are there any additional responsibilities that it should undertake?

Please see our response to Question 6

Q8 - Do the proposed deliverables reflect the outputs that the Interim DSI Coordinator should focus on in the initial DSI stages? Do you suggest any additional deliverables?

The proposed list of deliverables is comprehensive. However, it would be beneficial for the Interim DSI Coordinator to also provide:

- **A public development roadmap for the DSI**: This will help the sector understand ongoing activities, critical dependencies, and the roles different actors have or could take.

- **A plan for enabling work or critical dependencies**: This includes aspects like data sharing, data standard creation, and licensing templates.

We suggest that all these artifacts be maintained as live documents, within the shared knowledge base, with a rapid update cycle to reflect the speed of development and drive the roadmap in a timely and agile manner.

Additionally, the Interim DSI Coordinator should routinely update the wider industry to ensure open and transparent delivery and governance of the DSI, such as through regular "Show & Tell" sessions throughout the year.

Q9 - Do you agree with us that the System Operator is the best option as the Interim DSI Coordinator? If no, explain your reasons and justify your proposed option.

We concur with your analysis and assessment of the System Operator (SO) as the suitable option for the Interim DSI Coordinator role. In addition to the benefits resulting from their transition to NESO, there are key advantages specific to common digital infrastructure:

- **Pace of development:** The SO has been leading the development of the DSI Pilot, which can be leveraged to build the MVP and the full-fledged service design. The SO acting as the Interim DSI Coordinator during this critical phase of development would further support maintaining pace.

- **Established thinking and knowledge:** The SO has been involved in, and leading, similar work associated with sector-wide data sharing for several years. They would therefore be able to leverage valuable experience and expertise.

It should be expected that the SO will work openly and transparently with industry during the term of the Interim DSI Coordinator and the development of the Pilot and MVP of the DSI; and will extensively engage with stakeholders and existing working groups to ensure that all sector requirements are understood.

Q10 - What assessment criteria do you foresee being required when transitioning from short-term governance to an enduring governance model?

When considering the governance framework, it should be guided by the set of aims, values, and design principles that underpin the Data Sharing Infrastructure, and ensuring these definitions are tested with sector stakeholders. Such aims, values and design principles include:

- **Transparency and openness** – Bring visibility to its operation to enable trust and adoption across different market participants. Encouraging participation and constructive input into its development.

- **Accountability** – Provide clear definition of responsibilities and party responsible for each governance function and avoid conflicts of interest. It provides transparency into the model

allows the stakeholders to clearly understand accountability, and responsibility of actors engaging with the programme.

- **Legitimacy** – Assure the endorsement of a data sharing infrastructure as a sector wide common digital infrastructure.

- **Responsiveness** – Enable adaptation to future challenges, opportunities, and stakeholder needs.

Our work on the Digital Spine Feasibility Study provided an outline assessment of the short-term governance model for developing the DSI MVP and implement priority use cases. A similar approach could be considered when developing the long-term governance model.

Q11 - What suggestions or feedback do you have for refining these governance assessment criteria to better meet the requirements and challenges of digitalisation in the energy sector?

Arup suggests the governance assessment criteria consider whether they should relate directly to the values and the culture the solution that will meet the challenges and requirements for the new product or service.