![Inland Revenue Te Tari Taake logo]

17 July 2024

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Dear ▢▢▢▢▢▢

Thank you for your request made under the Official Information Act 1982 (OIA), received on 23 June 2024. You requested the following (numbered for ease of reference):

1. *Which role within the organisation is responsible for the overall strategic direction of data systems and processes, and at which level (e.g., Tier 1, 2, 3) within the organisation's hierarchy? Please briefly describe the key responsibilities of this role.*

2. *Does the Organisation have a published Data Strategy? If yes, please provide the document and briefly describe how it is being implemented.*

3. *Does the organisation make use of, or reference to, the Data Capability Framework (DCF) published by Statistics New Zealand?*

Question 1

The Strategic and Investment Board (SIB) is an Inland Revenue Executive-Level Governance Board and is responsible for Inland Revenue's strategic direction. This group is chaired by the Commissioner and Chief Executive of Inland Revenue and has membership of Tier 1 and 2 leaders.

Alongside SIB, is a second Executive-Level Governance Board named the Data and Information Governance Authority (DIGA). This Authority ensures right-sized, sustainable, and efficient data and information governance which delivers oversight, transparency, and accountability in Inland Revenue's stewardship and use of data and information as assets.

The SIB Charter and DIGA's Terms of Reference outline their key responsibilities and membership. These have been released to you as **Appendix A**.

Question 2

The document *Business Solution Blueprint – Intelligence Led* provides the foundation on how Inland Revenue looks at data, analytics and intelligence as a driver for its digital organisation. This is available on Inland Revenue's website at: [IR BT Business Solution Blueprint Intelligence Led (ird.govt.nz)](IR BT Business Solution Blueprint Intelligence Led).

The *AI Strategic Considerations* document includes strategic considerations around the use of Artificial Intelligence (AI), primarily generative AI. This is released to you as **Appendix B**. This document contained some information determined not in scope of your request. This information has not been considered for release.

![Inland Revenue Te Tari Taake logo]

Question 3

Inland Revenue has used the Data Capability Framework published by Statistics New Zealand informally to assist in our work in data quality. The framework has helped Inland Revenue shape its data quality management work programme, but engagement with the framework has not been formal.

Inland Revenue has, however, been involved in a data and analytics maturity assessment as part of the OECD Forum on Tax Administration membership. This assessment is highly similar in nature to the Data Capability Framework published by Statistics New Zealand.

Right of review

If you disagree with my decision on your OIA request, you can ask an Inland Revenue review officer to review my decision. To ask for an internal review, please email the Commissioner of Inland Revenue at: commissionerscorrespondence@ird.govt.nz.

Alternatively, under section 28(3) of the OIA, you have the right to ask the Ombudsman to investigate and review my decision. You can contact the office of the Ombudsman by email at: info@ombudsman.parliament.nz.

If you choose to have an internal review, you can still ask the Ombudsman for a review.

Publishing of OIA response

We intend to publish our response to your request on Inland Revenue's website (ird.govt.nz) as this information may be of interest to other members of the public. This letter, with your personal details removed, may be published in its entirety. Publishing responses increases the availability of information to the public and is consistent with the OIA's purpose of enabling more effective participation in the making and administration of laws and policies and promoting the accountability of officials.

Thank you again for your request.

Yours sincerely

Tina MacLean
Intelligence Leader - Data

Inland Revenue
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Strategic and Investment Board Charter

IR's Executive-Level Governance System

The Executive-Level Governance System supports IR's Commissioner and Chief Executive with their stewardship of the revenue system and their responsibilities for IR's financial management, performance, sustainability, organisational health and capability.

Our governance bodies steer us in the near and medium term, and they look out to the long term, ensuring sustainability and agility for the future. They ensure we successfully balance competing priorities, take up the right opportunities, and deliver for government and customers in the face of risks and challenges.

The Executive-Level Governance System evolves so that it continues to be fit for purpose. Governance roles, practices and processes iterate as needed to ensure the system and the bodies within it remain effective and responsive. The system is reviewed every six months, and any proposed changes to the structure are approved by the Commissioner. See the appendix for the current structure.

The Strategic and Investment Board's purpose

The Strategic and Investment Board (SIB) provides overall governance and strategic direction for IR and acts as the organisation's conscience. This means deciding what we want to achieve, by when, and what is important to us along the way.

The Board looks to IR's immediate, medium-term and long-term operating environment, testing strategic assumptions and assessing risks and opportunities.

The Board has overall responsibility for IR's strategic financial management, ensuring IR is operating sustainably and making good investment choices and trade-offs.

SIB ensures IR is delivering Government priorities and meeting its commitments as a public sector organisation. This includes supporting the Crown's responsibilities under Te Tiriti o Waitangi and upholding the principles of partnership, protection and participation.

SIB approves:

- IR's strategic direction, including vision, mission, outcomes, objectives, values and operating model
- IR's enterprise plan for each financial year, including the organisational priorities for that year
- IR's performance measurement framework and performance measures and targets (with output measures then going to the Minister of Revenue for their approval)
- IR's strategic approach to employee relations, organisational design and remuneration.

It may be appropriate for the Board's approval to be sought for key strategies for aspects of IR's operation, depending on the impacts and nature of the strategic choices involved.

Strategic financial management and organisational budgets

SIB's responsibilities for IR's financial management include:

- overseeing IR's multi-year funding position
- approving the starting position for IR's organisational budgets for each financial year
- endorsing requests to move operational funding between years (with approval then being sought from the Minister of Finance and the Minister of Revenue)
- approving IR's approach to the Government's Budget, including seeking Budget funding from Ministers for any proposed Budget initiatives
- approving IR's five-year capital expenditure plan.

The governance of in-year financial performance is delegated to the Enterprise Priorities and Performance Committee (EPPC), who can move funding between organisational budgets within each year.

Enterprise initiatives

SIB approves all enterprise initiatives that require investment funding from outside of business group baselines and all enterprise initiatives that will have significant internal or external impacts. This means approving the outcomes, funding, high-level scope and plan, governance model and other parameters as appropriate.

SIB expects enterprise initiatives to be planned and delivered in accordance with IR's Initiative Management Framework.

SIB usually delegates governance of initiatives in delivery to the Portfolio Governance Committee (PGC). For some initiatives, SIB sets an amount of contingency funding to be approved for release by PGC as needed. PGC escalates to SIB when initiatives require additional funding above the contingency held by PGC, and when significant risks and issues cannot be adequately controlled for or mitigated.

Enterprise risks

SIB oversees IR's strategic approach to risk management. The Board approves the articulation of IR's set of enterprise risks and assigns executive-level risk owners for each.

SIB regularly reviews and discusses the enterprise risks, with a focus on changes in risk and control status, based on quarterly reporting and on recommendations and observations from the risk owners.

Health and safety

SIB holds primary responsibility for discussing health and safety risks and issues, based on reporting every two months from the National Health and Safety Steering Committee.

Membership

SIB's members are:

- Commissioner and Chief Executive of IR (Chair)
- Chief Tax Counsel
- Deputy Commissioner Customer and Compliance Services – Business
- Deputy Commissioner Customer and Compliance Services – Individuals

- Deputy Commissioner Enterprise Design and Integrity
- Deputy Commissioner Enterprise Services
- Deputy Commissioner Policy and Regulatory Stewardship

The Commissioner approves proposed changes to Board membership.

Roles and responsibilities

The Chair

The Chair is responsible for the overall direction of the meeting. They set the agenda, with the support of the Governance Domain Specialist.

The aim in meetings is to achieve consensus, and the principles of collective responsibility apply. The Chair may, however, bring discussion to an end and determine a position.

Board members

The SIB members, or the people formally acting for them, are expected to attend every SIB meeting. Where this is not possible, members are encouraged to send delegates in their place. Only people who are formally acting for members count toward quorum.

The SIB members commit to:

- demonstrating the public service principles and values
- demonstrating Te Pou o te Tangata – how we do things at IR: Whanaungatanga, Manaakitanga and Mahi Tika
- working with IR's commitments as a public sector organisation in mind, including IR's commitment to strengthening the Māori-Crown relationship and to integrating te Tiriti o Waitangi and Māori concepts and perspectives into IR's work
- making sure risks, issues and challenges are brought into the open and explored
- welcoming different points of view and frank, robust discussion
- being clear when allocating responsibility and authority
- collectively owning decisions made.

All papers must be sponsored by a Board member, who ensures the paper provides the right information and meets the standards required for robust discussion and decision making.

The Governance Domain Specialist

The Board is supported by a Domain Specialist Governance (L2), from the Governance and Ministerial Services Team. They are responsible for:

- ensuring the Board follows good governance principles and practices
- working with the Chair to set the agenda, taking into account key enterprise issues and decisions required
- providing support, advice and quality assurance for Board papers, with the mandate to refuse any that do not meet quality standards
- ensuring that minutes reflect decisions and key discussion points, and that decisions are communicated to the people who need to know.

Attendees and observers

At the Chair's discretion, people are invited to attend Board meetings to provide input as needed.

Observers may attend with approval from the Chair. Observers do not contribute to the Board's discussion unless a member asks them to.

Health and safety

Members of the Board exercise due diligence to ensure Inland Revenue complies with its duties or obligations under the Health and Safety Act 2016, and health and safety implications will be considered with every decision taken.

Logistics

Meetings

SIB meets monthly, and the SIB members are advised of the meeting dates set for the year.

Additional meetings may be scheduled when needed, and members are notified of these as early as possible. All procedures, rules and practices for regular meetings stay in place for additional meetings.

In some circumstances it may be necessary for papers to be circulated for feedback and decisions outside of meetings. The Chair's agreement is required for these 'out-of-cycle' items.

Agendas and papers

The agenda and papers are made available to Board members four working days before the meeting. The Chair decides whether to accept late agenda items and papers on the Governance Domain Specialist's recommendation.

Papers should be on the governance template (a choice of Word or PowerPoint) and should include a purpose statement and recommendations.

Quorum

A quorum of three members, including the Chair, is required for decisions to be made. If there is no quorum, the Chair decides whether to reschedule the meeting.

Minutes of meetings

The Governance Domain Specialist writes the minutes and provides them to the Board with the papers for their following meeting. Within that following meeting, the Board is asked to approve the minutes as an accurate record.

P. Mersi
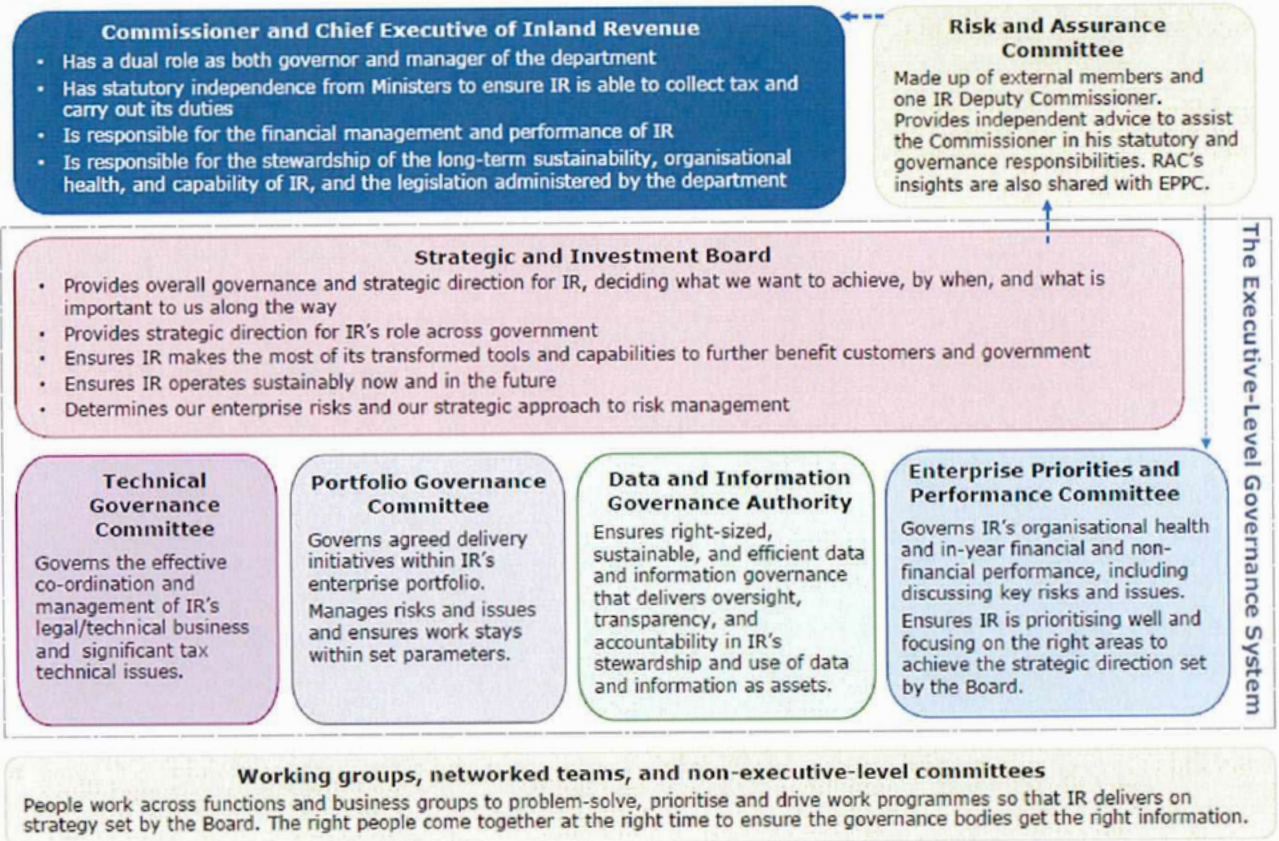
Peter Mersi
Commissioner of Inland Revenue

7 March 2023

Appendix 1: The Executive Level Governance System

[UNCLASSIFIED]

Inland Revenue
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How IR is Governed

Executive Level Governance

Commissioner and Chief Executive of Inland Revenue
- Has a dual role as both governor and manager of the department
- Has statutory independence from Ministers to ensure IR is able to collect tax and carry out its duties
- Is responsible for the financial management and performance of IR
- Is responsible for the stewardship of the long-term sustainability, organisational health, and capability of IR, and the legislation administered by the department

Risk and Assurance Committee

Made up of external members and one IR Deputy Commissioner. Provides independent advice to assist the Commissioner in his statutory and governance responsibilities. RAC's insights are also shared with EPPC.

Strategic and Investment Board
- Provides overall governance and strategic direction for IR, deciding what we want to achieve, by when, and what is important to us along the way
- Provides strategic direction for IR's role across government
- Ensures IR makes the most of its transformed tools and capabilities to further benefit customers and government
- Ensures IR operates sustainably now and in the future
- Determines our enterprise risks and our strategic approach to risk management

Technical Governance Committee

Governs the effective co-ordination and management of IR's legal/technical business and significant tax technical issues.

Portfolio Governance Committee

Governs agreed delivery initiatives within IR's enterprise portfolio.

Manages risks and issues and ensures work stays within set parameters.

Data and Information Governance Authority

Ensures right-sized, sustainable, and efficient data and information governance that delivers oversight, transparency, and accountability in IR's stewardship and use of data and information as assets.

Enterprise Priorities and Performance Committee

Governs IR's organisational health and in-year financial and non-financial performance, including discussing key risks and issues.

Ensures IR is prioritising well and focusing on the right areas to achieve the strategic direction set by the Board.

The Executive-Level Governance System

Working groups, networked teams, and non-executive-level committees

People work across functions and business groups to problem-solve, prioritise and drive work programmes so that IR delivers on strategy set by the Board. The right people come together at the right time to ensure the governance bodies get the right information.

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Data and Information Governance Authority

Terms of Reference

IR's Executive-Level Governance System

The Executive-Level Governance System supports IR's Commissioner and Chief Executive with their stewardship of the revenue system and their responsibilities for IR's financial management, performance, sustainability, organisational health, and capability.

Our governance bodies steer us in the near and medium term, and they look out to the long term, ensuring sustainability and agility for the future. They ensure we successfully balance competing priorities, take up the right opportunities, and deliver for government and customers in the face of risks and challenges.

The Executive-Level Governance System evolves so that it continues to be fit for purpose. Governance roles, practices and processes iterate as needed to ensure the system and the bodies within it remain effective and responsive. The system is reviewed every six months, and any proposed changes to the structure are approved by the Commissioner.

Purpose

The Data and Information Governance Authority (DIGA) ensures right-sized, sustainable, and efficient data and information governance that delivers oversight, transparency, and accountability in IR's stewardship and use of data and information as assets.

The Authority is responsible for:

- Custodianship of Enterprise-Risk 5 and ensuring appropriate practice management of identified risks and controls, in accordance with IR's risk settings

- Ensuring external assurance activities are completed annually by IR
    - Government Chief Privacy Officer's Privacy Maturity Assessment
    - Archives New Zealand's Information Management Maturity Assessment
    - Public Service Commission's Information Gathering and Public Trust Model Standards

Membership

Members are:

Business Unit	Role
Enterprise Services	Deputy Commissioner (Chair)
Enterprise Design and Integrity	Deputy Commissioner
	Chief Information Security Officer
	Privacy Officer

Business Unit	Role	
	Enterprise Leader – Strategic Architecture	
Policy & Regulatory Stewardship	Deputy Commissioner	2
Tax Counsel Office	Chief Tax Counsel	
Customer & Compliance Services - Individuals	Deputy Commissioner	

Roles and Responsibilities

The Chair

The Chair is responsible for the overall direction of the meeting. They set the agenda, with the support of the Information Governance Team.

The aim in meetings is to achieve consensus, and the principles of collective responsibility apply. The Chair may, however, bring discussion to an end and determine a position.

Authority Members

The Authority members, or the people formally acting for them, are expected to attend every meeting. Where this is not possible, members are encouraged to send delegates in their place. Only people who are formally acting for members count toward quorum.

The members commit to:

- demonstrating the public service principles and values
- demonstrating Te Pou o te Tangata - how we do things at IR: Whanaungatanga, Manaakitanga and Mahi Tika
- working with IR's commitments as a public sector organisation in mind, including IR's commitment to strengthening the Maori-Crown relationship and to integrating te Tiriti o Waitangi and Māori concepts and perspectives into IR's work
- making sure risks, issues and challenges are brought into the open and explored
- welcoming different points of view and frank, robust discussion
- being clear when allocating responsibility and authority
- collectively owning decisions made
- operating with an agnostic system, platform, and information form perspective.

All papers must be sponsored by an Authority member, who ensures the paper provides the right information and meets the standards required for robust discussion and decision making.

Information Governance Team Support

The Authority is supported by the Information Governance team. They are responsible for:

- ensuring the Authority follows good governance principles and practices
- working with the Chair to set the agenda, considering key enterprise issues and decisions required
- providing support, advice and quality assurance for Authority papers, with the mandate to refuse any that do not meet quality standards
- ensuring that minutes reflect decisions and key discussion points, and that decisions are communicated to the people who need to know.

Attendees and observers

At the Chair's discretion, people are invited to attend Authority meetings to provide input as needed.

Observers may attend with approval from the Chair. Observers do not contribute to the Authority's discussion unless a member asks them to.

Logistics

Meetings

The Authority meets quarterly, and members are advised of the meeting dates set for the year.

Additional meetings may be scheduled when needed, and members are notified of these as early as possible. All procedures, rules and practices for regular meetings stay in place for additional meetings.

In some circumstances it may be necessary for papers to be circulated for feedback and decisions outside of meetings. The Chair's agreement is required for these 'out-of-cycle' items.

Agendas and papers

The agenda and papers are made available to Authority members four working days before the meeting. The Chair decides whether to accept late agenda items and papers on the Information Governance Team's recommendation.

Papers should be on the governance template (a choice of Word or PowerPoint) and should include a purpose statement and recommendations.

Quorum

A quorum of 50% of members including the Chair, is required for decisions to be made. If there is no quorum, the Chair decides whether to reschedule the meeting.

Minutes of meetings

The Information Governance Team writes the minutes and provides them to the Authority for their following meeting. Within that following meeting, the Authority is asked to approve the minutes as an accurate record.

Review

To enable ongoing improvement, the Authority will review its performance at approximately six-monthly intervals. Reviews will be recorded in the minutes.

Version Control

The most recent document will be included in the footnote[1] for continuity.

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[1] Version 2.0 2024.03.26

Inland Revenue
Te Tari Taake

AI Strategic Considerations & Roadmap

Version: FINAL 29/01/24

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Executive Summary

At Inland Revenue we have a structure and governance in place for AI and are now looking to further develop strategic considerations and a roadmap for this capability. This is a key input to Inland Revenue's Enterprise Strategy and long-term planning.

We have established a strategic framework to guide the secure and effective adoption of artificial intelligence (AI) within Inland Revenue. Our AI strategy consideration pack is informed by comprehensive research and collaboration with experts, and it presents an approach structured around seven strategic pillars that resonate with our organisational goals, ensure fair user experiences, and maintain secure, transparent innovation.

Key Components:

- **Strategic Considerations:** The foundations of our AI strategy consideration pack are pillars that align with our organisational aims, champion inclusivity, fortify security, prepare infrastructure, and conform to regulatory standards.

- **Prioritisation and Roadmap:** We introduce a prioritisation model for AI initiatives, coupled with a phased roadmap. This framework provides direction for foundational and optional activities from the initial stages through to broader implementation.

- **Impact on Inland Revenue:** This framework allows us to carefully consider ways to integrate AI into IR's operations and people capabilities. AI has the potential to increase operational efficiency and enhance the customer experience, whilst supporting IR's broad roles as defined in our enterprise strategy.

Background & Context

- At Inland Revenue we have a structure and governance in place for AI and are now looking to further develop strategic considerations and a roadmap for this capability. This is a key input to Inland Revenue's Enterprise Strategy and long-term planning.
- Through this work, we have identified and developed pertinent strategic considerations for Artificial Intelligence and concluded with high-level roadmap options for prioritisation.

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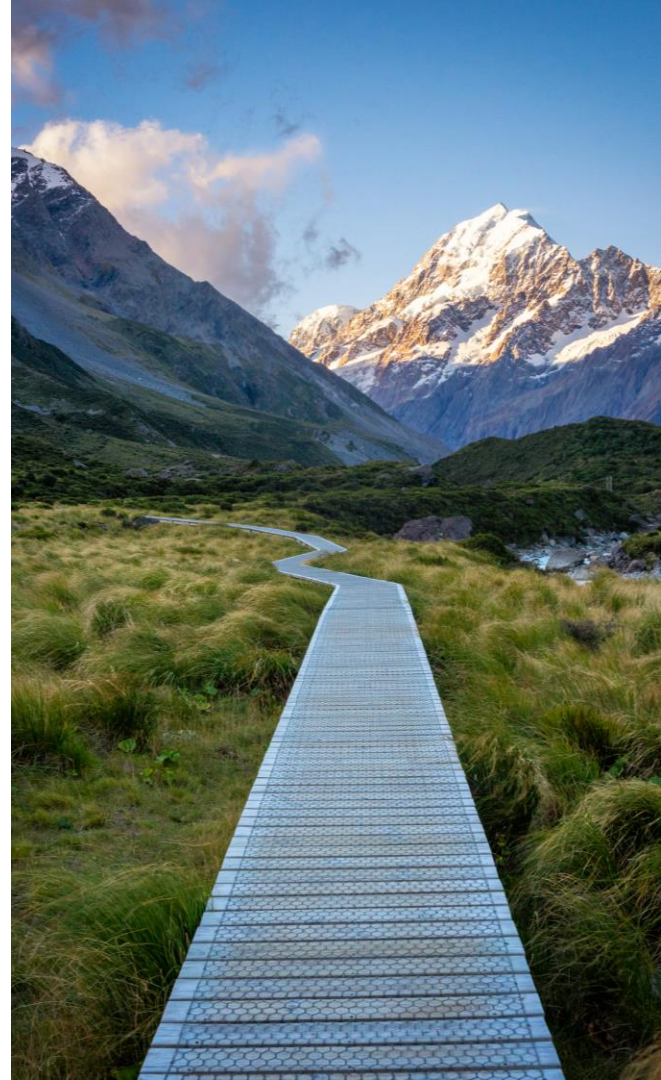
Our Approach

Our approach included drawing on key inputs to support the development of AI strategic considerations and a use case prioritisation framework to feed into a clear roadmap to safely uplift our Artificial Intelligence (AI) capabilities and enable us to better leverage AI to meet our strategic goals.

INPUTS

Thought Leadership
Global thought leadership, local considerations and discussions with Deloitte subject matter experts

Reference Documents
23 reference documents have been incorporated from IR

Interviews
20 IR stakeholders provided input, across 9 interviews

Meetings for input and review
3 AI Oversight Group Meetings, 3 AI Working Group meetings, and 5 AI Strategy & Roadmap Sub-Group Meetings

WG Use Cases
20 use cases incorporated from the AI backlog

Informs...

AI STRATEGIC CONSIDERATIONS

Strategic Alignment, Our Customers, Our People, How We Work, Our Approach, Data and Digital, Landscape
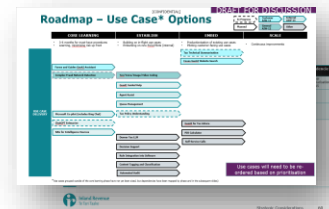

USE CASE PRIORITISATION

Informs...
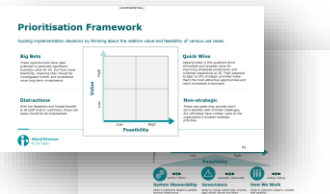
PATH FORWARD

AI Roadmap Foundations
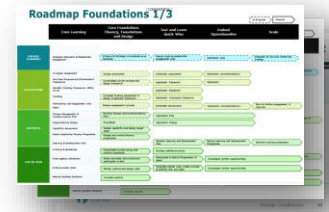
AI Roadmap Use Case Options

Strategic Considerations

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Introduction to the Strategic Considerations Framework

- We have developed a framework guiding the use of AI in our operations and strategic outlook, consisting of seven essential pillars: Strategic Alignment, Our Customers, Our People, How We Work, Our Approach, Data & Digital, and Landscape.

- This dynamic framework integrates our alignment with endorsing socially accountable, fair, transparent, secure, and confidential AI systems.

- We're committed to enhancing workforce understanding of AI, fostering innovative partnerships, creating a solid digital ecosystem and manoeuvring through potentially turbulent political and other environmental factors.

- As we strive towards excellence, we adhere to trustworthy AI principles and international standards; we respect the data sovereignty and other Te ao Māori considerations, all while focusing on stewardship, efficiency, effectiveness and promoting a culture of continuous growth and learning.
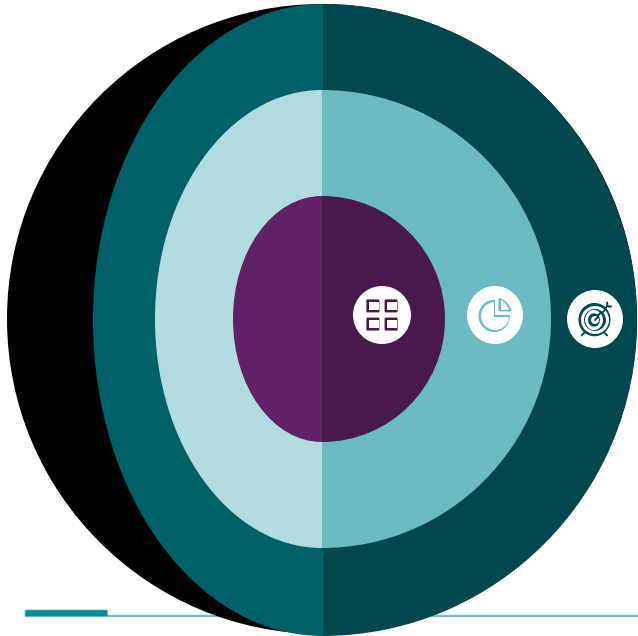
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AI Strategic Considerations

Strategic considerations are the factors

and elements that we seek to consider

when shaping our approach towards AI.

They include factors internal to Inland

Revenue and external influences both

locally and internationally. We explore each

in more detail next.

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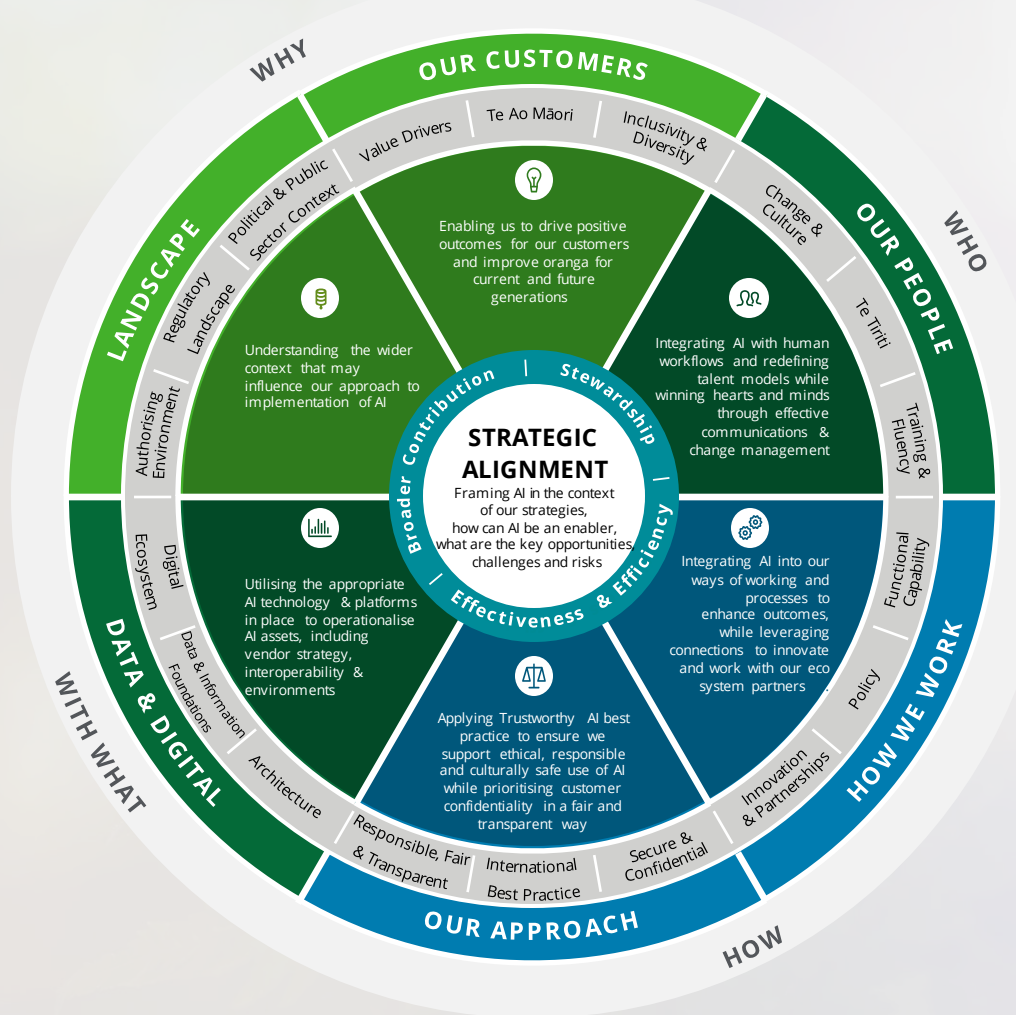
A deep dive into each pillar & element follows

Framework — The framework outlines the strategic considerations to ensure alignment with fair, transparent, secure, and confidential AI systems

7 essential pillars — Each pillar includes factors internal to Inland Revenue and external influences both locally and internationally

19 elements — Under each pillar sits various elements which should be considered when shaping our approach towards AI

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Strategic Alignment

Effectiveness & Efficiency	Stewardship	Broader Contribution

- **Effectiveness & Efficiency:** By integrating AI, we can optimise our resource utilisation and streamline operations, enhancing our decision-making capabilities and improving our overall effectiveness and efficiency through optimisation and automation.

- **Stewardship:** Stewardship is crucial as we implement AI, and with careful planning and strategic allocation of resources, we can improve our adaptability, safeguard existing systems, and maintain the integrity and the relevancy of the tax and social policy system.

- **Broader Contribution:** As we strive to make a broader contribution to New Zealand, integrating AI can enhance cross-departmental data processing and enhance our capabilities for efficient partnerships, fostering holistic insights and innovative solutions.

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Strategic Alignment

STRATEGIC CONTEXT

Aligning the use of AI to accelerate the realisation of our organisation's aspiration and outcomes.

Our Enterprise Strategy is central to shaping the approach to AI. This strategy revolves around four key elements: our people, the driving force behind our operations; our customers, who guide our operational focus; supporting the Crown to be a better Treaty partner, promoting equitable services across Aotearoa New Zealand; and maintaining the integrity of the tax and social policy system, our underlying cornerstone. AI holds the potential to strengthen these pillars by streamlining processes, anticipating risks, and optimising public service delivery. However, as AI innovations and data flow escalate, stewardship becomes more critical. Falling behind in this rapidly evolving field could jeopardise our ability to effectively maintain our services. It's also crucial that te ao Māori principles are deeply woven into our strategy. By aligning AI with our objectives, we can strive towards promoting 'Oranga' via cross-government cooperation, robust social policy, and revenue generation. This combined strategic precision and deepened operational understanding could significantly elevate our performance.

STAKEHOLDER FEEDBACK

In order to optimise its operational effectiveness, we should consider transforming our perception of the synergies with our ecosystem partners and maximising the potential of data-driven strategies. This involves emphasising strategic alignment and innovation while observing a cautious approach towards risks. AI technology has a critical role in propelling the development of enterprise and refining various strategies rather than functioning on its own, with notable impacts on managing brand reputation and enhancing customer communication quality.
Interviewees: Mary, James, Mike.

OPPORTUNITIES & CHALLENGES

- Successful AI integration could enhance efficiency, effectiveness, stewardship principle alignment, and broader public service delivery in Aotearoa New Zealand, as well as confer a 1.7 times greater likelihood of achieving exceptional outcomes for organisations with enterprise-wide AI strategies [1].

- Successful AI integration is complex and difficult, with only 28% of organisations achieving high outcomes from AI deployments in 2021 [1]. Large-scale public service organisations like IR may encounter extra barriers when adopting AI at scale.

RISKS

- As nearly 50% of organisations have reportedly experienced poor AI outcomes, it's evident that introducing AI into our systems poses a risk to upholding the principle of stewardship. Indeed, any related regulatory failures could jeopardise the integrity of the tax system. To avoid undermining public confidence and operational stability, careful planning of AI initiatives is key to ensure they enhance, rather than detract from, our efficiency and capability [1].

- With a potential for AI initiatives to become costly diversions, there's a clear risk of straining our resources without delivering the promised benefits. Thorough planning, strategic allocation of resources, and prudent execution can help manage this risk and ensure meaningful return on investment.

- To navigate societal implications, it's pivotal for us to anticipate possible disruptions, continually assess societal responses, and create an inclusive communication strategy to engender trust and promote understanding among stakeholders.

KEY INSIGHTS

- We have leveraged technology for outcome improvement and efficiency gains throughout our history. While AI technologies are emerging and advancing quickly, they are simply the next tool for us to leverage to empower our people to further the interests and improve the delivery to our customers and New Zealanders as a whole.

- Combining Artificial Intelligence (AI) with our service delivery can optimise resource utilisation and streamline operations. This would enhance result-oriented decision-making in Aotearoa New Zealand by leveraging machine learning models for accurate tax prediction and ensuring effective resource allocation. AI can also facilitate continuous innovative solutions that improve service delivery.

- Fostering an AI-enabled ecosystem can promote stewardship by improving adaptability and safeguarding existing systems. Predictive analytics offer the ability to proactively adjust to future customer trends. Coupled with AI-enhanced cybersecurity, this would bolster legislative, asset, and resource integrity. Additionally, implementing AI-oriented training programs would ensure the workforce evolves in line with technological advancements.

- Embracing shared AI platforms amongst public services can heighten the broader contribution of IR to New Zealand. Through rapid processing of cross-departmental data, AI can enable generation of holistic insights and innovative solutions. Moreover, the automation capabilities of AI can foster partnerships with other agencies to improve the efficiency and quality of public services.

ROADMAP CONSIDERATIONS

Strategic Alignment & Stakeholder Engagement

1. DI_CIR_State-of-AI-4th-edition.pdf (deloitte.com)

Our Customers

Value Drivers	Te Ao Māori	Inclusivity & Diversity

- **Value Drivers:** We aim to leverage AI to enhance efficiency, decision-making, and service delivery, refocusing our resources on higher-value innovations for improved customer outcomes.

- **Te Ao Māori:** We seek to ensure that data sovereignty principles underpin all AI initiatives, recognising Tangata whenua as kaitiaki (guardians) of their own data and fostering oranga (health and well-being) through equitable tax processes.

- **Inclusivity & Diversity:** Ensuring our AI strategy at Inland Revenue prioritises accessibility and inclusiveness for all our customers and workforce is key in delivering a diverse, equitable, and representative service that aligns with the principle of manaakitanga in Te Pou o Te Tangata.

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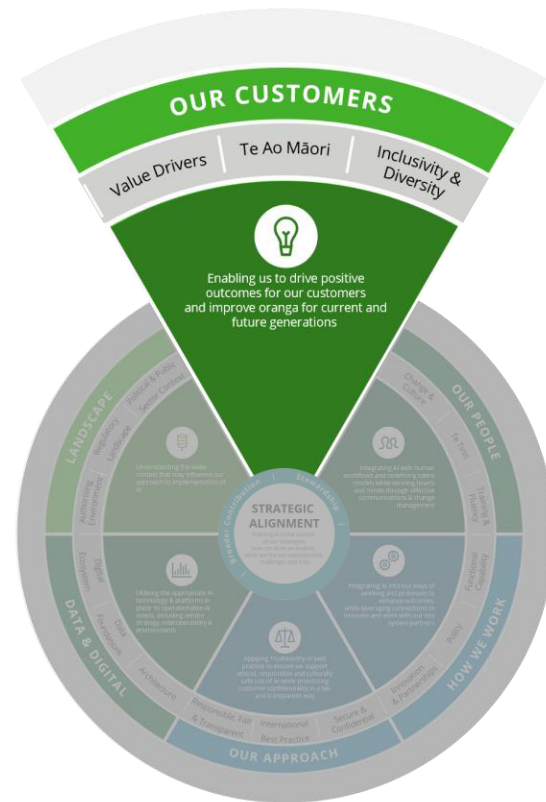
Value Drivers

STRATEGIC CONTEXT

Value drivers are the strategic considerations that impact us delivering the maximum effectiveness and efficiency from AI.

Value drivers are essential in shaping our approach to AI because they align technological advancements with our aspirations and outcomes, ensuring AI initiatives contribute to broader organisational impact. This alignment is crucial in harnessing AI's potential to enhance efficiency, decision-making, and service delivery in the tax domain.

By leveraging AI for automating routine tasks and decision support, resources are redirected towards higher-value activities, fostering a culture of innovation and ensuring the technology's meaningful and measurable contribution to the broader government and tax ecosystem.

STAKEHOLDER FEEDBACK

We are prioritising customer-centric approaches, focusing on opportunities to quickly make a difference and effectively managing risks. Advancements in efficiency and corresponding value for given business opportunities are essential, while also acknowledging the importance of having the necessary roles and skills aligned with value drivers. The strategic balancing of protection and opportunities, emphasis on enhancing decision support for staff, and partnering with intermediaries all form key aspects of the AI strategic considerations.
Interviewees: Mary, Cate, Mike, Malcolm, Tina, James, Dan.

OPPORTUNITIES & CHALLENGES

- AI can automate routine processes, notably in back-office operations, enabling staff to focus on complex issues, thereby increasing efficiency and enhancing decision-making capabilities [1]. Notably, AI can provide decision support through real-time prediction and simulation [2].

- The integration of AI necessitates significant organisational changes, including reimagining work practices and developing new talent strategies. This presents both an opportunity to drive transformation and a challenge in managing the change journey within the organisation [3][4].

- Successfully scaling AI technologies within the organization can bring about transformative benefits, impacting not just internal operations but also improving citizen services. This requires a strategic focus on use cases that yield high return on investment and foster internal cultural changes [5]. Shifting focus from improving isolated processes to a systemic approach that aims to create better outcomes as a whole is part of this.

RISKS

- Establishing the necessary data and technical infrastructure is critical for deploying AI. Any inadequacies in this area pose significant risks to the success and effectiveness of AI initiatives [1]

- The need for upskilling or hiring key staff, along with refining approaches toward AI governance, presents risks related to talent acquisition and management. Ensuring that staff are adequately prepared and have developed the fluency to work with AI is vital for mitigating these risks, as well as putting robust governance processes in place [1][6].

- Reliance on rapidly evolving technologies like big data analytics, RPA, AI, and machine learning introduces risks associated with keeping pace with technological advancements and ensuring that these are effectively integrated into tax processes [6].

KEY INSIGHTS

- Focusing on use cases with high potential for return on investment can create momentum for further AI adoption and drive internal changes, essential for maximizing the impact of AI in government sectors [4]

- AI's valuable decision support capabilities include using predictive algorithms to turn data flows into practical insights, virtual experiences (with VR or digital twins) as a low-risk testing environment, or even a GenAI assistant to provide decision-making advice [2]. For example, the US IRS are using advanced analytics to monitor taxpayer behaviour and make real-time decisions to "nudge" them toward greater tax compliance [7].

- AI's capability in real-time tracking and data analysis can significantly improve public services, enhancing service delivery to citizens [8].

- AI applications in government can address resource constraints, reduce backlogs, and free workers from mundane tasks. This not only optimizes resources but also attracts younger, tech-savvy workers, addressing personnel challenges [8].

- As compliance tasks are automated, AI enables tax professionals to focus on navigating complex regulatory environments, thereby adding more value within the organization and ensuring effective tax risk management [6].

ROADMAP CONSIDERATIONS

AI Impact Assessment | Funding

Use Case Proposal and Prioritisation Framework

Benefits Tracking Framework (KPIs) for AI

1. DI_AI-readiness-for-government.pdf (deloitte.com)
2. How AI Can Help Leaders Make Better Decisions Under Pressure (hbr.org)
3. DI_CIR_State-of-AI-4th-edition.pdf (deloitte.com)
4. us-ai-institute-state-of-ai-fifth-edition.pdf (deloitte.com)
5. The Impact of Generative AI in Finance | Deloitte US
6. working-and-thriving-in-a-digital-tax-world (deloitte.com)
7. Digital Revenue Agency of the Future | Deloitte Luxembourg | Public Sector
8. DUP_AI-augmented-government.pdf (deloitte.com)

Te Ao Māori

Adopting a Māori lens when considering how we use AI to better serve Aotearoa.

In order to foster oranga in all areas, it will be beneficial for us to think holistically when considering how to create enhanced outcomes for tangata whenua through the adoption of AI.

He rei ngā niho, he paraoa ngā kauae – One must have the right principles for large undertakings.

STAKEHOLDER FEEDBACK

AI has potential to counteract unconscious bias, and its implementation at IR will require careful consideration of data storage locations. Collaborative opportunities with Te Kāhui Tūhono need to be explored and any decisions must be viewed through a risk lens.

Interviewees: Anil, Mike, Brijesh, Mary, Cate.

OPPORTUNITIES & CHALLENGES

- The adoption of AI tools presents a unique opportunity to build more trust with Māori communities, providing principles of Māori data sovereignty are incorporated. Notably, there is a need to ensure Māori are kaitiaki of their own data and prioritise benefits back to the community.

- We have a key opportunity to think at the level of the broader tax system, and set out to reduce inequitable outcomes for Māori communities through AI implementation. We could explore opportunities to incorporate mātauranga Māori in AI systems through sustained community engagement.

RISKS

- Many AI applications require data to be stored in overseas data centers, which may conflict with principles of indigenous data sovereignty whereby Māori have the intrinsic right to control over their own data. Similarly, many Māori communities have expressed concern over the use of their language data to train Large Language Models for generative tasks without their consent, when they should be active decision-makers in the process [1].

- Potential for AI initiatives to perpetuate further harm, if insufficient consideration is given to te ao Māori. Particularly, care is needed to ensure that further bias is not encoded in AI models through the use of imbalanced datasets, and that generative AI tools do not misrepresent reo and tikanga in its outputs. Preventative steps should be communicated to the public.

KEY INSIGHTS

- Principles of Māori Data Sovereignty are designed to comprehensively cover all aspects of the collection, storage and use of Māori data. Notably, Te Mana Raraunga's Māori Data Governance model can be used to support IR efforts to foster oranga for current and future generations [2]. Critically, data is considered to be taonga and should be collected respectfully in ways that prioritise Māori needs, fostering kotahitanga (collective benefit).

- Data storage considerations include ensuring Māori control as well as sufficient privacy and security measures, ensuring that tangata whenua are kaitiaki over their own data. Finally, the use of Māori data should benefit the Māori community, with the aim of reducing inequities over time and putting protection in place to prevent future harm.

- Work in this space should be done in conjunction with Te Kāhui Tūhono within IR.

ROADMAP CONSIDERATIONS

Partnership & Engagement with Māori

1. Indigenous groups in NZ, US fear AI colonisation | Reuters
2. Te Kāhui Raraunga

Inclusivity & Diversity

STRATEGIC CONTEXT

Ensuring accessibility of our AI tools for the organisation and customers, and increasing inclusive outcomes.

This consideration will be of utmost importance when incorporating AI into Te Pou o Te Tangata, or how our enterprise strategy is delivered. It aims to ensure that the entirety of our diverse customer base and workforce is included on the journey of AI implementation, and that accessibility is prioritised.

STAKEHOLDER FEEDBACK

As technology becomes more integrated, efforts must be made to prevent exclusion of individuals who lack access, skills, motivation, or trust in digital capabilities.

Interviewee: Anil.

OPPORTUNITIES & CHALLENGES

- AI, and specifically GenAI, is poised to help users more easily access relevant information, providing a key opportunity to improve the inclusivity of our channels [1]. To activate the full gains of AI tools, we should ensure that services are fully accessible, and carefully considered to all internal and external end-users, considering the diversity of the taxpayer base, providing multilingual options and support for those with disabilities.

- Seeking diverse perspectives (manaakitanga) to inform the work we do, a key pillar of Te Pou o Te Tangata, will ensure our AI initiatives benefit all of our people. Internal workshops, with a team of staff from all backgrounds and levels of the organisation, will notably help to eliminate possible biases in AI algorithms from early in the design process, as any potential blind spots will quickly be identified by such a team [2].

RISKS

- Without sufficient engagement and co-design, there is a risk that AI solutions will only be beneficial for certain segments of our workforce and customers. This connects to the broader issue of digital exclusion, whereby certain groups may be less able to use digital tools (including those built with AI) due to a lack of experience with technology, among other factors [3]. This risk is particularly pronounced in our organisation's case, as tax administration services need to be fully accessible to the wider population.

- Particular consideration should be given to upskilling and engaging Māori, as is further discussed in the foundations segment of this strategic framework. Otherwise, there is a risk that AI tools will perpetuate harm for these communities rather than being part of the solution.

KEY INSIGHTS

- People living with disabilities have expressed a great deal of interest in how the use of AI is poised to make their lives easier. Indeed, there are many potential benefits of use cases such as a Generative AI assistant, for example, to help customers more easily navigate through and interpret material when interacting with our organisation [1].

- Inclusivity by design can be implemented in AI tools through a collaborative engagement process. Notably, consulting a diverse range of end-users will be critical to drive innovation and development, including hearing about their previous experiences of using AI applications and taking suggestions for improvement on board. Specifically engaging with members of the neurodivergent community can, for example, help our designers simplify content in ways that may seem small but make the world of difference when it comes to accessibility [4].

- Inclusive design can also be enabled through technical measures that target accessibility, such as speech-to-text capability or keyboard navigation. These are most effective when built in early on in the process, so that they are central to the design of a particular solution rather than worked in just before production [1].

ROADMAP CONSIDERATIONS

Use Case Proposal & Prioritisation Framework

Partnership & Engagement with Māori

1. *Designing GenAI for People with Disabilities (hbr.org)*
2. *us-ai-institute-state-of-ai-fifth-edition.pdf (deloitte.com)*
3. *OECD State of the art | (oecd-ilibrary.org)*
4. *Inclusive Design (deloittedigital.com.au)*

Related Resource 1: *DI_CDO-Playbook-2023 (deloitte.com)*
Related Resource 2: *Entering the world of tax (deloitte.com)*
Related Resource 3: *Scaling AI in government (deloitte.com)*

Our People

Change & Culture	Te Tiriti	Training & Fluency

- **Change & Culture:** We understand the pivotal role that workplace culture and change management play in successful AI integration, and how it addresses our strategic consideration of ensuring effectiveness and efficiency within Inland Revenue.

- **Te Tiriti:** We recognise the importance of upholding our commitments to Māori under Te Tiriti o Waitangi within our AI strategy, acknowledging the potential of AI to enhance our contributions to oranga tāngata, oranga whānau and oranga whenua. This is achieved through a continued engagement and partnership with Māori, ensuring the fair and transparent use of AI tools in tax services that respect and incorporate mātauranga Māori.

- **Training & Fluency:** Cementing AI fluency within our organisation is vital to prepare us for the future of work, leverage the full potential of AI, and ensure our workforce is equipped to engage with AI initiatives and responsibly use AI tools in their tax-specific tasks.

Inland Revenue
Te Tari Taake

Change & Culture

Fostering a positive culture of AI adoption and innovation within our organisation, through carefully planned change management and communications.

For us to achieve the key outcome of staying 'effective and efficient' far into the future, a focus on workforce culture will be essential. This builds into having a fit-for-purpose change delivery model, with change management planning already actioned by the AI Working Group.

A recent study showed that nearly half of all organisations experience difficulties in integrating AI into their daily workflows, highlighting the importance of fostering a receptive workplace culture where AI adoption is widespread, new ways of working are fostered and job satisfaction is enhanced.

STAKEHOLDER FEEDBACK

The strategic implementation of AI in Inland Revenue will require a people-first approach, fostering a culture shift towards embracing AI while emphasising it is not a threat to job security but a tool in service of people. The application of AI should be designed with a mindset of being AI-first but not a one-size-fits-all solution, and efforts must align with Te Kāhui Tūhono's vision. A notable challenge includes seamlessly integrating AI into people's workflows.
Interviewees: James, Mary, Cate, Anil, Tina, Brijesh, David.

OPPORTUNITIES & CHALLENGES

- We have the opportunity to underpin the next stage of our AI journey with a comprehensive change management plan. In consolidating our existing internal teams that focus on AI, we will be able to identify AI champions at all levels of the organisation to drive wider adoption and fluency.

- Through a carefully curated communication plan, we can encourage an attitude of curious enthusiasm in staff across the organisation by conveying key messages and critical information about AI initiatives to relevant stakeholders as well as all employees, ensuring everyone is brought along on the journey.

RISKS

- In order to limit cultural misalignment, it will be important to assess workforce readiness to move towards AI usage and identify gaps and possible roadblocks early on. This will avoid any adoption pains and optimise the efficiency gains of implementing AI within IR.

- If organisational culture is neglected as we pivot towards higher use of AI, staff may become disillusioned with the power of AI to enhance their day-to-day work, or we may not see sufficient adoption in the first place. This risk of employee dissatisfaction can be mitigated by a well-thought-out change management plan.

- The adoption of AI may cause concern for our staff and associated unions, as role descriptions have the potential to change. Entry level roles are poised to change the most, with internal training pathways also shifting in focus. We will need to carefully consider this risk as the organisation continues on its journey with AI.

KEY INSIGHTS

- When seeking to grow their internal AI capability, organisations tend to hire experienced professionals with existing AI knowledge when early on in their AI transformation. However, developing a change management plan to support internal resources to thrive through the organisation's AI journey appears key to deriving sustained benefits from AI initiatives, particularly due to shortages in AI talent in the public sector [1].

- From a future of work perspective, AI-enabled workflows will include more time for focused work, collaboration and personal time as AI takes up decision support, assistant and admin tasks. This may lead to a shift in employee responsibilities, which will be important to consider integrating change management into our people strategy.

- The change required to shift towards new ways of working with AI can potentially alarm employees and cause clashes with worker unions. These commonly occur when work changes rapidly without sufficient training, adding additional workload and leading to a perceived risk to job security (particularly for those with entry-level roles). Such concerns can be addressed through a careful investment in employee training, a clear communication plan which emphasises the reality of the future of work, and updated role descriptions where necessary [2].

ROADMAP CONSIDERATIONS

Change Management & Communications Plan

Organisational Design

1. OECD State of the art | (oecd-ilibrary.org)
2. Unions: AI and Automation (hbr.org)

Related Resource 1:
us-ai-institute-state-of-ai-fifth-edition.pdf (deloitte.com)

Te Tiriti

STRATEGIC CONTEXT

Ensuring we support the Crown to deliver on our commitments to Māori under te Tiriti o Waitangi. In the context of AI, this aligns with commitments made as a signatory to the Algorithm Charter.

We aim to move closer to our aspirations of improving oranga by becoming te Tiriti-based, establishing this consideration as a crucial foundation for our approach to AI.

STAKEHOLDER FEEDBACK

We should formulate our AI strategy with particular emphasis on working in alignment with Te Kāhui Tūhono, as this would promote the values embedded in Te Tiriti.
Interviewee: Brijesh.

OPPORTUNITIES & CHALLENGES

- The contribution to oranga tāngata, oranga whānau and oranga whenua we have made has the potential to be greatly enhanced by AI initiatives that build on a meaningful, mutually beneficial partnership with Māori. There is an opportunity to engage with iwi Māori to raise awareness on the potential benefits of using AI for tax purposes, as well as to foster collaborative co-design, agreeing on system parameters of relevant AI tools and creating space in which mātauranga Māori can be shared.

RISKS

- Potential for tangata whenua to have a low appetite to engage with customer-facing AI solutions, due to a perception that AI will impact their right to control how services are delivered to them and how their information is utilised. This highlights the importance of transparency of AI tools and accountability, ensuring the AI tools are seen as trustworthy by both the organisation and the community.

- There is a risk that, if partnership with Māori is seen as a one-time engagement process, the full benefit of our AI initiatives may not be derived for Māori communities. Instead, collaboration with tangata whenua should be seen as a foundational element of our AI framework that will enable its broader success. As AI tools continue to evolve, the connections to Te Tiriti will also change and need to be considered on an ongoing basis. Specifically, fairness and transparency should be prioritised to foster equitable outcomes and align with the associated equity principle of te Tiriti.

KEY INSIGHTS

- The key principles of te tiriti are highly relevant when implementing AI initiatives. The protection of Māori interests and prevention of future harm should be front of mind, alongside the incorporation of mātauranga Māori in all initiatives. This is supported by strong partnership with Māori, and a willingness to prioritise participation and engagement with tangata whenua. Many Māori researchers are already involved in determining how AI can be made mana-enhancing and beneficial for Māori, and several academic workshops have been held across the country [1]. These efforts have been supported by Te Hiku Media, among others. These organisations are partnering to implement AI-enabled linguistic resources for te reo Māori, in collaboration with local iwi [2]. This ongoing initiative has received government funding [3] and provides a practical example of how effective partnership, underpinned by te Tiriti, can provide beneficial outcomes for Māori.

- When planning an AI initiative, the three voices framework can help with the synthesis of information from different knowledge sources across complex systems. Specifically, the voice of intent (legislation), voice of expertise (research) and voice of experience (community perspective) all come together to form a holistic view of how collective benefit can be derived for all involved [4].

ROADMAP CONSIDERATIONS

Te Tiriti Alignment

1. Māori Speech Hui 2021 | Speech research @ UoA (auckland.ac.nz), Wānanga for Māori Artificial Intelligence: University of Waikato
2. Papa Reo (tehiku.nz)
3. Te Hiku Media Awarded $13M
4. Three Voices Infographic (Deloitte.com)
Related Resource 1: Ngā mātāpono o te Tiriti o Waitangi (teara.govt.nz)

Training & Fluency

Cement AI fluency within our organisation to prepare for the future of work.

We are committed to ensuring that the organisation has access to the right capabilities and personnel as work in the tax sector evolves. The AI Working Group already has several relevant initiatives in its backlog, including a Learning and Development plan and a Review of Capabilities. Tackling this consideration will be essential to foster ongoing learning in our workforce and keep pace with AI trends.

STAKEHOLDER FEEDBACK

Training and fluency in AI are deemed essential, with a current low maturity level acknowledged. Importance is placed on people, highlighting capabilities and subject matter expertise. There is a strong presence already within the Data and Analytics space and a suggested reliance on partners for specialist tasks. A Shared Responsibility Model is suggested regarding training. Interviewees: James, Mike, Tina, Mary, David.

OPPORTUNITIES & CHALLENGES

- Investing in workforce development to enhance AI fluency is essential for us to adapt to the evolving digital landscape and harness the full potential of AI [1][2][3]. Prioritising AI notably creates an opportunity to attract new, highly skilled talent to the organisation. Particularly, internships and immigration pathways will play an important role here.

- We have an opportunity to develop a central knowledge management repository that can support employees to engage with AI initiatives and upskill in this regard. Any developed training materials should be comprehensive and engaging, and ongoing support should be provided to foster employee uptake.

RISKS

- The challenge in attracting and retaining skilled personnel poses a significant risk, potentially hindering the effective implementation and growth of AI capabilities within IR [1][2]. This could in turn impact our ability to safely adopt AI, as insufficient knowledge of how to work well with AI creates a risk of misuse and suboptimal outcomes.

- A skills gap in AI and data science within the public sector may limit the ability to develop and deploy effective AI solutions, necessitating focussed efforts in workforce training and development [3]. It will be useful for us to undertake a capability assessment to identify where our workforce stands in its knowledge of AI tools and techniques, including the skills needed to work *with* AI, and align on an action plan to develop internal capability or seek available talent externally in applicable areas.

KEY INSIGHTS

- Half of government agencies consider a lack of internal capability to be one of their biggest barriers to taking advantage of AI [4]. This can translate to low AI fluency and, commonly in the tax sector, a shortage of skilled professionals with enough experience and available time to provide feedback on proposed AI use cases. Notably, enabling tax professionals to effectively work alongside data scientists can lead to more insightful data analysis and decision-making [5]. For example, we could include non-technical workers as testers on pilot projects in sandbox environments, soliciting their feedback regularly.

- Research suggests that employees who embrace the power of working with AI tend to thrive [6]. As AI is implemented for the most tedious tasks, many tax professionals will be freed up from administrative tasks such as reporting and analysis to focus on higher value activities like executive management and complex problem solving. Educating our workforce on how to apply new AI tools to domain-specific tasks with appropriate oversight will become of utmost importance, as well as emphasising the human aspect in AI integration and the continued importance of curiosity, creativity and critical thinking [2]. Learning pathways should additionally focus on responsible use of AI, including understanding the limitations of AI and accounting for local regulations and trustworthy AI best practice [7].

ROADMAP CONSIDERATIONS

Capability Assessment

Learning & Development Plan

Senior Leadership Fluency Programme

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1. *Building the digital revenue agency of the future*
2. *Artificial intelligence entering the world of tax*
3. *Crafting an AI strategy for government leaders*
4. *state-of-ai-fifth-edition.pdf (deloitte.com)*
5. *Us tax working and thriving in a digital tax world*
6. *thriving-in-a-digital-tax-world (deloitte.com)*
7. *Training next-gen AI talent*

How We Work

- **Functional Capability:** Ensuring we have a consolidated functional capability is vital to enhance our technical preparedness to adopt AI solutions, balance the automation of routine tasks, and empower our employees for higher-value work, thereby enhancing Inland Revenue's operational effectiveness and adaptability in the digital era.

- **Policy:** Given the crucial role of AI policies in seamlessly integrating AI within our operations, we must focus on framing internal policies for AI to balance compliance needs, ensure data integrity, and manage risks associated with data privacy and protection. This focus supports the broader theme of how we work, shaping it for an increasingly digital and AI driven context.

- **Innovation & Partnerships:** Focusing on how we apply AI to enhance our operational efficiency, we need to foster diverse partnerships and utilise novel technologies, balancing the innovation drive with ethical standards, privacy and data integrity considerations.

Inland Revenue
Te Tari Taake

Functional Capability

Ensure we are prepared to thrive in the next stage of its journey with AI from a technical standpoint.

Our organisational functional capability is a crucial consideration in formulating an approach to AI, in order to ensure our technical preparedness to adopt AI solutions and support cross-functional capability across government. The focus is on how the appropriate technology can made available and leveraged to augment human capabilities across the business groups, thereby impacting our operational effectiveness and adaptability in the digital era.

STAKEHOLDER FEEDBACK

Stakeholder feedback suggested a need for coordinated and efficient utilisation of resources with a specific focus on timely and context-driven application. This is set against the background of system stewardship, with emphasis on mitigating risks in case of system errors. Furthermore, there's a strong indication towards streamlining customer communication, engaging advanced digital technologies, and fostering processing efficiencies. A notable use case for AI is in the complex fraud area. Manual efforts for tasks such as annual tax risk reviews should be reduced with AI facilitating both data input and decision-making processes.
Interviewees: Mary, Cate, Anil, James, Dan, Mike, Lisa.

OPPORTUNITIES & CHALLENGES

- Consolidating functional capability will help us to optimise resource allocation and operational efficiency across the business groups by implementing a variety of AI solutions in order to balance the automation of routine tasks with the empowerment of employees for higher-value work [1][2].

- We have the opportunity to engage with a range of third party vendors to bring in the technical services required for service delivery. However, we may like to maintain a level of technical capability internally in order to support the development of any high-risk use cases which involve highly sensitive data or require custom features. As such, this strategic consideration can help to inform discussions as we decide whether to build certain solutions in-house or buy them from external providers.

RISKS

- There is a key risk associated with not leveraging AI capability. We already face AI-enabled cybersecurity threats, and these are only set to increase. Consolidating our access to the technology needed to drive responsible AI implementation will act as a layer of protection from these threats. This aspect is also worth bearing in mind as we choose how we will play in the AI space, such as whether the organisation acts as a leader in adopting AI use cases or a follower who waits to see AI solutions tried and tested by others first.

- The risk of stagnation in 'pilot purgatory' highlights the need for a strategic approach to scale AI solutions from pilot to full implementation, ensuring ongoing advancement and adaptation [3][4].

KEY INSIGHTS

- The importance of a scalable and adaptable approach to AI is clear. Moving beyond initial pilots to full scale AI deployment requires a strategic focus on data management and technological infrastructure [3].

- Enhanced functional capability enables high quality AI-enabled solutions, which can in turn can foster greater productivity and enhanced staff experience. A recent study looked at the impact of Generative AI on customer service centres, finding that productivity improvements were high, particularly for less-experienced workers. With an AI assistant to pinpoint the relevant parts of the documentation and draft responses for a given query, agents were able to resolve 13.8% more chats per hour [5]. This use case has also been shown to foster better consistency in staff outputs and decisions made [6]. In our context, AI has the potential to increase accessibility for tasks in the tax function that were previously only able to be completed by senior staff. However, these benefits will only be realised if functional capability is sufficient to support PoCs, pilots and eventually productionised solutions in this area.

ROADMAP CONSIDERATIONS

AI Environment Scan

1. AI augmented government
2. DI CGO state of AI for gov
3. DI CGO state of ai for gov
4. Us tax working and thriving in a digital tax world
5. Workers gain the most from generative AI | MIT
6. Generative AI (forbes.com)

Policy

Confirming how we will use policy to support the seamless integration of AI capabilities into its workflows.

Our AI policies will play a crucial role in framing how the organisation works. It ensures that AI applications are integrated seamlessly into existing frameworks, aligning with both internal governance and external regulator requirements. This integration is vital for maintaining the integrity and effectiveness of our operations in an increasingly digital and AI driven landscape.

STAKEHOLDER FEEDBACK

The policy consideration stresses the significance of defining what constitutes AI versus GenAI and the varied workstreams, risks, and practical results associated with each. It also emphasises the governance of the implementation process, ensuring appropriate conversations with well-informed individuals to leverage their expert knowledge.
Interviewees: Cate, Tina.

OPPORTUNITIES & CHALLENGES

- By leveraging AI, we can enhance compliance and encourage voluntary participation in the tax system, much like the Danish model, which successfully integrated sharing economy transactions into the tax framework [1]. However balancing the compliance costs and burdens for stakeholders is a key challenge in this approach.

- The operational policy must address the quality and management of data, as AI's effectiveness hinges on high quality, consistent and accurate data. Ensuring data integrity is vital and introducing new operational policies presents the opportunity to reset and create better organisational practices for data collection and storage[2].

- Policy and guidelines must be put in place to determine who is responsible for the decisions made or derived using AI.

RISKS

- Policies need to account for the risks associated with data privacy and protection, especially considering regulations which place restriction on automated decision making and profiling. [3]

- Operational policy must include mechanisms to continuously evaluate and mitigate biases in AI algorithms and secure sensitive financial data against unauthorised access or breaches. [4]

- There is a need for clear documentation and enforceable processes to address ethical risks, such as bias or misuse of AI, underlining the importance of robust governance structures.[2]

KEY INSIGHTS

- Effective governance structures are essential to instill trust and confidence in AI systems, especially in addressing issues of bias and discrimination [2].

- Establishing a centre of excellence or similar structures can help in developing best practices, sharing knowledge, and ensuring the quality of AI deployments [2]

- Documenting and enforcing machine learning operations (MLOps) is crucial for the ethical and effective deployment of AI, as it facilitates addressing any issues with AI models. [5]

- Embracing new operational models and processes is vital for leveraging AI in a way that drives sustained quality, innovation and value creation[5].

ROADMAP CONSIDERATIONS

AI Policies & Guidelines

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1. Building the digital revenue agency of the future
2. DI crafting an AI strategy for govt leaders
3. Ddtl tax artificial intelligence in tax
4. Us Deloitte the implications of generative
5. State of ai for government

Innovation & Partnerships

Leveraging our relationships to enhance our AI capability while using our maturity to lead and support the wider public sector.

It's key for us to focus our strategic considerations for innovation and partnerships in AI on leveraging diverse ecosystems and integrating digital solutions. This approach is pivotal in maintaining a competitive position and enhancing operational efficiency within the tax system.

STAKEHOLDER FEEDBACK

A common theme to emerge was the potential of cross-government guidance and alignment with OECD Tax Admin 3.0 policies. The utility of Shared Responsibility Model is highlighted, with an underlying need to maintain the integrity of the tax system.
Interviewees: Mike, Mary, Cate, James, Tina.

OPPORTUNITIES & CHALLENGES

- High-achieving organisations, including government agencies, benefit from a diverse ecosystem of partnerships, leading to better AI implementation and improved organisational outcomes [1][2]. We have the opportunity to work with other government agencies through the AoG AI Programme of Work, as well as in collaboration with ecosystem partners to better deliver AI-enabled services to New Zealanders.

- Effective communication and collaboration, often through formal training programs, enable tax departments to evolve into more competent advisers, enhancing both risk management and department performance. Learning and sharing with partners offers significant opportunity to accelerate maturity progression[3].

- Deciding how to leverage each strategic partnership is as critical as the choice of partners. This involves balancing a streamlined approach with the need for diverse perspectives and capabilities [1].

RISKS

- While collaboration is key, there's a risk in over-relying on external partners, potentially compromising our ability to maintain any competitive advantage and independence [1].

- Collaborations, especially those involving data sharing and AI implementation, must navigate ethical frameworks and privacy concerns, ensuring adherence to standards and mitigating bias [4][5].

- The integration of AI technologies from various partners can pose challenges in terms of compatibility with existing systems, maintaining data integrity and security, and legal implications [5].

KEY INSIGHTS

- Collaboration with diverse partners, including industry and academia, can spur innovative solutions, as seen in examples from government agencies using AI for public benefit [4][6].

- While partnerships are valuable, developing differentiating in-house capabilities ensures sustained competitive advantage and strategic autonomy [1].

- Ethical frameworks and toolkits are essential in AI implementation, promoting privacy, reducing bias, and ensuring diverse and inclusive design teams [4].

- Effective collaboration aligns with the organisation's broader business goals, enhancing overall performance and driving digital transformation [5]

- To excel we could decide to be agile and reactive to innovations led by other organisations or we could choose to lead and innovate new technologies with partners. The initial option risks failure to adopt quickly enough and the latter option risks introducing technology unfit for purpose respectively, however each approach has high possible reward.

ROADMAP CONSIDERATIONS

Cross-agency Initiatives

Natural Systems Guidance

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1. DI_CIR_State-of-AI-4th-edition.pdf (deloitte.com)
2. Scaling AI in government How to reach the heights of enterprise wide adoption of AI (deloitte.com)
3. us-tax-working-and-thriving-in-a-digital-tax-world.pdf (deloitte.com)
4. Crafting an AI strategy for government leaders | Deloitte Insights
5. DI_building-the digital-revenue-agency.pdf (deloitte.com)
6. DUP_AI-augmented-government.pdf (deloitte.com)

Our Approach

Responsible, Fair & Transparent | **International Best Practice** | **Secure & Confidential**

- **Responsible, Fair & Transparent:** We are committed to designing and operating our AI systems in a socially responsible way, providing fair and equal treatment for all and maintaining a level of transparency that all users can understand and trust.

- **Secure & Confidential:** As the custodians of New Zealand's tax data, we must prioritise implementing Trustworthy AI principles to ensure robust security and confidentiality measures, which are intrinsic to maintaining trust and confidence.

- **International Best Practice:** Leveraging insights from international standards and collaborating with international bodies will enable us to design AI-related frameworks well-tailored to New Zealand's context, while facilitating efficient learning transfer and enhancing organisational transparency at Inland Revenue.

Inland Revenue
Te Tari Taake
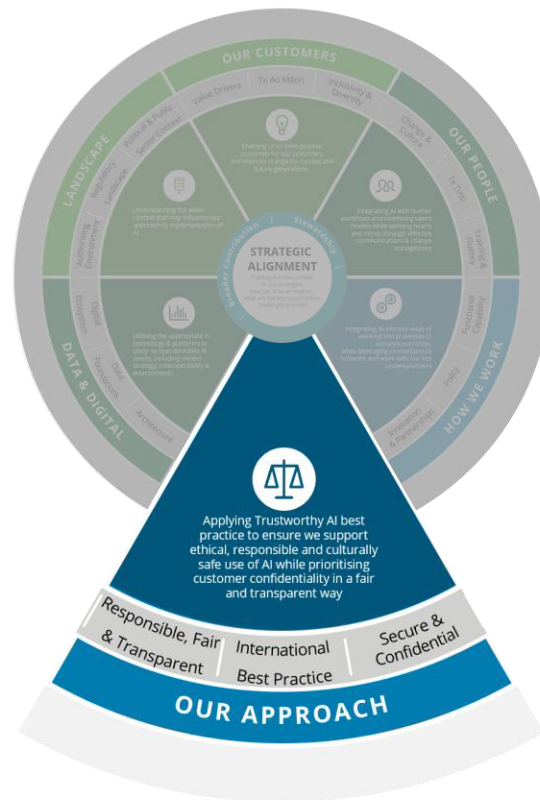
Responsible, Fair & Transparent

STRATEGIC CONTEXT

A socio-technical ecosystem enabling AI that is ethical, lawful and technically robust. It is achieved through governance of AI risks across people, processes and technology – in a systematic fashion, leveraging an impact-based tiering approach.

As the adoption of AI grows, so too does the need for fostering trust and accountability. Compared to private sector organisations, government agencies face additional legal and risk constraints when it comes to AI adoption. It is imperative to ensure everyone can understand and scrutinise how their data is being used by us, how AI decisions are being made, and who is responsible for them.

This is consistent with our Stewardship role – as set out in the Enterprise Strategy, we have a responsibility to ensure that any AI solutions implemented are trustworthy to be fit for purpose today and tomorrow.

STAKEHOLDER FEEDBACK

We must be responsible, fair and transparent in our application of AI. This involves effective risk management against malicious actors and bias, maintaining the integrity of the tax system, and ensuring rigorous testing and explainability of AI models. The credibility and trustworthiness of the AI system is crucial, hence, security, anonymity regarding Personal Identifiable Information (PII), and an absence of bias in practice are paramount. Also, engaging experts and improving knowledge, especially among decision-makers, on ethics and data governance is essential to avoid potential public relations issues related to AI use. Interviewees: James, Cate, Anil, Tina, Lisa.

OPPORTUNITIES & CHALLENGES

- We have the opportunity to introduce guardrails embedding Trustworthy AI principles early in AI journey, ensuring AI systems are responsible, reliable, fair and transparent.

- Responsible: Create and operate the technology in a socially responsible manner, with clear accountability of who is responsible for decisions made using AI systems.

- Robust & Reliable: Confirm that AI functions properly beyond pilot stage, producing consistently accurate, relevant outputs.

- Fair: Guard against illegal and unethical discrimination, ensuring equitable treatment of all.

- Transparent: Help users (IR employees / the public) understand how their data can be used and how AI systems make decisions.

RISKS

Most organisations are still grappling with the risks associated with traditional AI, and Generative AI brings renewed attention to these. We should seek a balanced view of value creation opportunities with risks involved. Examples include:

- Generation of misleading or false content, potentially causing confusion or harm to users who blindly rely on the generated output – e.g. our employees using Generative AI knowledge tools without proper training.

- Users may not be aware that specific IR content was machine-generated. We must communicate how the system works and build transparency and trust.

- Bias in the underlying data is a risk that can be amplified when AI models are trained on them – e.g. public-facing AI assistant less able to answer questions from certain socio-economic groups due to lack of past examples, perpetuating barriers to use.

KEY INSIGHTS

- New Zealand government agencies have established a foundation for responsible AI through initiatives like the Algorithm Charter and the AI Governance website from AI Forum NZ [1]. Whilst these resources are helpful, they need to be tailored to ensure there is a sufficient level of detail and relevance to our unique context. This is especially important when thinking about who should be responsible from an organisational perspective and striking the right balance between enhancing and protecting tax and social policy systems. To ensure good stewardship, we should take an IR specific approach to aspects such as an AI Risk Assessment (tailored to our needs), and MLOps (tailored to the development systems in play at IR).

- Additionally, global frameworks may be leveraged. Most notably, the NIST AI Risk Management Framework which has been adopted by other agencies in the New Zealand public sector. [2] The recently published ISO 42001:2023 AIMS can be leveraged alongside NIST to develop a robust AI risk and controls library in the near term, and work towards compliance in the longer term [3].

- It is important that an AI Risk Management Framework be established. Our risk team must be aware of how to manage this framework and potential risks, but awareness and compliance must also extend across all of IR [4].

ROADMAP CONSIDERATIONS

AI Risk Framework | AI Risk Assessment

AI Governance Framework | AI Governance Pilot

1. AI Forum NZ - AI Governance
2. AI Risk Management Framework | NIST
3. ISO 42001:2023 AIMS Standard
4. AI in Government Services

Secure & Confidential

To maintain trust and confidence, it is paramount in today's data-driven landscape to ensure the security and confidentiality of AI.

It is important to implement robust measures to safeguard sensitive information and protect against risks, including data breaches, that may cause physical and/or digital harm. Privacy must also be respected, and consumer and employee data should not be used beyond its intended and stated use.

This is also consistent with our Effective and Efficient role – as set out in the Enterprise Strategy, we have a responsibility to use our knowledge, resources and capabilities wisely.

STAKEHOLDER FEEDBACK

We should prioritise risk management, information security and elimination of bias, to preserve the integrity of the tax system. Ensuring model explainability, stringent testing and maintaining the anonymity and security of Personally Identifiable Information (PII) is crucial. Developing deep expertise and building capability relating to ethics and data governance are important points. It is vital to accommodate the evolving advances yet ensuring sensitive data is securely held for the credibility of both the tax system and the organisation.
Interviewees: James, Anil, Tina, Lisa.

OPPORTUNITIES & CHALLENGES

- We have the opportunity to introduce guardrails embedding Trustworthy AI principles early in our AI journey, ensuring AI systems are secure and confidential.

- Preserving Privacy: Train AI models on representative data without compromising sensitive sources of training data.

- Safe & Secure: Ensure that the technology, and the data that feeds into it, is protected from risks that may cause individual and/or collective physical, emotional environmental, and/or digital harm.

RISKS

Most organisations are still grappling with the risks associated with traditional AI, and Generative AI brings renewed attention to these. We should seek a balanced view of value creation opportunities with risks involved. Examples include:

- The risk of individual and / or collective physical, emotional and/or digital harm – e.g. prompt injection attack leading to data leakage and/or inaccurate tax advice (due to prompt/data poisoning).

- Where employing cloud architecture to host or run AI systems, this is subject to the same security risks as all cloud technology. Most notably, the risk of data breach, which results in a loss of customer trust, reputational impact, as well as regulatory fines & penalties.

- The risk of re-identification of data subjects in an anonymised dataset, using AI technology, by external players or employees (insider threat).

- AI technology is data hungry, and it can be tempting to use data for purposes beyond its initial intended use – resulting in data being used in ways not understood by customers and employees, or not permitted by agreements with them.

KEY INSIGHTS

- There is increased guidance from the Privacy Commissioner on Artificial Intelligence and the Information Privacy Principles [1]. These may provide a useful starting place in understanding our security and confidentiality needs.

- Additionally, global frameworks may be leveraged. Most notably, the NIST AI Risk Management Framework which has been adopted by other agencies in the New Zealand public sector [2]. The recently published ISO42001:2023 AIMS can be leveraged alongside NIST to develop a robust AI risk and controls library in the near term, and work towards compliance in the longer term [3].

- To ensure effective and efficient leadership, an IR specific approach should be taken to ensure confidentiality and integrity is maintained. This could be achieved through tools such as the AI Impact Assessment (tailored to our needs), and MLOps (tailored to the development systems in play at IR).

ROADMAP CONSIDERATIONS

AI Risk Framework | AI Risk Assessment

AI Governance Framework | AI Governance Pilot

1. AI-and-the-Information-Privacy-Principles.pdf
2. AI Risk Management Framework | NIST
3. ISO 42001:2023 AIMS Standard

International Best Practice

Using global context to inform our navigation of AI-related risks as New Zealand's tax authority.

International standards will set a benchmark that we may aim to meet or surpass when defining our approach to AI. This consideration feeds into Te Pou o te Tangata, in that it involves seeking diverse perspectives to inform the work we do.

STAKEHOLDER FEEDBACK

Tax Admin 3.0 is a key area of focus

OPPORTUNITIES & CHALLENGES

- There may be an opportunity to partner with an international body to co-design AI-related frameworks, building on existing standards and ensuring relevance to the specific New Zealand context. In 2020, the New Zealand government partnered with experts from the World Economic Forum in a pilot project to design a fit-for-purpose governance framework, producing recommendations to be fed into future work [1]. Any further collaboration in this space has the potential to be highly beneficial to IR, as international best practices can be directly incorporated into local strategy.

- Learning and sharing enables efficient learning transfers as well as improves organisational transparency. We could leverage this to solidify relationships and capability

RISKS

- The current international AI regulation landscape is in a period of great change. The EU currently relies on existing legislation (GDPR, Digital Services and Digital Markets Act) to govern algorithms, but the AI Act with its associated standards of quality and safety is expected to be passed into law over the next few months . The US, on the other hand, does not currently have any legislation on AI usage at the federal level, and instead has guidelines outlined in the AI Bill of Rights and President Biden's recent Executive Order on the topic [2]. These different approaches create a complex environment to navigate when seeking to identify best practices internationally.

KEY INSIGHTS

- We can draw upon insights from existing risk standards from overseas, such as the NIST AI Risk Management Framework. This framework targets the design and implementation of trustworthy AI in practice, and is already being used by other New Zealand public sector agencies including ACC. Specifically, the core of the framework introduces four elements that should be sustained to ensure adequate risk management. Namely, these include mapping risks to relevant real-world context, measuring risk impact along multiple dimensions and managing risk mitigation through prioritisation, all underpinned by a governing culture of risk management [3].

- AI principles defined by the OECD can also provide a helpful baseline, as several mirror our own aspirations, including enhancing wellbeing for people and planet and responsibly navigating the risks as stewards of the tax system and associated social policies. These guidelines also outline how AI can be best implemented in the public sector setting to support digital government, including frameworks to maintain transparency of public sector data-driven decision-making [4]. This may build into our thinking around Tax Administration 3.0, which prioritises digital transformation to integrate with the natural systems that taxpayers interact with daily [5], targeting tax rule management through AI.

ROADMAP CONSIDERATIONS

AI Risk Framework | AI Governance Framework

1. *WEF_Reimagining_Regulation_Age_AI_2020.pdf (weforum.org)*
2. *White House AI Executive Order | Brookings*
3. *nvlpubs.nist.gov/nistpubs/ai/NIST.AI.100-1.pdf*
4. *AI-Report-Online.pdf (oecd-opsi.org)*
5. *Tax Administration 3.0 (oecd-ilibrary.org)*

Data & Digital

Digital Ecosystem	Data & Information Foundations	Architecture

- **Architecture:** It is imperative that we continue to ensure a robust and adaptable technology infrastructure that can not only handle increased AI workloads, but also be flexible enough to leverage multi-cloud technologies and manage potential risks associated with outdated systems, to support IR's journey towards being an AI-empowered organisation.

- **Data/Information Foundations:** We recognise that establishing robust data foundations directly underpins our ability to effectively deploy AI, enhancing decision-making, processes and cybersecurity, within the wider context of our Data & Digital segment. These include considerations for not just transactional data but information and knowledge as well.

- **Digital Ecosystem:** To successfully implement our AI strategy, we need recognise the importance of establishing a diverse and well-managed digital ecosystem, harnessing relationships within it for actionable insights, while mitigating risks of overdependence on specific vendors.

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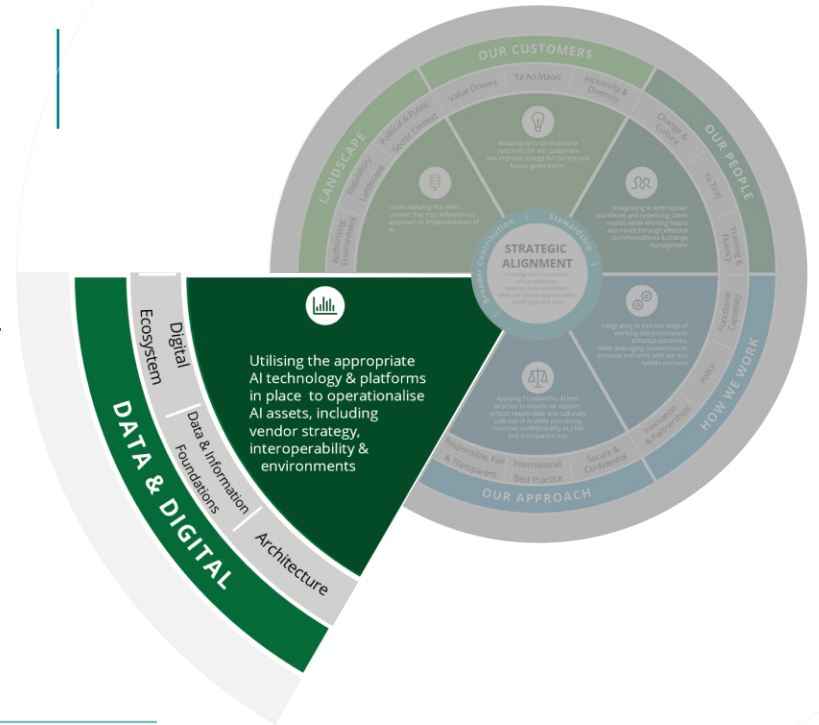
Architecture

Ensuring that we have the architecture and systems in place to support the transition to an AI empowered organisation.

In developing an approach to AI implementation, architectural considerations are critical. An appropriate architecture must be established to manage the projected AI workload, factoring in high bandwidth, low latency, and flexible architectures. This extends to the multi cloud strategy, examining the suitability of transitioning computational systems to the cloud, with an eye to data analysis enhancements. Furthermore, realising a metadata-informed analytics techniques necessitates careful preparation of existing and future data through rigorous cleansing processes.

STAKEHOLDER FEEDBACK

The architecture should be enabled to consume data and provide insightful information, leveraging the power of existing cloud infrastructure like AWS Sydney. Furthermore, the preference from some team members is towards AI solutions as a service, with an expectation for vendors to add significant value.

Interviewees: James, Mary, Cate, Mike, Malcolm.

OPPORTUNITIES & CHALLENGES

- The use of outdated or poorly documented systems within the technical architecture of IR can be a hindrance, as these constraints could limit our ability to manage risks and adapt to the required capabilities for successful AI implementation.[1]

- The effective deployment of AI may require a heavy redesign or improvement of technical architecture, this could be an opportunity to consider high bandwidth, low-latency, and flexible architectures to allow for efficient AI application deployment.[3]

- The implementation of AI at scale requires a different array of organisational capabilities compared to smaller scale projects or proofs of concept. It would therefore be challenging to translate the success of small pilots to a larger scale without also evolving the supporting architecture.

RISKS

- If current architecture is significantly based on outdated machine languages, it may pose challenges as these systems could potentially be incompatible with emerging technologies like artificial intelligence. If not addressed, these technical impediments could potentially lead to financial burdens and create unfavourable outcomes for citizen services in the long-term.

- Scaling from pilot projects to production level AI applications is a major shift that would require us to have infrastructure capable of handling the increased workload. If existing capacities cannot meet the required infrastructure demands, both in terms of processing power and bandwidth, we may face significant performance issues.

- Dependence on a single vendor for AI technologies can lead to limitations in flexibility and adaptability. This could inhibit the ability to incorporate new advancements in technology or switch to better solutions, thereby posing a risk to the long-term success of our AI initiatives.

KEY INSIGHTS

- Before implementing AI systems, we must comprehensively assess our current technology architecture. This not only includes technical compatibility but also whether the existing setup can handle expected AI workloads, especially when transitioning from a pilot phase to a production solution. These preparatory measures are crucial to avoid overburdening the system and ensure seamless integration of AI applications.

- Prior to deploying AI solutions, we must test and adapt our technology architecture. This ensures it can handle the demands of such advanced technologies. Testing and modifying the architecture prior to rolling out solutions are crucial steps to guarantee a successful implementation of AI across IR [2].

- Successful AI integration heavily depends on high bandwidth, low-latency, and flexible technical architecture such as multi cloud. Beyond merely scaling up a proof of concept, this includes implementing robust systems capable of handling increased AI workloads and assuring data quality [3].

- Tax systems are forever evolving due to changing policy mandates. It is key that we adopt a modular and flexible approach to system architecture, allowing for rapid adaptations and improvements as and when necessary. This can help future-proof our AI capabilities and ensure they can harness emerging technologies as they evolve.

ROADMAP CONSIDERATIONS

Architecture Review | Platform & Automation (MLOps)

1. DI_building-the digital-revenue-agency.pdf (deloitte.com)
2. DI_Crafting-an-AI-strategy-for-govt-leaders.pdf (deloitte.com)
3. Scaling AI in government | Deloitte Insights

Data (& Information)Foundations

High performance AI requires high quality, accurate and accessible data, information and knowledge.

Data and information foundations are a critical strategic consideration as they support the accessibility, quality and security of the vast amounts of data necessary for AI solutions to function optimally. This directly ties into the larger Data & Digital pillar, as effective data foundations work in harmony with our architecture and digital ecosystem, underpinning our ability to harness AI's potential to enhance key processes, enable insightful decision-making and guard against cyber threats.

STAKEHOLDER FEEDBACK

We demonstrate sound data and information maturity, having made significant investments into modernisation, which positions us favourably compared to other government agencies. The extensive renewal of systems ensures processes efficiently convert raw data into a format suitable for analytics. However, the need for strengthened data governance and quality management processes is crucial, with an emphasis on maintaining accuracy and relevance. Furthermore, channel content data consistency is highlighted to support corresponding use cases. Interviewees: Mary, Cate, Mike, Tina, James, Dan.

OPPORTUNITIES & CHALLENGES

- With the right data and information strategy, there exists a significant opportunity to unlock the hidden power of data. By identifying relevant datasets and creating platforms for data accessibility, the quality and effectiveness of AI can be vastly improved [1][2][3].

- Revenue agencies have a unique opportunity to treat data and information as an asset. By investing in data quality and governance, agencies can ensure AI enhanced taxation and compliance processes, thereby facilitating better decision making and more accurate tax collection [1][2].

- The sheer volume and variety of data/information can pose a serious challenge to revenue agencies. Overcoming this challenge requires an investment in processes that validate and enhance data quality. Inaccurate or poor-quality data can undermine AI effectiveness and lead to incorrect tax outcomes. [1]

RISKS

- There's an inherent risk of being overloaded by the vast volume of data generated by digital transactions. By not being equipped to handle these data flows, the effectiveness of AI outcomes could be compromised [1]

- Inadequate data/info governance and unclear roles or accountability could lead to security vulnerabilities or compliance issues. Mismanagement of data can lead to unauthorised access or data misuse, posing significant risks to the operation and reputation of the agency [2]

- Failing to identify relevant datasets or provide platforms for their access poses a risk for AI implementation at IR. Inadequate access to vital data could limit the potential of AI initiatives or lead to subpar results. Moreover, if data is used to answer basic questions rather than develop deep insights, there is a risk of under-utilising the sources present [3]

KEY INSIGHTS

- We must approach data/information as both our most significant advantage and challenge [1]. It's vital to deploy resources to convert these vast data inflows into actionable insights. We must understand how to unlock the potential of new types of data while ensuring citizens' privacy and serving the public good.

- A concrete data/information strategy and governance model are imperative [2]. It involves outlining clear roles and accountabilities for business and system owners and stewards. This model also provides guidelines for dealing with security, privacy and compliance issues, ensuring the data's integrity, consistency and reliability.

- Data/Information is a crucial ingredient for successful AI implementation [3]. Agencies need to distinguish and gain access to the crucial datasets for their operations. It is particularly important to develop platforms to access the identified data effectively. These platforms can improve the readiness and success rates of deploying AI in tax duties [3].

ROADMAP CONSIDERATIONS

Roll-out Plan for Pilots & PoCs

Technical Maturity Assessment

1. Building the Digital Revenue Agency of the Future | Deloitte Luxembourg | Public Sector
2. DI_Crafting-an-AI-strategy-for-govt-leaders.pdf (deloitte.com)
3. Scaling AI in government | Deloitte Insights

Digital Ecosystem

STRATEGIC CONTEXT

We will need to utilise wider digital partners and technologies to ensure successful implementation of AI.

For a robust approach to AI implementation, considering the digital ecosystem is essential as it not only provides the necessary breadth and diversity but also safeguards the organisation against overdependence and limits on innovation. Under the Data & Digital pillar, this aspect recognises the significance of having a healthy mix of partners, technologies, and data sources for continuous growth and competitiveness in the evolving AI landscape.

STAKEHOLDER FEEDBACK

We recognise the crucial role of a robust digital ecosystem in our AI strategic considerations. A key consensus is the necessity for clean, useful data as a primary foundation before layering any AI applications on top. Both the use of external partners for technology development and managing applications handling Personally Identifiable Information (PII) internally were emphasised. The potential role of third parties is acknowledged, with the understanding that these partners could help consolidate data from different sources as well as assist in employing AI technology.
Interviewees: Dan, James, Anil, Tina, Lisa.

OPPORTUNITIES & CHALLENGES

- Leveraging data ecosystems can offer the opportunity to unlock the next level of actionable insights, serving citizens more effectively and enabling richer decision making. This calls for an emphasis on not only developing internal capabilities, but also on building robust technology, ecosystems that capitalise on diverse external entities with distinct strengths [1][2][3].

- Balancing the risk and reward of data sharing is a common challenge in the public sector and requires considerable trust amongst all participants to ensure sustained data sharing. The continuous advancement and adoption of new technologies, standards and ethics for data use can help ease these challenges and accelerate sharing, but maintaining trust will be a persisting consideration [1].

- When interacting with the broader digital ecosystem during procurement, we should aim to clearly articulate business needs to vendors and establish suitable frameworks so that desired outcomes can be met while ensuring integrity and control.

- By embedding compliance into business transactions with Tax Admin 3.0 and integrating tax processes with Natural Systems, efficiency is amplified, and tax gaps are minimised. These improvements encourage timely tax fulfilment, directly curbing uncollected debts and revolutionising the taxation framework.

RISKS

- Trust is key to the health of the digital ecosystem, however it can also be a risk if not properly managed. Trust can be established through good governance models and clear rule agreement among all ecosystem members [1].

- Relying heavily on a few vendors or partners can lead to overdependence or 'vendor lock', stifling innovation and causing difficulties in transition to new vendors in the future, which could trigger substantial disruption. A diverse ecosystem and integrating with a variety of vendors, including those emerging or niche, could mitigate this risk [3].

- The management of the relationships within the digital ecosystem is an essential element, posing a risk if not executed effectively. Deciding how to leverage each relationship is just as important as deciding who and how many to have within the ecosystem. Properly managed, these relationships can enhance operation [3].

KEY INSIGHTS

- A well-orchestrated data ecosystem can offer the opportunity to unlock the next level of actionable insights. Interoperability, enabled by a well-thought-out ecosystem, can provide richer insights and more effective service to citizens. Our approach to AI should therefore focus on harnessing the potential of the relationships within this ecosystem to leverage data for faster, better decision-making [1].

- Trust forms a key ingredient for a sustainable digital ecosystem, especially when it revolves around data. All participants need to assure that data is protected as if it were their own. Our culture could also play a vital role in its willingness to adopt new technologies and adapt to changes in its operating system [1].

- To harness the full potential of AI, it's paramount to establish a diverse digital ecosystem. This ecosystem could range from existing technical solutions to partners across various sectors, including academia, industry, and governmental bodies. Such diversity provides technological agility to access a broad spectrum of AI-based solutions and helps avoid the risks associated with vendor lock or overdependence on a single entity. This, in turn, can expedite progress towards AI implementation at scale and enhance organisational readiness to adapt to any changes in the operating ecosystem [2][3].

- The implementation of Tax Admin 3.0, through integration with taxpayers' natural systems using AI, promises a revolutionary shift towards real-time taxation. This approach enhances compliance, reduces administrative burdens, and addresses current structural limitations in tax governance, ultimately creating a more efficient, inclusive, and streamlined tax administration.

ROADMAP CONSIDERATIONS

Procurement & Vendor Management

Roll-out Plan for Pilots & PoCs | AI Sandbox

Ecosystem Partner Collaboration

1. DI_CDO-Playbook-2023 (deloitte.com)
2. Scaling AI in government | Deloitte Insights
3. DI_CIR_State-of-AI-4th-edition.pdf (deloitte.com)

Landscape

- **Wider Regulatory Landscape:** We recognise the importance of monitoring and adapting to global AI regulation trends and changes, in order to ensure future-focused regulatory compliance and uphold the stewardship of New Zealand's tax system.
- **Political & Public Sector Landscape:** Navigating the mutable political landscape and public sector expectations is crucial in our AI strategy, as it informs our initiative's flexibility, public acceptability, and alignment with government and taxpayer expectations.
- **Authorising Environment:** We hold a unique legislative authority that enables us to pioneer AI applications in the public sector, making our understanding and navigation of the authorising environment crucial to the successful and ethical implementation of our AI strategy.

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Wider Regulatory Landscape

STRATEGIC CONTEXT

Planning for the implications of New Zealand's evolving compliance environment on AI activities at IR.

We are dedicated to creating a wellbeing legacy for those to come, as well as demonstrating integrity of process as well as outcome (mahi tika). To achieve this, it will be essential to align with applicable AI standards and ensure the use of AI does not jeopardise compliance with various legislation and legal frameworks including tax, intellectual property, copyright law, and content/ data ownership across various jurisdictions.

The AI Working Group has already drafted internal guidelines along these lines.

STAKEHOLDER FEEDBACK

Feedback revolved around jurisdiction and data storage location, with a need for increased transparency in AI use within procurement and vendor management processes. Stewardship and the right to audit providers if necessary are paramount, leveraging on the mature existing governance processes. Interviewees: Mary, Cate, Anil, and Mike.

OPPORTUNITIES & CHALLENGES

- In line with our target outcomes, the Algorithm Charter recognises the power of AI to help public sector organisations "deliver services that are more effective and efficient" [1]. Due to our broad ranging public role, any AI use cases have the potential to significantly impact wellbeing, whether intentionally or not. Applying the charter's recommendations around Trustworthy AI and Te Tiriti will enable us to mitigate any risks as they arise.

- As per the Tax Administration Act 1994, our officers are responsible for the integrity of the tax system [2]. AI fraud detection capabilities, with options for real-time analysis, provide us with the opportunity to proactively monitor taxpayer compliance and thus better maintain the integrity of the system.

RISKS

- Extra care is required when using third-party services that integrate AI. These might be subject to international regulations surrounding AI and privacy, particularly if their service uses international data sharing. As such, procurement processes should be strengthened to ensure provider use of AI is compliant with all applicable standards [3]. We should seek transparency and control over how providers are implementing AI, to ensure that any exposure of personal information or associated harm is prevented.

- Any deviation from applicable standards for AI use could result in severe reputational damage for our organisation due to its wide-ranging role as steward of New Zealand's tax system. Strong transparency and human oversight are especially critical for us, as inaccurate AI output could jeopardise public trust.

KEY INSIGHTS

- Regulatory compliance should be future-focussed - not only appreciating today's legislation but also proactively anticipating policies to follow. We should monitor for changes in regulatory policy that could impact our AI initiatives, and particularly for the introduction of any AI-related legislation. Thus far, pathways to AI regulation have been similar internationally, with countries moving from investigating AI capabilities to actively growing the industry [4]. As many governments begin looking at how to shape and regulate AI development, policies may diverge based on local factors. We should watch this regulatory landscape carefully, to pre-emptively ensure compliance.

- We should develop particularly robust procedures around the use of Generative AI. In addition to the privacy protections outlined in the Privacy Act 2020, specific Generative AI guidelines the Privacy Commissioner earlier this year focus on the importance of human oversight, including validation to ensure accuracy and confidentiality, as well as feedback mechanisms to enable improvement [5].

ROADMAP CONSIDERATIONS

AI Standards

AI Governance Standard Operating Procedures

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1. Algorithm-Charter-2020_Final-English-1.pdf (data.govt.nz)
2. Tax Administration Act 1994 Public Act 6 – New Zealand Legislation
3. Interim Generative AI guidance | NZ Digital government
4. AI regulation | Deloitte Insights
5. Privacy Commissioner outlines expectations around AI use
Related Resources 1: Privacy Act 2020 No 31 (as at 01 November 2023)

Political & Public Sector Landscape

Ensuring our approach to AI will align with expectations placed on our organisation by the government and taxpayer base alike.

As a public sector organisation, we are accountable to both the current government and the people of Aotearoa New Zealand, hence our strategic foundation to build and maintain strong and trustful relationships (Whanaungatanga). Considering how this context ties in with our AI aspirations will be essential to ensuring their continued success.

AI can also support efficiency by automating routine tasks, streamlining processes, and enhancing data-driven decision-making.

STAKEHOLDER FEEDBACK

The strategic considerations for AI implementation within our organisation lie in carefully balancing opportunity with the obligation to guard data security and risk management. The key is to transition gradually while ensuring informed customer consent and a build-up of public trust, thus earning a 'social license'. However, despite an internal push towards being 'more brave', navigating between the increasing expectations of efficient data usage and the absolute adherence to security and risk profiles is a challenging task.
Interviewees: Mary, Cate, Anil, Phil, Lisa.

OPPORTUNITIES & CHALLENGES

- We have the opportunity to run targeted public engagement to gauge appetite for the incorporation of AI in tax processes. In doing so, we will aim to establish a social license, or ongoing public acceptance, for the initiatives we have planned. This process will differentiate initiatives that could be delivered from those that should be delivered based on public appetite and opinions.

RISKS

- Due to political shifts, and particularly the current period of government transition, the authorising environment in which we carry out our work may change. Therefore, flexibility of AI initiatives in adapting to changing government priorities will be a key factor in their ability to come to fruition in the current climate. We may need to be prepared to pause certain initiatives pending more certainty around the government's demands of the public sector.

KEY INSIGHTS

- The fact that an AI solution is legally and financially feasible doesn't necessary translate into moral and ethical acceptance from the target population, even if they stand to personally benefit. To provide a tax case study, the Australian government faced backlash after implementing Robodebt, an automated system that used income averaging to identify those in welfare debt and demand recovery of funds. The tool was highly inaccurate and lacked transparency, and many individuals experienced negative impacts to their finances and mental health because of the scheme. It incurred nearly $2B in lawsuit fees, with taxpayers footing the bill [1]. Although Robodebt didn't directly use AI methods, it was perceived to have done so and thus caused public trust to be undermined [2]. Similarly, a Michigan government agency lacked the social license to implement MiDAS, an AI tool used to detect unemployment fraud and automatically require repayment from offenders. A retrospective study identified that 93% of the charges were incorrect, leading to the agency facing class-action lawsuits and losing its customers' trust [3]. In both cases, stronger ethical design principles and public engagement could have ensured these organisations had the social license to operate the AI tool responsibly and derive associated efficiency gains. Ideally, the level of public acceptance will be re-assessed periodically throughout the lifecycle of the AI solution in question.

- As we move through the current period of uncertainty, we may find it helpful to prioritise agile decision-making, informed by diverse voices [4]. Implementing AI in a trustworthy manner that balances the opportunities with the risks will be a crucial part of weathering this change.

ROADMAP CONSIDERATIONS

Public Engagement

1. Robo-debt (afr.com)
2. AI not to blame for Robodebt failures (govtechreview.com.au)
3. Government Serves Up False Fraud Charges (undark.org)
4. State of the State 2023 | Deloitte New Zealand

Related Resources 1: Artificial intelligence impact on society | Deloitte Insights

Authorising Environment

The set of regulations, guidelines, and approval mechanisms within our organisation and the wider government that dictate the parameters for our AI strategy implementation and development.

Internally, this involves the application of existing frameworks, procedures, and principles to AI operations, ensuring that AI is used responsibly and ethically, complying with the organisation's data, information and knowledge governance framework. The authorising environment externally refers to our unique legislative position under the Tax Administration Act, which authorises us to utilise technology to make decisions on the commissioner's behalf, differentiating us from the wider regulatory landscape and political/public sector context.

STAKEHOLDER FEEDBACK

The authorising environment is slightly different than political and public sector context: making decisions around what our role is, how we how we look after our data, the role we play in terms of our regulatory responsibilities.

Interviewee: Cathy

OPPORTUNITIES & CHALLENGES

- The authorisation by the Tax Administration Act for us to use machines for decision-making provides a solid legislative footing to pioneer AI applications in the public sector. This unique position can advance us as a role model in regulating AI adoption, enhancing its capabilities while inspiring widespread trust.

- By showcasing responsible AI stewardship with transparent and accountable practices, we can fortify our leadership in the public sector. This can inform legislative fitness, stimulate understanding of AI implications, and establish robust standards for AI utilisation in the public sector.

RISKS

- The current fragmented and disjointed external authorising environment across the public sector could present risk. While government has the authority to set the environment, currently this has not been consolidated and clear directives. Different sectors have varying frameworks, casting doubts on the solidity of the authorising environment and causing a range of approaches. This fragmentation and lack of defined parameters increases the risk of disjointed AI methodologies.

- Our current legislative framework sanctions technology to make commissioner decisions. While beneficial, further assessment is required for its suitability towards AI progression. The absence of comprehensive AI understanding and control processes could hinder decision accuracy and accountability. We need to evaluate our existing privacy, ethics and data governance frameworks against evolving AI scenarios. Any misalignment risks erroneous results and potential key risks going forward.

KEY INSIGHTS

- A robust authorising environment is fundamental to responsibly implementing AI in our operations. It operates at multiple levels – we must ensure our internal authorising environment aligns strategically with legislative permissions and security considerations, while also attempting to influence a clearer, unified authorising environment within the wider public sector.

- Developing a comprehensive understanding of AI and its risks is now a strategic imperative. Currently, lower perceived risks associated with AI could be due to inadequate understanding. To successfully implement AI in our strategic operations, we need to strengthen our knowledge to comprehend its implications, risk factors, and recognise the potential for incorrect results.

- The legislative function of the Tax Administration Act, allowing us to use AI for decision-making, puts us in a unique advantageous position in defining and navigating the authorising environment compared to other organisations. However, this also implies an elevated role in setting robust guidelines and frameworks aligning to ethical and responsible AI utilisation.

- Stewardship is integral to our operation in the authorising environment. We must ensure future hallmarks of good stewardship, including significant legislation, is fit for purpose. Thus, ensuring preparedness for challenges associated with AI, and safeguarding ourselves against potential legal and ethical implications.

ROADMAP CONSIDERATIONS

AI Standards

AI Governance Standard Operating Procedures

Thank you