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DSI Governance

Contact:

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Summary

Energy Systems Catapult welcomes the opportunity to respond to Ofgem's DSI Governance Consultation.

The Catapult was set up to accelerate the transformation of the UK's energy system and ensure UK businesses and consumers capture the opportunities of clean growth. The Catapult is an independent, not-for-profit centre of excellence that bridges the gap between industry, Government, academia, and research. We take a whole systems view of the energy sector, including in policy design and implementation, helping us to identify and address innovation priorities and market barriers, to decarbonise the energy system at the lowest cost.

Key points in our response:

- The Catapult is supportive of the aims of the consultation. The industry suffers from a lack of data sharing which presents challenges in the ability to manage the increasing complexities of the future system. Data Sharing Infrastructure (DSI) is essential to achieving energy system digitalisation and requires effective coordination.
- We agree that the ESO is best placed as the interim DSI coordinator. This responsibility aligns to the ESO's transition to NESO - an independent publicly owned body with responsibility for overall strategic planning of energy system operations.
- In the long term, we recommend the role of the DSI coordinator is incorporated into the responsibilities of the Digitalisation Orchestrator. We see NESO as the most practical option to take on the responsibility of Digitalisation Orchestrator, but we recognise that the Digitalisation Orchestrator will require new skills, different ways of working and significant support from industry partners to deliver.
- We strongly advise the timelines for implementation of the MVP and sharing of blueprints with industry and other sectors are brought forward to winter 2025/2026, not 2028, to increase engagement with industry and support the development of concurrent use cases.

We provide a response to the detailed consultation questions in the annex. We would be happy to further discuss DSI Governance with you.

Sincerely,

Elle Butterworth

Senior Digital Consultant

Response to detailed consultation questions

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

The future energy system requires the integration of large volumes of low-carbon and renewable infrastructure, including an increase in assets and asset information. The industry suffers from a lack of data sharing which presents challenges in the ability to manage the increasing complexities of the future energy system.

Energy Systems Catapult has long advocated for a DSI (previously known as a Digital Spine) to improve the interoperability of data and help accelerate innovation in the energy system. Examples of stakeholders we work with who would benefit from a DSI include:

- Innovators and SMEs – improved access to energy data in standardised formats helps innovators develop consumer friendly solutions.
- System Operators – improved information sharing between DSOs and NESO supports forecasting accuracy and outage planning.
- Flexibility Service Providers – asset data provided in standardised formats enables smoother market participation for aggregated assets.
- Local Authorities – improved access to energy data supports development of Local Area Energy Plans (LAEPs).

A DSI can enable a wide range of use cases by taking a whole systems approach to improve data interoperability, setting out a consistent framework for preparing and sharing data through data sharing agreements.

2. Do you have any comments on the funding mentioned within this section?

The Digital Spine Feasibility Study sets out estimated costs for achieving an MVP as £13-29 million for all three components of the DSI.¹ The use case of outage planning could also help reduce costs associated with data preparation node for the MVP as this is an area where the ESO already collect standardised data from network licensees.

Pass through costs to consumers need to be proportionate to the overarching benefit of the scheme, though the wider benefits to innovation will be difficult to directly quantify during this initial phase.

We agree that cost recovery for the DSI will need to be kept under review as use cases and engagement increase overtime. As the solution scales there may be alternative routes to cost recovery that should be kept under review.

3. Do you have any comments on the timeline shown?

¹ <https://www.gov.uk/government/publications/digital-spine-feasibility-study-exploring-a-data-sharing-infrastructure-for-the-energy-system>

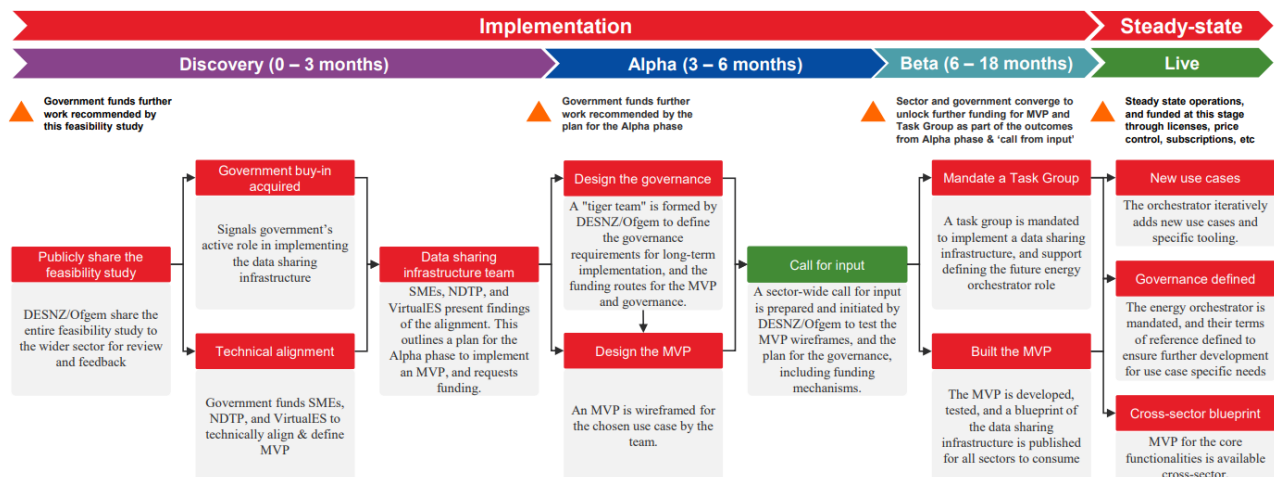


Figure 1 - proposed timeline from Digital Spine Feasibility study shows the MVP developed, tested and blueprint shared in Beta phase, which would be a 12-month phase immediately following decisions made on the call for input.

Our understanding from the consultation timeline is that only the MVP use cases is expected to be implemented by 2028. The blueprint would then not be promoted in the energy sector until late 2027/early 2028.

We are concerned this timeline is too slow. Advanced sharing of blueprints and engagement with a wider range of use cases before 2028 would help increase the reach and success of the DSI. There are several emerging programmes of work that would benefit from DSI engagement in the coming years. These include the consumer consent solution and asset visibility, either through a Flexibility Market Asset Register or a Central Asset Register solution (as developed for the NZIP AAR Programme).

We recommend the DSI coordinator brings forward plans for sharing blueprints to winter 2025/2026, which is line with timelines proposed in the feasibility study (Figure 1). This would support the development of concurrent use cases to help further embed the foundations of a DSI into the energy sector prior to 2028.

4. 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?

There is a strong case for improved coordination to help energy companies navigate emerging digital requirements.

Building on the work of the Energy Digitalisation taskforce, the ESO recently published our joint proposal for a Digitalisation Orchestrator³. The Orchestrator would be an independent organisation responsible for coordinating the sectors shared digital energy system infrastructure, including promoting interoperability to facilitate data sharing (see question 6). We recommend the DSI coordinator's responsibilities should eventually fall within the remit of the Digitalisation Orchestrator. Two separate organisations would create unnecessary duplication of effort and limit the value of a centrally coordinated approach.

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

See question 4.

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

The DSI coordinator is a good first step towards a more effectively coordinated digital energy system, but we strongly recommend Ofgem take steps to implement a Digitalisation Orchestrator. The Orchestrator's remit would include interim DSI coordination and promoting interoperability to support data sharing. The Orchestrator's role would also include:

- Maximising the use of markets to deliver innovative digital infrastructure in a coordinated way.
- Triaging and addressing risks of digital monopolies within the energy sector.
- Ensuring coordinated digital infrastructure is delivered in the best interests of consumers and at the least cost.

Decisions over the Market Facilitator's role, the development of a consumer consent solution, an asset register to support flexibility, Regional Energy System Planner (RESP) and the ramp up to the next price control period highlights a changing landscape where improved coordination is needed.

The timing of interim DSI development represents a good opportunity to promote alignment whilst the Market Facilitator is in its infancy and determining its role in setting digital standards for flexibility markets. A use case to support flexibility, such as the sharing of asset data to support market participation, would be a strong early DSI use case and promote alignment across the emerging digital infrastructure being developed to support flexibility.

In the future, we would expect DSI to become a cross-sector initiative to fully seize the wider benefits of standardised data sharing economy-wide. There is an opportunity for the energy system to play a leading role in shaping the blueprints of a cross sector DSI, but we strongly recommend that Ofgem do not wait for cross-sector initiatives to emerge and prioritises the development of an MVP with an energy sector focus. As DSI matures and becomes a cross-sector initiative, we would expect the Digitalisation Orchestrator to support DSI activities within the energy sector and coordinate with other cross-sector initiatives.

7. Do you agree with the responsibilities of the interim DSI Coordinator? Are there any additional responsibilities that it should undertake?

Overall, we agree these are the right areas of focus but there is limited detail in the consultation for us to provide a detailed assessment.

- Architecture – the Interim DSI Coordinator should publish blueprints for the wider use of DSI.
- Cyber Security – Agreed. The ESO is well placed to ensure the relevant security measures are being met.
- Technology – consultation refers to "Futures tools" but it is not clear what these are. How will "the right technology" be assessed? Beyond the development of the MVP, it is important to ensure a range of market driven technologies are available to industry so solutions can continue to innovate overtime.

- Tenders – Agreed
 - Delivery bodies – Agreed
8. **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?**

In the digital spine feasibility study, we split out required outcomes for the MVP into the development of blueprints and the development of components.

Blueprints would serve as design patterns for anyone developing technological solutions to the required DSI components of Prepare, Trust, Share. Blueprints should cover the process, procedures, assessment models, cyber security requirements and in-life processes for the DSI. Blueprints should be shared to enable a wider range of innovative component solutions to be developed and for the DSI to be adopted by industry and beyond the energy sector.

The development of components delivers the functional capabilities outlined in the blueprints. The organisation developing the blueprints could also develop initial components. This increases the technology readiness of DSI by providing the market with an “early adopter”. NESO, as the interim DSI coordinator developing an MVP with the outage planning use case, would develop initial components to support this use case, aligned to the overarching DSI blueprints. These components could then be iterated and validated against the design specifications for other specific use cases.

We agree that in addition, NESO should look to expose novel digital tools to be integrated into the DSI. This should be done through ongoing workshops and industry engagement, in addition to a published assessment that could be published at a later review date, to mark the transition from interim to long term coordinator.

9. **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.**

It is the Catapult’s recommendation that ESO in its new role as NESO would be best positioned to take on the role of Interim DSI Coordinator. Justifications for this recommendation include:

- Existing work on the DSI feasibility study, Virtual Energy System pilot and now the MVP increases the ESO’s digital capabilities and establishes relationships with potential delivery bodies.
- Fits with the ESO’s transition to NESO as an independent publicly owned organisation responsible for overarching coordination and strategic planning of energy system operations.
- Already established relationships with key energy stakeholders and understanding of energy system developments.
- Most independent organisation, compared to alternative viable options. Setting up a completely independent organisation would be costly and require time to establish the required relationships with relevant parties.

We agree that a working group would take time to establish and would not be the best approach for interim DSI coordination. We would recommend the DSI coordinator engages industry and takes steps to establish an industry elected user group that could support the Digitalisation Orchestrator and long-term governance of the DSI.

We recognise Ofgem’s strong support for digitalisation of the energy system, such as through the adoption of Data Best Practice. But we agree that Ofgem would not be the preferred coordinator of

the DSI. Instead, Ofgem should work with the DSI coordinator to ensure emerging policy areas align to the DSI as it develops.

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

The concept of a “transition” from an interim to a long-term coordinator (to be consulted on later) requires more thought.

The transition from short to long term governance is unlikely to have a clear start and end point. It is more likely the DSI Coordinator’s responsibilities will gradually increase overtime to support use cases as they emerge and develop. We would expect additional use cases to develop before 2028 as relevant initiatives (such as a central asset register) are developed.

It would be disruptive and costly to move the responsibilities of DSI coordination from one organisation to another after the interim stage. We recommend the ESO, in its new role as NESO, be appointed Interim DSO coordinator for energy system with the expectation that DSI coordination would fall under the role of the Digitalisation Orchestrator once established.

We see NESO as the most practical option to take on the responsibility of Digitalisation Orchestrator, but we recognise that the Digitalisation Orchestrator will require new skills, different ways of working and significant support from industry partners to deliver.

We would expect the ESO, to seize the opportunities as Interim DSI Coordinator, to further demonstrate their digital capabilities and suitability for the role of Digitalisation Orchestrator. This includes bringing in the right skills, adopting a more open and agile way of working and bringing in the right partners. We will set out our proposal for the Digitalisation Orchestrator in more detail as part of the forthcoming consultation.

11. 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?

No response.