

# Market Operator Service Provider

# Clearing manager road map

December 2024  
Version 5.0



## Revision history

Version	Date	Description
0.1	May 2017	Draft for Authority comment
1.0	May 2017	For publication to participants, incorporating Authority comments
2.0	November 2020	Roadmap updated
3.0	December 2022	Roadmap updated
4.0	December 2023	Roadmap updated
5.0	December 2024	Roadmap updated



# CONTENTS

1. Introduction .....	4
2. Context .....	4
3. Product strategy.....	5
3.1 How could the clearing manager role change in the future? .....	5
Short to medium term goals (over the next 36 months):.....	5
Longer term goals (36+ months):.....	7
3.2 Planning for the future .....	7
3.3 Product strategy overview .....	7
User needs .....	9
Key services and features .....	10
Authority business goal.....	10
4. Road map .....	10



# 1. Introduction

This document presents a product strategy and road map for the clearing manager’s services and systems. It is a living document and will be revised at least annually. The product strategy and road map will be developed and evolved in close collaboration with the Authority and users of our services and systems.

# 2. Context

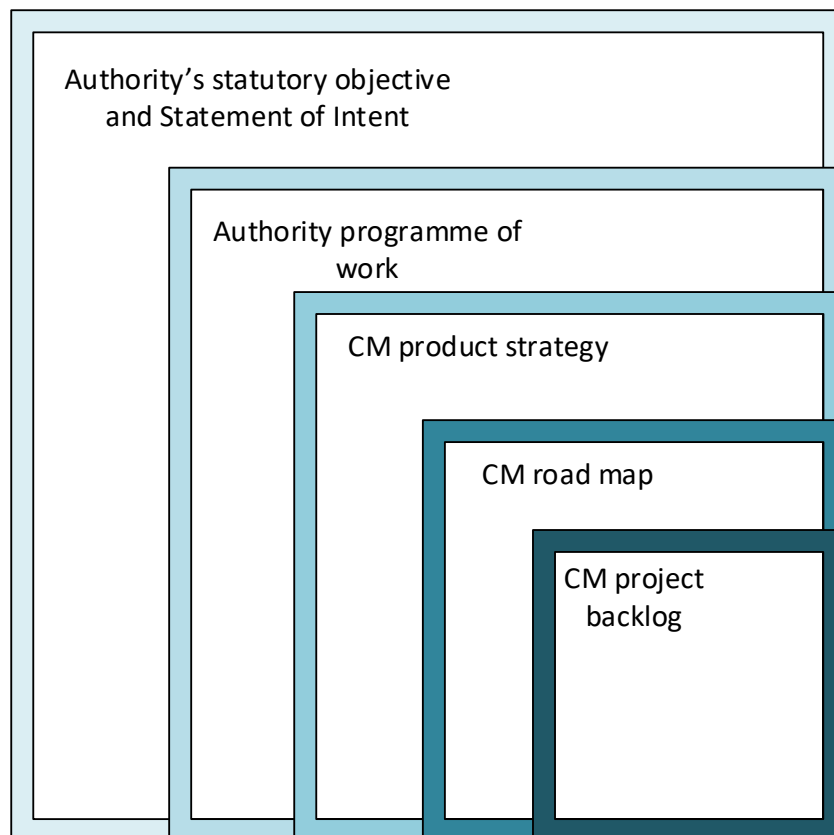
The road map provides a high-level overview of work to be progressed over the next 6 – 36 months. It informs the back log of features used by our IT team to prioritise their work on a week-by-week basis. The road map is not intended to be at a sufficiently granular level to include all work undertaken by NZX.

Our roadmap has been developed taking into account:

- The Authority’s strategy as outlined in their statement of intent and statement of performance objectives,
- The Authority’s programme of work,
- Our product strategy for the clearing manager and services.

The relationship between these elements is shown in Figure 1.

**Figure 1: Relationship between strategic elements**



## 3. Product strategy

Our product strategy provides a high-level plan for the development of the clearing manager's services and systems.

### 3.1 How could the clearing manager role change in the future?

To ensure that our services and systems continue to meet the needs of the industry we need to be aware of how the clearing manager role could change in the future.

We have identified the following issues below that may result in changes to our services and systems. While we have consulted with the Authority and participants, these issues are solely the clearing manager's assessment of what may happen in the future. Significant changes to systems would almost certainly require the normal Authority consultation and approval processes and would be signalled by the Authority well ahead of implementation.

#### Short to medium term goals (over the next 36 months):

##### 1. *Performance optimization for participants*

The clearing manager continues to respond to current needs and anticipate future needs of new and existing participants through:

- a. Market driven enhancements - leveraging existing participant's input and market insights.
- b. Future proofing our services and systems for an increase in participants to ensure that we can deliver consistent high levels of service.
- c. Offering bespoke services - we expect that there will be an on-going demand for more bespoke clearing services. For example, this could include a participant request for a new type of hedge settlement agreement or a new clearing report. This trend is partly associated with new participants and new types of participants (e.g., financial institutions). We expect that a modern clearing system can and should be able to evolve and remain relevant to a wide range of participants.

##### 2. *Market design changes*

In line with its statutory objective the Authority has an on-going programme of market design enhancements. Future potential enhancements, of relevance to the clearing manager include:

###### a. *Prudential methodology*

At the end of 2019 / beginning of 2020 the clearing manager reviewed the prudential methodology and consulted on an initiative for prudential to be more responsive to shifts in wholesale demand. This consultation found that there was no convincing approach that could satisfy generation nor purchasers and so the recommendation made to the Authority was that the methodology remain unchanged. Discussions in the 2023 Clearing User Group, highlight there could be benefit in again reviewing the methodology and trader default process and provide the Authority with potential recommendations in early 2025.



*b. Hedge Settlement Agreement Facility Enhancement*

The clearing manager is in progress of adding an upload facility for participants to lodge hedge contracts via integration with participants systems (API or similar) to the Electricity Clearing Portal. We will look to include a participant / clearing manager sign off facility, hedge portfolio and positioning reporting, and the inclusion of a fixed price variable volume hedge type, currently only available outside of the clearing manager.

*c. Clearing Manager Portal Enhancement*

The Clearing Manager portal enhancement is undergoing a framework upgrade to improve performance and scalability, enhance the user experience, simplify development, and future-proof the website. Additionally, it's going to provide visualization of participants' and market prudential exposure and enable exit period prudential calculators by leveraging the new features of the upgraded framework.

In summary, the market change enhancement reflects the introduction of new technologies and business models into the market and incorporates the Code changes and strategic plan from the Authority for the energy market.

*3. Operational excellence*

The clearing manager plans to increase robustness and efficiency of operations by:

- a. Control enhancements over settlement and other monthly processes.
- b. Daily and weekly pricing report automation.

*4. System performance, reliability, and security*

- a. Regular review of infrastructure and software means that systems are supported and updated, as necessary.
- b. Archiving and Data Management Enhancement: Automating the data archiving procedures from the Authority's production systems into a data warehouse. This automation not only improves system efficiency and operating speeds but also provides a flexible means to access historical data through API connections. Upgrading the data warehouse to a new solution offers numerous benefits, including improved system performance, scalability, flexibility, cost optimization, real-time analytics, advanced data integration, governance, and self-service analytics.
- c. Technological upgrade on ESB: The current software supporting the existing Enterprise Service Bus is reaching its end-of-life, necessitating a replacement with a focus on transitioning to microservices. The shift to microservices involves a transformation from the centralized, tightly coupled architecture to a decentralized, loosely coupled one. In this approach, applications are broken down into smaller, independent services that communicate through lightweight protocols. This transition offers advantages such as flexibility in technology choice, scalability, resilience, and faster deployment.



### **3.2 Planning for the future**

We are planning continuous improvements and modernisation of clearing manager systems and processes. While many of these changes may not directly impact participants, they ensure that the clearing manager will be able to effectively meet participant's needs in the future.

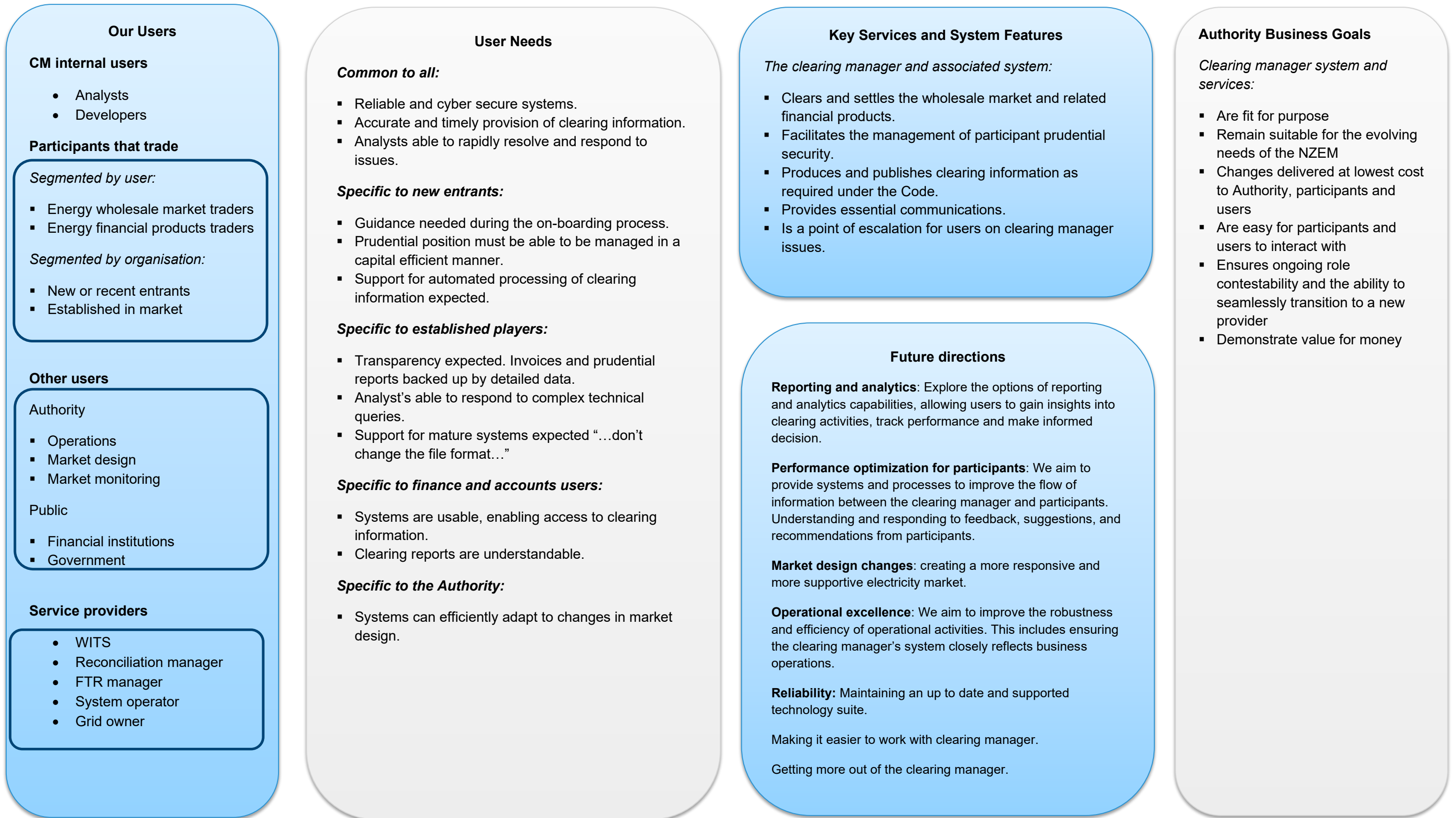
Under the real time pricing project scope, the clearing manager has taken over the residual tasks of the pricing manager, which includes publishing the pricing report (daily and weekly) and managing the pricing error claims. System automation and process enhancement specifically for these tasks are considered in future planning.

### **3.3 Product strategy overview**

Figure 2 provides an overview of the clearing manager's product strategy.



Figure 2. Clearing Manager Strategy Overview:



**Our Users**

**CM internal users**

- Analysts
- Developers

**Participants that trade**

*Segmented by user:*

- Energy wholesale market traders
- Energy financial products traders

*Segmented by organisation:*

- New or recent entrants
- Established in market

**Other users**

Authority

- Operations
- Market design
- Market monitoring

Public

- Financial institutions
- Government

**Service providers**

- WITS
- Reconciliation manager
- FTR manager
- System operator
- Grid owner

**User Needs**

**Common to all:**

- Reliable and cyber secure systems.
- Accurate and timely provision of clearing information.
- Analysts able to rapidly resolve and respond to issues.

**Specific to new entrants:**

- Guidance needed during the on-boarding process.
- Prudential position must be able to be managed in a capital efficient manner.
- Support for automated processing of clearing information expected.

**Specific to established players:**

- Transparency expected. Invoices and prudential reports backed up by detailed data.
- Analyst's able to respond to complex technical queries.
- Support for mature systems expected "...don't change the file format..."

**Specific to finance and accounts users:**

- Systems are usable, enabling access to clearing information.
- Clearing reports are understandable.

**Specific to the Authority:**

- Systems can efficiently adapt to changes in market design.

**Key Services and System Features**

*The clearing manager and associated system:*

- Clears and settles the wholesale market and related financial products.
- Facilitates the management of participant prudential security.
- Produces and publishes clearing information as required under the Code.
- Provides essential communications.
- Is a point of escalation for users on clearing manager issues.

**Future directions**

**Reporting and analytics:** Explore the options of reporting and analytics capabilities, allowing users to gain insights into clearing activities, track performance and make informed decision.

**Performance optimization for participants:** We aim to provide systems and processes to improve the flow of information between the clearing manager and participants. Understanding and responding to feedback, suggestions, and recommendations from participants.

**Market design changes:** creating a more responsive and more supportive electricity market.

**Operational excellence:** We aim to improve the robustness and efficiency of operational activities. This includes ensuring the clearing manager's system closely reflects business operations.

**Reliability:** Maintaining an up to date and supported technology suite.

Making it easier to work with clearing manager.

Getting more out of the clearing manager.

**Authority Business Goals**

*Clearing manager system and services:*

- Are fit for purpose
- Remain suitable for the evolving needs of the NZEM
- Changes delivered at lowest cost to Authority, participants and users
- Are easy for participants and users to interact with
- Ensures ongoing role contestability and the ability to seamlessly transition to a new provider
- Demonstrate value for money



## Our users

Our users cover a variety of different types of participants, including generators (including dispatch notification generators), retailers, instantaneous reserve providers, load aggregators, dispatchable demand purchasers (including dispatch notification purchasers), FTR traders, OTC hedge traders and almost any combination thereof. It is likely that this list will grow in the future.

Participants can also be usefully grouped by their experience in the market. The needs of new entrants are significantly different to those that have been established in the market for some period.

Particularly for some larger organisations, the clearing manager may have relationships with multiple professionals, including those from finance, hedge traders, and back-office analysts. Each of these groups will have different needs and different ways of interacting with the clearing manager.

Other users include the Authority, the public and service providers. The clearing manager works with the Authority's market design, market operations and market performance teams. Financial institutions are a growing group of public users, with most interest in the FTR daily settlement prices. The clearing manager works with several service providers. For the most part this interaction is in the form of system-to-system exchange of files. The FTR manager is one exemption as initiatives in the FTR market often have implications for the clearing manager.

## User needs

Our users have a core set of common needs that must be met without compromise. Our systems and services should be:

- Reliable,
- Cyber secure and protective of the confidentiality of sensitive commercial information,
- Able to produce and publish clearing information that is Code compliant and otherwise correct, and
- Supported, such that any issues escalated to the clearing manager are resolved promptly.

Different user groups will have other more specific needs. Satisfying these more complex needs is important as it is likely that this will drive overall user satisfaction and value delivery.

**New entrants** require on-boarding into the market, at least for the first few weeks of trading. This will involve clearing manager briefings, prudential security set-up and anti-money laundering checks. Many new and recent entrants have a strong desire to manage their prudential security in a capital efficient manner. They will want to use a combination of prudential security types in a relatively sophisticated manner. This group are also likely to express a preference for receiving and sending automated clearing information.

**Established participants** will often have an excellent understanding of clearing manager operations. They require a high level of transparency such that their clearing information - for example, invoices or prudential security reports - is sufficiently backed-up with detailed information. While queries from this group are infrequent, they tend to be complex and relatively time consuming. Established participants will expect the clearing manager to support their more mature systems by minimising or avoiding changes to long standing file formats.



**Finance and accounts professionals** are frequent users of our services and systems. This group of users require systems that are easy to use, allowing them to access the right information at the right time. Clearing information should also be understandable.

**The Authority** is also an important user of the clearing manager's systems and services. As discussed above, the Authority has a significant programme of work. It is important that changes to the system can be accommodated in a cost-effective manner, providing value for money for both the Authority and participants.

### **Key services and features**

The clearing manager:

- Clears and settles the wholesale market and related financial products,
- Facilitates the management of participant prudential security,
- Produces and publishes clearing information as required under the Code, and
- Is the first point of escalation for clearing and settlement related matters.

### **Authority business goal**

As the Authority owns the clearing manager role, the direction and pace of the product strategy will be heavily influenced by the Authority's business goals (see Figure 3).

Whether any given initiative is implemented will depend on:

- Participant support as expressed in, for example, surveys and user group meetings,
- Authority approval. An initiative should be consistent with the Authority's statutory objective and business goals for the clearing manager's system,
- Available budget for system improvements. This will be a critical factor.
- Our strong preference is for low cost, low risk initiatives that have a high likelihood of providing value to participants and other users.

## **4. Road map**

The clearing manager road map is shown in Figure 3.

The Authority and NZX have an internal joint development process to manage project conflicts and priorities. This process will manage all active road map initiatives. Part of the reconciliation manager role is to develop a joint goal setting framework. This framework has been integrated into the road map.

It is highly likely that the road map will change in response to:

1. Participant feedback,
2. Changes to the Authority's strategy or programme of work,
3. Operational necessities, and

Conflicts and changes in priority as identified through the Authority - NZX joint development process.



Figure 3. Clearing Manager Road Map:

# Clearing Manager Road Map

Who drives the change?

Feature / Enhancement	Participant	Authority	NZX	Benefit	Status	2025				2026				2027				
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<b>Performance optimization</b>																		
Analyse system for market growth	X	X	X	Review the system and future proof for potential market growth.	In progress													
Market driven enhancement	X	X	X	Provide a fit for purpose system in a rapidly changing environment.	In progress													
<b>Market design changes</b>																		
Prudential methodology review and enhancement		X	X	Review of the methodology to provide a better fit for purpose mechanism.	In progress													
Hedge contract facility enhancement	X		X	Accept new hedge contract type and provide a more efficient facility for contracts uploading.	Future work													
Ancillary services files automation		X	X	SO's file transfer automation to provide efficiency.	In progress													
<b>User experience improvement</b>																		
Participant prudential exposure visualisation	X	X	X	Provide a more dynamic view of participant's prudential exposure.	In progress													
Hedge contract bulk upload facility	X	X	X	Provide a more dynamic view of participant's prudential exposure.	Future work													
Front-end components enhancement			X	Provide responsive images and image loading optimization.	Future work													
<b>Operational excellence</b>																		
Automating the daily and weekly pricing report			X	Mitigate human errors and improve operational efficiency.	Future work													
Payments and monthly process enhancement			X	Control enhancement over settlement and other montly processes.	In progress													
<b>Reliability</b>																		
Technological upgrade on ESB			X	Offers advantages such as flexibility in technology choice, scalability, and resilience.	Future work													
Archiving and data management enhancement			X	Improves system efficiency and operating speeds.	Future work													
Multi-factor authentication			X	System security control improvement.	Future work													

