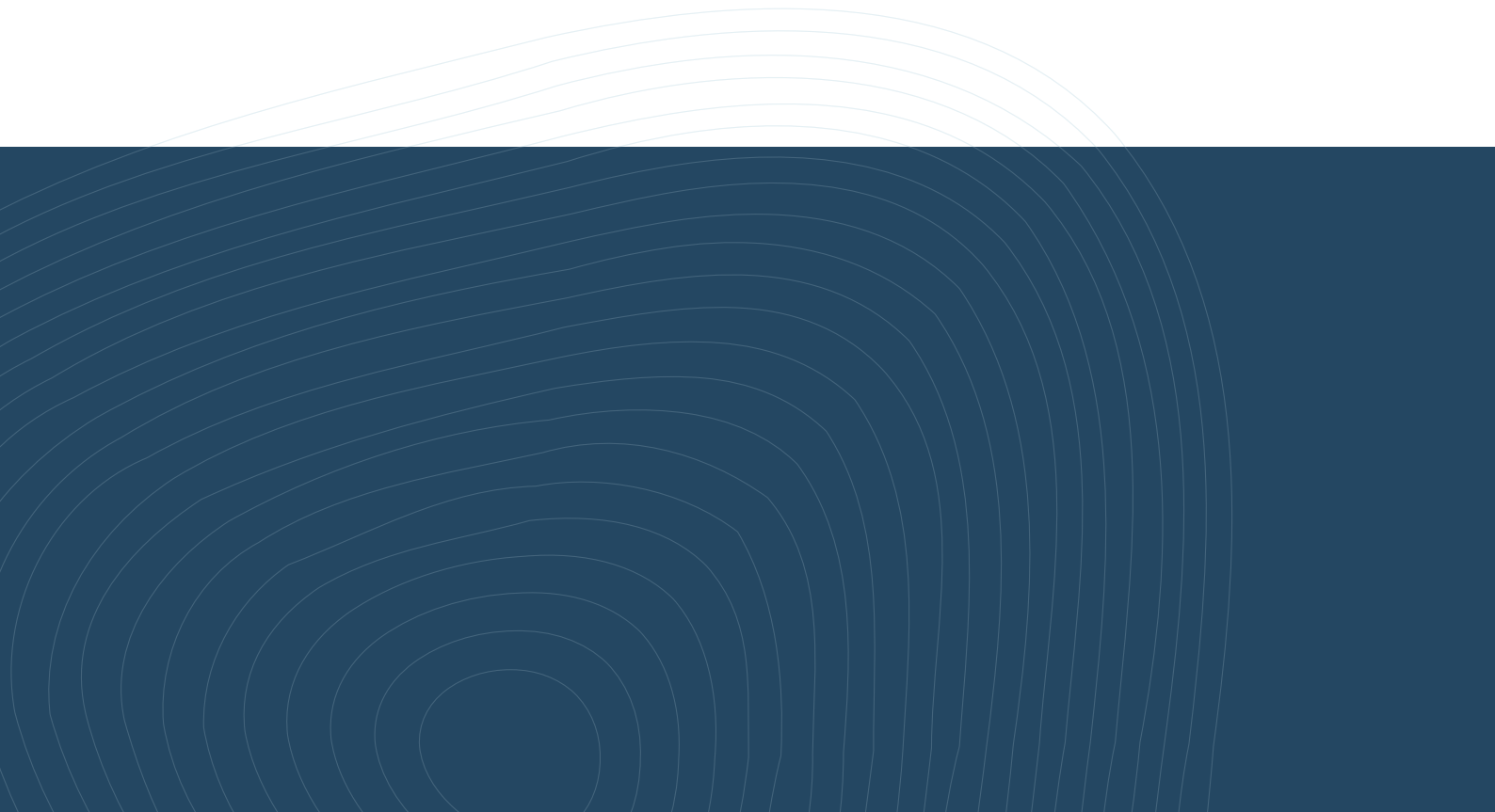


interRAI Service Review – Summary Report

Target Service Design

October 2020



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// Introduction

The interRAI assessment service has been very successful in standardising assessments for older people's care needs and reducing variances in care provision and support across NZ. It has also built a national database of assessments, with more than 500,000 assessments conducted that provide significant insights into trends in the health of ageing people and local, regional and national care needs and provision.

Building on this success, the Ministry of Health (MoH) and Technical Advisory Services (TAS) have jointly commissioned a service review and design that seeks to identify and evaluate the future opportunities for the interRAI service. This follows the interRAI software review, which highlighted, amongst other things, some user experience issues that were not directly related to technology.

The focus of this service review and design is on the potential future improvements that are available to the assessment service. In particular, the objectives are to:

1. Understand and document the current interRAI service – from establishment through delivery to data consumption
2. Identify, quantify and prioritise key opportunities to improve the overall service for consumers and stakeholders



// Objectives & Approach

Objectives

The objectives of this review and design are to understand and document the current interRAI service and identify, quantify and prioritise key improvement options for a desired target state interRAI service. Specific outputs sought include:

1. A definition of the current state service model
2. Identified and evaluated opportunities for improving the overall service for all stakeholders
3. A proposed target service design
4. Recommendations and roadmap, including potential investments/benefits

Service Review & Design Approach

Presented in the diagram opposite is a summary of the approach and major stages undertaken.



TARGET SERVICE DESIGN

// interRAI Service Summary



Purpose

The primary purpose of the interRAI assessment is to determine the characteristics of an older person accurately, in order to fully understand their needs – which may range from clinical to social support – and to prepare a care plan. The information provided by the interRAI assessment supports the decisions made by a healthcare professional.

The core purpose of the service is the provision of a national tool and capabilities to deliver a consistent suite of assessments to older people



Key Components

The NZ delivery of the interRAI International standard assessment comprises:

- A national software tool that is mandated to be used by healthcare providers in aged care centres and in-home settings
- A national training and competency programme to train assessors in:
 - The use of the tool
 - The delivery of comprehensive needs assessments using interRAI
- A repository of longitudinal information that is provided to data consumers for a variety of uses
- The implementation of five interRAI assessments across different uses, with opportunities for more assessments to be added



Cost

The current service costs \$8.9m per annum to establish and operate. Additional costs are incurred by assessment providers to maintain a trained workforce



The National Service is Not

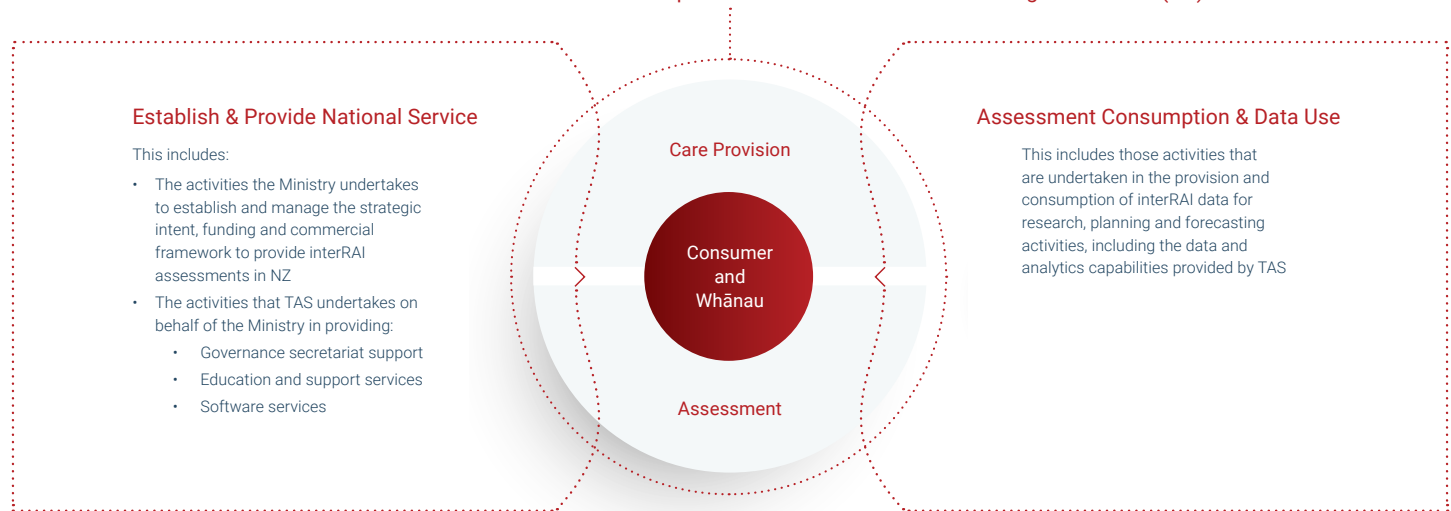
- Responsible for care planning
- A patient management system
- Responsible for delivering healthcare services
- Responsible for how the assessment is used in practice, including frequency, timeliness and consistency

// Scope of Review & Design

The scope of this review and design has been defined as the overall interRAI service, including the establishment and provision, delivery and subsequent use of the interRAI tool as it is being used by Aged Residential Care (ARC) and District Health Board (DHB) community providers to assess health needs in over 65s.

Assessment Service Components – Establishment Through Delivery

Those activities that assessors from ARC or DHB providers undertake 'in the field' using the interRAI (NZ) tools



// Summary of Current State Review

The scope of this review has been defined as the overall interRAI service, including the establishment and provision, delivery and subsequent use of the interRAI tool as it is being used by ARC and DHB community providers to assess health needs in over 65s. Outlined below are the dimensions for service assessment and a summary of findings.

Assessment Dimensions

Outcomes & Benefits	Governance, Roles & Responsibilities	Delivery & Commercials	Efficiency & Effectiveness: Assessment	Efficiency & Effectiveness: Data & Insights	Technology Solutions
The setting and monitoring of measures and outcomes for the service in relation to the broader sector goals	The definition of roles, responsibilities, accountabilities and decision-making across the service	The contractual arrangements that structure and direct the service and its associated funding/costs	The performance of the service delivery and the improvements made to the service over time	The capturing, management and sharing of data and the leveraging of it to generate service/sector insights	The effectiveness of the underpinning technology solution in supporting the service provision and its outcomes
Commercial Construct			Service Efficiency & Effectiveness		Technology

Assessment Findings

Expectations in relation to future priorities and outcomes sought need to be clarified	Roles and responsibilities are complex and limit the ease and pace of significant improvements	The commercial landscape is complicated and does not reflect the current service	Services can be delivered more efficiently and more effectively once expectations are clarified	A better understanding of the potential uses of data is required to maximise its value at both individual and population levels	The technology and the way that it is deployed hinders rather than helps those that are using and managing it
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// Summary of Stakeholder Engagement

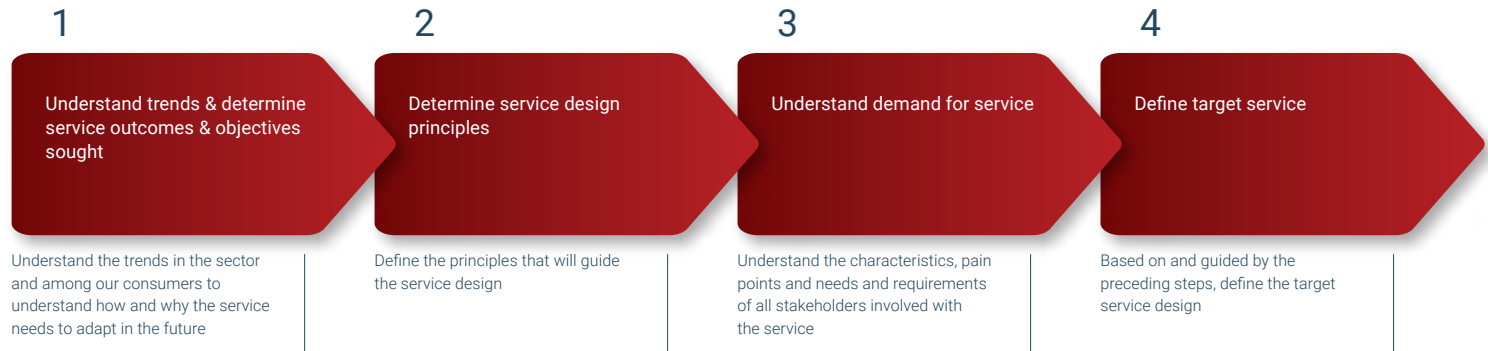
Through the course of this review, over 75 stakeholders across the below organisations were engaged to provide feedback and insight:

Care Providers	Central Government	DHBs/Needs Assessment and Service Coordination service (NASC)	interRAI Service Establishment	Universities	Other
<ul style="list-style-type: none"> • Nurse Maude • Te Kohao Health • Welcome Bay: Whaioranga Trust • Access Community Health • CHT Healthcare Trust • Nelson Bays Primary Health • Bupa • Summerset 	<ul style="list-style-type: none"> • Ministry of Health <ul style="list-style-type: none"> • Health of Older People • Emerging Health • Allied Health • Office of the Chief Nurse • HealthCERT • Data and Digital • ACC 	<ul style="list-style-type: none"> • Auckland DHB: NASC • Waitematā DHB: NASC • Waikato DHB: NASC • Bay of Plenty DHB: NASC • Lakes DHB: Strategy • MidCentral DHB: Health of Older People • Hutt Valley and Capital & Coast DHBs: NASC • Nelson Marlborough Health: NASC • Canterbury and West Coast DHBs: Health of Older People • Southern DHB: NASC 	<ul style="list-style-type: none"> • interRAI Board • Momentum Healthware • TAS: Health of Older People • TAS: interRAI NZ 	<ul style="list-style-type: none"> • University of Otago • Massey University • University of Auckland 	<ul style="list-style-type: none"> • Home and Community Health Association • NZ Aged Care Association • Age Concern • VCare

The engagement approach for this review was to conduct a targeted and focused series of engagements to inform the service design. It is anticipated that a further series of engagement and consultation on the recommendations raised through this review will follow.

// Target Service Design – Overview of Approach

Outlined below is a summary of the approach and major stages undertaken in designing the target service.

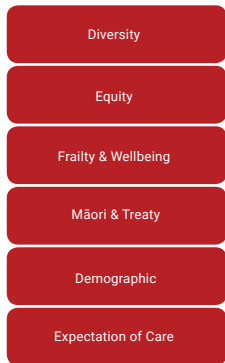


// Target Trends & Service Outcomes

The overall strategic context for the service design is illustrated below. The focus areas, outcomes, objectives and characteristics were defined through stakeholder insights, and determine the imperatives for the service design.

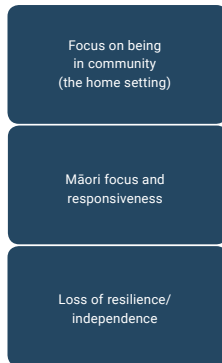
Trends & Drivers

The range of trends and drivers across the sector affecting the service.



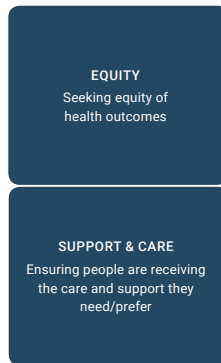
Focus Areas

Priority areas for focus in the service design.



Service Outcomes

Outcomes that the service must enable or contribute to.



Service Objectives

Objectives of the service design.



interRAI Service

FEEDBACK LOOPS & MEASUREMENT

Measurement of delivery of care vs support that is required
Measurement of these service objectives

EFFICIENCY

Ensuring the service is as efficient and cost effective as possible

CONSISTENCY

Ensuring consistency of needs assessment across providers

QUALITY

Ensuring that the assessment and the data it generates are of high quality

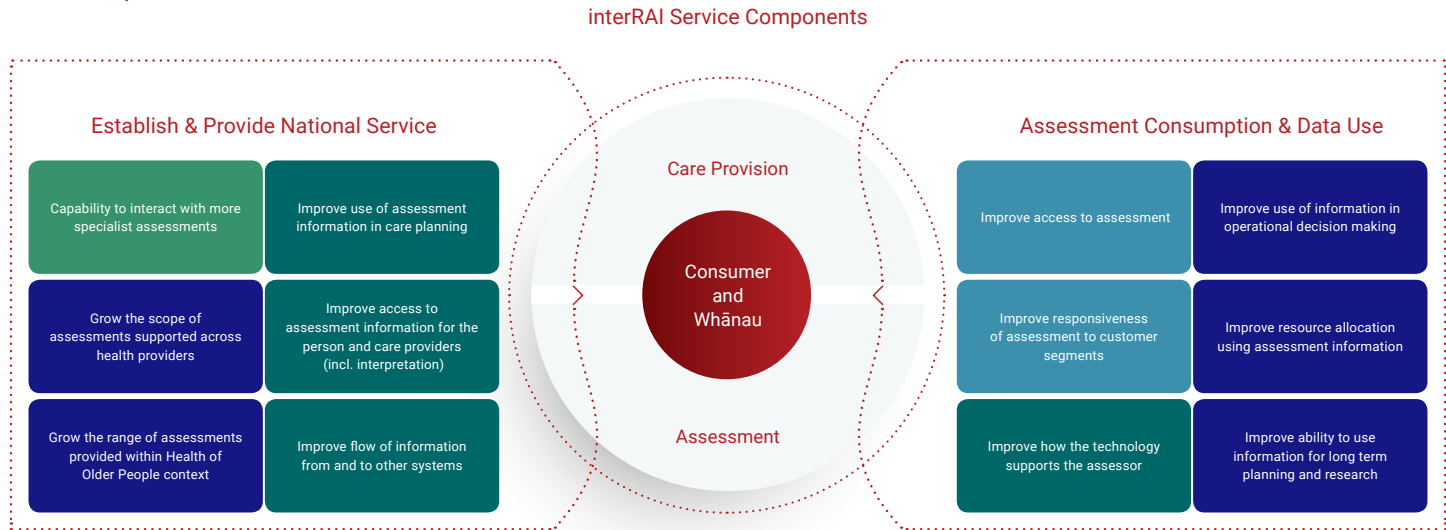
BROADER HEALTH & SOCIAL SYSTEMS VALUE

Leveraging the value of the investment and capabilities across the sector

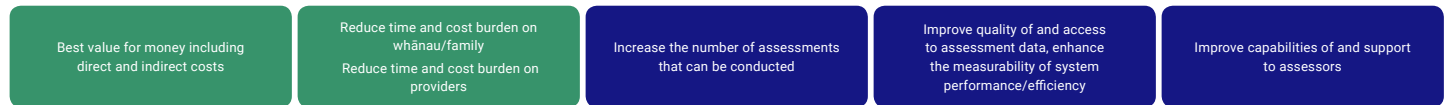
Service Characteristics – Underpinning features that indicate the way the service should be designed.

// Prioritisation of Service Opportunities

A series of objectives was identified for the service design. These objectives relate to improvements that are sought across the service components, with relative priorities defined.



Service Characteristics:

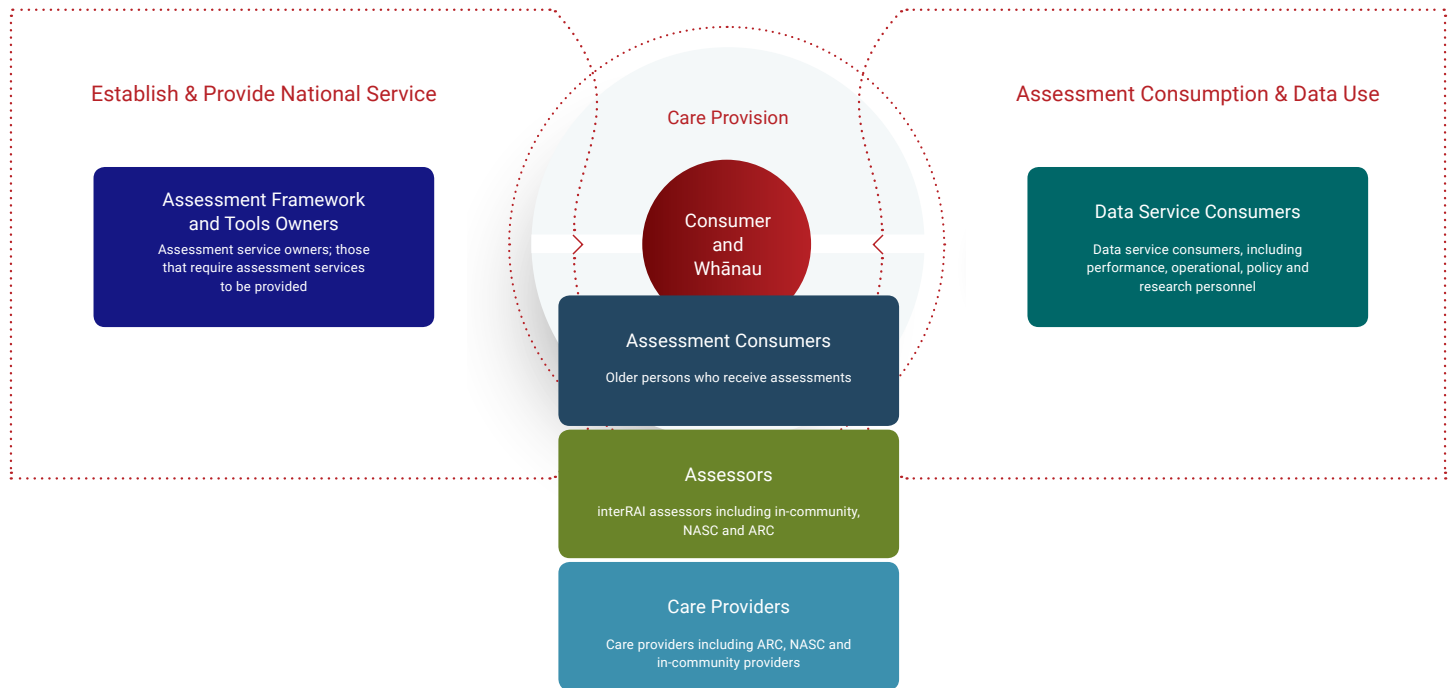


Priority of objectives for service design



// Assessment of Demand

In order to understand how each service should be designed, we need to understand stakeholders' situations and the demand for the service. The following pages outline the demand for the assessment service from the perspectives of all the parties involved.





// Assessment Consumers

Older Persons

- Typically aged 85+
- Some issues manifesting significantly earlier
- Assessment occurs in a time of high change or during an event
- Can present via multiple pathways to assessment, typically presenting for:
 - Showering or housework difficulties
 - Cognitive decline
 - Complex/acute needs
- Range in how forthright and informed they are during the assessment phase
- Have varying degrees of health literacy and engagement in the assessment process

Māori

- Tend to present later than non-Māori in their health journeys
- Tend to also have social needs such as housing that go unmet
- Comprise 8% of homecare assessments
- More likely to live alone
- Seeing cognitive decline before physical issues
- Likely to understate or minimise needs

Whānau

- Financial or legal considerations that may affect whānau, such as selling the family house for care
- May shield/delay need for intervention, or not be engaged in process
- May want higher levels of care sooner, and have high expectations of support
- May have high needs also
- May not be able to provide the level of care they would like to

Rural

- Lower frequency of contact with system
- More likely to be living alone
- Less engaged with health service
- May wait a long time for assessment or care delivery

Pain Points

As an older person, my pain points are:

- Dependency on primary care awareness of needs assessment service
- Having to repeat the same information to multiple people
- Not knowing what to expect during/from assessment
- An expectation of services that cannot be provided or are unavailable
- Many primary care agents delivering care with little connection
- Potential fear of needing to leave home

As an older Māori person, my pain points are that:

- The tool is not sensitive to Māori needs/not human centred
- Around one in five Māori consumers needs to be reassessed almost immediately
- The assessment delivery is not sensitive to Māori needs
- Social needs are ignored or not well captured e.g. damp housing
- There is a lack of Māori health professionals to conduct assessments

Needs & Requirements

As an older person, I need:

- Help, healthcare or support
- To retain and protect my independence and dignity
- To talk to someone and be listened to
- To have the context of my situation considered
- To have my needs assessed accurately and understood in a timely fashion

As an older Māori person, my needs include:

- To be assessed by people I know or can build trust with
- To be understood in my context
- To practice cultural needs e.g. karakia
- A desire for a whanaungatanga approach, listening to my stories
- For my personal data to be protected and secure – accordance with Māori Data Sovereignty'

// Assessors

Community Assessors

- Are registered health professionals with assessment experience
- Vary significantly in the number of assessments they conduct
- Are time poor, and not funded for organisational development
- Work under diverse operating models; they might be assigned to specific regions or demographics, or associated with primary care providers

ARC Assessors

- Registered Nurses
- High proportion of overseas trained nurses
- More assessors in ARC vs community services

Support Providers

- May be non-clinical but very experienced
- Separate organisations from assessors

Pain Points

As an assessor in the community, my pain points are that:

- Assessment is led by the tool
- Assessment isn't that valuable or reusable to me
- The perception of re-certification is that it is a heavy audit
- Assessment is not able to be pre-populated with consumer data
- Consumers may have no understanding of the process
- Momentum system is an impediment
- Tool does not enable issues to be solved easily or information to be accessed
- Separation between assessments and care planning does not enable the best consumer outcomes

As an assessor in ARC, my pain points are that:

- The re-entry of consumer information is time consuming and duplicates prior work/ knowledge
- Assessments are not accessible by other staff
- Assessment is not perceived to add value to care

As a support provider, my pain points are that:

- It is difficult to access interRAI data
- I may disagree with the level of care prescribed by the assessor

Needs & Requirements

As an assessor in the community, I need to:

- Have prior knowledge of the consumer
- Understand the full context of the consumer
- See how a consumer is living
- Be able to complete the assessment documentation easily
- Be aware of tikanga or cultural expectations
- Feel comfortable delivering the assessment
- Be assured I am asking/covering the right questions to understand the consumer's need
- Be able to draw on whānau/family to validate the assessment
- Be able to operate in a way that gets the best possible outcomes for my consumers without being penalised by audit
- Be empowered as a professional
- Have more ready access to FAQs or help
- Understand the assessment tool and be comfortable using it
- Have conversations that inform the questionnaire

As an assessor in ARC, I need to:

- Be able to access all information about a resident easily
- Be able to update changes over time

As a support provider, I need to:

- Know what decisions have been made prior
- Be able to get timely reassessments for consumers
- Be able to trust the assessments I receive

// Assessment & Care Providers

Providers

- Seeking to innovate service delivery
- Operate in a low trust environment
- Constrained by funding models
- Have workforce and funding constraints
- No standard model of care across region
- Expectation that staff will agree to be interRAI trained

NASC Providers

- Use interRAI by consensus
- 15–20 nationwide
- Some more advanced in use of data for planning and performance

Community Providers

- Limited ICT capabilities
- Provide assessment as well as many other services
- Require DHB to authorise access
- Limited ability to access data
- May only conduct one assessment type
- May only provide services based on upstream assessments

ARC Providers

- Obligated to use interRAI contractually
- High turnover of assessors
- Main chains represent 80–90% of beds
 - Have in-house ICT capacity
 - Typically have a national management system
- Small providers represent around 10% of beds
 - May have adopted Momentum capabilities for other functions

Pain Points

As a provider, my pain points are that:

- The Momentum tool is clunky and does not enable providers or efficiencies
- The lack of change management and communication support on changes to interRAI creates confusion
- There is low awareness of national interRAI changes
- It is slow to onboard and train new assessors
- I have no ability to share information from assessments
- There is no feedback loop back to interRAI
- Implementation of complex assessments to nurses creates backlogs
- Data needs are often misunderstood or data provided does not meet my needs

As an ARC provider, my pain points are that:

- There is a lack of integration and information flow
- There is a lack of clarity on contract/audit requirements

As a community provider, my pain point is that:

- Regional differences in interRAI delivery make comparisons difficult

Needs & Requirements

As a provider, I need to:

- Train new staff quickly and cost effectively
- Access up to date information on interRAI Standard Operating Procedures (SOPs)/changes
- Develop insights that are relevant to the facility
- Refer my consumers to other services as needed
- Access data easily in digestible formats
- Trust previous assessments
- Operate in a high trust environment with DHBs

As an ARC provider, I need:

- To be able to enter information once, then use it across systems
- To use assessment to drive care plans
- A highly efficient assessment and reassessment process
- Clear policies on reassessment
- Easy access to all staff and to all relevant systems

As a community provider, I need:

- To be able to benchmark and compare across other providers
- Flexibility in the assessment tools based on consumer need
- Ease of transference between providers

// Assessment Framework and Tools Owners

Assessment Owners

- High level strategic focus on core portfolio
- May overlap with other portfolios, and share consumers across portfolios
- Have discrete assessment needs for consumers within scope of portfolio
- Non-standardised assessment processes and models across different groups
- Work with a variety of influential stakeholders

Pain Points

As an Assessment Framework and Tools Owner, my pain points are:

- Default requirement to manage my own technology platforms and service provision
- The non-standardisation of assessment models across portfolio
- That current tools and processes do not support efficiency
- There is a lack of integration and information flows across different streams
- There is a lack of standardisation and shared services among comparable services

Needs & Requirements

As an Assessment Framework and Tools Owner, I need:

- To focus on the core strategic areas, while outsourcing the day to day operations of assessment delivery
- A robust, consistent and equitable assessment for my consumer base
- Assessments that meets strategic outcomes and those of the service consumers
- A process and assessment that are reliable and cost effective
- An outsourced data/technology platform management solution
- A consistent background service/ experience to support strategic needs
- A shared services model to manage day to day operations and deliver efficiencies

// Data Service Consumers

Management & Performance Planning

- Seeking to innovate service delivery
- Using analytics within operational platform (if available), data extracts and interRAI online visualisation tool
- Requirements range from simple to complex depending on specific use case

Operational

- Low time availability
- Not using data at any aggregate level
- Seeking individual or small number of records

Policy

- Looking to draw insights across long time spans using multiple data sources
- Looking to drive policy based on evidence
- Likely to combine with operational data for effectiveness measurement

Research

- Highly skilled in data management
- Looking to draw insights across long time spans using multiple data sources

Pain Points

In my role in management and performance planning, my pain points are:

- General low analytics capabilities
- That I am unable to access relevant information
- That it is unclear how to best use information to drive insights

As a policy planner or researcher, my pain points are:

- Slow access to data
- I am unsure of data characteristics or how to interpret them
- The regional differences in interRAI delivery make comparisons difficult

Needs & Requirements

In my role in management and performance planning, I need to be able to:

- Identify good practices to replicate, and poor practices to resolve
- Identify trends and future needs
- Compare facilities, regions and providers
- Protect commercially sensitive information
- Drive decisions and funding based on reliable and understood data
- Use data to promote transparency and trust across teams of care

As a policy planner or researcher, I need:

- Fast access to data
- Low levels of data curation
- To be able to combine data with multiple other data sources

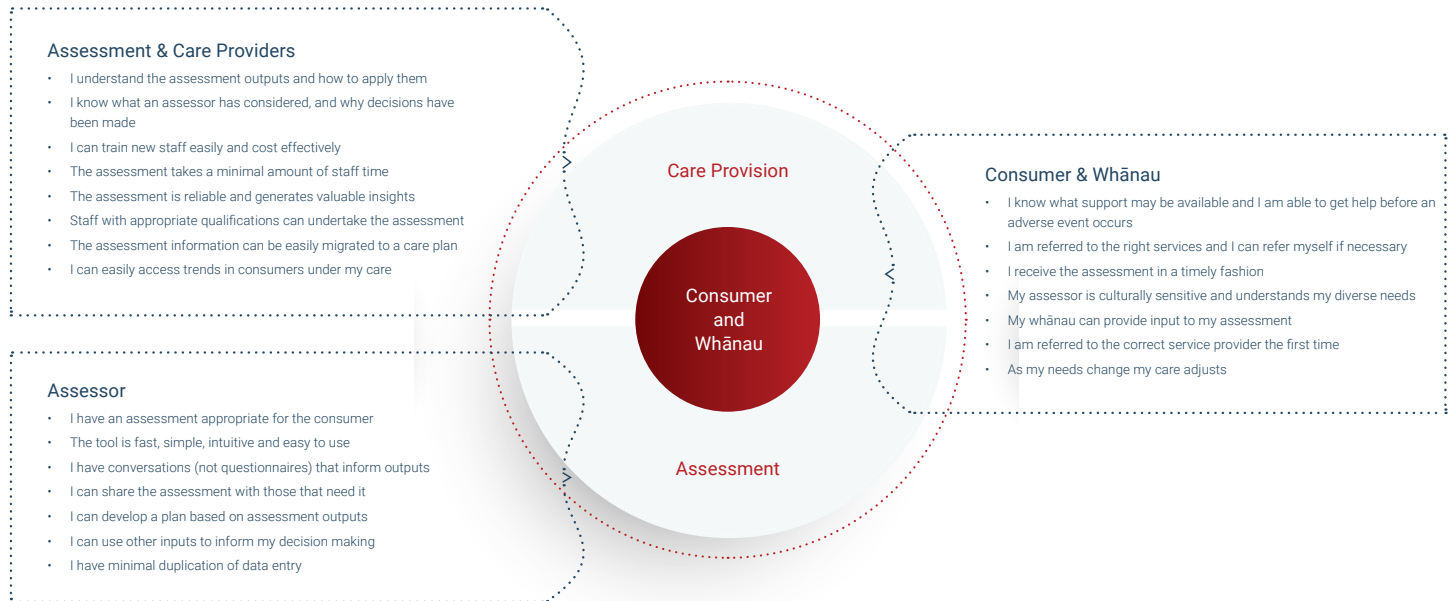
// Design Principles

Based on the demand analysis, the following design principles were incorporated to guide the target service design.

Principle	Rationale	Implications
1. Support responsiveness to Māori needs	<ul style="list-style-type: none"> • Relevance and equity are key objectives for service improvements and for the Health and Disability System Review • Will deliver better health outcomes 	<ul style="list-style-type: none"> • Shift emphasis from interRAI assessment to improving assessment delivery method • Move further toward a consumer/people led conversation vs assessor led questionnaire • Potentially enable different access and care provision models
2. Support (or do not inhibit) local/regional innovation and different delivery or funding models	<ul style="list-style-type: none"> • Significant variations exists across regions currently (e.g. funding and provider/assessor models) • Innovations in services/service delivery are being implemented across the sector to respond to local needs, which this service should support 	<ul style="list-style-type: none"> • Assessment service needs to support regional variations • Allow for flexibility, responsiveness to changes • Assessment on a versatile platform
3. Support flow of accessible and consumable information among people providing care to a person	<ul style="list-style-type: none"> • Improved efficiency and accuracy • Improved consumer and assessor/provider experience 	<ul style="list-style-type: none"> • Improve integration between systems • Improve system features that support information flow • Improve consumers' view of data relevant to the tasks they are undertaking
4. Support/Align with 'whole of system' direction	<ul style="list-style-type: none"> • Improved health outcomes if all parts of the system are aligned • Efficiency of effort and investment 	<ul style="list-style-type: none"> • Prioritise those improvements that align best with whole of system direction • Ensure decision making incorporates system view
5. Support integration of related consumer services	<ul style="list-style-type: none"> • Reduced duplication • Improved consumer experience/health outcomes 	<ul style="list-style-type: none"> • Understand consumer pathways to major related services • Improve coordination across major services

// Target Assessment Characteristics

Based on the stakeholder engagement, a series of characteristics was identified for the service stakeholders. These target state characteristics are represented in the diagram below.



// Target Service Design

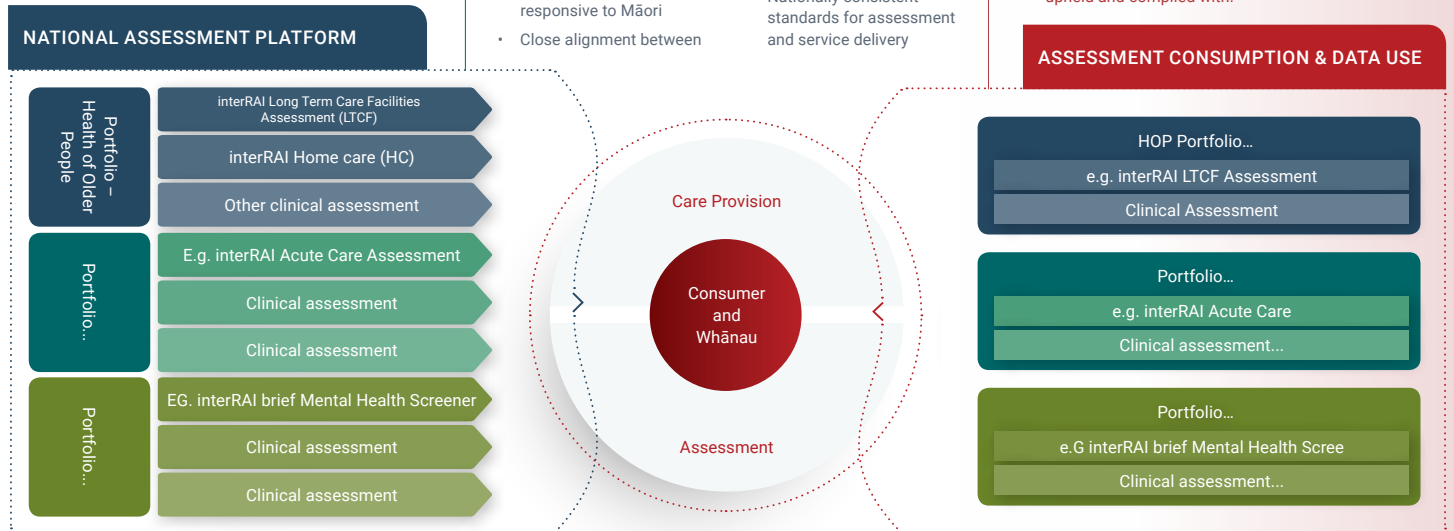
The key features of target service design are presented in the model below.

National Assessment Service

- National Assessment Platform able to serve multiple assessment services/ service owners
- Multiple portfolios using assessment services (Mental Health, Disabilities, Acute Injuries, etc.)

- A culturally appropriate assessment model with electronic access to data by individuals.
- Assessment and care model optimized to be responsive to Māori
- Close alignment between assessment and support providers
- A range of appropriate assessment tools are available
- Nationally consistent standards for assessment and service delivery

- Data available at an individual and/or population level within or across portfolios
- Mature data and analytics services supporting a range of stakeholders' purposes.
- The principles and requirements of data sovereignty are upheld and complied with.

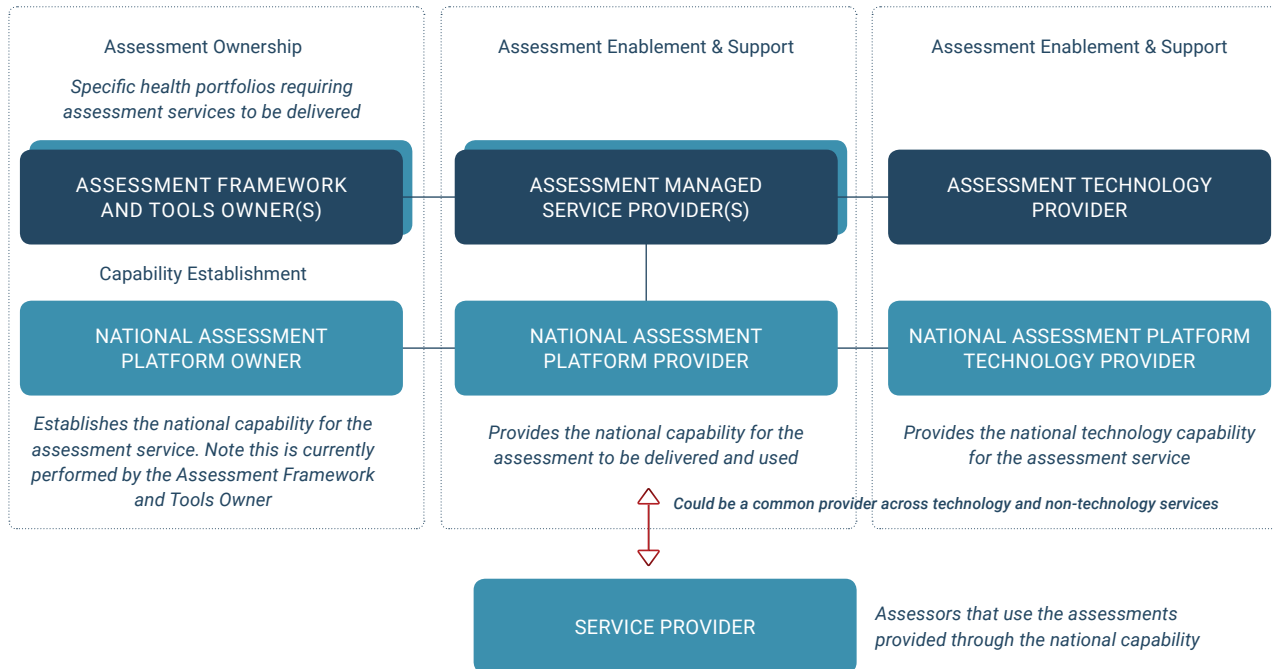


// Target Service Design - Stakeholder Roles

The full target service design proposes a national assessment platform capability that can support multiple assessments and assessment owners across multiple consumer groups. The recommendations in this report are phased across a series of time horizons. The diagram below shows how the underlying roles and responsibilities associated with service ownership, management and provision could change over time.

HORIZONS 1 & 2

HORIZON 3



// Recommendations & Horizons

Recommendations have been made across the service to achieve the target state. The recommendations are staged across three horizons. Horizons 1 and 2 seek to optimise the existing assessment capability, and Horizon 3 seeks to expand that capability and extends to multiple assessments. The recommendations are described in more detail on the following pages.

	Horizon 1: Mature Commercial Model	Horizon 2: Optimise Current Assessment Model	Horizon 3: Extend Assessment Capabilities
Commercial Construct			
Outcomes & Benefits ▷	1 Mature Service Management & Commercial Construct		7 Review Commercial Model
Governance, Roles & Responsibilities ▷	2 Revise Governance & Decision Making		
Delivery & Commercials ▷			
Efficiency & Effectiveness – ASSESSMENT ▷		3 Improve Consumer Access to Assessment	7 ^a Build Culturally Appropriate Assessment Model
		4 Improve Education & Support	7 ^b Build National Assessment Platform
Efficiency & Effectiveness – DATA & INSIGHTS ▷		5 Improve Data Service Confidence & Maturity	8 Extend Data Services
Technology Solutions ▷		6 Address Key Technology Impediments	9 Optimise Technology Support

// Horizon 1: Mature Commercial Model

Outlined below are the key recommendations pertaining to Horizon 1. They focus on establishing a robust commercial foundation for future service development.

1 Mature Service Management & Commercial Construct

The focus to date has been on implementing and establishing the interRAI assessment across NZ. To support future improvements and extensions, the management of the service and the underpinning commercial structure need to be matured.

Recommendations include:

1. Review and formalise service definition, characteristics and expected service levels
2. Review and formalise the allocation of functional responsibilities under a revised commercial construct
3. Establish a formal service management and measurement structure that reflects the revised commercial construct
4. Establish a commercial funding model that allows for cost sharing and scalability across multiple funders

2 Revise Governance & Decision Making

In order to ensure the appropriate management of the next stage of interRAI improvements, the interRAI Board representation must be examined in the context of the recommendations of this review.

Recommendations include:

1. Confirm the expectations and capacity of the interRAI Board - specifically whether it is an advisory or a governance group.
2. Review governance representation to reflect revised commercial construct, service priorities and operational demand
3. Establish specific representation for:
 - Responsiveness to Māori
 - Technology and data governance
 - Service performance and demand
 - Clinical excellence
4. Rebalance interRAI focus specifically on 'assessment'

// Horizon 2: Optimise Current Assessment Model

Outlined below are the key recommendations pertaining to Horizon 2. The focus of these recommendations is on seeking improvement within the existing assessment service, increasing the value and improving the experience of the service.

3 Improve Consumer Access to Assessment

An agreed objective for improving the interRAI service design was to over-achieve equitable access to assessments and information. The interventions below have been identified and captured through our stakeholder engagement, although most are likely outside the agreed scope of this review.

Recommendations include:

1. Raise awareness of the availability of care services amongst target consumers
2. Proactively target priority consumer groups to raise awareness and ensure ready access to assessments
3. Reduce impediments and review thresholds/regional variations for assessment
4. Extend who can refer or undertake assessments

interRAI Service Review

4 Improve Education & Support

There are two major approaches to improving the delivery of training:

- a. Modernising and rightsizing the existing training model
- b. Devolving training delivery to providers (providers have accredited trainers on staff).

These may be best explored sequentially and undertaken in line with a phased approach to optimising the overall service model.

Recommendations include:

1. Improve training relevance
2. Modernise training model
3. Improve access to information
4. Decentralise training delivery
5. Assess training landscape to ensure workforce needs are covered across sector training capabilities

5 Improve Data Service Confidence & Maturity

There is opportunity to extend the value of the current data and analytics capabilities to users. The recommendations suggest building more 'pre-packaged' analytics products that can be consumed by clinical users. This represents a shift from the current model of enabling users to develop their own analytics.

Recommendations include:

1. Improve data governance and strategy
2. Build strategic capability – required to support the sector direction with respect to more interoperable/integrated data
3. Develop analytics products that are 'pre-made' for specific users/purposes
4. Publish data characteristics to accurately inform the use of data by external users
5. Improve data access – particularly for accredited institutional users
6. Extend data quality standards

6 Address Key Technology Impediments

There are opportunities to improve the way the current technology supports the assessment delivery as part of Horizon 2 – improvements to the current assessment model that will address immediate pain points. Note that Recommendation 9 includes recommendations for a future platform that may render these unnecessary, dependent on time horizons.

Recommendations include:

1. Mature Technology Strategy and delivery model through establishing technology and architecture capabilities and leading a strategy aligned to broader sector direction (e.g. the national Health Information Platform) and technology trends
2. Immediate remediation – platform (e.g. review security model)
3. Immediate remediation – data flow (e.g. simple import/export)
4. Future considerations – (e.g. care plan activities, analytics/operational reporting)

// Horizon 3: Extend Assessment Capabilities

Outlined below are the key recommendations pertaining to Horizon 3. These recommendations should be considered together; however, consideration could be given to Recommendation 7a separately and ahead of Horizon 3.

7 Review Commercial Model	7a Build Culturally Appropriate Assessment Model	7b Build National Assessment Platform	8 Extend Data Services	9 Optimise Technology Support
<p>To achieve the recommendations contained in Horizon 3, a further review of the commercial and governance models is required to accommodate the scope and focus of the expanded service.</p>	<p>To address the broader issues that exist in the current assessment service delivery, consideration should be given to designing, developing and promoting nationally a 'model' assessment approach that can be used in training assessors and is responsive to Māori and culturally appropriate.</p>	<p>There is a significant opportunity to expand the service model to accommodate a future national assessment capability. This would be based on providing a common capability that could support a range of assessments across instrument types or health portfolios.</p>	<p>As the assessment platform grows and the use of the associated analytics increases, there will be a need to further extend the products and services supporting this.</p> <p>There is an opportunity to extend and tailor data services to support identified use cases, ranging from operational to advanced research.</p>	<p>Adopting the recommendations in Horizon 3 will necessitate new technology capabilities. These capabilities may be found in the same provider or it may require multiple service and support providers</p>
<p>Recommendations include:</p> <ol style="list-style-type: none"> Review and adapt the commercial and governance model to support required initiatives in Horizon 3. Further information on potential models is contained in the detailed recommendations 	<p>Recommendations include:</p> <ol style="list-style-type: none"> Develop and promote a common assessment model/ approach that: <ol style="list-style-type: none"> Is culturally appropriate and responsive to Māori needs Incorporates all necessary material for DHBs to implement it effectively Is not siloed within assessment providers 	<p>Recommendations include:</p> <ol style="list-style-type: none"> Define, scope and evaluate further the required capabilities for and benefits of a national, scalable assessment model Establish and extend the assessment platform nationally with appropriate support in regions 	<p>Recommendations include:</p> <ol style="list-style-type: none"> Further understand and develop relevant analytics and reporting products to suit operational, management and performance, and policy/research user segments Continually evolve capability and capacity in line with demand Regularly review understanding of demand through user forums 	<p>Recommendations include:</p> <ol style="list-style-type: none"> Define and scope the required information and functional capabilities required to support 7a and 7b, with a specific focus on sharing of information, and extensibility to multiple assessments Evaluate available market solutions for providing these capabilities Develop detailed business case for implementation

interRAI Service Review – Full Report

Target Service Design

October 2020



// Full Report – Contents

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Section 1: Background & Context

// Introduction

The interRAI assessment service has been very successful in standardising assessments for older people's care needs and reducing variances in care provision and support across NZ. It has also built a national database of assessments, with more than 500,000 assessments conducted that provide significant insights into trends in the health of ageing people and local, regional and national care needs and provision.

Building on this success, the Ministry of Health (MoH) and Technical Advisory Services (TAS) have jointly commissioned a service review and design that seeks to identify and evaluate the future opportunities for the interRAI service. This follows the interRAI software review, which highlighted, amongst other things, some user experience issues that were not directly related to technology.

The focus of this service review and design is on the potential future improvements that are available to the assessment service. In particular, the objectives are to:

1. Understand and document the current interRAI service – from establishment through delivery to data consumption
2. Identify, quantify and prioritise key opportunities to improve the overall service for consumers and stakeholders



// Objectives & Approach

Objectives

The objectives of this review and design are to understand and document the current interRAI service and identify, quantify and prioritise key improvement options for a desired target state interRAI service.

Specific outputs sought include:

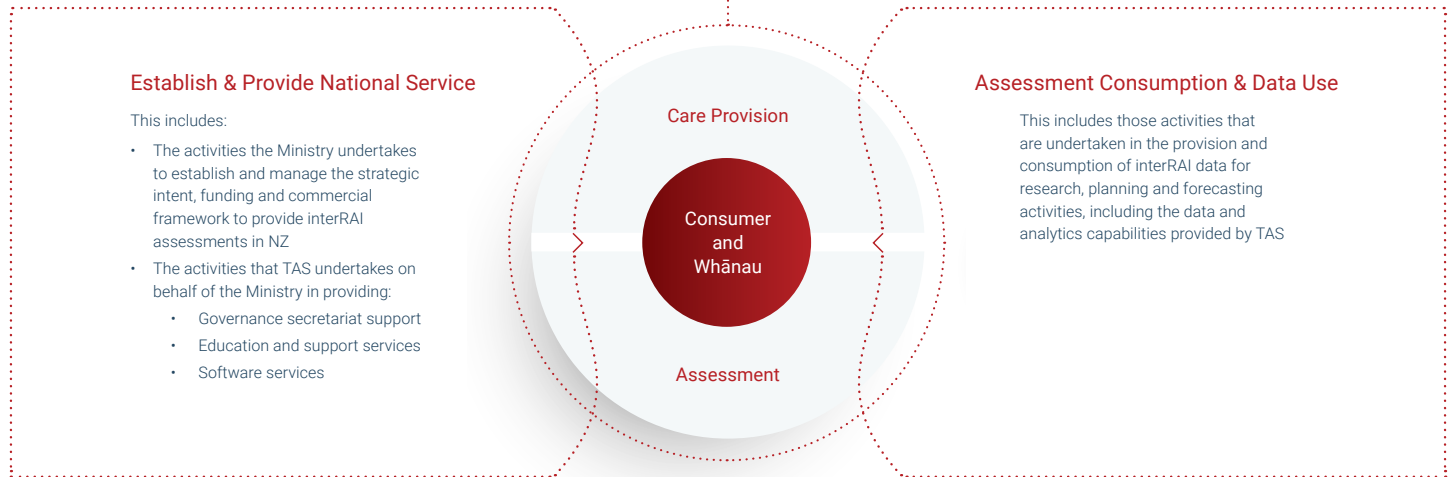
1. A definition of the current state service model
2. Identified and evaluated opportunities for improving the overall service for all stakeholders
3. A proposed target service design
4. Recommendations and roadmap, including potential investments/benefits

// Scope of Review & Design

The scope of this review and design has been defined as the overall interRAI service, including the establishment and provision, delivery and subsequent use of the interRAI tool as it is being used by Aged Residential Care (ARC) and District Health Board (DHB) community providers to assess health needs in over 65s.

interRAI Service Components – Established Through Delivery

Those activities that assessors from ARC or DHB providers undertake 'in the field' using the interRAI (NZ) tools



// Approach

The interRAI service review and target design was undertaken broadly in two stages – a current state review and analysis and target state design. The phases are described below. The review took a staged approach, supported by a steering group comprising MoH (MoH) and TAS representatives, and a sub-board of the interRAI Board.





Section 2: Summary of Current State

// Section Overview

This section provides a summary of the current state of the service and presents the findings of the current state assessment stage of the review.




Summary of the interRAI Service

- Strategic context
- Service objectives and promise
- Service context models
- Relationships across the service
- Costs of the service
- Technology summary

Current State Findings

- Outcomes and benefits
- Governance, roles and responsibilities
- Delivery and commercial
- Effectiveness: assessment
- Efficiency and effectiveness: data and insights
- Technology solutions

// interRAI Service Summary

<p>Purpose</p>	 <p>Key Components</p>	 <p>Cost</p>	 <p>The National Service is Not</p>
<p>The primary purpose of the interRAI assessment is to determine the characteristics of an older person accurately, in order to fully understand their needs – which may range from clinical to social support – and to prepare a care plan. The information provided by the interRAI assessment supports the decisions made by a healthcare professional.</p> <p>The core purpose of the service is the provision of a national tool and capabilities to deliver a consistent suite of assessments to older people</p>	<p>The NZ delivery of the interRAI International standard assessment comprises:</p> <ul style="list-style-type: none"> • A national software tool that is mandated to be used by healthcare providers in aged care centres and in-home settings • A national training and competency programme to train assessors in: <ul style="list-style-type: none"> • The use of the tool • The delivery of comprehensive needs assessments using interRAI • A repository of longitudinal information that is provided to data consumers for a variety of uses • The implementation of five interRAI assessments across different uses, with opportunities for more assessments to be added 	<p>The current service costs \$8.9m per annum to establish and operate. Additional costs are incurred by assessment providers to maintain a trained workforce</p>	<ul style="list-style-type: none"> • Responsible for care planning • A patient management system • Responsible for delivering healthcare services • Responsible for how the assessment is used in practice, including frequency, timeliness and consistency

// Strategic Context

The interRAI service is delivered into a complex environment, with numerous strategies, programmes of work and standards and requirements influencing its shape. Notable drivers are shown below and have been used to inform this analysis.

 Strategic Direction ▷	Health Strategy	Healthy Ageing Strategy	Digital Health	interRAI Strategic Plans
	Health & Disability System Review	Equity in Health	He Korowai Oranga Māori Health Strategy	Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2014–2018
 Work Programmes ▷	Aged Care Funding Review (EY)	National Health Information Platform	interRAI Software Review	interRAI ARC Implementation Review
	ARC Contracts	Health Information Governance Guidelines	Home and Community Support Services (HCSS) National Framework	interRAI International standards
 Standards & Requirements ▷	Open Government Guidelines	Ministry of Health (MoH) Outcomes Framework	Privacy Act	

// Service Objectives

The interRAI service objectives are most clearly defined by three key strategic means:

In the Healthy Ageing Strategy Action Plan

Within the Healthy Ageing Strategy, interRAI is identified as supporting:

1. Forward planning and understanding of healthy ageing through learning about the outcomes of older people receiving support services in a location or population group
2. Resource allocation, service planning and provisioning based on health requirements and outcomes in a community.
3. Patient information-sharing across primary or community health teams to reduce duplication
4. Service improvement based on quality indicators to improve models of care for Home and Community Support Services (HCSS)

Through a Memorandum of Understanding (MOU)

Purpose of the MOU: Provide a National interRAI Service.

All vulnerable and older people in NZ have the support and care they need:

1. Establish an integrated education and support service
2. Establish a national data and reporting centre
3. Assist with establishing a governance structure
4. Oversee reporting and analysis of ICT infrastructure
5. Provision of contract administration services

By the interRAI Board

The key stated objectives of interRAI NZ are:

1. Consumers are receiving equitable access to and benefits from interRAI assessment regardless of their location in NZ
2. Health outcomes are improved, and health inequalities reduced for all those assessed through interRAI
3. interRAI is effective in its use of funding and resources
4. Promote the use by Government agencies of interRAI data as evidence in policy development where appropriate
5. Promote the use of interRAI data and information to shape services and support best outcomes and continued service improvements
6. interRAI data and information are accessible for research purposes
7. Access to interRAI data is maximised whilst ensuring the privacy of consumers is safeguarded at all times
8. NZ contributes to the international development of interRAI tools
9. The interRAI suite is successfully and consistently implemented and supported in all relevant settings in NZ

// Service Promise

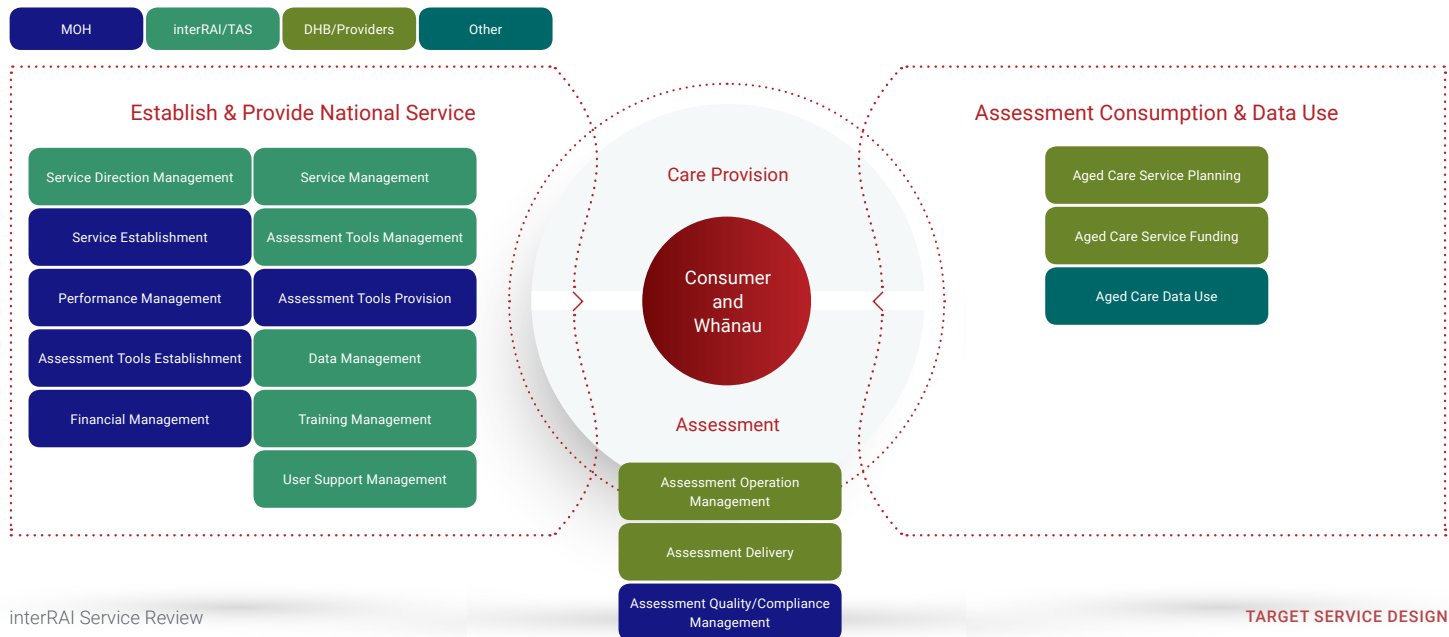
In addition to the strategic and contractual objectives, the interRAI service defines a 'Service Promise' below. This is articulated through the interRAI informatics strategy and was considered in forming design principles for the service to date.

The Service will...	Description
Be life-centred	We are striving to ensure our technology empowers people to fully participate in their healthcare and connect with health services in a way that fits best with their lives.
Enable informed choice	People should have full access to their own health information. They should have control over who can access it. This means people and their families can make informed choices about the health and social services that work best for them.
Facilitate access to technology 'closer to me'	Better access to technology helps remove isolation, as people and communities become more connected. This means that care can be provided closer to where people and their families live, learn and work.
Offer value for NZ	Our country's investment in interRAI is aimed at inequities in knowledge and education. interRAI is a valuable tool that enables access to services, technology and connectivity. With interRAI, value in the aged care sector can be measured. Information can be used to drive learning and decision making, leading to better digital service delivery and better care for older people.
Enable collaborative care	We are working to enable health and social support services, whānau, and communities to use interRAI technology to help them operate as effective teams in a high-trust system that puts the person at the centre of their care.
Be responsive, predictive and personalised	This means that people should be able to participate as full partners in their own health and care. It means the Board and interRAI Services should ensure interRAI technology responds proactively to people's changing needs, and carers know a person's preferences and can anticipate their needs.
Offer actionable insights	interRAI data and technology should assist evidence-based decisions. Health data from individuals and communities gained through interRAI should inform health policy and address inequities.
Be accessible and have trusted information	A key driver for our informatics strategy is ensuring that interRAI information is secure. We continually work to make interRAI data reliable, accurate, accessible and in an appropriate form.

// Current Service Model

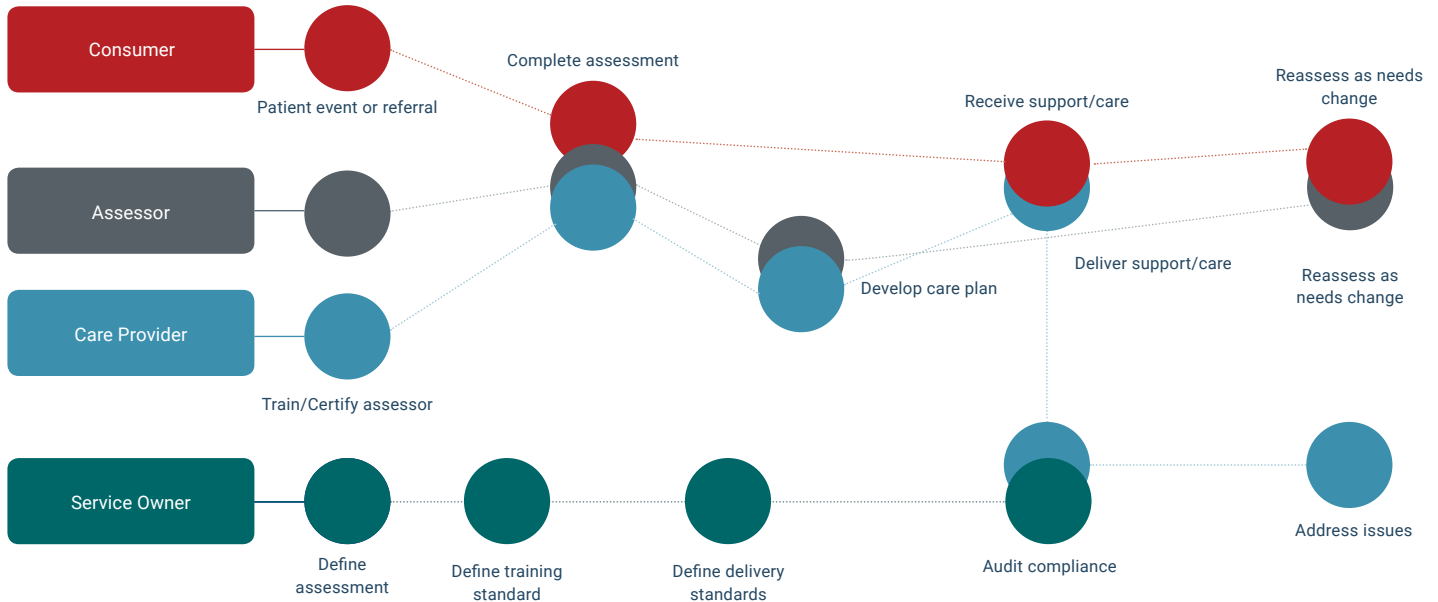
The scope of the interRAI service review and target design is defined as including the “overall interRAI service across the establishment and subsequent use of the interRAI tool as it is currently used by Aged Residential Care (ARC) and District Health Board (DHB) community providers to assess health needs in persons aged 65 or over.”

The functions performed across the service are shown below, noting the lead actor for each group of activities. A detailed service context model is included in appendix 4.

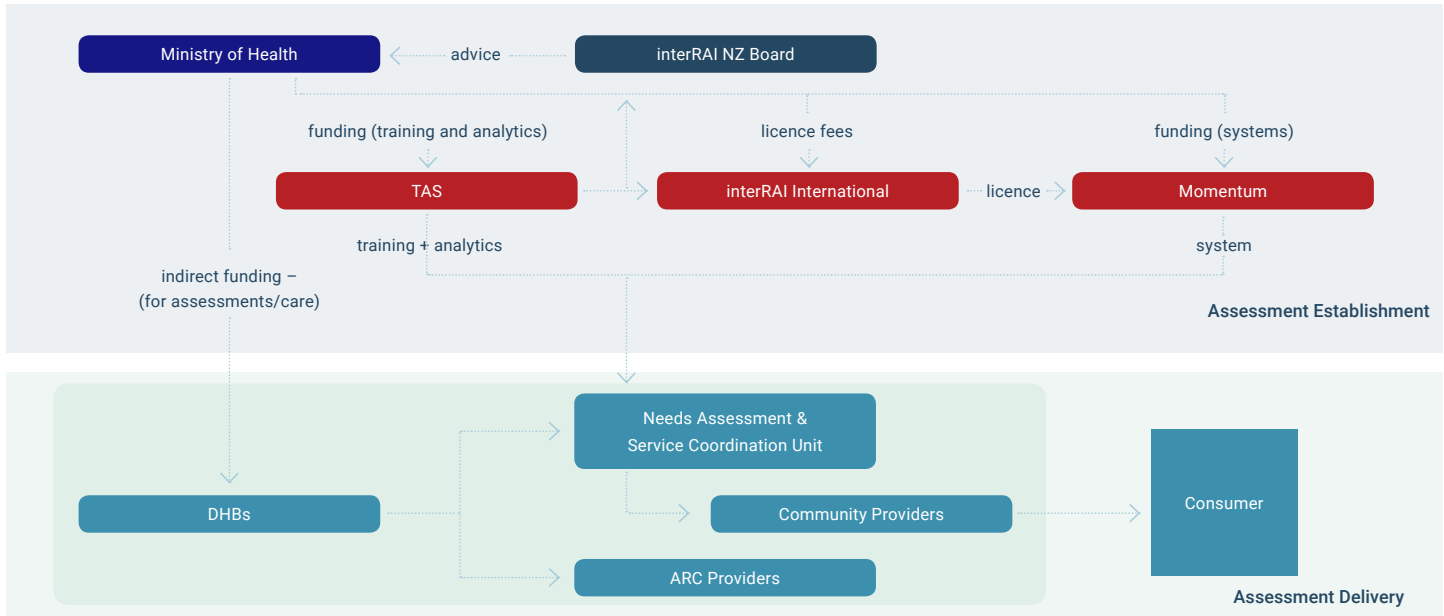


// Service Journeys

The interRAI assessment is one step in a broader process for consumers, assessors and care providers. The major steps are presented below, together with the places where they combine and diverge.



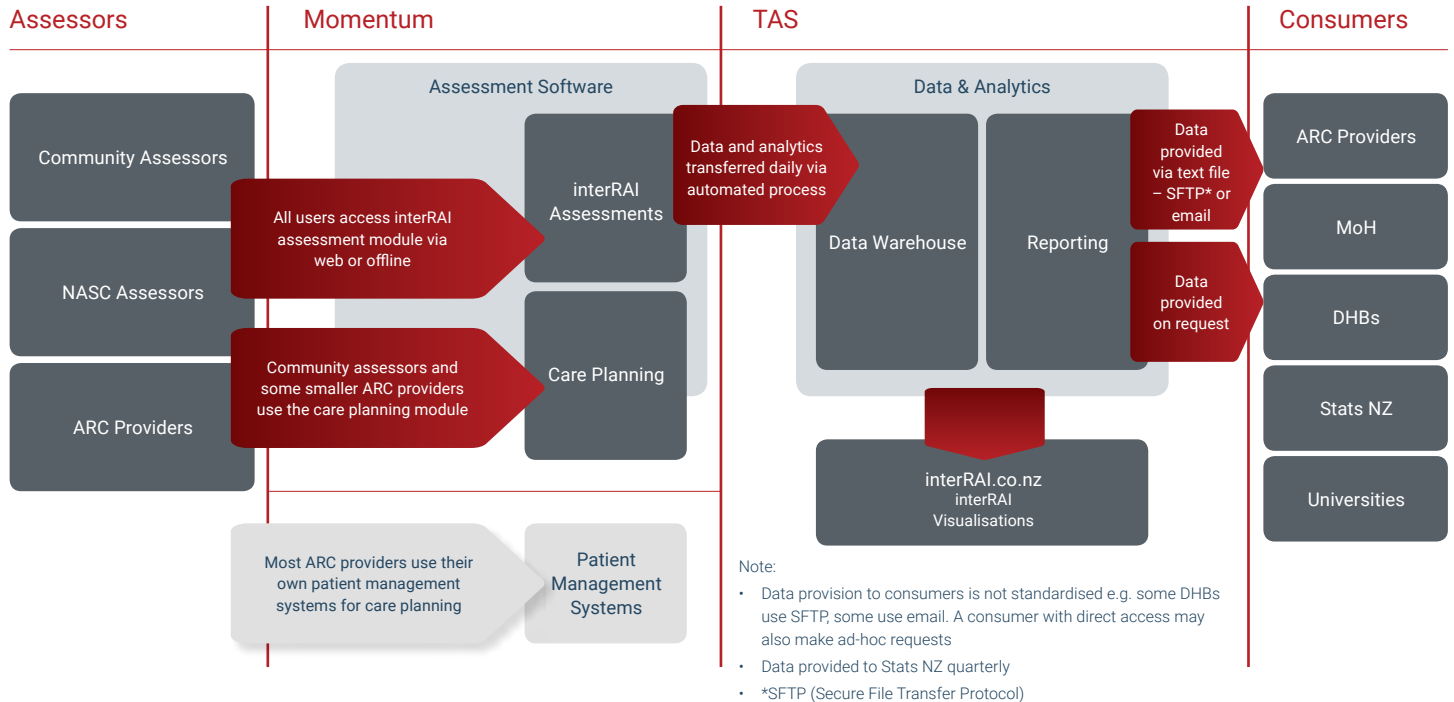
// Relationships



interRAI International: New Zealand has a strong relationship with interRAI International through fellowships and is one of few interRAI users that have implemented interRAI into health delivery in a systemic manner. It is considered that NZ has a high degree of influence in the development of interRAI instruments and other improvements in this regard.

// Technology Context

Major technology components and data exchanges.



// Summary of Current State Review

The scope of this review has been defined as the overall interRAI service, including the establishment and provision, delivery and subsequent use of the interRAI tool as it is being used by ARC and DHB community providers to assess health needs in over 65s. Outlined below are the dimensions for service assessment and a summary of findings.

Assessment Dimensions

Outcomes & Benefits	Governance, Roles & Responsibilities	Delivery & Commercials	Efficiency & Effectiveness: Assessment	Efficiency & Effectiveness: Data & Insights	Technology Solutions
The setting and monitoring of measures and outcomes for the service in relation to the broader sector goals	The definition of roles, responsibilities, accountabilities and decision-making across the service	The contractual arrangements that structure and direct the service and its associated funding/costs	The performance of the service delivery and the improvements made to the service over time	The capturing, management and sharing of data and the leveraging of it to generate service/sector insights	The effectiveness of the underpinning technology solution in supporting the service provision and its outcomes
Commercial Construct			Service Efficiency & Effectiveness		Technology

Assessment Findings

Expectations in relation to future priorities and outcomes sought need to be clarified	Roles and responsibilities are complex and limit the ease and pace of significant improvements	The commercial landscape is complicated and does not reflect the current service	Services can be delivered more efficiently and more effectively once expectations are clarified	A better understanding of the potential uses of data is required to maximise its value at both individual and population levels	The technology and the way that it is deployed hinders rather than helps those that are using and managing it
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// Findings – Outcomes & Benefits

Outcomes & Benefits

Findings

Expectations in relation to future priorities and outcomes sought need to be clarified.

- **Sector-level health outcomes** – the current service is not well structured to achieve the sector-level health outcomes. This is due to both a lack of clarity on the purpose and objectives sought and an inability to influence many areas that the service has responsibility for. The specific outcomes sought from the service do not clearly line up with the higher order objectives that the service is intended to support
- **Linkage of service to overall health strategies (e.g. healthy ageing)** – there does not appear to be an explicit connection between the higher order strategies of the health system and the service strategy that should be considered across domains of service, technology and data relevant to aged care
- **Metrics** – the current metrics appear to be output focused, with unclear priorities as to the service improvements sought (e.g. quality, efficiency and equity). Clear priorities and clarity of expectations, supported by regular measurement, will help direct and prioritise service improvements
- **Wider benefits** – while the service delivers many benefits, it is not clear that all benefits sought are achievable and there is currently no framework to relate the service to downstream health benefits
- **Innovation cycle** – the cycle of innovation between outcomes sought, current performance and the success of interventions does not appear to be explicit or well linked to any demand from users. There is an opportunity to close feedback loops across the service. Improvements to date have been slow and incremental to achieve (for a range of reasons) so there is an opportunity to improve the frequency and magnitude of improvements through more strategic KPIs (key performance indicators) and well structured roles and responsibilities

// Governance, Roles & Responsibilities

Governance, Roles & Responsibilities

Findings

Roles and responsibilities are complex and limit the ease and pace of significant improvements.

- **Roles and responsibilities** – accountabilities appear to be unclear and do not easily drive significant improvements in the service. Multiple parties perform parts of an overall function, diluting overall responsibility. It is not clear/formalised who the owner of the service is or what the relationships with the service consumers are
- **Role and representation of the Board** – the Board is constrained in delivering on strategy, split between ICT and service governance. It is tasked with defining the strategy for the service but in effect MoH holds this function. There appears to be an opportunity to better align accountabilities and responsibilities across the parties involved (the Board, MoH, TAS, vendors, etc.) so that the right parties can effect changes for which they are responsible. There is an opportunity to strengthen the links to consumers through governance representation and structures
- **Service responsibilities** – several service delivery functions are not properly allocated e.g. there is no singular accountability for service innovation. While parties may perform these functions, they are not specifically allocated
- **Emphasis on new assessments** – there is an emphasis on delivering additional assessments at a sector/segment level, but roles and responsibilities for this are unclear. If the Board is responsible for this, it needs to be able to effect it
- **Funding** – the responsibility for making change and the funding for change are currently separated. If the Board is responsible for driving change, consideration is required for how funding decisions are made

// Delivery & Commercials

Delivery & Commercials

Findings

The commercial landscape is complicated and does not reflect the current service.

- **Complex service agreement environment** – commercial and contractual relationships appear complex. There is an opportunity to consolidate/simplify the contractual relationships (especially with third parties) and associated funding to enable a single point of accountability
- **Agreements are not fully reflective of the current state** – the contracts/MoU do not fully or accurately reflect the scope of activities that TAS undertakes (e.g. operation and delivery support services) The current service KPIs reflect the establishment of a service (via a large scale project). not necessarily the ongoing outcomes sought from the service, and do not represent fully what the service is actually or should be delivering
- **Software procurement is under-utilised** – the software agreement provides for a larger set of capabilities than is currently used. It is unclear whether there would be any change in cost if redundant functionality were removed
- **Service delivery model is not clearly defined** – the delivery of services (training, analytics, service improvements) would benefit from a stronger service level definition. Currently there is a perception of inconsistent service delivery by TAS among users of the service. Driving a more mature service model would improve access and outcomes for consumers
- **Lack of transparency of costs** – some costs seem high (e.g. support, other, training), and there appear to be opportunities to reduce infrastructure/technology costs beyond the existing programme of work. Stronger measurement and transparency of costs would allow a) a greater understanding of real costs and b) service delivery improvements to be more readily identified. Currently costs are essentially the budget; however, due to a lack of performance metrics these are hard to benchmark
- **Some hidden costs to external providers** – there are costs to external providers (e.g. ARC providers) that could be reduced through certain improvements. These costs include the costs of maintaining staff certification, the time cost of delivering assessments and the impacts of managing any duplication caused by technical limitations

// Efficiency & Effectiveness – Service Management

Service
Efficiency &
Effectiveness

Service
Management

Findings

Services can be delivered more efficiently and effectively once expectations are clarified.

- **Customer segmentation and service differentiation** – there appear to be significant enough differences in the way assessments are delivered between HCSS and ARC that different service approaches across training, reporting and specific technology or processes may be warranted. The differences include but are not limited to: the frequency of assessment, workforce composition, information needs and technology landscapes. These may include specific approaches to address pain points in both of the key user groups
- **Training delivery** – training is reportedly time intensive and the delivery model is reflective of the needs at the time the service was established:
 - Issues were identified with the ease of training new staff. Wait times upward of six weeks before a course is available were reported. Given that many providers only have one or two assessor roles and the noted high turnover in the sector, access to training needs to be enhanced
 - Some providers have implemented an in-house training model, which was reportedly delivering good results. The in-house model was also observed to show positive engagement with and understanding of interRAI across the participating organisations
- **Support** – the provision of support to assessors does not currently make use of service support management disciplines such as call tracking to better inform training and software changes and reduce future requirements for support

// Efficiency & Effectiveness – Assessment Delivery

Service
Efficiency &
Effectiveness

Assessment
Delivery

Findings

Services can be delivered more efficiently and effectively once expectations are clarified.

- **Consistency of application** – the way that an interRAI assessment is positioned in the model of care between DHB regions (particularly in-home) is inconsistent, largely due to local policy settings (e.g. eligibility and reassessment timeframes)
- **Care planning** – the distinction between the interRAI assessment and care plan is blurred in some circumstances. This is especially true when a provider is using Momentum for care planning. Currently the care planning capability is provided within Momentum at no cost to users. Some providers do make use of this capability, but the operational requirements of assessments and care plans are markedly different
- **Time and cost to deliver assessments** – an assessment has a high time requirement (up to four hours per assessment). While any assessment has an associated cost, the interRAI delivery cost is considered relatively high. The time and effort required to deliver assessments vary significantly between assessors. A combination of factors drive these variations. For example:
 - The locations of assessments (including travel time) can vary significantly
 - Other services or activities may be delivered alongside the assessment, influencing the perceived time required for the interRAI component
- Data entry may occur during or after an assessment. Due to the limitations of the technology, data may need to be entered across two or more systems
- Inconsistencies in interRAI reassessments/updates (notably in ARC) are potentially driving greater effort
- The complexity of the individuals' needs can greatly vary the assessments, which can differ across assessment providers. For example, some assessors only work with high needs consumers, so are more likely to report long assessment times

// Efficiency & Effectiveness – Equity

Service
Efficiency &
Effectiveness

Equity

Findings

In terms of the assessment itself, equity has been explored with stakeholders based on the approaches to equity outlined in:

- The Health Equity Assessment Tool
- Achieving Equity in Health Outcomes: Summary of a discovery process

Access to the assessment

Access to interRAI assessments can vary across regions and demographics, depending on numerous factors. Awareness of referral pathways, capacity, and overall consumer engagement with the health sector were identified as contributing to

access inequities for the interRAI assessment.

Assessment appropriateness

The interRAI assessment is a holistic approach to wellbeing that is aligned with a broader concept of health. In this regard, it is expected that the tool should be responsive to the needs of those experiencing health inequities. It was noted that as part of the initial implementation of interRAI in NZ, significant attention was given to its appropriateness for Māori. While considered appropriate at the time of implementation, further attention may be required to the language, terms and frames of

reference to ensure it remains suited to the NZ context.

Assessment delivery

A key consideration is the delivery of the assessment, and whether assessors have the appropriate cultural competency to identify needs within diverse communities and patients. Given the high turnover described in assessment and training provision, it is likely that this competency is difficult to maintain.

Downstream services

The interRAI assessment generates a rich source of data that can be used at an

individual level to inform care provision, and at a population level to target resources and interventions based on need. The interRAI assessment is an important enabler for the health sector in addressing equity issues, on the assumption that the points above are functioning well. Accordingly, providing feedback loops and metrics to help identify equity issues would be beneficial.

Note: further findings regarding equity are contained in the analysis presented from pg. 57.

// Data & Insights

Data & Insights

Findings

A better understanding of the potential uses of data is required to maximise its value at both individual and population levels.

- **Valuable data asset** – data collected is seen as valuable by the sector. However, there are opportunities to make data more accessible and understandable to healthcare professionals, policy analysts and researchers
- **Uses of data** – a better understanding of how data is used across users, including GPs, DHBs and individuals/whānau, may help identify additional opportunities for data sharing and data integration and thereby increase the overall value of interRAI to the sector
 - The most value is derived when the interRAI data is joined with other health datasets
 - It is important not to extend the use of the interRAI assessment beyond it being a snapshot of patient need at a point in time
 - Location and access are important considerations to enable these opportunities
- **Data access** – there are opportunities to provide easier and greater access to data to maximise the intent of the NZ Government's open data policies

// Technology Solutions

Technology Solutions

Findings

The technology and the way that it is deployed hinder rather than help those using and managing it.

- **Technology context** – providers use numerous tools to provide care to patients. The Momentum/interRAI tool within this broader technology context of care provision creates points of duplication and overlap. This results in inefficiencies and user frustration
- **Limited interoperability** – while APIs (application programming interfaces) are available, there is limited interoperability between the ARC Facility Management Systems and interRAI. A small number of providers make use of API capability to pull data currently. There is no ability to pull data held elsewhere into an interRAI assessment
- **Technology changes** – it appears that changes to the technology are reactive and constrained by the deployment process. Changes are incremental and can take significant time to be implemented
- **User experience** – while the assessment itself is considered valuable by users, the software has limitations that make the assessment challenging and time intensive to complete and use. Some of the limitations arise due to the localisation of the software, while other limitations are due to the nature of the comprehensive assessment
- **Solution deployment and user provisioning** – the current model is cumbersome and time consuming. Software updates and user creation processes require significant effort and are inefficient – laptops must be physically returned to providers for software to be updated. User access and provisioning are subject to individual DHB policies, creating inconsistencies and potential barriers to legitimate access



Section 3: Target State Service Design

// Section Overview

This section describes the future state of the interRAI assessment service. It captures the outputs of stakeholder engagement across service objectives and demand, to define the characteristics of a target state and develop the target state model.

Service Objectives

- Design outcomes
- Service design objectives and priorities

Demand

- Service consumer profiles
- Service design principles

Service Design

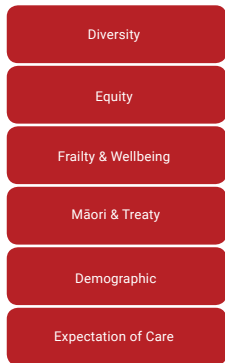
- Target service model
- Target design characteristics:
 - Service establishment
 - Assessment
 - Data

// Target Trends & Service Outcomes

The overall strategic context for the service design is illustrated below. The focus areas, outcomes, objectives and characteristics were defined through stakeholder insights, and determine the imperatives for the service design.

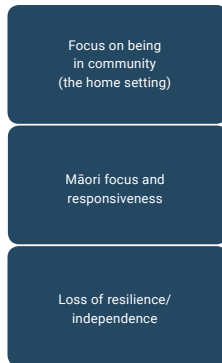
Trends & Drivers

The range of trends and drivers across the sector affecting the service.



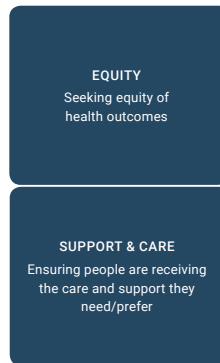
Focus Areas

Priority areas for focus in the service design.



Service Outcomes

Outcomes that the service must enable or contribute to.



Service Objectives

Objectives of the service design.



interRAI Service

FEEDBACK LOOPS & MEASUREMENT

Measurement of delivery of care vs support that is required
Measurement of these service objectives

EFFICIENCY

Ensuring the service is as efficient and cost effective as possible

CONSISTENCY

Ensuring consistency of needs assessment across providers

QUALITY

Ensuring that the assessment and the data it generates are of high quality

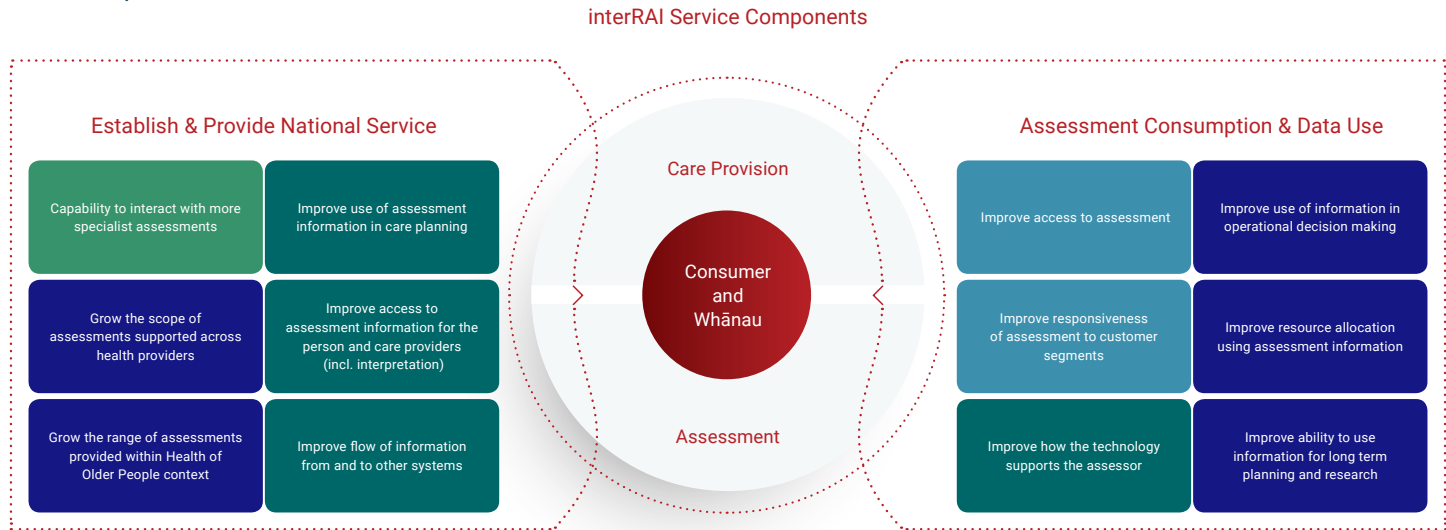
BROADER HEALTH & SOCIAL SYSTEMS VALUE

Leveraging the value of the investment and capability across the sector

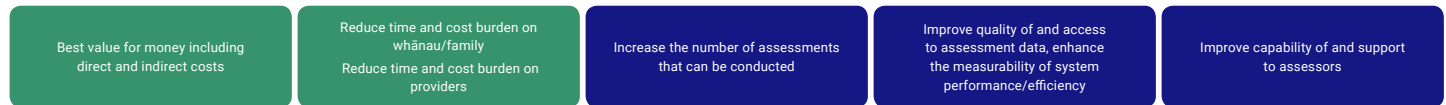
Service characteristics – underpinning features that indicate the way that service should be designed.

// Prioritisation of Service Opportunities

A series of objectives was identified for the service design. These objectives relate to improvements that are sought across the service components, with relative priorities defined.



Service Characteristics:

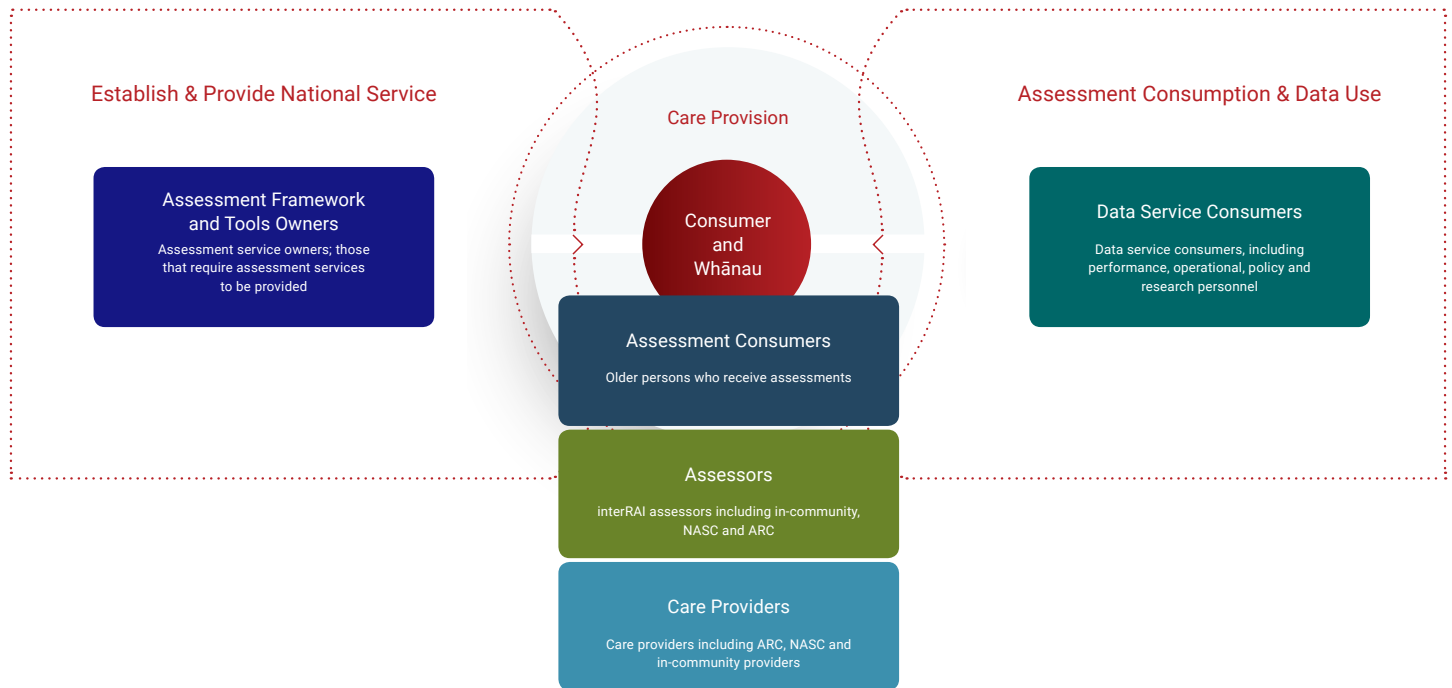


Priority of objectives for service design



// Assessment of Demand

In order to understand how each service should be designed, we need to understand stakeholders' situations and the demand for the service. The following pages outline the demand for the assessment service from the perspectives of all the parties involved.



// Assessment Consumers

Older Persons

- Typically aged 85+
- Some issues manifesting significantly earlier
- Assessment occurs in a time of high change or during an event
- Can present via multiple pathways to assessment, typically presenting for:
 - Showering or housework difficulties
 - Cognitive decline
 - Complex/acute needs
- Range in how forthright and informed they are during the assessment phase
- Have varying degrees of health literacy and engagement in the assessment process

Māori

- Tend to present later than non-Māori in their health journeys
- Tend to also have social needs such as housing that go unmet
- Comprise 8% of homecare assessments
- More likely to live alone
- Seeing cognitive decline before physical issues
- Likely to understate or minimise needs

Whānau

- Financial or legal considerations that may affect whānau, such as selling the family house for care
- May shield/delay need for intervention, or not be engaged in process
- May want higher levels of care sooner, and have high expectations of support
- May have high needs also
- May not be able to provide the level of care they would like to

Rural

- Lower frequency of contact with system
- More likely to be living alone
- Less engaged with health service
- May wait a long time for assessment or care delivery

Pain Points

As an older person, my pain points are:

- Dependency on primary care awareness of needs assessment service
- Having to repeat the same information to multiple people
- Not knowing what to expect during/from assessment
- An expectation of services that cannot be provided or are unavailable
- Many primary care agents delivering care with little connection
- Potential fear of needing to leave home

As an older Māori person, my pain points are that:

- The tool is not sensitive to Māori needs/not human centred
- Around one in five Māori consumers needs to be reassessed almost immediately
- The assessment delivery is not sensitive to Māori needs
- Social needs are ignored or not well captured e.g. damp housing
- There is a lack of Māori health professionals to conduct assessments

Needs & Requirements

As an older person, I need:

- Help, healthcare or support
- To retain and protect my independence and dignity
- To talk to someone and be listened to
- To have the context of my situation considered
- To have my needs assessed accurately and understood in a timely fashion

As an older Māori person, my needs include:

- To be assessed by people I know or can build trust with
- To be understood in my context
- To practise cultural needs e.g. karakia
- A desire for a whanaungatanga approach, listening to my stories

// Assessors

Community Assessors

- Are registered health professionals with assessment experience
- Vary significantly in the number of assessments they conduct
- Are time poor, and not funded for organisational development
- Work under diverse operating models; they might be assigned to specific regions or demographics, or associated with primary care providers

ARC Assessors

- Registered nurses
- High proportion of overseas trained nurses
- More assessors in ARC vs community services

Support Providers

- May be non-clinical but very experienced
- Separate organisations from assessors

Pain Points

As an assessor in the community, my pain points are that:

- Assessment is led by the tool
- Assessment isn't that valuable or reusable to me
- The perception of re-certification is that it is a heavy audit
- Assessment is not able to be pre-populated with consumer data
- Consumers may have no understanding of the process
- Momentum system is an impediment
- Tool does not enable issues to be solved easily or information to be accessed
- Separation between assessments and care planning does not enable the best consumer outcomes

As an assessor in ARC, my pain points are that:

- The re-entry of consumer information is time consuming and duplicates prior work/knowledge
- Assessments are not accessible by other staff
- Assessment is not perceived to add value to care

As a support provider, my pain points are that:

- It is difficult to access interRAI data
- I may disagree with the level of care prescribed by the assessor

Needs & Requirements

As an assessor in the community, I need to:

- Have prior knowledge of the consumer
- Understand the full context of the consumer
- See how the consumer is living
- Be able to complete the assessment documentation easily
- Be aware of tikanga or cultural expectations
- Feel comfortable delivering the assessment
- Be assured I am asking/covering the right questions to understand that person's need
- Be able to draw on whānau/family to validate the assessment
- Be able to operate in a way that gets the best possible outcomes for my consumers without being penalised by audit
- Be empowered as a professional
- Have more ready access to FAQs or help
- Understand the assessment tool and be comfortable using it
- Have conversations that inform the questionnaire

As an assessor in ARC, I need to:

- Be able to access all information about a resident easily
- Be able to update changes over time

As a support provider, I need to:

- Know what decisions have been made prior
- Be able to get timely reassessments for consumers
- Be able to trust the assessments I receive

// Assessment & Care Providers

Providers

- Seeking to innovate service delivery
- Operate in a low trust environment
- Constrained by funding models
- Have workforce and funding constraints
- No standard model of care across regions
- Expectation that staff will agree to be interRAI trained

NASC Providers

- Use interRAI by consensus
- 15–20 nationwide
- Some more advanced in use of data for planning and performance

Community Providers

- Limited ICT capabilities
- Provide assessment as well as many other services
- Require DHB to authorise access
- Limited ability to access data
- May only conduct one assessment type
- May only provide services based on upstream assessments

ARC Providers

- Obligated to use interRAI contractually
- High turnover of assessors
- Main chains represent 80–90% of beds
 - Have in-house ICT capacity
 - Typically have a national management system
- Small providers represent around 10% of beds
 - May have adopted Momentum capabilities for other functions

Pain Points

As a provider, my pain points are that:

- The Momentum tool is clunky and does not enable providers or efficiencies
- The lack of change management and communication support on changes to interRAI creates confusion
- There is low awareness of national interRAI changes
- It is slow to onboard and train new assessors
- I have no inability to share information from assessments
- There is no feedback loop back to interRAI
- Implementation of complex assessments for nurses creates backlogs
- Data needs are often misunderstood or data provided does not meet my needs

As an ARC provider, my pain points are that:

- There is a lack of integration and information flow
- There is a lack of clarity on contract/audit requirements

As a community provider, my pain point is that:

- Regional differences in interRAI delivery make comparisons difficult

Needs & Requirements

As a provider, I need to:

- Train new staff quickly and cost effectively
- Access up to date information on interRAI standard operating procedures (Standard Operating Procedures)/changes
- Develop insights that are relevant to the facility
- Refer my consumers to other services as needed
- Access data easily in digestible formats
- Trust previous assessments
- Operate in a high trust environment with DHBs

As an ARC provider, I need:

- To be able to enter information once, then use it across systems
- To use assessment to drive care plans
- A highly efficient assessment and reassessment process
- Clear policies on reassessment
- Easy access to all staff and to all relevant systems

As a community provider, I need:

- To be able to benchmark and compare across other providers
- Flexibility in the assessment tools based on consumer need
- Ease of transference between providers

// Assessment Framework and Tools Owners

Assessment Owners

- High level strategic focus on core portfolio
- May overlap with other portfolios, and share consumers across portfolios
- Have discrete assessment needs for consumers within scope of portfolio
- Non-standardised assessment processes and models across different groups
- Work with a variety of influential stakeholders

Pain Points

As an Assessment Framework and Tools Owner, my pain points are:

- Default requirement to manage my own technology platforms and service provision
- The non-standardisation of assessment models across portfolio
- That current tools and processes do not support efficiency
- There is a lack of integration and information flows across different streams
- There is a lack of standardisation and shared services among comparable services

Needs & Requirements

As an Assessment Framework and Tools Owner, I need:

- To focus on the core strategic areas, while outsourcing the day to day operations of assessment delivery
- A robust, consistent and equitable assessment for my consumer base
- Assessments that meets strategic outcomes and those of the service consumers
- A process and assessment that are reliable and cost effective
- An outsourced data/technology platform management solution
- A consistent background service/ experience to support strategic needs
- A shared services model to manage day to day operations and deliver efficiencies

// Data Service Consumers

Management & Performance Planning

- Seeking to innovate service delivery
- Using analytics within operational platform (if available), data extracts and interRAI online visualisation tool
- Requirements range from simple to complex depending on specific use case

Operational

- Low time availability
- Not using data at any aggregate level
- Seeking individual or small number of records

Policy

- Looking to draw insights across long time spans using multiple data sources
- Looking to drive policy based on evidence
- Likely to combine with operational data for effectiveness measurement

Research

- Highly skilled in data management
- Looking to draw insights across long time spans using multiple data sources

Pain Points

In my role in management and performance planning, my pain points are:

- General low analytics capabilities
- That I am unable to access relevant information
- That it is unclear how to best use information to drive insights

As a policy planner or researcher, my pain points are:

- Slow access to data
- I am unsure of data characteristics or how to interpret them
- The regional differences in interRAI delivery make comparisons difficult

Needs & Requirements

In my role in management and performance planning, I need to be able to:

- Identify good practices to replicate, and poor practices to resolve
- Identify trends and future needs
- Compare facilities, regions and providers
- Protect commercially sensitive information
- Drive decisions and funding based on reliable and understood data
- Use data to promote transparency and trust across teams of care

As a policy planner or researcher, I need:

- Fast access to data
- Low levels of data curation
- To be able to combine data with multiple other data sources

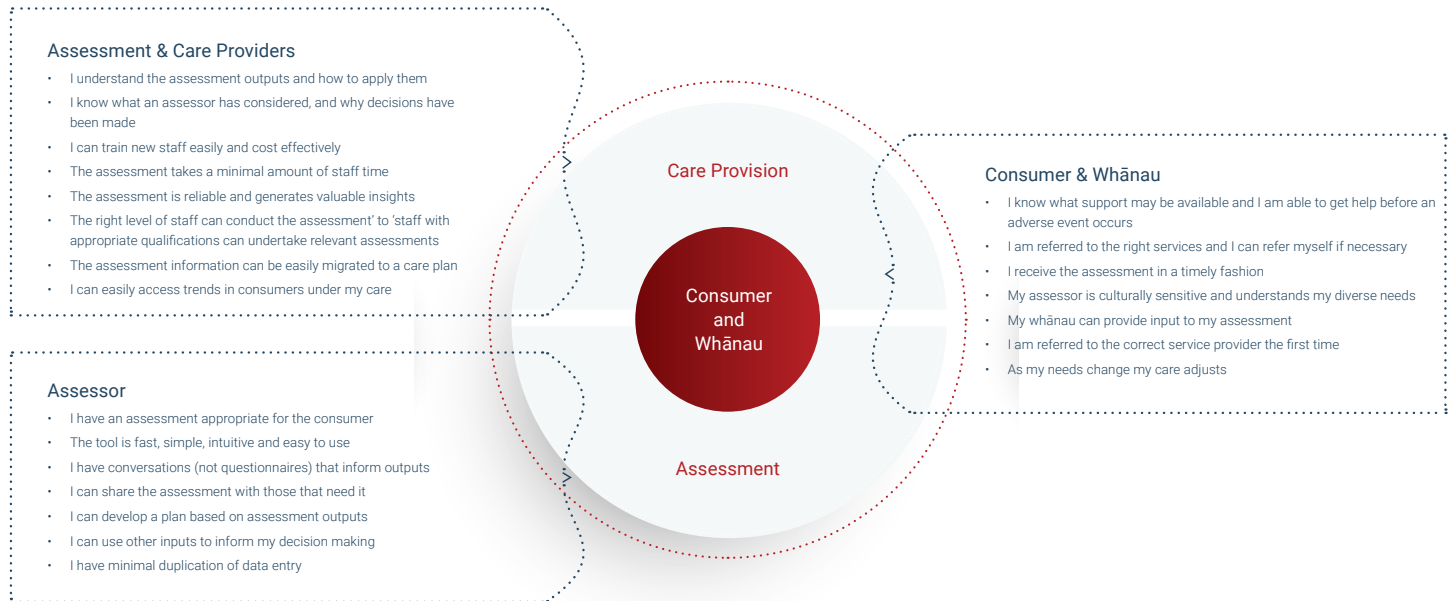
// Design Principles

Based on the demand analysis, the following design principles were incorporated to guide the target service design.

Principle	Rationale	Implications
1. Support responsiveness to Māori needs	<ul style="list-style-type: none"> • Relevance and equity are key objectives for service improvements and for the Health and Disability System Review • Will deliver better health outcomes 	<ul style="list-style-type: none"> • Shift emphasis from interRAI assessment to improving assessment delivery method • Move further toward a consumer/people led conversation vs assessor led questionnaire • Potentially enable different access and care provision models
2. Support (or do not inhibit) local/regional innovation and different delivery or funding models	<ul style="list-style-type: none"> • Significant variations exists across regions currently (e.g. funding and provider/assessor models) • Innovations in services/service delivery are being implemented across the sector to respond to local needs, which this service should support 	<ul style="list-style-type: none"> • Assessment service needs to support regional variations • Allow for flexibility, responsiveness to changes • Assessment on a versatile platform
3. Support flow of accessible and consumable information among people providing care to a person	<ul style="list-style-type: none"> • Improved efficiency and accuracy • Improved consumer and assessor/provider experience 	<ul style="list-style-type: none"> • Improve integration between systems • Improve system features that support information flow • Improve consumers' view of data relevant to the tasks they are undertaking
4. Support/Align with 'whole of system' direction	<ul style="list-style-type: none"> • Improved health outcomes if all parts of the system are aligned • Efficiency of effort and investment 	<ul style="list-style-type: none"> • Prioritise those improvements that align best with whole of system direction • Ensure decision making incorporates system view
5. Support integration of related consumer services	<ul style="list-style-type: none"> • Reduced duplication • Improved consumer experience/health outcomes 	<ul style="list-style-type: none"> • Understand consumer pathways to major related services • Improve coordination across major services

// Target Assessment Characteristics

Based on the stakeholder engagement, a series of characteristics was identified for the service stakeholders. These target state characteristics are represented in the diagram below. A more comprehensive list is included in appendix 4.



// Target Service Design

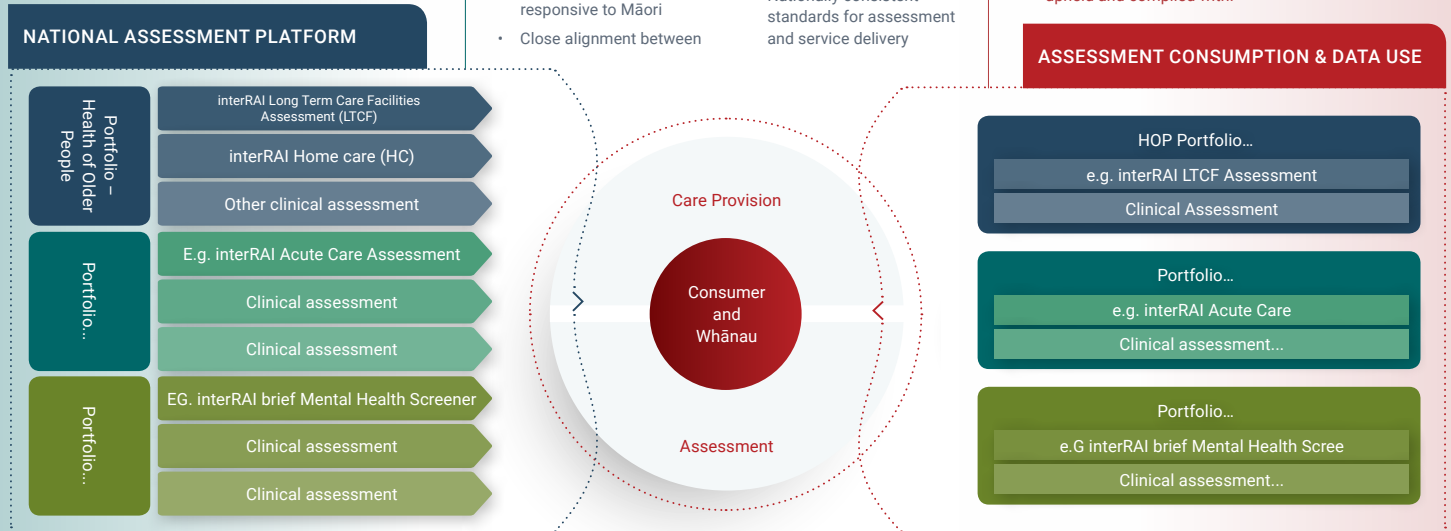
The key features of target service design are presented in the model below.

National Assessment Service

- National Assessment Platform able to serve multiple assessment services/ service owners
- Multiple portfolios using assessment services (Mental Health, Disabilities, Acute Injuries, etc.)

- A culturally appropriate assessment model with electronic access to data by individuals.
- Assessment and care model optimized to be responsive to Māori
- Close alignment between assessment and support providers
- A range of appropriate assessment tools are available
- Nationally consistent standards for assessment and service delivery

- Data available at an individual and/or population level within or across portfolios
- Mature data and analytics services supporting a range of stakeholders' purposes.
- The principles and requirements of data sovereignty are upheld and complied with.

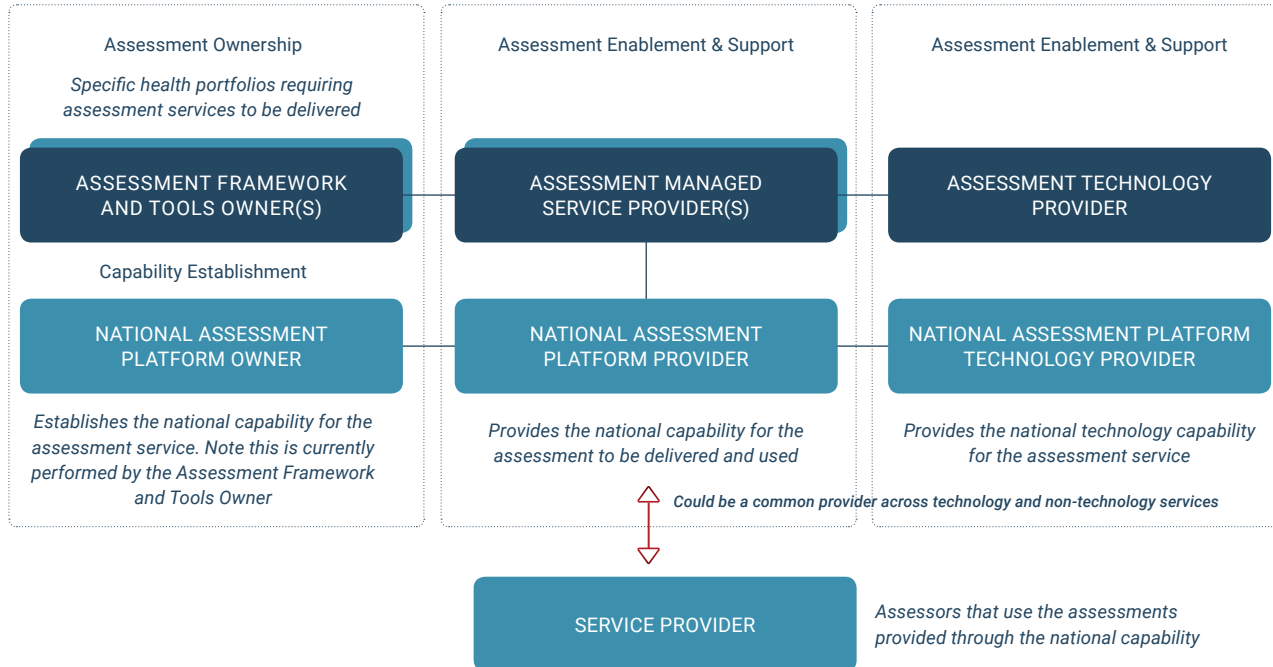


// Target Service Design - Stakeholder Roles

The full target service design proposes a national assessment platform capability that can support multiple assessments and assessment owners across multiple consumer groups. The recommendations in this report are phased across a series of time horizons. The diagram below shows how the underlying roles and responsibilities associated with service ownership, management and provision could change over time.

HORIZONS 1 & 2

HORIZON 3



// Target Service Characteristics – Data Service

	Use Cases			
Information Attributes	Operations	Management & Performance	Policy & Planning	Research
Information time horizon "I am concerned about when..."	<ul style="list-style-type: none"> • Today 	<ul style="list-style-type: none"> • This week • This month 	<ul style="list-style-type: none"> • This year • The future 	<ul style="list-style-type: none"> • The future
Example business process "I need to do..."	<ul style="list-style-type: none"> • Referral • Assessment • Care delivery 	<ul style="list-style-type: none"> • Tracking and monitoring • Resource allocation and scheduling • Benchmarking and performance • Outcome measurement • Profitability 	<ul style="list-style-type: none"> • Policy definition • Official Information Act requests • Performance monitoring • Budgeting and fund allocation 	<ul style="list-style-type: none"> • Research
Example output "What sort of information do I need?"	<ul style="list-style-type: none"> • Medical event report • Assessment report • Care plan report • Consumer event planner 	<ul style="list-style-type: none"> • KPIs • Trends • Workload management 	<ul style="list-style-type: none"> • KPIs • Trends • Resource allocation • Outcome assessment 	<ul style="list-style-type: none"> • Research papers
Information type	<ul style="list-style-type: none"> • Background consumer information • Assessment results • Medical information 	<ul style="list-style-type: none"> • Assessment summaries • Services provided • Consumer outcomes 	<ul style="list-style-type: none"> • Consumer demographics • Assessment summaries • Population demographics • Population outcome stats 	<ul style="list-style-type: none"> • Consumer demographics • Assessment results • Population demographics • Population outcome stats

// Target Service Characteristics – Data Service (Cont.)

Information Attributes	Use Cases			
	Operations	Management & Performance	Policy & Planning	Research
Currency "How recent is it?"	<ul style="list-style-type: none"> Real time 	<ul style="list-style-type: none"> Point in time 	<ul style="list-style-type: none"> Point in time 	<ul style="list-style-type: none"> Point in time
Report Types "How do I want to view it?"	<ul style="list-style-type: none"> Reports with filters Inside my operational system 	<ul style="list-style-type: none"> Reports with Filters Dashboards Ad-hoc extracts 	<ul style="list-style-type: none"> Ad-hoc extracts Tables Charts 	<ul style="list-style-type: none"> Ad-hoc extracts
Source Information Systems "Where can it come from?"	<ul style="list-style-type: none"> interRAI ARC or Community Provider System Clinical Systems 	<ul style="list-style-type: none"> interRAI ARC or Community Provider System Clinical systems 	<ul style="list-style-type: none"> interRAI Stats NZ Medsafe DHB systems 	<ul style="list-style-type: none"> interRAI Stats NZ Medsafe Other Government Agencies



Section 4: Recommendations

// Recommendations & Horizons

Recommendations have been made across the service to achieve the target state. The recommendations are staged across three horizons. Horizons 1 and 2 seek to optimise the existing assessment capability, and Horizon 3 seeks to expand that capability and extends to multiple assessments. The recommendations are described in more detail on the following pages.

	Horizon 1: Mature Commercial Model	Horizon 2: Optimise Current Assessment Model	Horizon 3: Extend Assessment Capability
Commercial Construct			
Outcomes & Benefits ▷	1 Mature Service Management & Commercial Construct		7 Review Commercial Model
Governance, Roles & Responsibilities ▷	2 Revise Governance & Decision Making		
Delivery & Commercials ▷			
Efficiency & Effectiveness – ASSESSMENT ▷		3 Improve Consumer Access to Assessment	7a Build Culturally Appropriate Assessment Model
		4 Improve Education & Support	7b Build National Assessment Platform
Efficiency & Effectiveness – DATA & INSIGHTS ▷		5 Improve Data Service Confidence & Maturity	8 Extend Data Services
Technology Solutions ▷		6 Address Key Technology Impediments	9 Optimise Technology Support

// Horizon 1: Mature Commercial Model

Outlined below are the key recommendations pertaining to Horizon 1. They focus on establishing a robust commercial foundation for future service development.

1 Mature Service Management & Commercial Construct

The focus to date has been on implementing and establishing the interRAI assessment across NZ. To support future improvements and extensions, the management of the service and the underpinning commercial structure need to be matured.

Recommendations include:

1. Review and formalise service definition, characteristics and expected service levels
2. Review and formalise the allocation of functional responsibilities under a revised commercial construct
3. Establish a formal service management and measurement structure that reflects the revised commercial construct
4. Establish a commercial funding model that allows for cost sharing and scalability across multiple funders

2 Revise Governance & Decision Making

In order to ensure the appropriate management of the next stage of interRAI improvements, the interRAI Board representation must be examined in the context of the recommendations of this review.

Recommendations include:

1. Confirm the expectations and capacity of the interRAI Board - specifically whether it is an advisory or a governance group.
2. Review governance representation to reflect revised commercial construct, service priorities and operational demand
3. Establish specific representation for:
 - Responsiveness to Māori
 - Technology and data governance
 - Service performance and demand
 - Clinical excellence
4. Rebalance interRAI focus specifically on 'assessment'

// Horizon 1: Mature Commercial Model

1 Mature Service Management & Commercial Construct

The current state assessment and further analysis have identified a range of improvements required to mature the service. The recommendations below primarily address the commercial and service delivery themes.

RECOMMENDATIONS		BENEFITS	
Define service and service levels	<ul style="list-style-type: none"> Review and formally define the service that is to be provided and specify appropriate service level agreements (SLAs) and KPIs <ul style="list-style-type: none"> Define core assessment service and characteristics (face to face, modular, localised, scalable etc.) Specify key downstream dependencies of service (case mix funding, audit) Simplify contract structure to optimise the roles and responsibilities and associated accountabilities of the parties involved, noting the subsequent recommendations 	<ul style="list-style-type: none"> Provides clarity of service and expectations to all parties 	
Review the allocation of functional responsibilities/ the operating model	<p>A series of capabilities has been identified that need to be reaffirmed, enhanced and/or assigned to different parties in order to clarify and optimise the service model</p> <ul style="list-style-type: none"> Reaffirm existing capabilities and responsibilities: <ul style="list-style-type: none"> Service strategy, governance Assessment tool definition and procurement Service delivery management Confirm new or enhanced capabilities and the responsibility for developing them: <ul style="list-style-type: none"> Stakeholder and consumer engagement Investment management 	<ul style="list-style-type: none"> Commercial management, Service level definition, Performance management Change Management Data and Technology Strategy and architecture Analytics Delivery Consider shifting the locations of certain functions: <ul style="list-style-type: none"> Technology procurement, and adopting a more cohesive outsourced ICT model Training Delivery Analytics Delivery 	<ul style="list-style-type: none"> Introduces capabilities that are required for the service Clarifies capabilities that are currently provided but not specified/funded
Improve service measurement	<ul style="list-style-type: none"> Implement KPI's that focus on service effectiveness, such as cost to train, cost to serve, and a net promoter score Implement ticketing system and capability for all training, support and ICT helpdesk requests to drive continual improvement 	<ul style="list-style-type: none"> Strong measurement framework will assist in driving service improvement initiatives 	
Enable cost sharing and scalable cost model	<ul style="list-style-type: none"> Develop service and cost model that allows for cost sharing between key funders across all service components, noting that the service currently has multiple fund streams active or planned 	<ul style="list-style-type: none"> Allows for costs to be fairly shared across funders, realising efficiencies of scale and overall less cost to individual agencies 	

// Horizon 1: Mature Commercial Model

2 Revise Governance & Decision Making

The current state assessment and further analysis has identified a range of improvements required to mature the service. The recommendations below primarily address the governance and decision making framework, and key relationship considerations.

RECOMMENDATIONS		BENEFITS
Review governance focus and representation	<ul style="list-style-type: none"> Confirm the expectations and capacity of the interRAI Board - specifically whether it is an advisory or a governance group. Closer alignment of decision making to demand is required, at operational and governance levels Closer alignment to ARC and HCSS governance and management groups to promote strategic alignment More structural feedback mechanisms of service performance Establish specific governance focus on: <ul style="list-style-type: none"> Māori responsiveness Technology and data governance Service performance and demand Clinical excellence 	<ul style="list-style-type: none"> Improved connection to customer/ consumer demand Improved ability to adjust the service
Establish a measurement and improvement framework	<ul style="list-style-type: none"> Establish over-arching system measures that guide investment and service direction against health outcomes Build an improvement cycle to guide future development, with appropriate funding established 	<ul style="list-style-type: none"> Improved visibility of assessment service performance and trends Improvement roadmap based on demand and adequately funded to meet strategic demand
Review interRAI International relationship	<ul style="list-style-type: none"> Review local requirements regarding interRAI International requirements – NZ is an advanced user at a whole of system level and may require future localisations to be more responsive to NZ needs 	<ul style="list-style-type: none"> Aimed to deliver faster and more responsive assessment localisation to NZ
Reorientate emphasis on interRAI brand	<ul style="list-style-type: none"> Improve the reputation and understanding of interRAI in the assessor and care community through more engagement and de-branding the assessment step of the needs assessment process 	<ul style="list-style-type: none"> Improved perception and reputation of assessment tool in assessor community

// Horizon 2: Optimise Current Assessment Model

Outlined below are the key recommendations pertaining to Horizon 2. The focus of these recommendations is on seeking improvement within the existing assessment service, increasing the value and improving the experience of the service.

3 Improve Consumer Access to Assessment

An agreed objective for improving the interRAI service design was to over-achieve equitable access to assessments and information. The interventions below have been identified and captured through our stakeholder engagement, although most are likely outside the agreed scope of this review.

Recommendations include:

1. Raise awareness of the availability of care services amongst target consumers
2. Proactively target priority consumer groups to raise awareness and ensure ready access to assessments
3. Reduce impediments and review thresholds/regional variations for assessment
4. Extend who can refer or undertake assessments

4 Improve Education & Support

There are two major approaches to improving the delivery of training:

- a. Modernising and rightsizing the existing training model
- b. Devolving training delivery to providers (providers have accredited trainers on staff).

These may be best explored sequentially and undertaken in line with a phased approach to optimising the overall service model.

Recommendations include:

1. Improve training relevance
2. Modernise training model
3. Improve access to information
4. Decentralise training delivery
5. Assess training landscape to ensure workforce needs are covered across sector training capabilities

5 Improve Data Service Confidence & Maturity

There is opportunity to extend the value of the current data and analytics capability to users. The recommendations suggest building more 'pre-packaged' analytics products that can be consumed by clinical users. This represents a shift from the current model of enabling users to develop their own analytics.

Recommendations include:

1. Improve data governance and strategy
2. Build strategic capability – required to support the sector direction with respect to more interoperable/integrated data
3. Develop analytics products that are 'pre-made' for specific users/purposes
4. Publish data characteristics to accurately inform the use of data by external users
5. Improve data access – particularly for accredited institutional users
6. Extend data quality standards

6 Address Key Technology Impediments

There are opportunities to improve the way the current technology supports the assessment delivery as part of Horizon 2 – improvements to the current assessment model that will address immediate pain points. Note that Recommendation 9 includes recommendations for a future platform that may render these unnecessary, dependent on time horizons.

Recommendations include:

1. Mature Technology Strategy & delivery model through establishing technology and architecture capability and leading a strategy aligned to broader sector direction (e.g. national Health Information Platform (nHIP)) and technology trends
2. Immediate remediation – platform (e.g. review security model)
3. Immediate remediation – data flow (e.g. simple import/export)
4. Future considerations – (e.g. care plan activities, analytics/operational reporting)

// Horizon 2: Optimise Current Assessment Model

3 Improve Consumer Access to Assessment

An agreed objective for improving the interRAI service design was to over-achieve equitable access to assessments and information. The interventions below have been identified through our stakeholder engagement, although most are outside the agreed scope of this review.

RECOMMENDATIONS	
<p>Raise awareness of care availability</p>	<ul style="list-style-type: none"> In some districts there was a perception that there was a need to raise awareness amongst both consumers and primary care providers of the eligibility for the interRAI assessment and care and support services. Through targeted campaigns and/or communications, the Ministry can increase awareness of the assessment/available care provision
<p>Target priority consumer groups</p>	<ul style="list-style-type: none"> In order to address inequity amongst key segments of consumers, the Ministry (and/or through the DHBs) should consider identifying and targeting key consumer groups in order to: <ul style="list-style-type: none"> Measure existing access and the consequential effectiveness of any interventions Identify appropriate channels to raise both awareness of and access to assessments/care provision This targeting can be undertaken directly (through established mechanisms such as the Health Promotion Agency) or indirectly (through support agencies, sector/regional bodies or support structures such as marae groups) Targeting could make use of wider information sources and analytics
<p>Reduce threshold for assessment</p>	<ul style="list-style-type: none"> As local policies, criteria and non-health related prerequisites (e.g. Community Services Card) may be barriers to access, the Ministry should provide guidelines as to the minimum thresholds for consumers that should apply regardless of region
<p>Extend who can refer or undertake assessments</p>	<p>There is variability in the availability of practitioners in remote/rural areas, which is a barrier to access for consumers. To address this, the eligibility of the roles/people who are able to refer and perhaps the types of referrals they are able to make could be expanded by:</p> <ul style="list-style-type: none"> Enabling individual consumers/whānau to evaluate eligibility and/or self-refer by: <ul style="list-style-type: none"> Providing a shorter assessment that whānau and/or individuals can complete to get a (non-binding) indication of their potential eligibility or level of need (such as is available for Ministry of Social Development benefit eligibility) Coupling this self-assessment to existing DHB self-referral processes to make self-referrals more relevant Extending the eligibility of persons able to undertake assessments, including: <ul style="list-style-type: none"> Enabling wider care practitioners (e.g. social support, other registered health practitioners) to refer to services or undertake certain assessments

// Horizon 2: Optimise Current Assessment Model

4 Improve Education & Support

There are two major approaches to improving the delivery of training – modernising and rightsizing the existing training model, and devolving training delivery to providers (whereby providers have accredited trainers on staff). These may be best explored sequentially and undertaken in line with a phased approach to optimising the overall service model.

RECOMMENDATIONS		BENEFITS
Improve training relevance	<ul style="list-style-type: none"> Expand training accessibility to provide appropriate modules to a broader range of consumers (e.g. care providers who use the results of interRAI assessments) 	<ul style="list-style-type: none"> Broader understanding of interRAI in the care community Improved ability to use interRAI information as part of care provision
Modernise training model	<ul style="list-style-type: none"> Focus training on continual learning, with less emphasis and focus on audit/certification Adopt a standards based training approach with flexibility over delivery Ensure that all trainers have adequate and current capabilities to teach culturally safe practices and align to common government wide models Track reasons for learner dropout 	<ul style="list-style-type: none"> Training would be able to be delivered in line with current best practice models Improved responsiveness to learners' needs
Improve access to information	<ul style="list-style-type: none"> Develop and improve access to information, policies and procedures Promote examples of best practice and develop communities of practice to share approaches 	<ul style="list-style-type: none"> Improved access to information outside training courses
Decentralise training delivery	<ul style="list-style-type: none"> Consider a more decentralised training model with more emphasis on providers delivering training, supported and enabled by more online and self-guided learning options 	<ul style="list-style-type: none"> Improving ability for providers to deliver training as required Decreased lag between training need and training completion
Assess training pipeline	<ul style="list-style-type: none"> Conduct a detailed review of the skills/competencies required to deliver assessments (including interRAI) and determine how these competencies are being delivered with regards to assessments of older people. This should take a broad view of the required social and clinical competencies to ensure the aged care assessment workforce has access to the training required 	<ul style="list-style-type: none"> This would help ensure that assessment skills are being delivered This would build assurance that cultural and other competencies are being delivered and maintained

// Horizon 2: Optimise Current Assessment Model

5 Improve Data Service Confidence & Maturity

The current data and analytics capability is not optimised to deliver value to users. The recommendations below are based on building more analytics products that can be consumed by clinical users. This represents a shift from the current model of enabling users to develop their own analytics.

RECOMMENDATIONS		BENEFITS
Improve data governance and strategy	<ul style="list-style-type: none"> Implement a specific focus on data governance and ensure data ownership is clearly defined Align data service to nHIP strategic direction Develop a data strategy that identifies data use cases, and an underpinning architecture that enables use cases to be provisioned Develop data quality measures and capability to ensure data integrity 	<ul style="list-style-type: none"> Clearer strategic alignment to drive investment
Build strategic capability	<ul style="list-style-type: none"> The overall direction of travel for the health sector is a more interoperable/integrated data landscape. To support future data integration services, specific expertise and capabilities will be required. The implications of nHIP and other sector-wide initiatives need to be understood further 	<ul style="list-style-type: none"> Closer alignment to future health information landscape
Develop analytics products	<ul style="list-style-type: none"> Develop capability to deliver analytics products and insights based on consumer needs Prioritise development of packaged analytics products to support operational users <ul style="list-style-type: none"> Operationalise benchmark reporting and improve accessibility for consumers Develop capability to produce analytics/insights centrally at a regular cadence Develop communities of practice around downstream data use to share and promote best practices 	<ul style="list-style-type: none"> More value derived from existing and past investment in data
Publish data characteristics	<ul style="list-style-type: none"> Improve the information about interRAI data to support interpretation <ul style="list-style-type: none"> Develop consistency and visibility of reassessment policies Improve data information and specifications, lineage etc Improve data characterisation information to support comparisons, and improve guidance for interpretation and use 	<ul style="list-style-type: none"> Easier interpretation and understanding of data to support analytical use
Improve data access	<ul style="list-style-type: none"> Review data access policies to improve access for accredited institutional users 	<ul style="list-style-type: none"> Faster and more relevant access for advanced data users
Extend data quality standards	<ul style="list-style-type: none"> Identify, expand and define data quality standards <ul style="list-style-type: none"> Implement/Expand data quality measures Improve data validation Introduce data pulls from nominated data sources to pre-populate information (as a data quality control) 	

// Horizon 2: Optimise Current Assessment Model

6 Address Key Technology Impediments

Technology has been identified as an impediment to assessment delivery. The recommendations below are baseline improvements that would address immediate pain points. Note that recommendation 9 includes recommendations for a future platform that may render these unnecessary, dependent on time horizons.

RECOMMENDATIONS		BENEFITS
Mature Technology Strategy and delivery model	<ul style="list-style-type: none"> Establish technology and architecture capability to lead a strategy aligned to broader sector direction (e.g. nHIP) and technology trends In conjunction with users, adopt an incremental approach to the delivery of improvements and establish a more frequent update and release cycle to leverage simplified hosting model Manage ICT spend as a total package, versus the current fragmented model Review current costs to drive efficiencies in technology spend 	<ul style="list-style-type: none"> Ensures that technology strategy and architecture is aligned to drive desired improvements
Immediate remediation – platform	<p>In conjunction with users/governance bodies:</p> <ul style="list-style-type: none"> Review security/access model to enable authorised users to see appropriate information. It appears that integration/interoperability is currently being viewed as a solution to resolve inherent security limitations <p>Dependent upon Momentum contract horizon/cost, undertake interim improvements, including:</p> <ul style="list-style-type: none"> Consider enabling assessments (or reports) to be embedded in other applications via web portals/webparts Reorient interface toward optimising the user experience, improve how the assessment has been localised to improve the user experience, and confirm responsibilities for user experience implementations Improve mobile/offline performance and experience 	<ul style="list-style-type: none"> Reviewing security model will likely resolve some issues around data access Improvements intended to improve the user experience, and reduce the time taken to enter assessment information
Immediate remediation – data flow	<ul style="list-style-type: none"> Enable assessment platform to perform import/extraction/consumption to support open information flow into and from the assessment Enable care plan platforms to easily consume interRAI decisions/contextual information Pre-populate assessment data from trusted sources Reduce duplication of data entry, and use information and context already available to populate assessments Enable more relevant use of broader contextual information captured in assessments, particularly in notes fields 	<ul style="list-style-type: none"> Improvements intended to reduce friction between systems, reducing duplication and data handling time
Future considerations	<p>The below considerations are assumed only if the current platform is expected to be retained for an extended period:</p> <ul style="list-style-type: none"> Review requirements for care plan capabilities – this has patchy demand and is reportedly being abandoned by users. Care planning has a different set of users and requirements, and higher access needs, which may not be best suited in a single platform. If care planning is to be provided as part of the package, it should be delivered to a comparable market standard Develop more operational insight and analytics capability as part of platform package Consider an as-a-service model for software provision (SaaS/PaaS) to reduce complexity of software and host management Consider consumer facing access to allow for self-assessment, assessment completion or review. 	<ul style="list-style-type: none"> Steps towards a modernised and fit for purpose technology platform that can support target technology features

// Horizon 3: Extend Assessment Capabilities

Outlined below are the key recommendations pertaining to Horizon 3. These recommendations should be considered together; however, consideration could be given to Recommendation 7a separately and ahead of Horizon 3.

<p>7 Review Commercial Model</p>	<p>7a Build Culturally Appropriate Assessment Model</p>	<p>7b Build National Assessment Platform</p>	<p>8 Extend Data Services</p>	<p>9 Optimise Technology Support</p>
<p>To achieve the recommendations contained in Horizon 3, a further review of the commercial and governance models is required to accommodate the scope and focus of the expanded service.</p>	<p>To address the broader issues that exist in the current assessment service delivery, consideration should be given to designing, developing and promoting nationally a 'model' assessment approach that can be used in training assessors and is responsive to Māori and culturally appropriate.</p>	<p>There is a significant opportunity to expand the service model to accommodate a future national assessment capability. This would be based on providing a common capability that could support a range of assessments across instrument types or health portfolios.</p>	<p>As the assessment platform grows and the use of the associated analytics increases, there will be a need to further extend the products and services supporting this.</p> <p>There is an opportunity to extend and tailor data services to support identified use cases, ranging from operational to advanced research.</p>	<p>Adopting the recommendations in Horizon 3 will necessitate new technology capabilities. It may be possible to find these capabilities in the same provider or may require multiple service and support providers.</p>
<p>Recommendations include:</p> <ol style="list-style-type: none"> 1. Review and adapt the commercial and governance model to support required initiatives in Horizon 3. Further information on potential models is contained in the detailed recommendations 	<p>Recommendations include:</p> <ol style="list-style-type: none"> 1. Develop and promote a common assessment model/ approach that: <ol style="list-style-type: none"> a. Is culturally appropriate and responsive to Māori needs b. Incorporates all necessary material for DHBs to implement it effectively c. Is not siloed within assessment providers 	<p>Recommendations include:</p> <ol style="list-style-type: none"> 1. Define, scope and evaluate further the required capabilities for and benefits of a national scalable assessment model 2. Establish and extend the assessment platform with appropriate support nationally regions 	<p>Recommendations include:</p> <ol style="list-style-type: none"> 1. Further understand and develop relevant analytics and reporting products to suit operational, management and performance, and policy/research user segments 2. Continually evolve capability and capacity in line with demand 3. Regularly review understanding of demand through user forums 	<p>Recommendations include:</p> <ol style="list-style-type: none"> 1. Define and scope the required information and functional capabilities required to support 7a and 7b with a specific focus on sharing of information, and extensibility to multiple assessments 2. Evaluate available market solutions for providing these capabilities 3. Develop detailed business case for implementation

// Horizon 3: Extend Assessment Capability

7 Review Commercial Model

The overall assessment capability across the sector could be bolstered through the establishment of an assessment service that provides a common capability across numerous portfolios or assessment owners.

RECOMMENDATION

Develop future national assessment capabilities

There is a significant opportunity to expand the service model to accommodate a future national assessment capability. This would be based on providing a common capability that could support a range of assessments across instrument types or health portfolios.

The proposed functional model (see pg. 86) defines assessment owners as distinct from service capability owners (both with service ownership roles). This means there could be many assessment owners using common capabilities.

- The Assessment Framework and Tools Owner assumes responsibilities for defining the specific assessment standards, whereas the capability owner assumes responsibilities for delivery, quality and consistency
- This model is an extension of the model proposed for Horizon 1, and would require a full review of the commercial constructs surrounding the expanded service
- Under a national assessment capability model, there may still be multiple technology platforms that are standardised and interoperable. For example, the model makes allowance for scenarios where certain assessments may be best delivered through a patient management system and reported back via a defined standard

BENEFITS

- Creating a national capability is expected to improve the maturity of all in scope assessments
- Creating a specialised function allows for focused development of the capability, relieving portfolio owners of this additional responsibility
- Allows for benefits to be shared across multiple portfolio owners, lifting the capabilities of the sector



// Horizon 3: Extend Assessment Capability

7^a Build Culturally Appropriate Assessment Model

The development of a model assessment approach, agnostic to the specific tool, would help to address the current inconsistencies in assessment delivery. It is anticipated that a model assessment could be applied to multiple tools, allowing for a common practice to be propagated.

RECOMMENDATIONS		BENEFITS
<p>Develop and promote an assessment model/ methodology that is responsive to Māori</p>	<ul style="list-style-type: none"> To address the inequity that exists in the current assessment service delivery, the Ministry should consider designing, developing and promoting nationally a 'model' assessment approach that can be used in training potential assessors The proposed target assessment service should be used as a basis, but further validated and elaborated The model assessment should: <ul style="list-style-type: none"> Ensure the assessment questions and the way in which the assessment is conducted (from referral to service provision) are respectful of kaupapa Māori and give effect to the Treaty Establish capability/experience guidelines for assessors' awareness and capability to understand their consumers' contexts Build assessor capability, competence and confidence in recognising and responding appropriately to cultural differences Appropriately engage whānau in the assessment conversations Ensure the assessment conversation is orientated to the consumer and they feel empowered – they are in control – not that the assessment is 'done to them' The model should incorporate all necessary material for DHBs to implement it effectively – including assessor capabilities, interaction models, cultural awareness/context information, scenarios, etc This model should not be siloed within assessment providers (i.e. specifically trained sub-teams). The premise is that an assessment approach that is responsive to Māori needs is beneficial to all It is assumed that further consultation or co-design would be undertaken to develop the details and specific characteristics of a model of this nature 	<ul style="list-style-type: none"> Greater equity in assessment (delivery and access) Improved response to questions as they are delivered in a culturally appropriate way to drive a relevant conversation Improved perception of the service which can in turn promote access
<p>Optimise the interRAI service model</p>	<p>When defining the model assessment, consideration should be given to:</p> <ul style="list-style-type: none"> Broadening the model so that assessment and service delivery are conducted by the same provider to improve the consumer experience and continuity of service Funding levels for assessment to reflect the time taken to conduct an assessment Resolving the lack of clarity over reassessment requirements in ARC (between contract and audit requirements) to remove unnecessary rework and duplication Promoting consistency and best practice clinical pathways based on assessment outcomes Promoting standardisation or consistency of reassessment guidelines 	<ul style="list-style-type: none"> Addressing these underpinning factors in the current delivery model would improve the operational effectiveness of the assessment and support service delivery

// Horizon 3: Extend Assessment Capability

7^b Build National Assessment Platform

There is an opportunity to develop a national assessment platform, which can host and provide multiple assessments (interRAI or other) for a variety of assessment owners. This recommendation is focused on the organisational capabilities required to manage a platform and service offering of this nature.

RECOMMENDATION

Nationally scalable assessment capability

- A common assessment capability has been identified as desirable across the sector, due to the number of assessments supported across portfolios. The current rollout of the interRAI acute care assessments to ACC indicates the use cases for this model
- In order to best support this direction, it is recommended that a nationally scalable assessment capability be gradually introduced. This would provide common capabilities that different assessments could be provided through. It would require a common technology platform and capability
- The adoption of this model would separate assessment owners (e.g. specific health portfolios) from a platform/capability owner. This would allow for multiple assessment owners to have specific assessments provided in a common manner. It should be noted that this may not be limited to interRAI assessments

BENEFITS

- Expandable capabilities that can provide consistency across multiple business lines
- Potential for cost efficiencies
- Potential for improved value and derived benefits from enhanced and consolidated capabilities

// Horizon 3: Extend Assessment Capability

8 Extend Data Services

These recommendations are based on the recognition of different data use cases, ranging from operational to advanced research. Each of the use cases below has a discrete set of recommendations that would enhance the value derived by that user set. It is expected that each of these use cases would largely be fulfilled by the capabilities established in the foundational data and analytics recommendations.

RECOMMENDATIONS		BENEFITS
Operations	<ul style="list-style-type: none"> • Improve access to assessments across care teams (primary care, support) • Enable assessment information to be readily exported to care plans • Information pull from patient management systems to interRAI. Information pull from interRAI to patient management systems • Develop relevant operational reporting capabilities that can be filtered or adapted by users 	<ul style="list-style-type: none"> • The benefits of these changes primarily accrue to the user groups. All groups are expected to derive more value from the information being presented in different and more relevant ways
Management and performance	<ul style="list-style-type: none"> • Improve maturity of analytics capabilities <ul style="list-style-type: none"> • Introduce and further develop benchmarking capabilities • Consider usage of current data visualisation tool – it appears to be a high effort model that does not meet core use cases • Refine dashboard use cases in conjunction with technology changes to support identified use cases 	
Policy and planning research	<ul style="list-style-type: none"> • Streamline ability to conduct ad hoc (self-service) extracts for institutional users • Improve access and timeliness of access to data repository/analytics platform, for example by: <ul style="list-style-type: none"> • Enabling analytics carried out within managed platform • Adding ability to combine interRAI data with other information • Establish health outcome measurement capabilities and report regularly alongside service performance <ul style="list-style-type: none"> • Measure effectiveness of healthcare by establishing metrics covering support delivery vs plan and interventions vs needs 	

// Horizon 3: Extend Assessment Capability

9 Optimise Technology Support

Underpinning a national assessment capability, a national scalable technology capability would be required.

RECOMMENDATION

Define requirements for a nationally scalable technology platform

Adopting an approach to assessment such as that described in 7 and 7b would necessitate different technology capability.

A national platform is proposed to support this capability as:

- The ability for all assessment providers to have a standalone platform may be limited (particularly in ARC/community health settings)
- When multiple assessments are enabled, economies of scale become achievable
- Nationally data is a core attribute of the current service, and adding more assessments would richen the utility of the data
- The platform is used by a range of organisations including DHBs – all with significantly varying ICT capabilities

This platform is envisaged to be flexible to allow for:

- Multiple assessments to be provided
- Flexibility in location of specific platform layers
- The user interface to be configurable by respective users
- Assessments to be conducted in other platform and reported back to the primary platform where appropriate

The technology should:

- A shift toward a platform + assessment concept
- Reflect changing models of care and multiple parties (and organisations) involved in people's support and their need for information
- Leverage broader innovations such as sensor and home network information as input sources
- Support wider nHIP and digital health strategy principles

BENEFITS

- Common technology capability expected to be fit for purpose across multiple assessment lines
- Modern technology should have appropriate costs to operate, and scalable foundations that allow for growth and flexibility

Appendix 1: Stakeholder Engagement

// Organisations Engaged

Through the course of this review, over 75 stakeholders across the below organisations were engaged to provide feedback and insight:

Care Providers	Central Government	DHBs/Needs Assessment and Service Coordination service (NASC)	interRAI Service Establishment	Universities	Other
<ul style="list-style-type: none"> • Nurse Maude • Te Kohao Health • Welcome Bay: Whaioranga Trust • Access Community Health • CHT Healthcare Trust • Nelson Bays Primary Health • Bupa • Summerset 	<ul style="list-style-type: none"> • Ministry of Health <ul style="list-style-type: none"> • Health of Older People • Emerging Health • Allied Health • Office of the Chief Nurse • HealthCERT • Data and Digital • ACC 	<ul style="list-style-type: none"> • Auckland DHB: NASC • Waitematā DHB: NASC • Waikato DHB: NASC • Bay of Plenty DHB: NASC • Lakes DHB: Strategy • MidCentral DHB: Health of Older People • Hutt Valley and Capital & Coast DHBs: NASC • Nelson Marlborough Health: NASC • Canterbury and West Coast DHBs: Health of Older People • Southern DHB: NASC 	<ul style="list-style-type: none"> • interRAI Board • Momentum Healthware • TAS: Health of Older People • TAS: interRAI NZ 	<ul style="list-style-type: none"> • University of Otago • Massey University • University of Auckland 	<ul style="list-style-type: none"> • Home and Community Health Association • NZ Aged Care Association • Age Concern • VCare

The engagement approach for this review was to conduct a targeted and focused series of engagements to inform the service design. It is anticipated that a further series of engagement and consultation on the recommendations raised through this review will follow.

// Engagement Phases & Activities

The engagement phases, the activities undertaken, and the purpose of engagement are shown below. Stakeholder groups engaged in each phase are also shown. Note that some stakeholders were engaged with multiple times, dependent on the project phase.

Engagement Phase	Activities & Purpose	Participants
Current state assessment	Interviews with selected stakeholders to understand current state, pain points and opportunities in existing service	<ul style="list-style-type: none"> • MOH • TAS • NASC representatives • ARC representatives • Data users (university, research)
Service purpose and scope workshop	Workshop to clarify the scope of and objectives for the service design	<ul style="list-style-type: none"> • MOH • interRAI Board delegates • DHB representatives • TAS
Demand workshops and interviews	Interviews and workshops with selected stakeholders to develop the demand characteristics for consumers, care providers, assessors and support providers	<ul style="list-style-type: none"> • Māori Health Providers • Community health providers • Primary care representatives • Elder persons/representatives • ARC representatives • Research and data users
Service delivery design interviews	Interviews focused on understanding the requirements of service users (providers, data users) that would shape the way the demand was met	<ul style="list-style-type: none"> • NZACA • Needs Assessment Service Co-ordination Association (NASCA) • ARC representatives • Research and data users (e.g. Health of Older People planning functions)
Design refinement	Refinement and validation of the service design with small to medium enterprises	<ul style="list-style-type: none"> • NZACA • NASCA • ARC representatives • Research and data users (e.g. Health of Older People planning functions)

Note that the project was guided by a steering group, and reported to both the interRAI Sub Board and Board through this review.
interRAI Service Review

Appendix 2: Target Service Design – Roles and Responsibilities

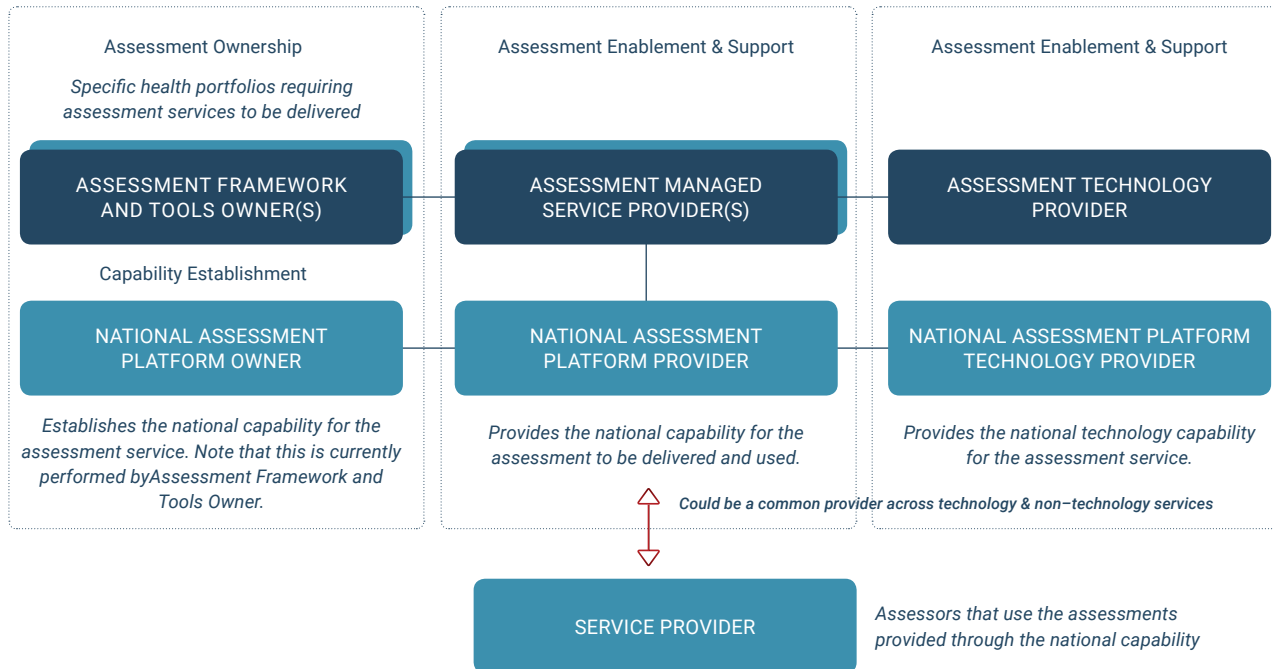
This section outlines the roles and responsibilities required to be defined to support the implementation of the recommendations.

// Target Service Design - Roles and Responsibilities

The full target service design proposes a national assessment platform capability that can support multiple assessments and assessment owners across multiple consumer groups. The recommendations in this report are phased across a series of time horizons. The diagram below shows how the underlying roles and responsibilities associated with service ownership, management and provision could change over time.

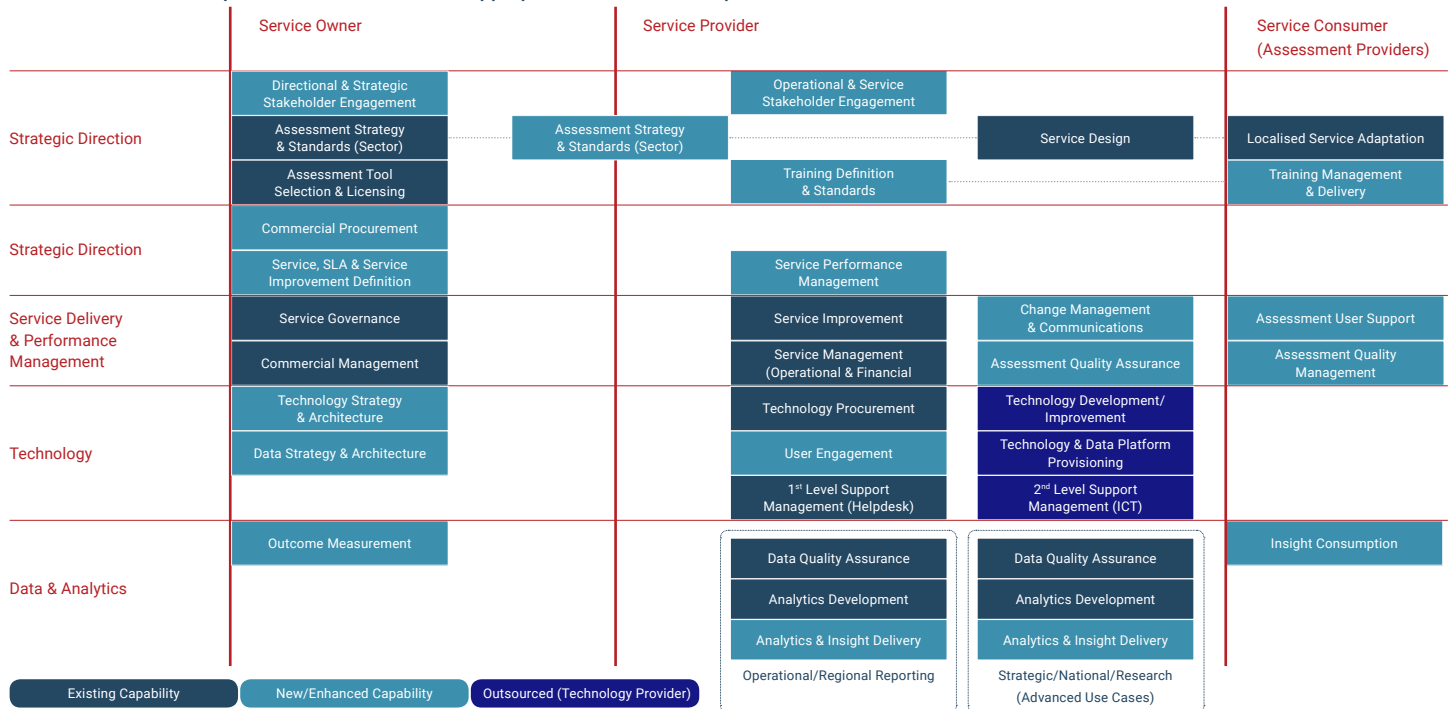
HORIZONS 1 & 2

HORIZON 3



// Horizons 1 & 2 – Commercial Model

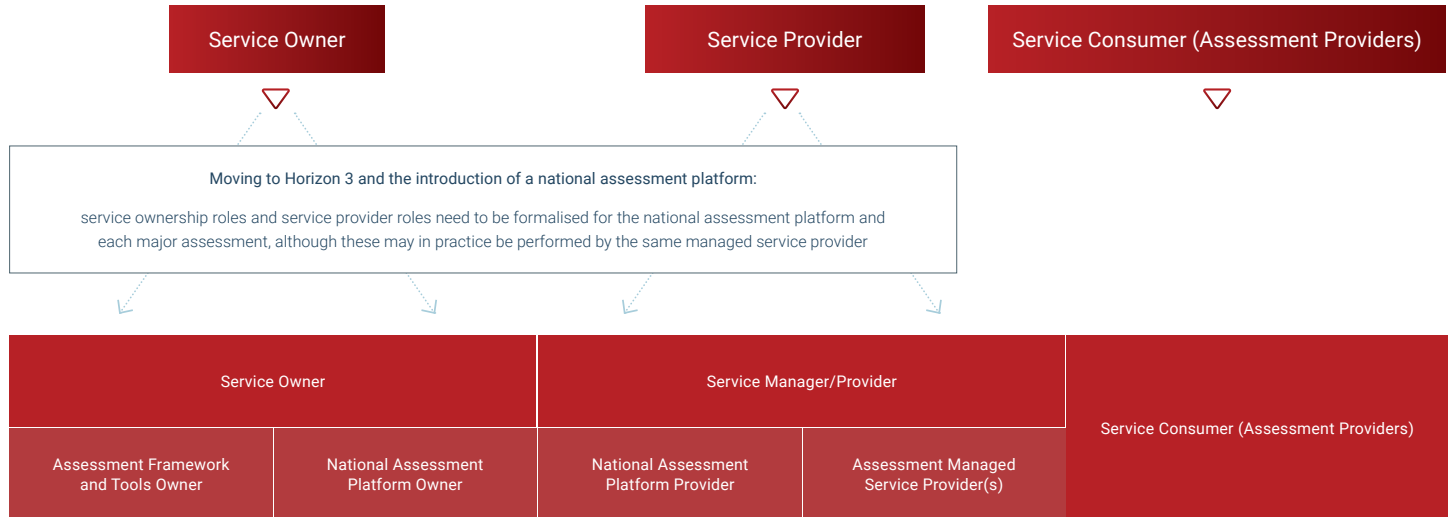
Outlined below is a possible allocation of functional responsibilities across the service owners, providers and consumers, supporting Horizons 1 and 2. This is a draft model to promote discussion on the appropriate allocation of responsibilities.



Existing Capability New/Enhanced Capability Outsourced (Technology Provider)

// The Shift

The responsibilities required under a multiple assessment ownership model (Horizon 3) are different from those under single assessment model (Horizons 1 and 2). The diagram below shows how those responsibilities shift between the two models, to introduce a distinction between assessment and platform ownership, and a distinction between platform provision and assessment provision.



// Horizon 3 – Commercial Model

Outlined below is a possible allocation of functional responsibilities across the service owners, providers and consumers, supporting Horizon 3. This is a draft model to promote discussion on the appropriate allocation of responsibilities.

	Service Owner		Service Manager/Provider		Service Consumer (Assessment Providers)
	Assessment Framework and Tools Owner	National Assessment Platform Owner	National Assessment Platform Provider	Assessment Managed Service Provider(s)	
Service Strategy & Improvement	Directional & Strategic Stakeholder Engagement	Assessment Product/Service Line Management	Roadmap & Investment Management	Operational & Service Stakeholder Engagement	Localised Service Adaptation
	Assessment Strategy & Standards (Portfolio)	Assessment Catalogue Development		Service Design	Training Management & Delivery
	Assessment Tool Selection & Licensing			Training Definition & Standards	
Commercial/ Service Procurement	Commercial Procurement				
	Service SLA & Service Improvement Definition				
Service Delivery & Performance Management	●	Service Governance	Service Improvement	Service Performance Management	Assessment User Support
		Commercial Management	Service Management (Operational & Financial)	Change Management & Communications	Assessment Quality Management
Technology		Technology Strategy & Architecture	Technology Standards	Technology Standards	Technology Procurement
		Data Strategy & Architecture	Technology Sub-licensing	Technology Sub-licensing	Technology Development/Improvement
			User Engagement	User Engagement	2nd Level Support Management (ICT)
			1st Level Support Management (Helpdesk)	1st Level Support Management (Helpdesk)	API Implementation
Data & Analytics	Data Quality Assurance			Data Quality Assurance	Insight Consumption
	Analytics Development			Analytics Development	Analytics Development
	Analytics & Insight Delivery			Analytics & Insight Delivery	Analytics & Insight Delivery
	Strategic/National/Research (Advanced Use Cases)			Operational/Regional Reporting	Operational/Regional Reporting
	Outcome Measurement				

Existing or New Capability

Outsourced (Technology Provider)

Appendix 3: Analysis of Specific Issues

This section presents material relating to specific issues identified during the service design.

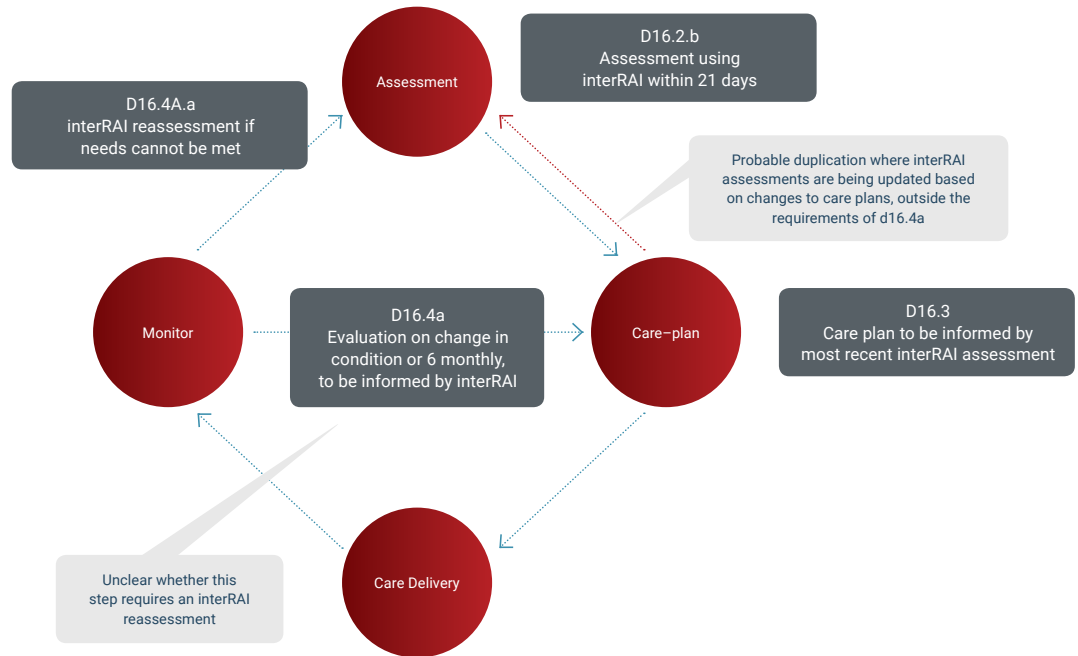
// Reassessment Cycle – ARC Contract

The review identified that there may be a lack of clarity among ARC providers about the requirements to update an interRAI assessment after the initial assessment has been conducted on entry.

This diagram shows the cycle of care, with relevant ARC contract clauses. The wording of D16.4.a, which drives evaluations, is sufficiently vague that it could be interpreted in multiple ways.

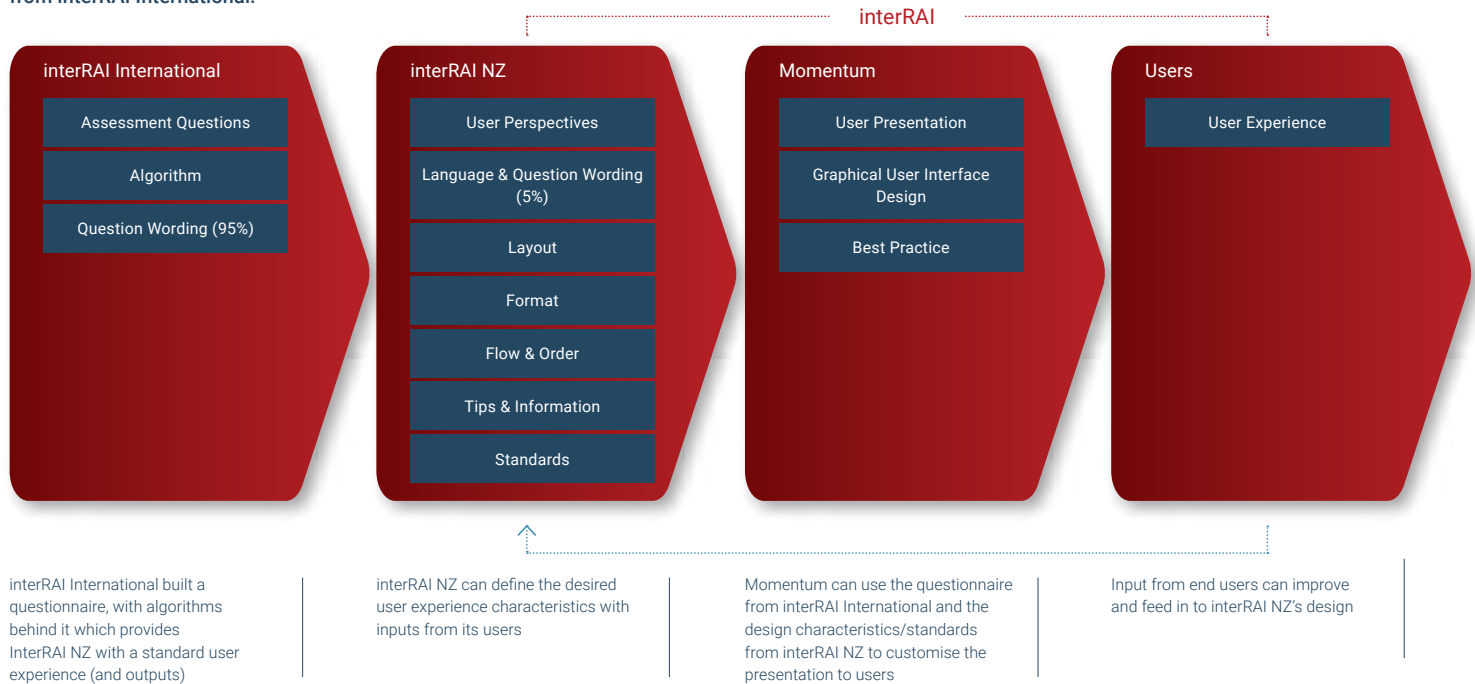
One interpretation is that the interRAI assessment must be updated every time there is an adjustment to a care plan, so that the two artefacts are aligned at all times.

This cycle forms a component of the compliance audit framework for ARC facilities. It is probable that the interpretation of this section of the contracts, and the resultant audit focus, is driving activity not originally intended.

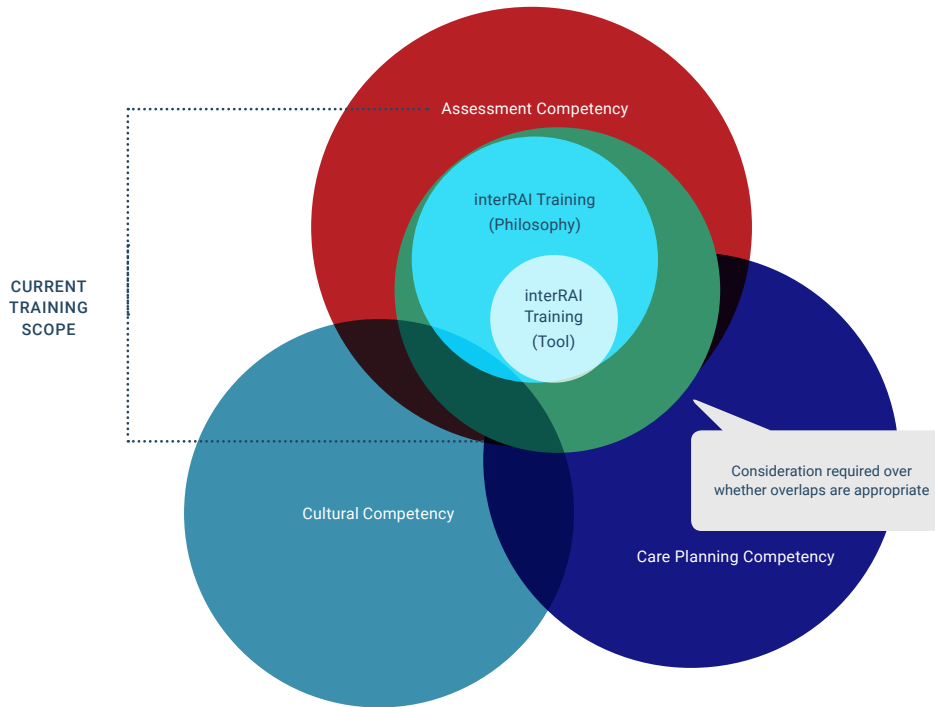


// User Experience Responsibilities

The key relative responsibilities of the organisations involved in the interRAI user experience are represented below. Note that the responsibilities associated with interRAI NZ are currently not being fulfilled effectively. These responsibilities appear to be perceived as constrained by the 5% variation expectation from interRAI International.



// Training Scope



The current training package appears to have evolved to suit the needs of the sector over time, and in some instances may be considered an assessment refresher course or standardisation training, in addition to training in the interRAI tool and philosophy.

In this regard, the current training package may be delivering a scope larger than what is strictly necessary to conduct an interRAI assessment. However, this may be necessary from a broader sector view.

The Recommendation 4: Improve Education & Support - Assess training pipeline relates to the model shown here, to ensure that the necessary skills are being delivered through appropriate channels across all appropriate standard setters.

// ICT Responsibilities

The responsibilities for ICT are split across TAS, Momentum and DHBs. The diagram shows the high-level activities performed by each agency (this is not a complete representation)

In particular, DHBs are responsible for the policies relating to how the Momentum software is accessed and used within their regions. This means that each DHB has discretion over access policies, update timing, devices etc.

The application of user access occurs at a DHB level. It was observed that there are notable inconsistencies between regions, which may be contributing to the data access limitations currently reported. The recommended review of the access/security model should focus on this distributed responsibility set and consider whether it is fit for purpose.

This is important because it is likely that many of the data access issues currently being experienced may be resolved through a refresh of access rules, noting that the current policy set has been in place since the solution inception more than 10 years ago.

