

By email
23 September 2024

Dear Euan,

Ofgem Call for Input on Flexibility Market Asset Register

This joint response is from the consortium who took part in Phase 1 of the **Flexibility Markets Unlocked (FMU)** competition for the Department of Energy Security and Net Zero (DESNZ), awarded through the Flexibility Innovation Programme which is part of the government's £1 billion Net Zero Innovation Portfolio (NZIP). This consortium was successfully selected to delivery Phase 2 of the FMU competition, which is currently undergoing contract discussions.

The consortium consists of **Arup**, **Energy System Catapult**, and **Electron**. This joint response represents their views as the *FMU delivery consortium* only and does not represent their individual organisation views, which may be submitted via separate responses.

This response is based on the consortium's learnings from delivering Phase 1 of FMU, where we proposed new digital tools, data standards, governance models, and delivery routes that will progress the outcomes for common data standards, common registration of assets, registration of users, and pre-qualification mechanisms.

Yours sincerely

On behalf of the FMU delivery consortium

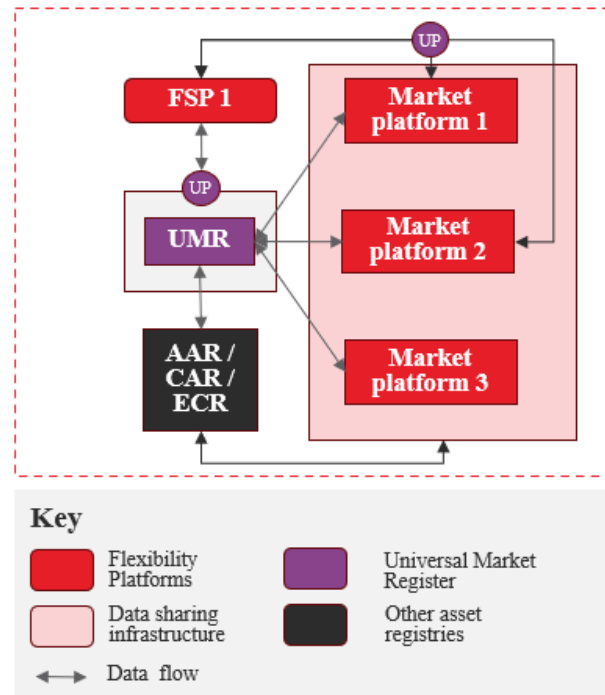
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The *FMU delivery consortium* proposed a Universal Market Register (UMR) to meet the challenge of market access and information transparency. The UMR allows FSPs to register, ‘just once’, and share their organisation, asset, and qualification data across different markets and platforms.

This tool is composed of three aspects:

1. **Universal profile (UP).** Equivalent to a ‘digital passport’ for FSPs that is interoperable across all flexibility market platforms, allowing for ‘just once’ registration, and issuances of ‘Visas’, depending on their role in the flexibility ecosystem. This service allows them to access energy sector digital platforms, depending on their role in the ecosystem, without adding the burden of multiple registrations.
2. **A pre-qualification services** that help the FSP understand the markets they can access and the products they can register against. It provides visibility of other markets and products FSPs can potentially qualify for, considering the type of assets, and their role as an active or passive flexibility provider.
3. **Asset connection service** which gives FSPs the ability to link assets they own or have consent to manage in the flexibility ecosystem, and orchestrate the transfer of asset information between platforms, if requested. It acts as a control plane for connecting information across multiple platforms.



Conceptual design of the UMR

UMR is underpinned by common flexibility data standards associated to registration, and qualification, allowing for data interoperability required to enable a decentralised ecosystem. The feasibility study defined and evaluated potential delivery routes. The route requiring policy intervention for process definition, and governance scored the most likely to deliver the results with the least number of resources.

As part of the feasibility study, the consortium provided a roadmap for Phase 2 which involves taking the platform into detailed design, conducting stakeholder engagement to assess key architectural decisions, and considering factors such as data volume, growth projections, scalability, and the challenges and opportunities associated with decentralized or centralized identity management.

Phase 2 will also define the scenarios for integrating of external dependencies like a consent management platform, and the Data Sharing Infrastructure.

Q1 - Do you agree that policy intervention is needed to deliver common Flexibility Market Asset Registration?

Yes, the *FMU delivery consortium* believe policy intervention will be required to meet certain outcomes defined in Figure 2: FDI outcomes. The *FMU delivery consortium* believe through the UMR and AAR, a common registration of assets can be enabled, requiring only the policy interventions related to the adoption of the platforms.

It aims to test the viability of integrating asset information with the identities of users who have consent to manage those assets, such as FSPs. The *FMU delivery consortium* proposed testing the design viability by pulling asset information from a central asset base, like AAR, or market platforms like Electron, or the FSPs' databases who are responsible acquiring and storing consent, and for dispatching the assets, or OEMs who manufacture and sell flexibility enabled assets.

The *FMU delivery consortium* believe Phase 2 findings can provide the relevant evidence to support the types of policy interventions that will be needed, especially as it relates to integrating the various on-going sector initiatives and innovation programmes.

Q2 - Do you agree that for other FDI outcomes policy intervention is not needed at this stage? Are there any risks to consider with this approach to FDI delivery?

The *FMU delivery consortium* believe further evidence gathering is required to understand the appropriate detailed definition of the policy interventions required to meet the stated outcomes of FDI. This evidence can be informed by the design and sector feedback on the completed innovation projects such as FMU, AAR, Data Sharing Infrastructure Pilot, and ENA's open network programme enablers.

Q3 - Are there any other policy alignments or industry developments, in the UK or internationally, which should be considered as part of ongoing FDI policy development?

Other initiatives to consider:

Initiative	FDI Outcome
Self-Sovereign Identity	Common registration of users
OneNet	Common data standardisation and sharing mechanism
Call for Information: Big tech and digital wallets from FCA	Common registration of users, Common registration of assets

Q4 - Do you agree with the scope proposed for markets, assets, and data? Should anything else be considered?

The *FMU delivery consortium* agree with the proposed markets and data.

The *FMU delivery consortium* recommend that the scope of assets should be increased to include all LCT assets under 1MW, not just those participating in flexibility markets. This opens the solution up to a wider range of uses cases such as network planning which is closely connected to flexibility.

It is inevitable that visibility of all assets will be required in the future and the longer it takes for a solution to be deployed, the more assets we risk losing sight of.

Furthermore, the expansion of a flexibility asset on register or development of an additional solution would result in duplicated effort, resource and cost. Therefore, it would be a missed opportunity if the scope is not inclusive from the outset.

Q5 - Do you agree with the functional outcomes? Should anything else be considered?

Yes, the *FMU delivery consortium* agree with the functional outcomes. A recommended amendment, to align with the work of the NZIP AAR project, is the for the ‘appropriate collection points’ to be at point of installation only. Capturing asset data at installation will provide a more seamless registration process for the asset owner and therefore provide more and better-quality data. The registration of legacy assets is proven to be more costly and time consuming, with more risk of data processing errors.

An additional aspect to consider is the level of innovation that can be unlocked, depending on the mechanism selected to enable said outcomes. The *FMU delivery consortium* believe these outcomes can provide the necessary foundations for innovators to build a marketplace of new tools to support the net zero journey.

Q6 - Do you agree with the design principles? Should anything else be considered?

Yes, the *FMU delivery consortium* agree. These design principles are in line with the ones we’ve proposed in our FMU Phase 1 study.

The *FMU delivery consortium* proposed the following high-level characteristics that consider people and process are:

- Transparent operations
- Low barrier deployment
- Collaborative
- Open ecosystem (no vendor lock-ins)

The high-level characteristics identified that consider data and technology are:

- Distributed architecture
- Data standardisation & interoperability
- Self-serve platform
- Low integration overhead
- Extensible

Q7 - Do you agree with the enablers and design activities needed and for the Market Facilitator to coordinate Working Groups for them? If not, what other activities and governance arrangements should be considered?

Yes, the *FMU delivery consortium* agree. The *FMU delivery consortium* suggest that the market facilitator using existing working groups where possible to avoid stakeholder fatigue.

Q8 - What are the advantages and disadvantages of the proposed delivery body options for the Flexibility Market Asset Registration digital infrastructure? Are there any additional options that should be considered? Do you agree with the justification for discounting approaches?

As part of FMU, the *FMU delivery consortium* outlined the following delivery bodies for both implementation and steady-state operations of the solution, and an outline of the assessment criteria used.

Components	Implementation	Steady-state	Assessment criteria
Identity Service (IDaaS) Identity and access management for sector organisations.	<ul style="list-style-type: none"> • Open Energy • ESO - VirtualES DSI • Consortium - builds new software • Consortium - licenses existing technology • Consortium - purchases existing technology 	<ul style="list-style-type: none"> • Consortium as a non-profit • Consortium for profit • Open Energy • Market facilitator • Existing flexibility platform • Mandate an existing strategic entity (such as Elexon or ESO) 	<ul style="list-style-type: none"> • Costs • Timelines • Monopoly risk • Adoption • Skills and capabilities
Asset Connection Service A register for asset ownership, and/or dispatch.	<ul style="list-style-type: none"> • Link into existing asset registers • Consortium builds a new register 	<ul style="list-style-type: none"> • Link into existing asset registers • Consortium as for profit 	<ul style="list-style-type: none"> • Costs • Timelines • Monopoly risk • Adoption • Skills and capabilities
Market Qualification Service SaaS platform for managing one's operations in the flexibility ecosystem.	<ul style="list-style-type: none"> • Consortium builds new software • Undertaken by existing market platforms at cost 	<ul style="list-style-type: none"> • Consortium as for profit • Consortium as non-for-profit • Market facilitator • Mandate an existing strategic sector entity 	<ul style="list-style-type: none"> • Costs • Timelines • Monopoly risk • Skills and capabilities

The *FMU delivery consortium's* recommended delivery routes for these included using existing available code, where possible, and building only the new and integration aspects for the UMR. The *FMU delivery consortium* proposed the solution be owned by the Market Facilitator, but operated as a managed/shared service.

The *FMU delivery consortium* believe certain aspects of the solution will require a license to have legitimacy for operating in the energy sector. For example, AAR, through UMR, can collect information, through consumer consent, all the asset information related to DERs. This can require regulatory oversight to ensure the platform operates in the best interest of the energy consumer.

Q9 - Do you agree with the timelines proposed? Should anything else be considered?

The *FMU delivery consortium* agree with the timelines proposed.

It allows for room for integration with other sector programmes. The *FMU delivery consortium* suggest the delivery body to be closely involved with other sector initiatives such as the Data Sharing Infrastructure, Consumer Consent, and other innovation programmes, such as FMU and AAR.

Q10 - What existing or new policy levers could be used to improve asset visibility?

The *FMU delivery consortium* suggest that incentives are considered alongside consumer consent for asset visibility. For example, lower electricity bills, or better tariffs, or community awards for consumers that are willing to share their asset information for use in the flexibility ecosystem, and other use cases such as network planning.

Q11 - What use cases for asset visibility should be considered as priorities and why?

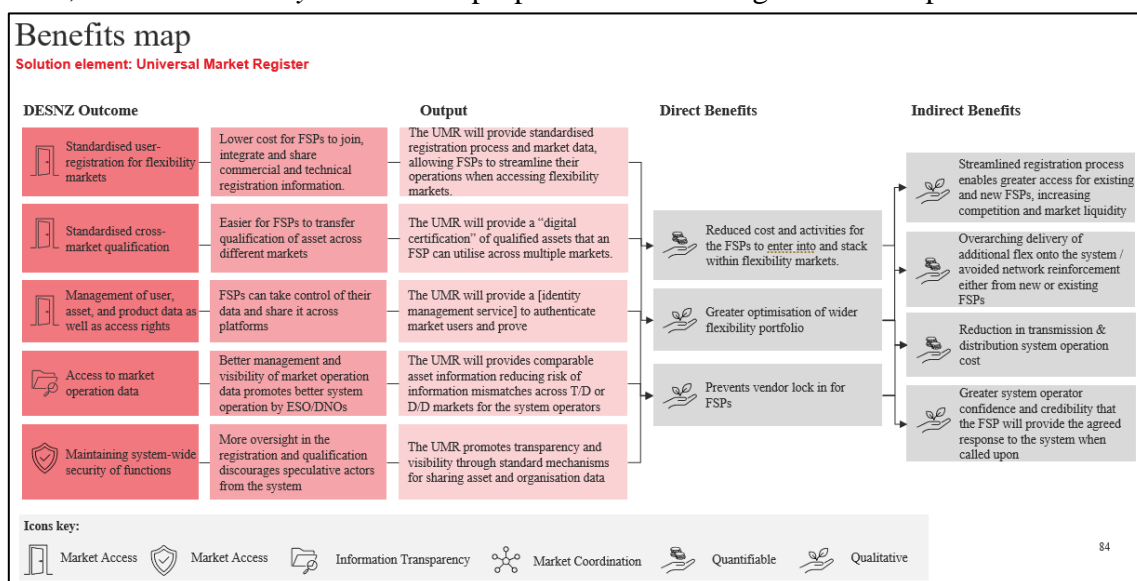
The *FMU delivery consortium* believe flexibility should be prioritised because it provides the incentives for the consumer to share their information. This use case, along with the architectural decisions made to enable the use case, can enable other uses such as network planning and integration across other sectors.

The UMR connects into AAR, Market Platforms, FSPs, or OEMs databases, enabling the UMR to create three tranches of data that can be used across multiple use cases:

1. Flexibility enabled assets that are registered and active in the market
2. Flexibility enabled assets that are registered, but not active in the market
3. Flexibility enabled assets that are installed but not registered in the market

Q12. What costs, benefits or factors should be considered in a Cost-Benefit Analysis for asset registration solutions?

In Phase 1, the *FMU delivery consortium* proposed the following benefits map for the UMR



The *FMU delivery consortium* believe that evidence should be gathered to fully understand the costs and benefits of technology to the outlined considerations because architectural decisions and integration with other sector initiatives can significantly influence the allocation of costs and reduce double allocation of benefits.

The *FMU delivery consortium* believe a register of assets can be achieved without extensive public money support, enabling a culture of self-sustained operations of common digital solutions.