

Flexibility Digital Infrastructure

System Use Case exercise

Template

December 2023, Version 2.1

Disclaimer: The materials in this Template comprise Ofgem's current thinking around a Flexibility Digital Infrastructure (FDI). This Template is purely an information gathering exercise to enable a more informed discussion on FDI governance and technical design. It is not an indication of any minded-to positions on an FDI in Ofgem's Future of Distributed Flexibility workstream.

Contents

| | | |
|----|------------------------------|---|
| 1. | SUC Template for BUC.4 | 3 |
| 2. | SUC Template for BUC.2 | 5 |

| Version | Date | Author(s) | Notes |
|---------|--------------------------------|-----------|------------------------------------|
| 2.0 | 4 th December 2023 | Ofgem | Emailed to participants. |
| 2.1 | 13 th December 2023 | Ofgem | Presented at introduction meeting. |
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1. SUC Template for BUC.4

Please use this template (based on [IEC standards](#)) to set out your SUC proposals which deliver the BUC narrative and KPIs, and address the scenario provided above. You may find the [PlantUML website](#) tool useful for making sequence diagrams (tutorial seen [here](#)), but diagrams created in Word/PowerPoint (or equivalent) are entirely acceptable.

| Narrative of the System Use Case |
|--|
| Short description |
| <p><i>Written description of your SUC implementation of the BUC. Describe the SUC operation and what new/existing systems are involved and what system functions are used to deliver the BUC. Describe any aspects of the BUC narrative or KPIs or scenario that your SUC implementation does not meet. Optionally, please also include any overall architectural diagrams.</i></p> <p>We would favour a centralised solution to ensure the requirements are met reliably, efficiently and economically.</p> <p>In considering our existing systems, Common User Registration would be in the scope of the Kinnect Customer Solution, which is a Salesforce-based platform currently used to register all participant and asset details required under the BSC.</p> <p>In the context of Distributed Flexibility, we would see user registration operating with the following components:</p> <pre>graph TD SO[System Operators] <--> CS[Customer Solution] MO[Market Operators] <--> CS FSP[Flexibility Service Providers] <--> CS SU[Special Users] <--> CS EIC[EIC Register] --> CS IGA[Identity Governance & Administration] --> CS OVS[Organisation Verification Services] --> CS CS --> PD[Participant Directory] PD <--> U[Users]</pre> <p>The diagram illustrates the architecture of the Customer Solution. At the center is a blue box labeled 'Customer Solution' containing three sub-components: 'Participant ID', 'Participant Role', and 'Authorised Persons'. Above this central box are four orange boxes: 'System Operators', 'Market Operators', 'Flexibility Service Providers', and 'Special Users'. Each of these orange boxes has a double-headed orange arrow connecting it to the 'Customer Solution' box. To the left of the 'Customer Solution' box is a green box labeled 'EIC Register' with a single-headed green arrow pointing to the 'Customer Solution' box. To the right of the 'Customer Solution' box are two green boxes: 'Identity Governance & Administration' and 'Organisation Verification Services', each with a single-headed green arrow pointing to the 'Customer Solution' box. Below the 'Customer Solution' box is a blue box labeled 'Participant Directory' with a single-headed blue arrow pointing to it from the 'Customer Solution' box. To the left of the 'Participant Directory' box is an orange box labeled 'Users' with a double-headed orange arrow connecting it to the 'Participant Directory' box.</p> <p>The Customer Solution offers a managed market entry process to guide users through the steps necessary to register their participation, enter into any qualification procedures and prepare for operation. This would be expanded to accommodate the different types of user (including private individuals) who may be participating in Distributed Flexibility.</p> <p><u>Initial verification</u></p> |

Our standard method of verification for new users is by requesting director-level declarations from the organisation involved, which can then be verified through integration with suitable services, e.g. Companies House. For private individuals an equivalent mechanism would be required to verify their identity. In either case, we would also use Identity Governance & Administration / IAM services (such as Okta, EntraID) to establish reliable single sign-on for users from the outset.

Once this initial user is established as an Authorised Person, the solution would enable them to create further Authorisations for their organisation, each with appropriate permissions.

Participant IDs and Roles

Once basic identities are established, Participant IDs and Roles can be assigned, with the solution ensuring unique combinations. Other existing organisation identifiers may be leveraged, e.g. EIC Codes granted by Local Issuing Offices (LIOs). However these may not be exhaustive and so we would assume the central solution would always need to establish its own Participant ID if only for internal purposes.

Each Participant ID would be associated with a number of Roles that reflect the organisation's activities in the market. The users established above would be linked to those roles (not just the organisation) to allow for fine-grained Role-Based Access (RBAC) that underpins many of the other use cases.

Supporting Information

The managed entry process allows for supporting information to be requested and provided through various electronic channels. A user would be advised on any additional information (commercial or technical) that needs to be submitted as part of their entry, and the Customer Solution can support workflows to manage each of these requests, along with suitable alerts, reminders, etc. Where external sources need to be referenced to validate any of these details, they will be factored into the workflow.

Ongoing Management

Participant Details would continue to be managed through self-serve facilities offered by the Customer Solution, all supported by RBAC permissions.

Searchable Directory

The information captured through this process could be made accessible using the roles and permissions established above, with commercially-sensitive data being obscured/suppressed as necessary.

Integration with Other Use Cases

The Participant Directory would form a key source of information to other use cases, and would be integrated with any other systems that require the data, using suitable API technologies.

2. SUC Template for BUC.2

Please use this template (based on [IEC standards](#)) to set out your SUC proposals which deliver the BUC narrative and KPIs, and address the scenario provided above. You may find the [PlantUML website](#) tool useful for making sequence diagrams (tutorial seen [here](#)), but diagrams created in Word/PowerPoint (or equivalent) are entirely acceptable.

| Narrative of the System Use Case |
|---|
| <p>Short description</p> <p><i>Written description of your SUC implementation of the BUC. Describe the SUC operation and what new/existing systems are involved and what system functions are used to deliver the BUC. Describe any aspects of the BUC narrative or KPIs or scenario that your SUC implementation does not meet. Optionally, please also include any overall architectural diagrams.</i></p> <p>The Customer Solution offers a self-service asset registration process that allows users to register and manage assets relevant to their market operation.</p> <pre> graph TD SO[System Operators] <--> CS[Customer Solution] MO[Market Operators] <--> CS FSP[Flexibility Service Providers] <--> CS SU[Special Users] <--> CS EIC[EIC Register] --> CS IGA[Identity Governance & Administration] --> CS AVS[Asset Verification Services] --> CS CS --> AD[Asset Directory] U[Users] <--> AD </pre> <p><u>Asset Validation and Registration</u></p> <p>The Customer Solution prompts users for next steps in registering relevant assets as part of the managed entry process, along with any other supporting information relevant to their participation. This would be based on their chosen participant roles and can be highly configurable, based on agreed rules.</p> <p>Prospective assets may need to be validated against a range of external services; these may involve automatic integrations with APIs or potentially part of a more manual but managed workflow. This process should include suitable checks to ensure the same physical asset is not registered multiple times.</p> <p><u>Asset IDs</u></p> |

The solution establishes unique Asset IDs along with details of asset type and ownership (associated to one or more Participant IDs). EIC codes for assets may be leveraged if relevant.

Ongoing Management

Asset registrations are confirmed back to the registrant through Customer Solution self-serve facilities. Users are then able to manage their registrations using RBAC controls. If multiple organisations are allowed to update asset details, rules would be needed to manage and reconcile conflicts. The exact rules would need to be defined at the policy/market design level, but can be translated into the solution using suitable logic.

Asset Directory

Asset information maintained through this process would be made accessible to those users/systems that need it, based on RBAC permissions. Any requirements about notification of access to data would be translated into suitable system logic.

Integration with other Use Cases

The Asset Directory is a key resource and would be integrated with any other systems that require the data, using suitable API technologies

Unexpected system downtime

The solution would be underpinned by service level agreements specifying availability targets, and suitable Disaster Recovery arrangements would be put in place to protect dependent systems from consequential failure.