

1 September 2022

Scott

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Tēnā koe Scott

Official Information Act request: Year One Review of the Algorithm Charter

Thank you for your email dated 4 August 2022 in which you requested, under the Official Information Act 1982 (the Act), the following information:

I would like to make a request for information relating to the recently released Taylor Fry Year One review of the StatsNZ Algorithm Charter.

I would like to request:

ONE: Copies of all aides-mémoire, memoranda, briefings, and reports produced by StatsNZ for the responsible minister on the topic of the review and StatsNZ's response to it.

TWO: If an action plan, work plan or implementation plan has been prepared for StatsNZ's response to the review I would like to request a copy of it.

THREE: A StatsNZ memorandum prepared for Minister Clark dated September 2021 refers to a "maturity assessment" StatsNZ was working on to assess its own use of the Charter:

"Since signing the Charter, Stats NZ has begun work on a maturity assessment to understand what gaps and issues around algorithm use might exist relating to the Charter. When this is completed, options to address the gaps will be developed. Stats NZ intends to publish a report on its findings and solutions early next year to ensure transparency and to help agencies who are undertaking similar reviews"

The memorandum I am referring to can be accessed here (quote on page 6):

<https://fyi.org.nz/request/19545/response/74734/attach/5/OIA%20DC%2043%202022%20Documents.pdf>

I would like to request a copy of this maturity assessment. I would also like to request a copy of whatever document sets out the "options to address the gaps" referred to above, as well as any action plan, work plan or implementation plan prepared for this, if any.

In response to your first question please find attached a copy of *Report to the Minister of Statistics - Report on the Algorithm Charter Review*. This is the only document produced by Stats NZ for the responsible minister, on the topic of the review and Stats NZ's response to it. You will note within the document that some information is withheld under section 9(2)(f)(iv) of the Act as it is under active consideration. The release of this information is likely to prejudice the ability of government to consider advice and the wider public interest of effective government would not be served.

You can also find more information about the charter, including a copy of the review published online here: [Algorithm charter for Aotearoa New Zealand - data.govt.nz](https://data.govt.nz/algorithm-charter).

In response to your second question, this part of your official information request is refused under section 18(e) of the Act as this information does not exist or, despite reasonable efforts to locate it, cannot be found.

In response to your third question, the Algorithm Maturity Assessment is still currently under development. Two internal case studies were put through a draft Algorithm Maturity Assessment to test the framework. A workshop to develop solutions and options from identified gaps was planned during August 2021. However, the workshop was cancelled due to the COVID-19 lockdown, and work was then put on hold more widely due to internal reprioritisation of resources towards unanticipated high priority work.

Work on the Algorithm Maturity Assessment has only recently resumed. Documents relating to the case studies remain in a draft working state, and the work to identify options to address the gaps has not yet been undertaken. As such I am withholding this information under section 9(2)(g)(i) of the act to protect the effective conduct of public affairs through the free and frank expression of opinions. I believe the greater public interest is in the ability of individuals to express opinions in the course of their duty.

However, it is still our intention to produce and publish a report on the findings and solutions of the Algorithm Maturity Assessment, when this work has been completed. We will notify you via this email when the report becomes publicly available. Additionally, please find attached a copy of the Algorithm Maturity Assessment framework that we used, noting that it is still in draft form.

If you are not satisfied with this response, you have the right to seek an investigation and review by the Ombudsman. Information about how to make a complaint is available at www.ombudsman.parliament.nz or 0800 802 602.

It is our policy to proactively release our responses to official information requests where possible. This letter, with your personal details removed, will be published on the Stats NZ website. Publishing responses creates greater openness and transparency of government decision-making, and helps better inform public understanding of the reasons for decisions.

Ngā mihi nui



Blair Cardno

General Manager, Data Management and Operations

Algorithm Maturity Questions for XXX

| Charter commitment | Questions | What has been done? | Links to evidence | Gaps identified |
|---|--|---------------------|-------------------|-----------------|
| Transparency - clearly explain how decisions are informed by algorithms. | Has Stats NZ provided information as to the purpose and benefits of the relevant algorithm/methods for the communities who may be affected by decisions made outside Stats NZ? | | | |
| | Has Stats NZ provided plain English documentation of the relevant algorithms/methods for researchers who will use the data? | | | |
| | Has Stats NZ provided plain English documentation of the relevant algorithms/methods for the communities in the data? | | | |
| | Has Stats NZ made information about the data and processes available (unless a lawful restriction prevents this)? | | | |
| | Has Stats NZ published information about how data are collected? | | | |
| | Has Stats NZ published information about how data are stored securely? | | | |
| | Has Stats NZ published information about where the data are stored? | | | |
| Partnership – deliver clear public benefit through Treaty commitments | Has Stats NZ embedded a Te Ao Māori perspective in the development and use of these algorithms/methods consistent with the principles of the Treaty of Waitangi? | | | |
| | Does Stats NZ have established systems, policies, and procedures to support ethical, responsible, and culturally appropriate practices when working with algorithms/methods? | | | |
| | Has Stats NZ identified people, communities and groups who have an interest in these algorithms / methods, both technical users and communities in the data? | | | |
| Focus on people | Has Stats NZ identified the benefit of these algorithms for Stats NZ and other agencies and whether they are in line with the goals of the communities of interest? | | | |
| | Has Stats NZ identified the potential harm of these algorithms if they are miss-used by others? | | | |

| Charter commitment | Questions | What has been done? | Links to evidence | Gaps identified |
|-----------------------------------|---|----------------------------|--------------------------|------------------------|
| | Has Stats NZ actively engaged with the people, communities, and groups who were identified above? | | | |
| | Has Stats NZ understood and documented the limitations of the data used or produced by the algorithms / methods? | | | |
| Make sure data is fit for purpose | Has Stats NZ understood the cultural context of these algorithms? | | | |
| | Has Stats NZ understood the research context of these algorithms? | | | |
| | Has Stats NZ identified any bias introduced by the algorithms/ methods? | | | |
| | Has Stats NZ got a plan for managing this bias? | | | |
| | Has Stats NZ established a process to identify opportunities for new algorithms? | | | |
| | Has Stats NZ commissioned any peer reviews of these algorithms/ methods? | | | |
| Privacy, ethics, and human rights | Did these peer reviews cover privacy, ethics, and human rights concerns? | | | |
| | Has Stats NZ considered the privacy concerns of whānau and community groups as well as those of individuals? | | | |
| | Have any unintended consequences of the algorithms / methods been identified? If so, what has been done to act on this information? | | | |
| | Does Stats NZ have a nominated point of contact for public inquiries about algorithms/methods? | | | |
| Human oversight | Can citizens find and use this point of contact to ask questions or make complaints? | | | |
| | Have any question or complaints been received by Stats NZ? Were they dealt with appropriately? | | | |
| | Does Stats NZ provide a channel for challenging or appealing decisions informed by algorithms/methods? | | | |
| | Has Stats NZ clearly explained the role of humans in decisions informed by algorithms/methods? | | | |

**Report to the Minister of Statistics:
Report on the Algorithm Charter Review**

| | | | | | |
|-------------|--------------|-----------------|---|-------------------|--------|
| Date | 27 July 2022 | Priority | L | Ref number | MM2319 |
|-------------|--------------|-----------------|---|-------------------|--------|

Timeline and next steps

| | |
|--|--|
| Decision or action required by: | N/A |
| Purpose | This briefing provides you with an overview of the independent report '1-year review of the Algorithm Charter for Aotearoa New Zealand', prior to its publication. |
| Linkages | |
| Publicity | The 1-year review will be published on data.govt.nz. |

Recommended action

It is recommended that you:

- Note** that an independent review of the Algorithm Charter's first year of operation has been completed by the consultancy Taylor Fry.
NOTED
- Note** that the review found that there is almost universal support for the Charter amongst government agencies and subject matter experts, but to realise the desired shifts in the ethical use of algorithms, agencies require additional guidance and supports to effectively implement the Charter.
NOTED
- Note** that the independent review of the Algorithm Charter will be published on the data.govt.nz website.
NOTED
- Agree** to share a copy of this briefing with the Associate Minister of Statistics given her portfolio responsibilities for Māori data capability.
AGREE / DISAGREE



Caleb Johnstone
**General Manager – Data System Policy
Data System Leadership
Stats NZ**

Hon Dr David Clark
Minister of Statistics
Date:

Background

1. In July 2020, the Algorithm Charter for Aotearoa New Zealand (attached as **Appendix 1**) was released. The intention of the Algorithm Charter was to increase public confidence and visibility around the use of algorithms within the public sector. The Charter demonstrates a commitment to ensuring New Zealanders have confidence in how government agencies use algorithms.
2. The Charter is voluntary and applies solely to the public sector. The Algorithm Charter has 28 signatory agencies so far. Some current non-signatory agencies have expressed an interest in signing up in the future. A list of the signatories is attached as **Appendix 2**.
3. Conducting a review of the Algorithm Charter after its first year was agreed as part of its establishment.
4. An independent review of the Algorithm Charter's first year of operation was conducted by specialist consultants Taylor Fry. Taylor Fry was also the consultancy used by the New Zealand Police to conduct a stocktake of their algorithms, and to provide advice on best practice to assure safe and ethical development and use of algorithms.
5. The independent review was conducted in consultation with signatories, non-signatories and subject matter experts.

Review findings

6. The review found that there is almost universal support for the Algorithm Charter amongst government agencies and subject matter experts, and that the Charter has been influential in changing practice.
7. As a result of the Charter, agencies have implemented new risk management policies; established ethics committees and review boards; created new roles to oversee emerging technologies; performed stocktakes and reviews of their algorithms; evaluated the potential for risks that would have previously been unforeseen; and been transparent with the public about the types of algorithms that are being used.
8. The review specifically pointed to several notable shifts as a result of the Charter, including:
 - increased executive visibility of the importance of data ethics and the data management practices within their agencies – with data teams also reporting that they have an improved remit to raise issues at an executive level; and
 - improved capability when interacting with third-party vendors – with data teams asking more questions and providing greater scrutiny over models being considered for purchase.
9. The review also found that agencies would not have made the move towards publishing their algorithms online, if it had not been for the Charter.
10. However, the review also identified a number of areas where agencies require additional support to implement the Charter. The review established five themes, each with a series of considerations focussed on improving progress towards the Charter's commitments. These are summarised below:

Themes and considerations

Charter specifics

The review reported that most agencies see real value in the Charter, however its application can be hampered by a lack of clarity about what should be considered an algorithm, and the supporting risk matrix - which can be seen as a simplistic tool with limited use.

The review recommends supplementing existing guidance with further information that clarifies some of the points of confusion and provides more examples of algorithms, tools and processes that should and shouldn't be captured under the Charter.

Capability and capacity

The review reported that agencies would welcome a community of practice and an oversight body to support compliance with the Charter, as measuring bias is not something that all agencies have expertise in.

The review recommends:

- facilitating a community of practice for signatories of the Charter, enabling the sharing of examples where agencies are delivering well on the principles;
- creating an oversight body for the Charter; and
- developing a more detailed resource guide for agencies – helping to form guidelines and principles for best practice, including technical descriptions of bias assessment protocols.

Engaging with Treaty Partners

The review found that many agencies are not clear on how to practically implement the partnership commitment in the Charter and that the capacity of experts to support agencies is limited.

The review recommends:

- working with Māori data experts to develop a more detailed guidance white paper on what the partnership commitment should consist of, and issuing subsequent best practice.
- helping agencies to fulfil the principle of parity when engaging in consultation and ensuring government agencies have realistic expectations about timeframes for consultation with experts.

Public Awareness

The review found that public reporting of the algorithms in use is fragmented and incomplete and therefore public awareness of use by government agencies is limited.

The review recommends developing an annually updated register of algorithms to increase public visibility and investigating novel forms of citizen participation such as citizen assemblies and focus groups to increase the public's awareness of algorithms.

Wider context

The review found that the “light regulatory nature” of the Charter places limitations on its ability to offer public assurance and facilitate public trust. In addition, the review observed that algorithms sit within a broader algorithmic system incorporating data sourcing, data use, presentation of algorithm output to users, and decision-making – highlighting the importance of taking a consistent and visible approach across the whole system.

The review recommended:

- considering ways, such as a publicly available register of algorithms, to evolve the Charter from its light regulatory nature to encourage compliance and best practice; and
- the provision of advice on system-wide data governance and establishing non-binding audits of Charter compliance.

Next steps

11. Stats NZ supports the findings of the review and is undertaking planning work as part of the wider work programme focussed on data ethics **s(9)(2)(f)(iv)**

12. Policy options on data ethics are in early development stages, with a progress update due in the coming months. A key part of this process is to test approach and seek direction from the Digital Executive Board.
13. In the interim, work is underway to determine a phased approach for implementing the remaining recommendations. This will involve working with others to reduce any duplication, make best use of existing resource, and to build momentum. Progress updates will be provided regularly.
14. A copy of the review will be published on data.govt.nz. There is an opportunity to start talking more widely about the Algorithm Charter, its application, and the Taylor Fry review. Stats NZ has been asked by RNZ to participate in a panel on Artificial Intelligence on 11 August 2022, which will likely cover the Charter.
15. We will continue to advise your Office as future opportunities arise.

JULY 2020

New Zealand Government

Stats NZ
Tatauranga Aotearoa

ALGORITHM CHARTER FOR AOTEAROA NEW ZEALAND

The value of algorithms

Government agencies use data to help inform, improve and deliver the services provided to people in New Zealand every day. Simple algorithms can be used to standardise business processes to ensure scarce resources are distributed equitably. More complex algorithms can be used to distil information from large or complex data sets to support human decision-making and reveal insights that could not easily be revealed by human analysis alone.

These algorithms can be used to help government better understand New Zealand and New Zealanders. This knowledge helps government make good decisions and deliver services that are more effective and efficient. The use of algorithms can mitigate the risk that human biases will enter into the administration of government services and result in real benefits for everyone.

However, the opportunities also bring fresh challenges. For example, human bias could be perpetuated, or even amplified by, algorithms that are not designed and operated in thoughtful ways. Transparency and accountability are critical to ensuring that the public can trust and support the government to use these tools in appropriate ways.

This Charter is a commitment by government agencies to carefully manage how algorithms will be used to strike the right balance between privacy and transparency, prevent unintended bias and reflect the principles of the Treaty of Waitangi.

Definitions

There are a wide range of advanced analytical tools that can fit under the term 'algorithm'. These range from less advanced techniques such as regression models and decision trees, which primarily support predictions and streamline business processes, through to more complex systems, such as neural networks and Bayesian models, which can take on properties of machine learning as they make advanced calculations and predictions.

A good discussion of the different types of predictive algorithms and the challenges of defining these is contained in 'Government Use of Artificial Intelligence in New Zealand' (New Zealand Law Foundation and Otago University, 2019).

The risks and benefits associated with algorithms are largely unrelated to the types of algorithms being used. Very simple algorithms could result in just as much benefit (or harm) as the most complex algorithms depending on the content, focus and intended recipients of the business processes at hand. As a consequence, this Charter does not specify a technical definition of an algorithm. It instead commits signatories to take a particular focus on those algorithms that have a high risk of unintended consequences and/or have a significant impact if things do go wrong, particularly for vulnerable communities.

Review

The Algorithm Charter for Aotearoa New Zealand is an evolving piece of work that needs to respond to emerging technologies and also be fit-for-purpose for government agencies. After twelve months a review of the Algorithm Charter will be conducted, to ensure it is achieving its intended purpose of improving government transparency and accountability without stifling innovation or causing undue compliance burden.

Foundations

The Algorithm Charter is part of a wider ecosystem and works together with existing tools, networks and research, including:

Principles for the Safe and Effective Use of Data and Analytics (Privacy Commissioner and Government Chief Data Steward, 2018)

Government Use of Artificial Intelligence in New Zealand (New Zealand Law Foundation and Otago University, 2019)

Trustworthy AI in Aotearoa – AI Principles (AI Forum New Zealand, 2020)

Open Government Partnership, an international agreement to increase transparency

Data Protection and Use Policy (Social Wellbeing Agency, 2020)

Privacy, Human Rights and Ethics Framework (Ministry of Social Development).

Assessing likelihood and impact

The Algorithm Assessment Report found that advanced analytics and data use are an essential part of delivering public services. Applying the Charter to every business rule and process would be impossible for agencies to comply with and not achieve the intended benefits of the Charter.

However, where algorithms are being employed by government agencies in a way that can significantly impact on the wellbeing of people, or there is a high likelihood

many people will suffer an unintended adverse impact, it is appropriate to apply the Charter.

Charter signatories will make an assessment of their algorithm decisions using the risk matrix below. This supports their evaluation, by quantifying the likelihood of an unintended adverse outcome against its relative level of impact to derive an overall level of risk.

The risk rating determines the application of the Charter.

Risk matrix

Likelihood

| | | | |
|--|---|---|--|
| <p>Probable Likely to occur often during standard operations</p> | | | |
| <p>Occasional Likely to occur some time during standard operations</p> | | | |
| <p>Improbable Unlikely but possible to occur during standard operations</p> | | | |
| Impact | <p>Low The impact of these decisions is isolated and/or their severity is not serious.</p> | <p>Moderate The impact of these decisions reaches a moderate amount of people and/or their severity is moderate.</p> | <p>High The impact of these decisions is widespread and/or their severity is serious.</p> |

Risk rating

| | | |
|---|---|---|
| | | |
| <p>Low The Algorithm Charter could be applied.</p> | <p>Moderate The Algorithm Charter should be applied.</p> | <p>High The Algorithm Charter must be applied.</p> |

Application and Commitment

The Charter will apply differently to each signatory. The risk matrix approach means that signatories can focus first on decisions that have a high risk and exclude most of the many business rules that government agencies use every day to give effect to legislative requirements

and for business as usual activities. The intention is to focus on those uses of algorithms that have a high or critical risk of unintended harms for New Zealanders. This commitment will be reviewed in twelve months as part of the scope review.

ALGORITHM CHARTER FOR AOTEAROA NEW ZEALAND

This Charter demonstrates a commitment to ensuring New Zealanders have confidence in how government agencies use algorithms. This Charter is one of many ways that government is demonstrating transparency and accountability in the use of data. However, it cannot fully address important considerations, such as Māori Data Sovereignty, as these are complex and require separate consideration.

Commitment:

Our organisation understands that decisions made using algorithms impact people in New Zealand. We commit to making an assessment of the impact of decisions informed by our algorithms. We further commit to applying the Algorithm Charter commitments as guided by the identified risk rating.

Algorithm Charter Commitments:

TRANSPARENCY

Maintain transparency by clearly explaining how decisions are informed by algorithms. This may include:

- » Plain English documentation of the algorithm,
- » Making information about the data and processes available (unless a lawful restriction prevents this),
- » Publishing information about how data are collected, secured and stored.

PARTNERSHIP

- Deliver clear public benefit through Treaty commitments by:
 - » Embedding a Te Ao Māori perspective in the development and use of algorithms consistent with the principles of the Treaty of Waitangi.

PEOPLE

- Focus on people by:
 - » Identifying and actively engaging with people, communities and groups who have an interest in algorithms, and consulting with those impacted by their use.

DATA

- Make sure data is fit for purpose by:
 - » Understanding its limitations,
 - » Identifying and managing bias.

PRIVACY, ETHICS AND HUMAN RIGHTS

- Ensure that privacy, ethics and human rights are safeguarded by:
 - » Regularly peer reviewing algorithms to assess for unintended consequences and act on this information.

HUMAN OVERSIGHT

- Retain human oversight by:
 - » Nominating a point of contact for public inquiries about algorithms,
 - » Providing a channel for challenging or appealing of decisions informed by algorithms,
 - » Clearly explaining the role of humans in decisions informed by algorithms.

Signed

Chief Executive:

Chief Privacy Officer:

Senior Manager responsible for algorithms:

Organisation:

Date:

Appendix 2: Signatories

Current signatories to the charter are:

- Ara Poutama Aotearoa — The Department of Corrections
- Te Tāhuhu o te Mātauranga — The Ministry of Education
- Te Manatū Mō Te Taiao — The Ministry for the Environment
- Te Tūāpapa Kura Kāinga — The Ministry of Housing and Urban Development
- Te Tari Taake — Inland Revenue
- Te Tāhū o te Ture — The Ministry of Justice
- Toitū Te Whenua — Land Information New Zealand
- Te Puni Kōkiri — The Ministry of Māori Development
- Oranga Tamariki - The Ministry for Children
- Te Manatū mō ngā Iwi o te Moana-nui-ā-Kiwa — The Ministry for Pacific Peoples
- Te Manatū Whakahiato Ora — The Ministry of Social Development
- Tatauranga Aotearoa — Stats NZ
- Te Manatū Waka — The Ministry of Transport
- Te Kāhui Whakamana Rua Tekau mā Iwa—Pike River Recovery Agency
- Manatū Wāhine — The Ministry for Women
- Toi Hau Tāngata — Social Wellbeing Agency
- Te Ope Kātua o Aotearoa — New Zealand Defence Force
- Te Kaporeihana Āwhina Hunga Whara — Accident Compensation Corporation
- Te Tari Taiwhenua — Department of Internal Affairs
- Te Arawhiti — The Office for Māori Crown Relations
- Waka Kotahi — The New Zealand Transport Agency
- Te Tari Arotake Matauranga — The Education Review Office
- Hīkina Whakatutuki — The Ministry of Business, Innovation, and Employment
- Manatū Aorere — The Ministry of Foreign Affairs and Trade
- Manatū Hauora — The Ministry of Health
- Ngā Pirihimana O Aotearoa — New Zealand Police
- The Mental Health and Wellbeing Commission
- Te Kawa Mataaho — Public Service Commission