

NEW ZEALAND
DATA FUTURES FORUM



Harnessing the economic and social power of data

Key recommendations and catalyst projects

@nzdatafutures
#NZDFF



www.nzdatafutures.org.nz

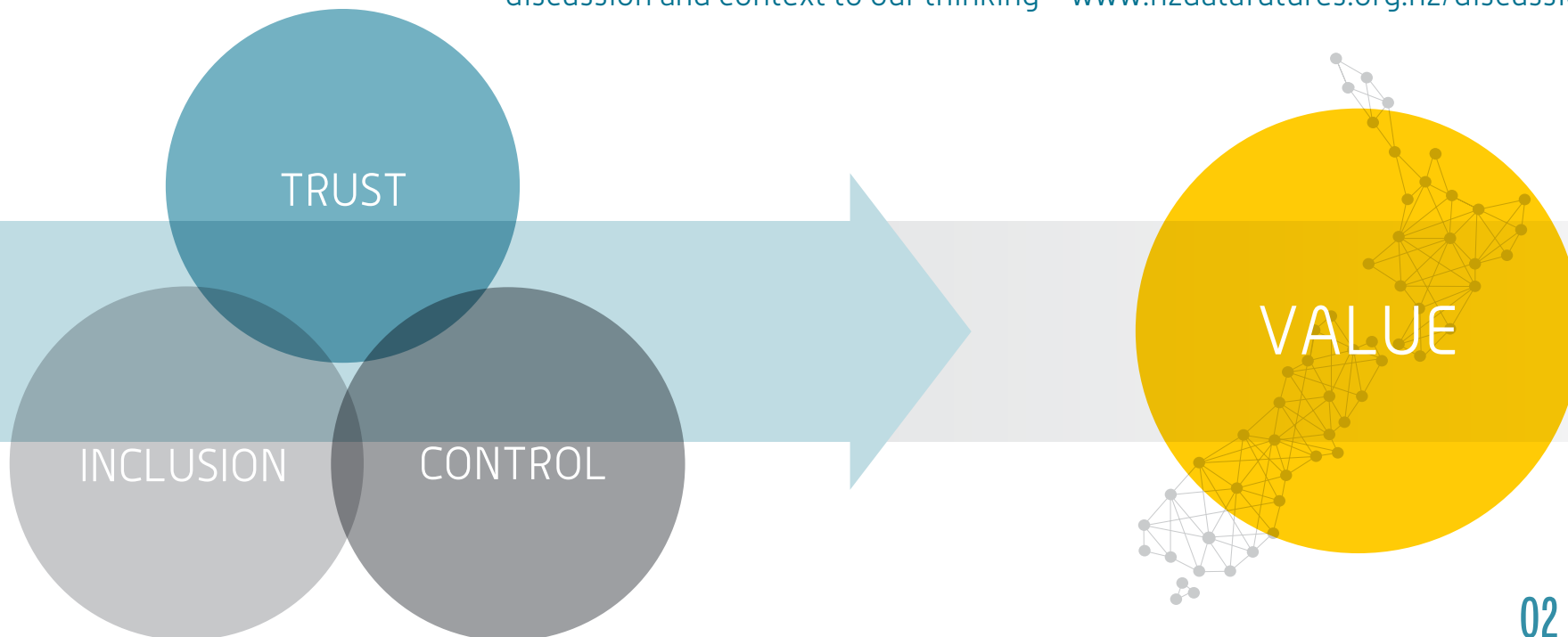


INTRODUCTION

We think there are huge economic, social, environmental and personal opportunities for New Zealand if we can strengthen trust, control and inclusion in the data-use ecosystem.

We've developed four principles to guide and underpin New Zealand's progress.

This slide deck presents a summary of elements we think will significantly advance New Zealand's ability to unlock the value of data. The full paper provides more detailed discussion and context to our thinking – www.nzdatafutures.org.nz/discussion-documents.





FOUR GUIDING PRINCIPLES

We've developed four principles to help us navigate the data future.

Value

New Zealand should use data to drive economic and social value and create a competitive advantage.

To achieve this we should:

- treat data as a strategic asset
- encourage collaboration and sharing
- support creativity and innovation
- promote our unique data-use eco-system in New Zealand and overseas.

Inclusion

All parts of New Zealand society should have the opportunity to benefit from data use.

- We should support all New Zealanders, communities and businesses to adapt and thrive in the new data environment.

Trust

Data management in New Zealand should build trust and confidence in our institutions.

- Transparency and openness should form the foundations on which we build trust and enhance understanding about what data is held, and how data is managed and used.
- Privacy and security are fundamental values that should be built into data frameworks and the full data life cycle.
- Data collectors, custodians and users should be accountable for responsible stewardship and should exercise a duty of care.

Control

Individuals should have greater control over the use of their personal data.

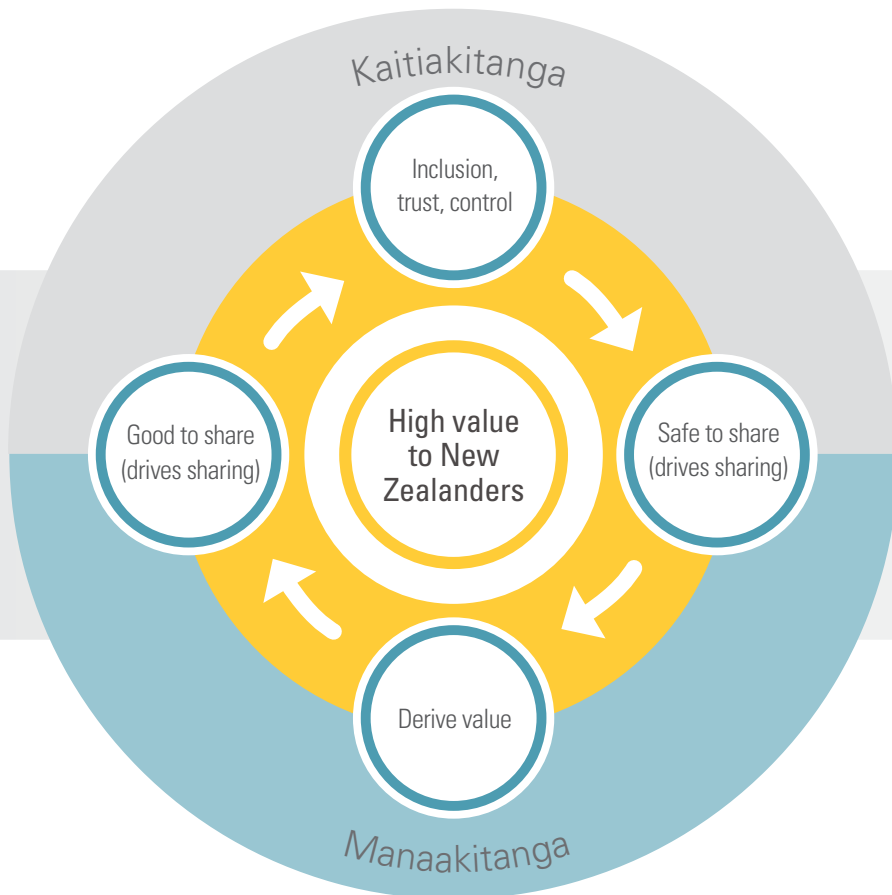
- Individuals should be better able to determine the level of privacy they desire on the basis of improved insight into how their personal data is processed and used.
- Informed consent should be simple and easy to understand.
- Individuals should have the right to correction and the right to opt out.



THE DATA-USE ECOSYSTEM – A POSITIVE FEEDBACK LOOP

We think the overarching objective should be to create a competitive advantage by positioning New Zealand as a high-value, strongly inclusive, high trust and control data-sharing ecosystem.

Inclusion, trust and control are critical enablers to unlock the latent value of data. Our data is our taonga: a unique and highly valuable strategic asset which can be used to improve the lives of all New Zealanders.





AT A GLANCE

We've identified three key areas to advance New Zealand's ability to unlock the latent value of our data assets.



1

Get the rules of the game right

- Establish an independent data council
- Create fit for purpose legislation

2

Create value by doing

- Treat data as a strategic asset
- Just do it – support catalyst projects that use data to solve real problems

3

Establish the foundations: value, inclusion, trust and control

- Appoint a champion to drive innovation and data sharing
- Grow technical capability and promote an innovation culture
- Raise public awareness and capability
- Invest in mechanisms that empower and build confidence



RULES OF THE GAME

GUARDIANS OF THE SYSTEM

Establish an independent data council to:

- Represent New Zealanders
- Give guidance on ethical practice
- Maintain trust
- Advise government and data users
- Support existing watchdogs and regulators
- Develop and share best practice principles and tools
- Promote value-creating data use

Review functions of the Data Council and existing watchdogs in two years to ensure New Zealand has a coherent governance system.





RULES OF THE GAME

FIT FOR PURPOSE LEGISLATION

Enable better, faster, trusted, collaborative use of data through more coherent legislation:

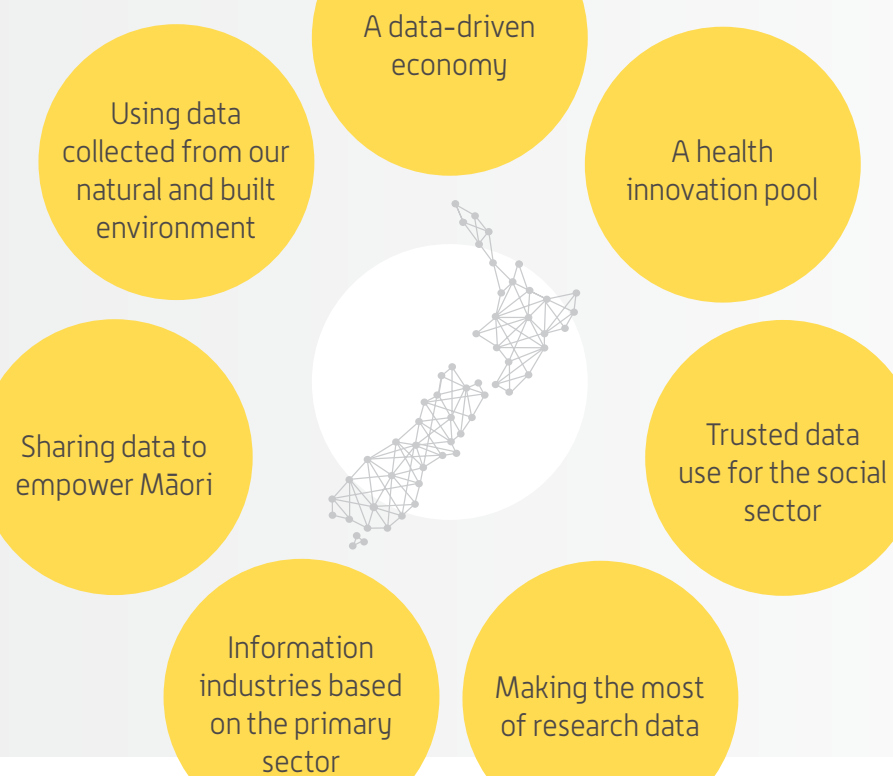
- Review information legislation, including Official Information Act, Privacy Act, Public Records Act, Statistics Act and Copyright Act
- Legislate for proactive release of open government data
- Extend information sharing beyond central government
- Protections against re-identification of anonymized data
- Proactive in discussions on international data-use rules and regulations





CREATE VALUE BY DOING TREAT DATA AS A STRATEGIC ASSET

We recommend that government, with business and communities, develop strategies to ensure New Zealand can unlock our data assets and drive economic and social value.





CREATE VALUE BY DOING CATALYST PROJECTS

We recommend government and sectors come up with clearly defined collaborative catalyst projects.

Just do it

use data to tackle real problems and thorny issues


Act fast

build on what is happening and get more underway

Learn

the transformational catalyst projects should inform longer-term strategies

We suggest a range of catalyst projects we think could add real value and take us forward. Sectors could build on these, or come up with others.



CREATE VALUE BY DOING JUST DO IT – CATALYST PROJECTS



What if NZ could grow
brand, market share and
export income?



Paddock to plate

Food traceability, or 'paddock to plate' tracking, has the potential to enhance productivity, generate more value, and foster the development of an information industry based on the primary sectors.

We suggest the creation of a government/industry collaboration that builds on current industry datafication projects, includes logistics and consumer/retail data, and links to the Ministry for Primary Industries certification regimes. This is about connecting up farm management with logistics management, consumer priorities, and government oversight and certification.

Getting Government help to transient families

Transience, or residential mobility, has a big impact on children's education achievements, as it results in children frequently changing schools. If we can support transient families, we can help children who otherwise might be left behind. Any assistance programmes need to acknowledge the distrust many of these folks hold in government agencies and their fears that information might be used by institutions such as credit agencies.

We suggest working with trusted brokers, such as The Salvation Army or other NGOs, to use their contacts and data to find and engage with such families to encourage them to receive government entitlements. Families could receive advice on what

might be available, work through the intermediary, or choose to deal directly with government at any time.



What if we could find new
ways to support transient
families and help children
who otherwise might be
left behind?





CREATE VALUE BY DOING JUST DO IT – CATALYST PROJECTS



What if we could halt
the increase of obesity
and diabetes?



Obesity and Diabetes

We would all benefit if we could find ways to curb the obesity and diabetes epidemics as there are very real impacts for individuals, families, and wider society. Data can help us understand the drivers of obesity and diabetes rates, and then to develop effective interventions.

We suggest a collaborative project which safely uses de-identified supermarket and weight and health information. Using privacy-by-design approaches, the project could derive a dataset that ties what households are purchasing to their weight and health outcomes over time. Findings from that study should be used to develop information and policy for government, to enable businesses to support consumers to make healthy decisions, and give health providers new tools for working with patients.

Increase the use of data and technology to support efficient transport in Auckland

Transport is a critical problem for Auckland, with bottlenecks and delays limiting Auckland's productivity and putting a brake on New Zealand's economic growth. Already a lot of transport data and technology is out there, supporting the efficiency, safety and development of the wider Auckland road, rail and public transport system, and providing information to users. However, we think there may be scope to explore new technologies and new data collection.

Building on the Intelligent Transport System Action Plan and working with transport leaders we suggest focussing specifically on accelerating the benefits from technology and data in Auckland by building more smart roads using

sensor technology for example, and making sure users can access transport data via a relevant platform.



What if Auckland's
traffic problems could
be addressed?



CREATE VALUE BY DOING JUST DO IT – CATALYST PROJECTS

Data for and about Māori

We see there is enormous potential to support manaakitanga and Māori development by enabling collaboration and co-production based on sharing government (and private) data with Māori groups. It will be important to work with Māori to develop appropriate ways to share and use data for and about Māori that suit Māori, their needs and their vision for development.

One option might be to support greater use of Statistics NZ's Integrated Data Infrastructure (IDI) to allow Māori researchers and analysts to obtain direct access to data to answer questions Māori have about their own people and development. Plans to add better ethnicity data to the IDI would support this.

An alternative might be to support existing initiatives by Māori, such as the many iwi databases that are supporting iwi decisions about resources, well-being and development, investigating the potential for collaborative projects.



What if data drove
Māori development and
manaakitanga?





ESTABLISH THE FOUNDATIONS

In addition to getting the rules of the game right and creating value by doing, we recommend a number of actions to ensure we have strong foundations for New Zealand's data-use ecosystem.

- A champion for data-driven innovation via openness and sharing
- Incentivise an innovation culture
- Grow skilled data scientists and innovators
- Promote New Zealand's data-use ecosystem overseas

- Raise public awareness and capability
- Support Māori in the new data environment

- Privacy and security 'by design'
- Consideration of context in regulating data use and re-use
- Other tools to enhance transparency

- Determining levels of privacy
- Genuine informed consent
- Provide more strongly for data correction and opting out

Value

Inclusion

Trust

Control





THE FOUNDATIONS: VALUE APPOINT A CHAMPION TO DRIVE INNOVATION AND DATA SHARING

- Advocate, catalyst, visionary and driver for openness, sharing and innovation
- Lead an open data agenda for New Zealand
- Broker the use of open data and the connecting of private and public data to drive value
- Explore which data types need to be protected, taking into account intellectual property and commercial sensitivity
- Encourage protected sharing of personal and private data
- Lead development of tools, standards and processes for open data to ensure interoperability and accessibility







THE FOUNDATIONS: VALUE PROMOTE AN INNOVATION CULTURE AND GROW TECHNICAL CAPABILITY

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- Government leading by example – encouraging innovation through outsourcing and collaboration, supported by greater tolerance for risk and experimentation in data-driven projects
 - Establish a 'prize-based' data innovation fund to solve intractable problems and design innovative solutions
 - Greater use of standards and open source tools
 - Use universities as 'safe sandpits' to bring diverse thinkers together, with funding provided for pilots and multi-disciplinary research and teaching
 - Provide support for post-graduate or mid-career courses in modern data analytics and data management
 - Include data analytics, data science, and data management in the immigration skills criteria
 - Promote New Zealand's data-use ecosystem overseas




THE FOUNDATIONS: INCLUSION

RAISE PUBLIC AWARENESS AND CAPABILITY

- Raise the debate and build a consensus on the way forward for New Zealand
 - Continue and broaden a constructive discussion with Māori stakeholders
 - Build public capability to understand and use data, and to manage personal data and privacy settings
 - Promote data visualization and support 'data brokers' who can translate and connect people to data
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THE FOUNDATIONS: TRUST AND CONTROL INVEST IN MECHANISMS TO EMPOWER AND BUILD CONFIDENCE

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- Ensure privacy and security mechanisms are applied at all stages of a data use initiative
 - Develop 'trustworthiness' ratings or certification
 - Adopt digital personal information management systems in online relationships
 - Develop a standard set of terms and conditions when supplying personal information, to enable genuine informed consent
 - Provide more strongly for data correction and opting out





OVER TO YOU...

These recommendations are a springboard for wider conversation and action. We've done the thinking, now we want you to take action.

The potential for New Zealand to unlock the value of data-driven innovation and build on strong foundations of inclusion, trust and control is unlimited.

Everyone in New Zealand has a stake in the outcome of this work. Business, government, NGOs, Māori and individuals can and should be involved in keeping New Zealand moving forward.

Aim high.

Explore how you or your sector can get a catalyst project up and running and delivering economic and social benefits for New Zealand.

To read the full paper visit www.nzdatafutures.org.nz/discussion-documents

To contact the Forum email nzdff@stats.govt.nz