OC240620

25 June 2024

Tēnā koe

I refer to your email dated 6 June 2024, requesting the following information under the Official Information Act 1982 (the Act):

> *"Your agency's digital (IT or ICT) strategy.*
> *Your agency's technology strategy (if separate from your digital strategy).*
> *Your agency's data or information strategy (if separate from your digital strategy).*
> *A documented report that demonstrates progress on your digital/technology/data strategy implementation."*

Te Manatū Waka the Ministry of Transport (the Ministry) has an IT strategy and I am releasing this to you in full. Please find attached *Te Rautaki Matihiko IT Strategy 2023-2038*.

Regarding the other parts of your request, I am refusing these under Section 18(e) of the Act - the documents requested do not exist.

The Ministry is currently developing a high-level IT roadmap (based on the IT Strategy) and this is planned for completion later this year.

You have the right to seek an investigation and review of this response by the Ombudsman, in accordance with section 28(3) of the Act. The relevant details can be found on the Ombudsman's website www.ombudsman.parliament.nz

The Ministry publishes our Official Information Act responses and the information contained in our reply to you may be published on the Ministry website. Before publishing we will remove any personal or identifiable information.

Nāku noa, nā

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Te Rautaki Matihiko | IT Strategy

2023-2028

19 Apr 2023

Executive Summary

This strategy is a companion document to the strategic documents of the Ministry[1]. From those sources, this document summarises the business priorities of the Ministry, using them to describe the change expected over a five-to-seven-year timeframe. From these, the business capabilities that need to change to meet those objectives are identified, along with the IT contribution to those capabilities.

The Ministry's strategic documents describe significant areas of change in the coming years, with many of these underpinned by IT investments that implement, automate, or enhance the work of those responsible for those changes. These take the form of 'new' IT systems and services, as well as improvements to existing services.

The analysis shows that there are significant expectations for investment in IT, and that the pace of change for that investment will be greater in the coming years than it has been to previously. Areas like collaboration and communication, within the Ministry, the sector, and the public will change considerably, with technology and integral part of the change. Coupled with collaboration, Ministry staff increasingly need to work with a broader range of stakeholders and partners, in whatever location the work takes place. This relies on technology that is flexible to support changing needs, and technology that enables different ways of working rather than being a barrier to exploring different ways of working. Resilience is another theme, where use of Cloud services, and increasing cyber security, are necessary to improve the availability of IT services to staff and the sector.

The change described in this document will be used to develop the Strategic Plan, which describes the implementation steps of this strategy.

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[1] A number of strategic/reporting documents from the Ministry were referred to in the creation of this strategy, including:

- Strategic Intentions 2021-2025
- Annual Report 2021-2022
- Hei Arataki Strategy – 2019
- Four Shifts – System Work Presentation – 2022

Business Context

Te Manatū Waka, Ministry of Transport, is the Government's lead agency for transport. The primary responsibilities of Te Manatū are:

- Policy advice regarding transport, and transport investment advice for over $40b over next decade
- Crown entity governance
- Sector leadership and stewardship

Transport plays a crucial role in New Zealanders' lives. It provides people with access to other people, places, jobs, and opportunities. It will play a vital role in reducing emissions. It connects businesses, markets, and regions. It shapes, and is shaped by, urban form and development and has major impacts on people's health.

The Government has set the key objective for the Ministry of 'A transport system that improves wellbeing and liveability', which is broken into five outcomes:

- Resilience and security
- Economic prosperity
- Inclusive access
- Healthy and safe people
- Environmental sustainability

This decade, multiple significant shifts are needed for transport to deliver positive outcomes and to contribute to changes to the systems it connects with. Successful management of change is a key focus for the Ministry. The Ministry has identified four key shifts to deliver a low emissions, sustainable transport system:

Shift One: Implement long term, integrated planning

Shift Two: Embed the focus on enhancing access and achieving well-functioning cities

Shift Three: Strengthening the role of public transport and active travel and freight

Shift Four: A principles-based approach to paying for transport and its externalities

For the Ministry, this sets the context for the magnitude of change needed within the Ministry to achieve the shifts.

The immediate actions taken by the Ministry to bring about the shifts are expressed through the five priorities:
1. Decarbonise the transport system
2. Improve road safety
3. Support liveable cities
4. Strengthen NZs supply chains
5. Enable emerging aviation technologies

In addition, the Ministry acts as a custodian of the Transport sector, and is required to;
- Understand, monitor and influence sector members as system steward
- Ensure resilience of the sector as a whole
- Model and encourage operation improvement of sector members. This includes:
    - Fostering continuous improvement, and
    - Operational resilience of the Ministry and sector agencies

Meeting these objectives requires the Ministry to develop and change. To support the Ministry's priorities are the Organisational Foundations, which underpin performance. They are:

- Ministry governance - driving our strategy, accountability, and assurance
- People and culture - maximising capability and capacity to be our best
- Business systems - enhancing our effectiveness and productivity

The final organisation foundation to meet the range and size of challenge presented above is adaptability, investing in the capability to be able to make change at pace, and adapt that change to meet the dynamic and changing demand.

Due to the complexity and breadth of the Ministry's work, it is expected that from time to time the Ministry's priorities will change. As a living document, this Strategy will be reviewed on an annual basis and updated to reflect these changes, as required.

These are summarised in the following table, with the areas of business priority that are most likely to have technology implications:

Business Objectives	
Resilience	Enable transport to continue to effectively respond to and recover from significant events – including natural disasters and pandemics.
Decarbonise	Decarbonise the transport system, supporting the Government's Net Zero objective.
Liveable cities	Support decision making around increased housing, reduced carbon emissions and improved access for people and freight.
Supply Chains	Strengthen New Zealand's supply chains to support resilience in transport and transport infrastructure.
Emerging aviation technologies	Actively contribute to, and lead, the development of a safe and innovative aviation sector, and alongside this, maximise the opportunities from new aviation technologies
Organisational Foundations	Ministry governance - driving our strategy, accountability, and assurance People and culture - maximising capability and capacity to be our best Business systems - enhancing our effectiveness and productivity
Stewardship	Understand, monitor, and influence sector members as system steward Ensure resilience of the sector as a whole Model and encourage operation improvement of sector members
Adapt at pace	Have flexibility in systems and processes to be able to accommodate an increasing and changing set of transport priorities

Business Capabilities

Achieving the business priorities above involves change in a number of businesses capabilities. The interlinked nature of the key priorities and responsibilities of the Ministry mean that many of the capability changes are shared, and change in one has broader impact. There are a number of business capabilities that are more likely to be changed in the future to meet the business priorities. These are not all business capabilities, as those with only organic change, or change without a change in technology enablers are not shown.

Business Capability	Description
Collaborating	The ability to work with people inside and outside the Ministry irrespective of location. To be able to create Ministry outputs seamlessly while involving people from the sector, outside, and internationally
Communicating	Share any Ministry or Transport Sector information with stakeholders. Information includes reports, analysis, modelling, data, data visualisations, publications, and reference documents (such as policies)
Analysing	Using information to derive understanding. This includes policy analysis, research, analytics, modelling, and simulation.
Advising	Preparing and disseminating official advice to stakeholders that represents the position of the Ministry (including Ministers, Industry and other Agencies)
Consulting	Engaging stakeholders and the wider community on issues, providing information, and receiving and using feedback in that process. This can be done electronically and physically.
Modelling/simulating	Creating models and using data to create simulations for policy or operational scenarios. This includes creating models, using data from simulations in any of the Collaborating, Communicating, Analysing, Advising, or Consulting processes, and sharing models in collaboration with others.
Maximising investment in technology (process improvement)	Ensuring the right level of training, change management, and ongoing support to continue to receive the benefits expected of any systems in use in the Ministry. Reviewing and improving processes based on best use of the tools available. Assisting staff to adapt and take up new services for systems that change in the course of their life, such as the Microsoft suite.
Resiliency (includes cybersecurity)	Keeping ahead of the needs of the Ministry to ensure that systems have the availability (hours of service, locations, support, usability, security, performance) to support the business objectives of the Ministry.
Delivery	Having the tools and processes to be able to continue to deliver change at the pace, cost and quality expected by the Ministry.
IT Capability building	Making ongoing change to the IT capabilities in pace to be able to meet the changing needs and expectations of the Ministry, and the changing services and technologies in the IT landscape.

The table below maps priorities to broad business capabilities. This is later used to link capabilities to investments and technologies, to reflect the impact. The view here looks at what capabilities are expected to change in order to meet the expectations of each priority area. The column describing the magnitude, reflecting the degree to which the future state is expected to differ from what is in place today, and what contribution technology is expected to make to that change. This is different to the importance of the change in a business capability, which will depend on business priorities.

The prioritisation of investments, which will be captured in the Strategic Plan, will be a combination of the magnitude of change expected in moving to the future state, and the business criticality of change.

Business Capabilities	Magnitude of change	Resilience	Decarbonise	Road safety	Liveable cities	Supply Chains	Emerging technologies	Organisational Foundations	Stewardship	Adapt at pace	Comment
Collaborating	High	X	X	X	X		X	X	X	X	Expect change in the frequency and volume of collaboration supported by technology
Communicating	Low	X	X	X			X	X	X	X	More forms of communication with more stakeholders at greater volumes
Analysing	Med	X	X	X	X		X			X	Use of more, and more real or near real time data to inform advice and policy decisions
Advising	Low	X	X	X	X	X	X	X		X	Technology improvements on existing processes
Consulting	High		X				X	X	X		More and diverse stakeholders, greater volumes, and more channels for consultation
Modelling/simulating	Med		X	X	X					X	Extending the number and scope of simulations needed within current capabilities to support policy development
Maximising investment in technology (process improvement)	Med							X	X		Training and process improvement to become part of the support expectations

Business Capabilities	Magnitude of change	Resilience	Decarbonise	Road safety	Liveable cities	Supply Chains	Emerging technologies	Organisational Foundations	Stewardship	Adapt at pace	Comment
Resiliency	High							X	X	X	Increasing expectations for flexible work, enhanced security, and more sensitive information to be managed
Delivery	Med		X					X		X	Defining and delivering projects to be more frequent and with higher expectations
IT Capability building	High							X	X	X	Need to increase the pace of change
IT Service Delivery Improvement	High							X	X	X	Need to support Ministry's increases in the pace of change

IT Contribution to Business Success

Supporting the business objectives requires the following changes in IT capability. Note the horizon for the future state is likely to be five to seven years. The details around priorities and timeframes will be included in the **IT Strategic Plan**.

The items listed represent areas for change for each capability. Those that are **Existing** are expected to experience **Improvement**s through training, expansion in use, or through upgrades in the product itself. The **New** category captures services and systems that expect to be introduced to the Ministry, enhancing or extending an existing business capability through technology.

Business Capability	Existing	Improvements to Existing	New
Collaborating	• **Document sharing and co-authoring** via **CoreShare** • **Communication** via **Microsoft Teams** • Limited Interactive whiteboarding and planning using **Miro** • **Meeting rooms in Wellington (Queens Wharf offices) and Auckland (APO)** – support both in person and hybrid meetings	• **Increase adoption/productivity using existing tools** through awareness campaigns and training – **in particular CoreShare and Teams** • **Increase reliability and performance of collaboration tools**	• **Continue to assess market for new/improved collaboration tools**
Communicating	• **Websites** • **Discover (intranet)** – Te Manatū staff/contractor communications • **MailChimp** – Stakeholder communication • Interactive presentations through **Mentimeter** • **Social Media** (Facebook, LinkedIn, Twitter) • **Conference audio visual (A/V) support through third parties** • **Datasets and analysis via website**	• **Increase adoption/productivity using existing tools** through awareness campaigns and training • **Review and rearchitect the intranet** to reflect common internal communication requirements • **Increase interactivity of Transport Knowledge Hub** (e.g. design based on commons personas) • **Streamline/automate reporting/management on key projects** (currently managed via PowerPoint)	• Improve conference experience/interaction through a **conference app** (registration/schedule/ interaction via polls etc) • Streamline management of various social media platforms via a **social media management tool** • Automate data feeds to publish analytics on the websites and intranet through new **online reporting tools**

Business Capability	Existing	Improvements to Existing	New
Analysing	• Various statistical/data analysis tools – e.g. **SAS; STATA; R; Tableau**	• Value for money and security in existing cloud platforms through rightsized **governance/management**	• Reduce time spent managing disparate data sets through creation of a **data lake** (a centralised repository that could store all Te Manatū Waka's structured and unstructured data) • Machine learning / AI • New statistical software platform - **replace SAS with modern cloud platform**
Advising (Ministers; Industry; other Agencies)	• **Email** • Productivity tools **Microsoft Office; Adobe** • **Research tools** (e.g. Futures Platform, a futurist research site)	• Reduce environmental footprint and streamline reporting through paperless reporting for ministers e.g. through the **Diligent cloud board papers management tool** **Note: No changes recommended for advising industries and other agencies**	• **Continue to assess market for new/improved advising tools**
Consulting/ Engagement	• Public consultation – written form via **Citizen Space** • Customer relationship management integration for engagement and sector stewardship **Simply Stakeholders** (currently only in use for the NZ freight and supply chain strategy development project) • Public consultation through voice – currently in development **Ipu waha kōrero - Supporting Community Voices** • Public/stakeholders surveys **website, using spreadsheets for analysis**	• Reduce administration burden of managing a large number of stakeholders, as well as enabling a single pane of glass to view stakeholder engagement via **wider use of a customer relationship management tool** • Similarly, increase opportunities for the public to consult on key programmes of work via **wider use of Citizen Space** • Further develop public consultation through voice capability	• Improve analysis of stakeholder feedback through a **feedback database/sentiment analysis tool**

Business Capability	Existing	Improvements to Existing	New
Modelling/ Simulating	• **Inhouse modelling capability** • **Project Monty** – agent-based NZ transport activity model that tells us how people might use a transport system	• **Surface Monty wider** (e.g. to public) – allow people to see underlying data (open data) and run their own modelling	• **Continue to assess the market for new tools/approaches that are faster/better etc**
Maximising investment in technology (process improvement)	• **TARDIS workflows** for streamlining Ministerials; OIAs etc – current workflows are functional but prone to breaking and difficult to maintain/update	• **Review/streamline TARDIS workflows** (reduce complexity; assess whether best fit in TARDIS or alternative system) • **Microsoft Office 365 apps and enhancements** – e.g. adopting and rolling out new features like Planner in Teams; Breakout rooms, Kanban boards etc • **Tailored Adobe and Office productivity suites training** • **Use of AI tools (e.g. ChatGPT, Copilot) to improve productivity)Training in modern analysis/reporting tools** (improve productivity/quality) • **Regular 'Super User' level digital/IT skills development training opportunities for the Business Support team** (help raise the digital/IT capability across Te Manatū)	• **Digital workflows to streamline common internal processes** – including procurement sign off and onboarding/offboarding

Business Capability	Existing	Improvements to Existing	New

Resiliency	• **Resource** (outsourced expertise and capacity via Cybersecurity partner)
	
	• **Disaster Recovery** and **Business Continuity** Plans
	
	• **Staff and Contractor Education** (phishing awareness/testing; ongoing cyber training for staff)
	
	• **Laptop and Cloud security platform** (24/7 Monitoring)
	
	• **Reporting** – quarterly cybersecurity dashboards (SLT Board meetings; Risk and Assurance Committee and Security Committee)
	
	• Email protection – **SEEMail**
	
	• Connected to NCSC's **Malware Free Networks** (threat detection and disruption service)
	
	• **eText -** Emergency comms
	
	• **Satellite phones** (Chief Executive and TRT)
	
	• Bi-annual **Tabletop Disaster Recovery** exercises
	
	• **Auditing**
	  o AuditNZ – annual IT audit
	  o PSR – annual IT assurance (self audit)
		• **Migrate remaining servers** (located in the CCL/Revera Data Centre) to 'real cloud' (Azure/AWS etc).
		
		• **Data Sovereignty** (most of Te Manatū's data is stored offshore) – review location of data and assess if appropriate to include NZ based location. Note also need to review from a Māori data perspective.
		
		• **Leverage existing security software stack** (Microsoft Defender etc) – ensure regular review and implementation of new enhancements that will benefit Te Manatū (e.g. spam reduction)
		
		• **Define/implement change management/config management processes for all system changes** (take good practice / right-sized approach)
			• Connect to **CertNZ's Phishing Disruption** Services
			
			• Create a small/medium sized agency **CISO network** (benefit from shared learnings)

Delivery	• No formalised project/programme management and governance processes • No project templates • Small number of people using number of tools for tracking – including spreadsheets, Word documents; Microsoft Project	• Project budget review and approval process	• Governance, templates and processes • **Definition of roles / accountabilities / responsibilities** • Standards around project records (e.g. business case, budget management, change, **scope**, project initiation docs, minutes, issues, risks etc)

Business Capability	Existing	Improvements to Existing	New

IT Capability building	• Document management system **TARDIS**
	
	• **TechOne** – Finance system
	
	• **HR Systems - JadeStar** (Payroll/leave management) and **Phoenix ATS** (applicant tracking)
	
	• **Minimal/disparate e-learning/training tools** – examples:
	   ○ **iWorkPlace learn** – Teams online help
	   ○ **KnowBe4** – cybersecurity training
	   ○ **Information Security eModule**
	   ○ **Diversity and Inclusion** (via external provider)
	
	• Risk and incident management through **spreadsheets**
		• TARDIS – **Increase adoption/productivity** through awareness campaigns and training
		
		• **Increase reliability and performance of TARDIS**
		
		• **TARDIS** – review against longer term business goals – is TARDIS the right tool post the three-year contract ending Jul 2024?
		
		• **HR Information and Learning Management System (HRIS/LMS)** – streamline process for new hires; bring new hires up to speed faster (common expected skills); real time reporting to SLT
		
		• **Risk and incident management and reporting tool** – reduce administration burden
			• **Enterprise Search** tool - completeness in coverage in information discovery – confidence that when find something it's the right thing
			
			• **Note no changes recommended for TechOne** (current model of technical ownership by Finance team with collaboration with the IT team around resilience, security and technical architecture is working well)

Service Delivery Improvement	• **IT Support Services** (onsite and remote Helpdesk; video conferencing support, Engineering and Technical Project Management) provided through CCL • **IT Security Services** – provided through InPhySec • **IT requests/improvements** (e.g. Te Manatū Waka staff member requesting a new tool to help manage a newly identified business opportunity) - currently managed on ad-hoc basis (no existing process)	• **Service delivery improvement/continuous improvement** – faster resolution of issues/requests; improved reporting with business focused metrics (e.g. trend showing number of issues/requests that were resolved with only "one touch/interaction" with the Service Desk) • **Problem management** – CCL reporting on issue/request trends and recommending improvements to reduce future issues/requests of the same type • **Develop right sized approach for Te Manatū Waka team to request new IT tools** – including governance/sign offs (from business case through to implementation and benefits realisation/tracking)	• **Implement an internal IT Advisory group** (small group – max of 7 people, representative of Te Manatū Waka teams) to provide input on emerging requirements and new initiatives + to communicate back to the wider Ministry around priorities and upcoming improvements. • **Note no changes recommended for IT Security Services**

Principles

Principles are a key control to implementing any strategy. They encompass the preferred choices that narrow down the range of options available, providing the guidelines within which investment choices can be made. Rather than see this as a restriction, they should be considered a checklist of considerations for any decision to ensure alignment to the business goals of the strategy.

Principle	Implications
Commitment to Hei Arataki (Te Manatū Waka's Māori Strategy)	• Weave Kaupapa Māori world view into IT team and services/systems • Adopt a bi-lingual first approach (Te Reo and English) • Continue to look at ways that Digital can help progress Hei Arataki and support the progression of a transport system that enables Māori to flourish.
A Trusted Business Partner tasked with stewarding change	• IT is seen as a part of The Ministry's business, acting in the interests of the Ministry. • The primary business focus is on ensuring investments are made to ensure the best systems and services to meet anticipated future needs. • Service functions, which are vital to the daily operation of the Ministry, are managed through 3rd parties to ensure business focus.
Technology should not be the limiting factor of business ambition	• Systems should be designed with configurability for different modes of operation. • Service or system assumptions should be challenged before being designed into those service or systems. • Flexibility in use is favoured in single-focused technology choices. • Where previous technology choices have limited flexibility, new investments should address the underlying issues rather than create a 'workaround'.
Services are favoured over systems, and public cloud systems over specialist systems	• Increase use of 'as-a-service' services for choice and flexibility • Use common public cloud services where possible, configure only as needed. • The Ministry adopts a 'no asset' model of IT system ownership. • Alignment with the Digital Public Services Cloud Strategy

Principle	Implications
Business demand for services determines the IT spend	- Agreed services and service levels are supported by the appropriate budget. - Services are varied to meet available budget. - Business recipients of IT services have control over the services they receive, and pay for the services they consume
Investments are made with consideration for the enterprise implications	"Tactical" investments are avoided where possible. - Value of investments are assessed on impact across the Ministry, and over time. - Value is assessed against the target future state.
Sourcing uses a small number of long-term vendors, adopting a partnership approach	- Invest in the knowledge of the Ministry by the selected vendors. - Manage relationships to resolve issues, not walk away. - Use All of Government (AoG)/Marketplace agreements to ensure appropriate pricing and vetting. - Use vendor management to ensure value for money. - Outsource services rather than hire.
Manage the data, systems, and services as a business asset	- Ensure appropriate controls on the initiation, creation, and management of systems, especially the management of production systems. - Meet security and privacy standards. - Invest in training and support to get best value from systems. - Invest in maintenance to ensure systems are able to meet their SLA and perform as required through their operating life. - As SLAs change, make investments to meet the new operating expectations.

Financial

In order for the Ministry to meet its current and new requirements, significant investment in IT is required. It is important to note that the pace of change for that investment will continue to grow. Areas like collaboration and communication, within the Ministry, the sector, and the public will change considerably, with technology an integral part of the change.

The current IT funding model is based on the previous year's IT baseline spend, with any new projects or growth being funded through a shared overhead pool. In most cases all IT related costs come out of the IT budget directly. With the increasing investment demands there may be value in exploring additional funding options – including Section 9 bids and directly linking IT costs with the respective business units that use the services.

Although the future looking figures are indicative only, the below chart below reflects the increasing requirement for IT investment – both as a result of new initiatives, along with the ongoing operational costs of the growing IT environment.

Sources: 5-year forecast information from Digital and Data Investments (as submitted to the DIA FY22/23); forecast investment for FY22/23 and projected investment for FYs 27/28 and 28/29

Note that the modelling assumes there is no material increase/decrease in FTE and contractor count. Baseline increases are made up of inflation and the ongoing cost of new initiatives after they are implemented.

Metrics

Business Capability	The Now	Future State
Collaborating (R)	**As an external stakeholder I** sometimes find it difficult to work/collaborate with the Ministry – for example sometimes I am unable to access a shared file and revert to using email instead. Also, sometimes I find it difficult to keep up with the communication around the collaboration due to the number of communication tools used. **As a Te Manatū Waka employee** some of my collaborations with internal and external stakeholders are improved through the use of the Ministry's collaboration tools. I am sometimes able to use the Ministry's collaboration tools effectively. I find that not everyone at the Ministry knows about the tools we have or how to use them effectively. I also find it difficult to access an up-to-date contact list of stakeholders and often use a spreadsheet to manage the list (this means I spend a lot of time having to update the list with people as they come and go – a very intensive admin process that sometimes results in people being missed out).	**As an external stakeholder I** find the Ministry easy to work and collaborate with. The Ministry has a reliable, easy-to-use set of collaboration tools that I can access reliably from anywhere. I find viewing, sharing, co-editing documents seamless and am easily able to keep up with communication around the particular collaboration. **As a Te Manatū Waka employee** I consistently find that my collaboration with internal and external stakeholders is enhanced through the use of the Ministry's collaboration tools. I feel confident using the Ministry's collaboration tools effectively. I find that everyone at the Ministry knows about the collaboration tools we have and how to use them effectively. It is quick and easy to set up a new collaboration and I can easily/reliably share files and collaborate on these in real time. I also appreciate being able look back at the chain of communication and use it as a valuable reference. In addition, I am able to access a centrally managed list of stakeholders that is accurate and up-to-date. This gives me more time to focus on collaborating. The whole collaboration process just feels seamless.

Business Capability	The Now	Future State
Communicating	**As a member of the public/external stakeholder** I can generally find the information I am looking for on the Ministry general website – however sometime the information appears to be out of date. I find the Transport Knowledge Hub is a useful starting point, but find it difficult to access the data I require and that some of the pages are out of date. I find the Te Manatū's conferences are well organised – but sometimes they are a challenge to attend remotely. **As a Te Manatū Waka employee** I can sometimes find the information I need from Discover, but a number of times I struggle to find what I am looking for – or find out of date information. I find the process to upload data to the website is generally labour intensive and not automated.	**As a member of the public/external stakeholder** I find I can easily access the information I need from Te Manatū's website – whether through following the intuitive navigation or by using the search function. I find the Knowledge Hub very useful – helped by up to data and the ability to easily to 'slice and dice' data or import it into my system of choice When attending Te Manatū's conferences I enjoy being able to view the programme on the conference app, as well as the ability to ask questions and connect with other attendees. Attending remotely is straightforward and I feel like I am part of the conference, not a bystander. **As a Te Manatū Waka employee** I find Discover very intuitive and easy to pinpoint the relevant information I'm looking for – the information is always up to date and relevant. I find the automated website data update process is straightforward and fast – allowing me to focus more on data analytics than the technical aspects of sharing data on the site.
Analysing	**As a member of the public/ external stakeholder** I can generally find the reports produced and have an understanding of the analysis done to reach the conclusions I read. Some of the analysis that supports those conclusions is visible, but I can't see the source data or the methods used. **As a Te Manatū Waka employee** I am supported to get access to data sets, tools, and data analytic environments I need. But the tools and support are limited. When we publish results, the interpretation of the analysis is available, but not the detail. Where there are questions, I email information about methods used or datasets to those individuals.	**As a member of the public/external stakeholder** I can see exactly what analysis was done to inform policy or advice that Te Manatū Waka publish. Not only can I see the results, but I am able to access the documented analysis methods, source data, and even the code where relevant. I am able to perform my own analysis and participate in any consultation process with that knowledge. **As a Te Manatū Waka employee** I have a range of tools to use. Where these don't meet the need there is a simple process to get access to different tools to support the analysis I am undertaking. I publish my analysis along with the reports they inform. This includes data and methods, so that other transport sector stakeholders are able to assess and critique my assessment, and provide comment back that improves the results and the transparency of the process.

Business Capability	The Now	Future State
Advising	**As a Minister** I receive regular briefings from Te Manatū Waka – these generally take the form of large amounts of printouts	**As a Minister** I receive regular briefings from Te Manatū Waka in easy to access/review digital format. Along with the ease of accessing this information, I enjoy having all of my documentation from the other agencies I oversee in one place.
	As an Industry contact, I receive appropriately levelled/timed advise from Te Manatū Waka via email or phone. **As a Te Manatū Waka employee** I am able to easily pass on advice to the right people	**Note no changes recommended for advising Industries and other agencies**
Consulting	**As a member of the public,** I sometimes find it easy to give my feedback on Transport initiatives in a way that works for me (e.g. via written/oral feedback etc) – but equally there are times when I find it a struggle (including not being able to use my language of choice). **As a Te Manatū Waka employee,** I am sometimes able to effectively consult with the public and access timely, meaningful, and interpretable data that I can use to create effective policy. I am sometimes able to use the Ministry's consultation tools effectively, however I don't always find I have access to a tool that is the right fit for the audience I am trying to learn from. I sometimes find it difficult to access an up-to-date contact list of stakeholders and often use a spreadsheet to manage the list (I am aware that others in the Ministry do the same – making it very difficult to gauge who the Ministry is engaging with as a whole, and how often).	**As a member of the public,** I almost always find it easy to give my feedback on Transport initiatives in a way that works for me (e.g. via written/oral feedback etc) – including the ability to send feedback in my preferred language. **As a Te Manatū Waka employee,** I am almost always able to effectively consult with the public and access timely, meaningful, and interpretable data that I can use to create effective policy. I am always able to use the Ministry's consultation tools effectively. I find it straightforward to access an up-to-date contact list of stakeholders and appreciate the visibility I have of how others in the Ministry have been engaged with these stakeholders.

Business Capability	The Now	Future State
Modelling/ simulating	**As a member of the public/ external stakeholder** I wonder how policy relating to investments in the future of transport are assessed. I hope that things like traffic change are modelled, using a wide number of scenarios, so that there is a higher likelihood of the desired outcome being achieved **As a Te Manatū Waka employee** I see the need to use simulation and see what is being achieved using Monty. As a member of the modelling team, I want to expand what we do so that we can apply what we have done so far to more and more transport scenarios to help inform better decision making.	**As a member of the public/external stakeholder** I see the results of simulations for the different transport options that Te Manatū Waka propose. I have confidence in the proposals as I see the broad range of results, and the data behind the options proposed. **As a Te Manatū Waka employee** I have a range of simulation tools to use. Where these don't meet the need there is a simple process to get access to different partners or tools that do specialist modelling to support the analysis I am undertaking. I publish my analysis along with the reports they inform. This includes information on all the simulation scenarios used, so that other transport sector stakeholders are able to assess and critique my assessment, and provide comment back that improves the results and the transparency of the process.
Maximising investment in technology (process improvement)	**As a Te Manatū Waka employee,** I generally find the Workflows in TARDIS are helpful for staying on top of my Ministerial and OIA deadlines – but sometimes find that the workflows 'break', which means I then have to resort to manual processes to track these. Although I have access to a number of productivity tools (notably Microsoft Office and Adobe) I don't always feel that I am getting the best value out of them and know there are a lot of new features and time saving techniques that I am not aware of. When it comes to setting up a new staff member or contractor at Te Manatū, or getting sign off on a piece of procurement, I find the process slow and error prone due to the heavy reliance on email.	**As a Te Manatū Waka employee** I find that the Workflows in TARDIS improve my productivity by help ensure I stay on top of my Ministerial and OIA deadlines. Through an easy to understand dashboard, both my manager and me can clearly see how our WPQs, PQs, OIAs and briefings are tracking in real time – and find that the automated alert/reminder system has significantly reduced the number of late responses. I feel that I am able to use our existing productivity tools (notably Microsoft Office and Adobe) efficiently to help me get my work done – I appreciate receiving regular updates on new features and time saving tips that further enhance my use of the tools. I find the digitised process for setting up new staff/contractors, and for signing off on procurement not only helps speed up the process, but it makes it very easy to keep track off progress and provide useful auditing information with minimal effort.

Business Capability	The Now	Future State
Resiliency (includes cybersecurity)	**As a member of the public**, I notice Ministry services are unavailable at times. **As a Te Manatū Waka employee**, I experience occasional outages that interrupt my work. There are security awareness campaigns, and I know that I may inadvertently cause data loss for the whole Ministry if I fall for a phishing or other type of attack. I am updated that systems are being upgraded or patched to avoid disruption or interruption, and this seems like a never-ending task.	**As a member of the public**, Ministry services are always available when I need them. **As a Te Manatū Waka employee**, I can work whenever I want, and there seem to be no disruptions. There are security awareness campaigns, but these focus on how I may lose personal information, as I can no longer cause disruption to my colleagues. System upgrades happen more frequently, but don't seem to involve outages.
IT Capability building	**As a Te Manatū Waka employee**, I generally have access to the business systems I need to do my job – however I am sure there are ways I could be using these tools more effectively to save time and increase my productivity – e.g. sometimes I find myself resorting to manual or transactional process to get something done expediently (e.g. sending a document via email rather than via TARDIS; managing risks/incidents via a spreadsheet). Whether for my induction, or ongoing development, I find that it is difficult to keep on top of my internal training requirements due to the number of different systems involved. I am sure that I have missed some useful training and find it very difficult to track my progress.	**As a Te Manatū Waka employee**, I have access to the business systems I need to do my job – and I feel empowered (through regular training and updates) to use these effectively to get everything I need done. Whether for my induction, or ongoing development, I appreciate having a one-stop portal where I can view my training progress (as well as my team members'). The training is easy to follow, practical and can be done at a time that suits me.
Service Delivery Improvement	**As a Te Manatū Waka employee**, I am generally able to get IT support for my to day-to-day issues – both when in an office (Wellington or APO in Auckland) or at home; and at any time (including evenings and weekends if required). However, sometimes I find that I have to wait a week or more before my issue/request is resolved – even when it's a quick/small request. For more complex requests – e.g. a new business requirement or request for a new system – I am unclear on how to get these approved, or how they are prioritised/funded.	**As a Te Manatū Waka employee**, I am consistently able to get IT support for my to day-to-day issues – both when in an office (Wellington or APO in Auckland) or at home; and at any time (including evenings and weekends if required). I almost aways find my requests are responded to and resolved within a reasonable timeframe. For more complex requests – e.g. a new business requirement or request for a new system – I find it easy to work through the 'new initiatives' request process – and am regularly informed of progress (from approval through to implementation). I also appreciate the transparency of being able to see everyone else's requests and how they have been prioritised based on business need.

IT Business Value and Services

Business Value

Business Partner

- Understanding the business and looking for ways to do things better
- Technology environment governance and strategy
- Business planning advice
- Business case development
- Advice on new requirements/initiatives

Project /Program / Change Management for IT intensive initiatives
(contracted in as required)

- Investigation and options assessment
- Implementation project management
- Change management – minimising disruption and maximising value

Application Support

- Maximising value of existing applications through improvements and training
- Ensuring reliability (managing upgrades, new features etc) and value for money of existing applications
- Supporting rollout of new applications/improvements where strong business case

IT Services

Operational services are provided by 3rd parties to ensure focus on performance to meet business needs. Services are managed against Service Level Agreements (SLAs), which represent the agreed services, quantity, quality, and cost that delivers business value.

Cybersecurity

- Cybersecurity Education and Awareness
- Audits/Assurance
- Incident and risk management
- Monitoring and threat detection
- Disaster Recovery

Operational IT

- IT Helpdesk (onsite in Wellington office; remote 24/7)
- Technical Business application support
- Video conference/meeting rooms (VC) support
- IT tools (laptops, phones)
- Connectivity (Remote access, Wellington office Wifi)

Architecture

The Ministry requires IT delivery that supports access from anywhere at any time, and resilience against single points of failure. Architecturally, this requires greater use of Cloud services that was the case in the past, and resilience built into the physical infrastructure used to connect offices.

To achieve this flexibility, and aligned to the Principles, the following architectural standards will apply.

Cloud services for business applications.
- To improve availability of key systems, where possible Cloud services will be used. The remaining services running in the legacy Revera datacentres will be migrated to Cloud based alternatives in 2023.

Remove Single Points of Failure
- Aside from business applications, the access control methods for the network also have key dependencies, with their failure meaning that systems would not be able to be accessed. The Active Directory (user log ins), VPN services (secure connections for remote users) and domain controllers will be migrated to Cloud services to increase resilience.

Cloud Centric Security by Design

- Industry and NZSIS guidance is that perimeter-based security models are transitioned to models of Zero Trust. This will make the Ministry more secure form cyber threats, and more flexible on where, how, and with whom staff can work.

- This facilitates easier, secure integration between Ministry system, regardless of location. It also enables data sharing or integration between systems with external parties in a more secure and cost effective manner than today.

Data Security and Sovereignty

- Data security is not only a technical issue, but reliant on accurate data classification and data management. Improving both will ensure that security is applied appropriately to the right data

- Data storage and management will also use classification data to ensure that broader considerations, such as data sovereignty, are applied by systems in the choices of where data is stored.

Sourcing

As described earlier, IT infrastructure and security services are outsourced. The focus of the sourcing changes being made are to achieve the following objectives:

- Manage performance in existing vendor base to get the full benefit of those agreements. That includes ensuring that the services expected are delivered, that they are cost effective, and that the proactive capabilities that the vendors are able to bring forward are also evident.

- Consolidation of vendor agreements where it makes sense to improve visibility and management. For instance, with the purchase of CCL by Spark, ensuring common services and SLAs.

- Increasing the use of the All of Government Marketplace for new agreements. This reduces the cost of sourcing, and also the cost of security assurance for those services.

These largely apply to existing vendors and the long-term agreements already in place.

Areas where new services may be sourced include:
- Project management
- Business Analysis
- Training, in particular for key systems such as Office 365, OpenText and TechnologyOne.

People

He aha te mea nui o te ao? Māku e kī atu, he tangata, he tangata, he tangata
What is the most important thing in the world – it is people.

Te Manatū Waka, despite its relatively small size, plays an important role in improving the wellbeing of New Zealanders – through its Transport stewardship role and leadership across a large number of significant transport improvement bodies of work. The complexity of the work required is mirrored in the number of IT systems that Te Manatū utilises to support its employees, contractors, stakeholders and engagement with New Zealanders.

In order to maximise the benefits from Te Manatū's investments in existing and future IT systems, a diverse range of IT capability is required. In most cases it is not possible for Te Manatū to provide the required skills through inhouse resources, for the following key reasons:
- in general, the required skill sets are only required for short bursts
- ongoing constraints in the talent market
- challenges in retaining a small number of specialists (difficult to keep motivated and upskilled) and
- the pace of change at the Ministry resulting in frequent re-prioritisation and new initiatives.

To mitigate against these challenges, the Ministry has adopted a model of employing an IT business leader and contracting in expert/trusted advisors as required. Operational IT, Project and Cybersecurity resources are managed through outsourced partnerships, with a blend of on and off-site resource as required. These partners provide Te Manatū with access to much larger teams and deeper modern/specialised skill sets than Te Manatū could ever sustain inhouse. As a result, Te Manatū is able to 'punch above its weight' and respond quickly to new requirements.

Note that where it is prudent to do so – i.e. it is clear that there are business benefits and efficiencies to bringing a resource inhouse – then this is reviewed on a case by case basis. As an example, in 2022 Te Manatū developed an Applications Business Adviser role to act as 'voice of the business' to drive value from both new and existing applications.

To ensure Te Manatū has access to the best people who understand both the agency's business and resulting IT requirements, it is vital that the outsourced partnerships are well managed and strong relationships are developed and maintained with the respective partner's Account Managers.

Ultimately the right people, with the right skill sets and shared vision are Te Manatū's most valuable resource.

Risks

The following risks are those identified as the potential barriers to achieving the Strategy.

Risk	Explanation	Rating	Mitigations
Resource availability	The changes envisioned require resource to be implemented, with the resource pool extremely constrained.	**High**	- Secure operational resources via SLA and long-term contracts. - Agree change plans with lead time to secure resources. - Keep to agreed schedules as much as possible to allow for long term resource planning.
Single lead vendor	Operational support, and knowledge of the environment is held by the lead vendor, leading to the risk of 'lock-in' and exposure to vendor failure	**Medium**	- Using common commodity services allows for price comparison. - Use of common service facilitates service transition. - Ministry maintains up to date documentation and service descriptions to facilitate transfer to a new vendor.
Failure to invest in the right areas	Fragmented approach to IT investment, leading to duplication, wasted effort/cost/time as well as increased complexity and system/information silos	**Medium**	- Ensure sound business case and assess against other business priorities - Manage scope and ensure all new systems/processes tie into the existing architecture - Ensure entire life cycle of investment considered (resourcing; support; linkages with existing systems etc)
Failure to make full use of investments	Training and support are needed to take advantage of the features of the systems already invested in. Failure to do so means that potential benefit is not achieved.	**Medium**	- Invest in ongoing training - Support services given time to identify training opportunities and address them. - Create user groups for sharing best practice
Information custodianship responsibilities not met using cloud services	While using cloud services, (often) offshore, the Ministry still needs to meet its obligations as a custodian of information	**Medium**	- Ensure backup onshore - Due diligence of service providers to ensure commercial viability
Key personnel	The Ministry has limited internal resources and would suffer loss of continuity and knowledge for key personnel to leave	**Medium**	- Develop handover/fallback ownership and processes. - Expand the internal team of similar skills when possible.