

## Learning-by-doing ecosystem review: scope and approach

The Flexibility Plan 1.0 step #B says, ‘Ensure coordination between agencies and bodies with a role in supporting learning-by-doing’.

The purpose of step #B is to identify possible improvements to the learning-by-doing ecosystem to ensure organisations attempting learning-by-doing relating to flexibility have access to appropriate and effective support for learning-by-doing.

### Context: learning-by-doing is central to delivering the Flexibility Plan

The Flexibility Plan 1.0 identifies practical, scalable and least-regrets steps to unlock the value of distributed energy resources (DER) and flexibility for households, businesses, communities, the power system and Aotearoa New Zealand.

Each step involves either delivering a capability, practice or process that is already well understood and is required to unlock the value of DER and flexibility or exploring new options through coordinated and collaborative research projects to uncover a capability, practice or process needed to unlock the value of DER and flexibility.

The Plan relies on industry-led, coordinated and collaborative learning-by-doing provide experience and insights into the capability, practices and processes required to maximise the value of DER and flexibility.

The FlexForum discussed learning-by-doing in August 2022.<sup>1</sup> The discussion highlighted two aspects of learning-by-doing:

- technical research and development – working out if technology works
- business model demonstration and commercialisation – working out new ways to supply products or services to customers (potentially using a new technology or an existing technology in a new way).

There are several organisations involved in supporting the two aspects of the learning-by-doing process for the electricity sector through financing the learning-by-doing and responsibility for the legislative, regulatory and operational environment.

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<sup>1</sup> See FlexForum session 15, 18 August 2022, at [FlexForum: Session Fifteen](#). The group heard perspectives on learning-by-doing from Ara Ake, the Commerce Commission, the Energy Efficiency and Conservation Authority (EECA), and the Ministry of Business, Innovation and Employment (MBIE).

## Technology Research & Development

- Private investment (venture capital and corporate funding)
- MBIE research & innovation grants, eg, Māori and Public Housing Renewable energy fund or Arahia innovation trailblazing grant
- Callaghan Innovation
- Universities
- Accelerators and incubators
- Crown research institutes

## Business model demonstration and commercialisation

- Private investment (venture capital and corporate funding)
- MBIE and agencies responsible for legislation
- Electricity Authority
- Commerce Commission
- EECA
- Ara Ake

## Improvements to the learning-by-doing ecosystem appear necessary

The FlexForum thinks improvements are needed to the learning-by-doing ecosystem to accelerate uptake of DER and flexibility.

Experiences shared with the FlexForum highlighted how parties attempting flexibility-related learning-by-doing must spend, sometimes material, time and effort cobbling together finance from various funding sources.

People have routinely highlighted international experience indicating dedicated funding for learning-by-doing with flexibility has underpinned significant progress by creating an expectation for collaborative learning-by-doing. An example of overseas support for learning-by-doing is the UK [Flexibility Innovation Programme](#).

Funding apparently can be difficult to obtain for learning-by-doing relating to business model demonstration and commercialisation, particularly when there are challenges with the status quo legislative, regulatory and operational environment that restrict the business model, product or service.

- legislation administered by MBIE and other agencies may (unintentionally) prevent participants from testing new business activities or business models
- the Electricity Industry Participation Code 2010 may (unintentionally) prevent participants from testing new business activities or business models. The Electricity Authority can make, amend or provide exemptions from the Code
- the Commerce Commission through Part 4 regulation affects incentives for transmission and distribution network operators to participate in learning-by-doing.

The FlexForum hears that business model demonstration and commercialisation is particularly challenging for the electricity sector because business-to-business and business-to-customer relationships are heavily regulated and prescribed, reducing opportunities to test new products and services and business models (particularly those requiring changes to existing multi-lateral relationships).

Finally, the FlexForum hears that there is little incentive for organisations to share the experience and insights obtained through their own learning-by-doing because:

- there is not always an obvious benefit from sharing the results given the possibility other organisations might get a free ride
- concerns about giving away potentially valuable intellectual property, even when the experience is not necessarily unique to Aotearoa New Zealand or globally
- there is extra cost to collate and present the results, without always an obvious benefit to the incurring those costs.

# Scope & approach

## Scope

The review will consider what improvements to the learning-by-doing ecosystem are possible to ensure:

1. Processes for obtaining (public) support for flexibility related learning-by-doing are streamlined and do not require unnecessary effort and cost
2. (Public) support for flexibility related learning-by-doing is available for both technology research and development and business model demonstration and commercialisation (and there is a strong preference for the latter)
3. Policy and regulatory agencies responsible for legislation and regulation (including Part 4) provide the appropriate type and level of support for learning-by-doing, particularly where it involves testing new business activities or business models
4. Learning-by-doing is collaborative, involves external parties, focuses on scalable solutions, experience is shared to avoid duplication, and has a clear focus on consumer benefit.

## Approach

The review should be completed in two parts.

1. Part 1 – explore and document the current state
2. Part 2 – identify options which could improve learning-by-doing outcomes.

The review does not need to be exhaustive or over-complicate things. The review should produce outcomes which:

- confirm or reject the perspectives heard by the FlexForum to date, and its working conclusions
- enable the FlexForum to develop robust advice about possible improvements to the learning-by-doing ecosystem.

## Part 1

Part 1 of the review should involve an interview or survey-style approach:

- to explore the perspectives on the four matters outlined in the project scope of a selection of organisations that have attempted learning-by-doing relating to flexibility on the challenges they faced (or face). Speak with enough organisations to identify themes and trends. Start with FlexForum participants and organisations suggested by FlexForum participants.
- to document the role and focus of organisations supporting learning-by-doing:
  - organisations responsible for administering the policy and regulatory environment, including MBIE, the Electricity Authority, Commerce Commission, and EECA
  - organisations with a role in providing funding support, including MBIE, Ara Ake, EECA and Callaghan Innovation.

The output of part 1 is a description of the main challenges faced by organisations attempting learning-by-doing, and any gaps in the support available from organisations supporting learning-by-doing.

## Part 2

Part 2 of the review should involve a desktop assessment of initiatives used to support learning-by-doing relating to flexibility in Australia and the United Kingdom.

The starting point for the assessment should be FlexForum participants who will provide context and information on these initiatives.

The output of part 2 is a list of initiatives which address the gaps identified in part 1 against the four matters identified in the scope, and any other material issues identified through the review. The list of initiatives should include a description of how each initiative will improve things and identify practical considerations associated with putting the initiative in place.

## Process and timeframe

The FlexForum wants to finalise its advice on improvements to the learning-by-doing ecosystem by 28 April 2023.

- Part 1 of the review should be complete by 28 February 2023.
- Part 2 of the review should be complete by 31 March 2023.

FlexForum participants will be available to assist throughout the review process including to assist with arranging interviews, provide advice and feedback.

The reviewer should provide the FlexForum secretariat with a basic project plan for completing the review, including an interview schedule, and provide regular progress reports.