Project EDGE

Demonstrations Insights Forum | 04 October 2022

Agenda

Item	Lead	Timing
Welcome, Acknowledgement of Country	Ryan Batchelor (Nous)	5 min
Quick project status update	Nick Regan (AEMO)	15 min
Scalable data exchange – problem statements	Nick Regan (AEMO)	60 min
Close and next steps	Ryan Batchelor (Nous)	5 min

Acknowledgment of Country

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay our respects to their Elders past, present and emerging.

Project EDGE update

Current position

- All 3 Aggregators are now participating in the field trials
- Project EDGE presented at the ARENA DEIP Dive on September 12th - report published online
- Final CBA methodology coming soon – thanks for your input
- More field test data becoming available from late October
- Ongoing results analysis and input into reform
- Further consultation on scalable data exchange problem statements and use cases

ARENA DEIP DIVE

- Project EDGE presented at the ARENA Distributed Energy Integration Program (DEIP) on 12 September
- EDGE was featured alongside other programs (Project Symphony, Edith, Converge)
- Presentation material is available on the ARENA website

https://arena.gov.au/assets/2022/09/deip-dive-ev-der-market-integration-event-presentations.pdf

Scalable Data Exchange

Project EDGE focus area

EDGE Scalable Data Exchange Hypotheses

The project will test two core hypotheses:

1. A data hub model provides a scalable and long-term approach for DER Marketplace data exchange compared with a web of many point to point interactions between industry actors
    - The ESB DER Implementation Plan requires DNSPs to begin implementing DOEs in late 2023
    - The ESB also require DER to be rewarded in the market and DNSPs to procure DER-based network services
    - The Reform Delivery Committee NEM2025 Implementation Roadmap has a "DER Data Hub & Registry Services" initiative that needs to be scoped in detail and in context of parallel ESB reforms
    - The data hub concept aims to lower aggregator barriers to entry by providing one integration to access wholesale markets, local network support services and DOEs

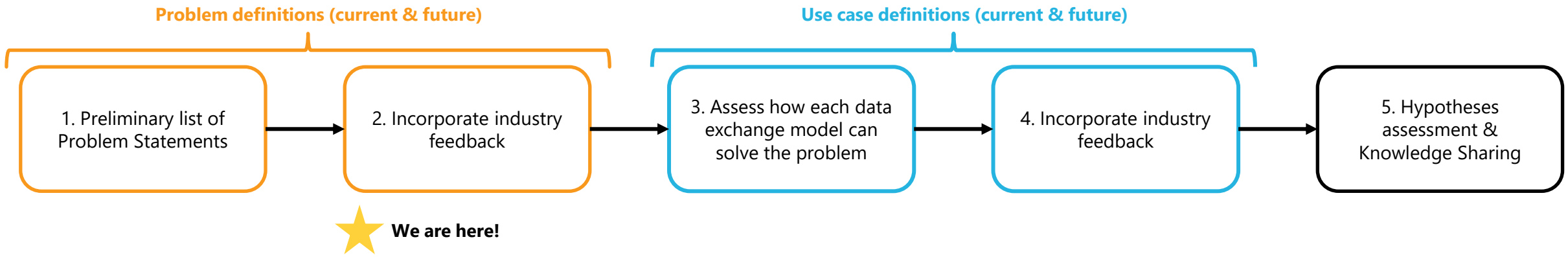
2. A decentralised data hub model is the most efficient solution that could deliver the most net benefit to NEM customers
    - AEMO currently operates a centralised hub approach, the e-hub for the retail market
    - As an off-market proof of concept project, EDGE has a unique opportunity to test innovative approaches to DER market integration
    - Project analysis on scaled data exchange challenges suggests a decentralised data hub approach could have value and testing this approach was encouraged by executive sponsors

AEMO and Industry stakeholder feedback is paramount to understanding the merit and costs of a future DER Data Hub, centralized or decentralized.

Industry stakeholder feedback is key to clarifying problems & use cases so that assessment of EDGE's hypotheses is based on a relevant foundation

Assessing scalable data exchange models requires clear problems to solve before jumping to solution mode – this is why we're talking to you today!

- EDGE Field Trial includes transactional DER use cases: DOEs, Bi-directional offers, Dispatch Instructions, Telemetry
- Appropriately assessing models for scalable DER data exchange needs to consider current and anticipated future problems.
- Project team (AEMO, AusNet, Mondo) have created a preliminary list of problem statements that cover transactional and standing data which, we'd like feedback on over the next couple of months.



Q&A + Activity

Raise a hand to speak
Use the Teams chat function

We will use Mural to work through the Data Exchange Problem statements and gather relevant feedback

Aim is to clarify problems to solve with stakeholders before jumping to solution mode

High Data Exchange Costs

Statement (1) Ease of Integration (As Aggregator) *"I need to integrate into multiple, separate, and bespoke data exchange systems with DNSPs to know which Dynamic Operating Envelopes to apply, deliver 'similar but different' local network services across the NEM in addition to integrating with AEMO to provide wholesale market services. This complexity means its difficult, and potentially not scalable or economic, for me to deliver these services using my portfolio or participate in new B2B services as the arise."*

Statement (2) Duplicate Identity Verification Processes (As DSO & Aggregator) *"I need to participate in multiple, separate and bespoke organisation identity verification processes with DNSPs to deliver 'similar but different' local network services across the NEM as well as AEMO to provide wholesale market services. This adds to my compliance burden and cost to serve customers"*

DER Standing Data inconsistent across industry participants

Statement (3) Inaccurate DER Configurations (As AEMO & DSO) *"The DER Register does not necessarily reflect the "as-is" configured state of the connected DER, as settings can be changed after the installation, and this can have a consequential impact on network DER hosting capacity assessments, dynamic operating envelope calculations and AEMO operational planning activities"*

Statement (4) Duplicate Portfolio Management Systems (As AEMO, DSO & Aggregator) *"Each party maintaining a different portfolio management system (AEMO for wholesale, DSO for local services, aggregator internal) is inefficient and raises risk of errors and disputes and is not scalable for a high DER future"*

We will use Mural to work through the Data Exchange Problem statements and gather relevant feedback

Aim is to clarify problems to solve with stakeholders before jumping to solution mode

Visibility of DER

Statement (5) Invisible off-market capacity commitments (As AEMO) *"I do not have visibility of flexible capacity committed to off-market services such as those between aggregators and DSOs to incorporate into my operational planning and market solve (e.g observe DNSP procured 300MW of peak demand support under a TNI on a given day)"*

Statement (6) Poor service provider discoverability (As DSO) *"Currently, my processes to discover and contract with DER aggregators for local network support is highly manual and has access to a limited pool of providers"*

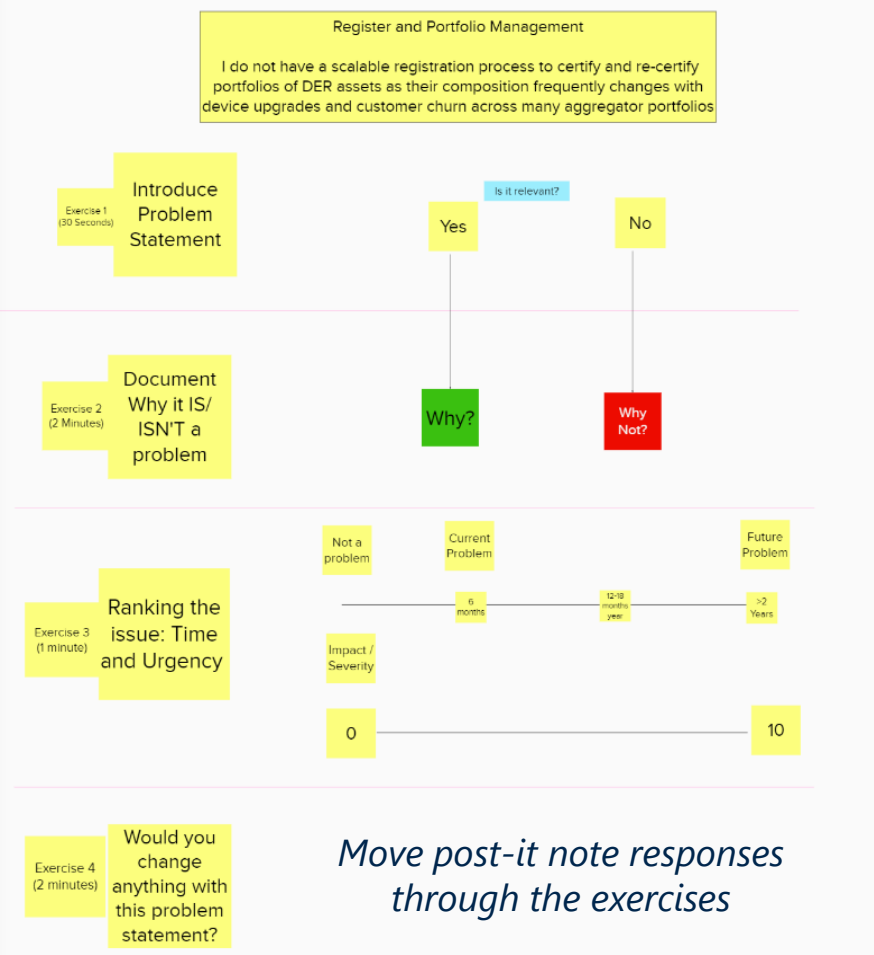
Statement (7) EV market registration at static location (As Aggregator) *"My ability to utilise EVs to provide services as part of my portfolio is limited as they are only recognised at one designated location."*

High Data Exchange Costs

Statement (8) Fractured settlement of EV V2G services (As Aggregator) *"When utilising an EV to provide V2G services across multiple locations, I do not have an efficient way to reconcile my settlement records against AEMO or other counterparties such as DNSPs."*

We will use Mural to work through the Data Exchange Problem statements and gather relevant feedback

Link: [Data Exchange Problem Statements](#)



What are we trying to achieve?

As we walk through these statements, we have 4 exercises. Through each exercise we are looking for targeted feedback to determine if we have captured and understood the issue correctly.

Exercise 1: We have captured the issue correctly?

Exercise 2: Is this statement a valid problem?

Exercise 3: Ranking the issue by time and impact.

Exercise 4: What would you change about this statement?

Close and next steps