PERFORMANCE IMPROVEMENT FRAMEWORK

Follow-up Review of Statistics New Zealand

August 2017

Lead Reviewer's Acknowledgement

Explanatory note

The diagnostic phase of this PIF Follow-up Review was undertaken in August 2016 and this report documents findings by the Lead Reviewer at that time and confirmed in October 2016. Unfortunately, finalisation of the Agency Response and publication of the report was delayed as a result of the earthquake that affected Wellington on 14 November 2016. Statistics New Zealand needed to focus on disaster recovery due to the abrupt closure of its head office building in Wellington, as well as meeting Government requirements for new data services as a matter of priority. The Chief Executive and Executive Leadership Team were able to reflect on the review findings in making subsequent decisions. The Agency Response was completed in August 2017.

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Executive summary

A Performance Improvement Framework Review (PIF) Review for Statistics New Zealand was commissioned in the second half of 2014, a year after the new Government Statistician and Chief Executive, Liz MacPherson, was appointed. Up until this time Statistics New Zealand was principally recognised (including internationally) as New Zealand's national statistical office, a Public Service department operating under the Statistics Act 1975.

At the time of the 2014 PIF Review Statistics New Zealand was undertaking a strategy refresh with extensive input from external and internal stakeholders. This was timely. Statistics New Zealand had to determine its future place, role and relevance in the public management system as the Government considered its response to global changes and opportunities associated with data analytics enabled by faster, cheaper computing. The Government had expressed its desire to use data and data analytics to positively impact future policy and decision-making and to help prioritise areas for intervention. The message to the agency was that the public management system needed Statistics New Zealand to do much more than continuing to produce Official Statistics (including census data).

The 2014 PIF Review clearly signalled that Statistics New Zealand's strategy, culture and operating model would need to change to take on this challenge. The agency would need to play a leadership role that was collaborative and networked across government, in this new data services space. This would be in addition to continuing to deliver on its responsibilities in the realm of Official Statistics.

Statistics New Zealand positively embraced the performance challenge presented to it at the completion of the 2014 PIF Review with evidence of immediate response and uptake occurring. There is strong evidence that the agency has made significant progress across all of the 2014 challenges, in what has been a very demanding and rapidly changing external environment.

The New Zealand data ecosystem has changed even faster than was envisaged and understood in 2014 and the rate of growth in demand for data in the wider New Zealand system is now clearer. During this time the Government has committed to developing more integrated datasets for its own decision-making, while also wishing to make its data available to all New Zealanders to drive economic, environmental and social well-being.

The need for an independent, timely, accurate Official Statistics System still remains and opportunities exist to incrementally enhance performance and deliver Official Statistics more efficiently, reduce the survey burden further, and innovate using new data sources and methods. However, the opportunities to capture and exploit data change by the day, fuelled by exponential advances in digitisation, data capture and processing opportunities. There is increasing expectation and demand for public data to be available, within the public sector and from the private sector to inform policy, market strategies, and operational priorities.

Statistics New Zealand operates in this environment. It must be effective in prioritising the challenges and opportunities for the Official Statistics System as well as for the agency's role in the data ecosystem, with a clear view of where the greatest value-add for New Zealand lies. The data ecosystem is dynamic; what is available and required now will differ from what will be experienced in the near future. This situation is very demanding for any government agency; it is exacerbated for Statistics New Zealand given the very different risk, data quality, independence expectations, timeliness demands and capability requirements between its two key roles for Official Statistics and new data services (particularly providing access to aggregated public data).

The performance challenge for Statistics New Zealand is to find a way to be relevant and effective and deliver to the very different demands of these two key roles, within tight fiscal constraints and a demand for urgent progress in the data services space. This requires the Four-year Excellence Horizon to be reset and the agency must step up to the new challenges this presents.

The significant progress Statistics New Zealand has made towards achieving the 2014 performance challenge will serve the agency well in future. While its new overarching vision of 'unleashing the power of data to change lives' is still highly relevant, the agency's role in achieving this vision needs to be revisited and nuanced, particularly for its role in the New Zealand data ecosystem and how it will prioritise across this area and the Official Statistics System. To do this, Statistics New Zealand must free itself from elements of its default historic culture that limit its ability to move at pace.

To meet this performance challenge, and to be relevant and respected for enabling New Zealand to maximise the leverage from Official Statistics and new data services, Statistics New Zealand must focus on the following areas:

- Further refine its role both as a data services player and Official Statistics provider and define what it must deliver (and what it must not deliver)

- Develop an enhanced operating model that supports 'One Stats NZ', plus a new internal narrative that will support the redefined future roles and enable the agency to function as 'One Stats NZ'

- Embed an internal culture which will enable Statistics New Zealand to be innovative and very responsive in all areas of its business

- Focus on robust implementation versus project completion

- Ruthlessly prioritise across the agency, looking at where effort is required from a 'One Stats NZ' perspective

- Hardwire innovation improvement technologies into the agency to enable it to be responsive and innovative in all its areas (not just the new low risk areas).

Agency response from Stats NZ

In 2014 the Stats NZ[1] Performance Improvement Framework Review came at a time when Stats NZ was reviewing its strategic direction. Stats NZ embarked on a significantly refreshed and deliberately ambitious strategic vision underpinned by the four-year performance challenge we set ourselves.

We welcomed back our Lead Reviewer, Sue Suckling, in August 2016 to undertake a PIF Follow-up Review to test both our progress and the relevance of our four-year excellence horizon given the external pace of change. Sue provided us with encouragement, insight and challenge. We were buoyed by Sue's feedback on the real and significant progress Stats NZ has made across all of the 2014 challenges, in what has been a very demanding and rapidly changing external environment. At the same time we were challenged and motivated by Sue's reflections on areas where further and accelerated improvement is needed. While some feedback resonated more strongly than others we agreed in general with the areas of focus and with the reset four-year excellence horizon. On the strength of these conversations we began immediately incorporating these learnings into our leadership discussions, work programmes and planning.

At around the same time as our PIF Follow-up Review, the State Services Commissioner asked Stats NZ to take an even stronger leadership role in data across the public sector data ecosystem. As part of this the Government Statistician has been formally acknowledged as the Government Chief Data Steward. This means Stats NZ will begin to shape the kind of system leadership that is required to support the move towards digital government and unlock the value of public data assets for the benefit of citizens.

On 14 November 2016, the Kaikōura earthquake changed the landscape dramatically for Stats NZ. There is nothing like a crisis to focus the mind and to bring priorities into sharp relief. As we worked to find a home for our 600 Wellington staff (and our Ministry of Transport co-located colleagues) our strengths as an organisation were further highlighted. So too were our vulnerabilities. The earthquake underscored the capability and commitment of our people and reinforced the need to support their resilience. It demonstrated our ability to take a whole-of-enterprise approach to prioritisation based on close collaboration with customers and service providers. It put a spotlight on the need for ongoing clear, transparent communication for our staff, customers and suppliers, using many different channels. It both reinforced and revealed key areas for IT and statistical infrastructure investment and development.

Key achievements

The learnings and reflections from both the PIF Follow-up Review and the earthquake provided us with critical insights into ourselves as an organisation and what we must do to be the system leader and data and statistics service provider that New Zealand needs now and into the future. We recognise that we need to move faster in this space and set clear priorities. The earthquake has also provided us with the impetus and opportunity to leap-frog forward in terms of our technological approaches.

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[1] In late 2016, Statistics New Zealand changed its branding to Stats NZ and this development is reflected in the Agency Response.

We have refined our operating model for data services and the production of Official Statistics through our structure

From March 2017, Stats NZ re-organised its leadership to bring more focus to key priorities. The group structures are now:

- Data Systems Leadership (spear-heading work across government to co-design approaches that support agencies' management and use of data to improve outcomes for New Zealand)

- Insights and Statistics (all statistical functions, 2018 Census and collection activities)

- Data Services (data services for external and internal customers, including integrated data)

- Organisation Capability and Services (continues as our corporate support group)

- Data Ventures (a small agile group is being established and will be led by an entrepreneur focused on converting Stats NZ's IP and expertise into revenue through innovative partnerships using existing and new forms of data).

We have established a team to drive a 'One Stats NZ' perspective to organisational prioritisation

"Ruthless prioritisation" was the area where the PIF Follow-up Review indicated we had made the least progress. As an organisation Stats NZ is hard-wired to be helpful and as a consequence finds it difficult to say no when asked for assistance. During the recovery from the Kaikōura earthquake we proved we could prioritise ruthlessly based on customer outcomes using a small team and a streamlined process to look across the organisation. Stats NZ has since built on this process and turned it into ongoing enterprise level "ruthless prioritisation".

We have accelerated our movement to 'as a service' technology

Stats NZ has used the earthquake as an impetus to fast-track future planned IT as a service arrangements and enhance our BCP and disaster recovery approaches. This has included not bringing back systems that were unused or where a superior approach could be developed. In some cases services were established in four days that would usually take 18 months to set up. The decision to take the opportunity provided by the earthquake was the right one. However, the minimum viable product approach taken means that while full services are currently being rolled out, the quality of the service is not yet consistently reliable. Staff were very tolerant initially, but are increasingly frustrated with the productivity impacts. Considerable effort is going into both resolving these issues and communicating clearly and regularly with staff about issues management and progress.

We have partnered on our key challenges

The procurement approach used to source bold and innovative solutions for our key challenges (*Project Wero)* has given rise to six key initiatives working with external partners:

- Development of a Big Data Analytical Environment that will also enable reproducibility research

- Analytical tools to allow external and internal customers to self-service and draw insights from data themselves

- Utilising automation experts in robotics and machine learning to advise on where and how to automate our systems and processes and coding to improve efficiency and effectiveness

- Working with an NGO to trial the sourcing of data and information from hard-to-reach populations

- Partnering to develop and provide capability building for Stats NZ and the system in data analytics

- Exploring commercialisation opportunities for on-going investment in our customer offerings.

The first three of these initiatives are finishing a six-week proof of concept sprint. The organisation still faces a challenge to cement this approach as a default way of working.

Accelerating towards our new performance horizon

Data is now recognised as 'more valuable than oil'. As a modern day data and statistics agency, Stats NZ has a critical role to play in unleashing the power of data to change lives through system leadership, delivering data services and through the provision of robust and independent statistics. We recognise that while we have made significant progress on the performance challenge set for us in 2014 the goal-posts have moved and the excellence horizon needs to be reset.

In order to further respond to the challenges set out by Sue over the next 18 months we will focus on:

- **supporting New Zealand to get real value from the use of data in decision-making**

  Data services

  In the coming 18 months we will have created a new data and analytics environment allowing researchers and decision-makers greater use of unstructured data and greater flexibility in how data can be analysed and stored. In the first step we will successfully incorporate Phase 2 changes to data supplied by Inland Revenue. We will also re-engineer the highly successful Integrated Data Infrastructure (IDI) to meet the exponential demand for both the data and easier access. In addition, the 2018 Census, which will be held on 6 March 2018, will not only showcase a digital approach to data collection (we are aiming for 70% online uptake) but also more sophisticated customer self-service options for data analytics.

  Working through intermediaries and partners

  Our aim is to create a data services platform that others can use to innovate to create products, tools and insights that meet many of the emerging needs of New Zealanders. We will use our leadership of the open data programme to encourage and support public agencies to take a similar approach. From a Stats NZ perspective as we do this we will be very deliberate about the extent to which Stats NZ is involved in the provision of information and insights – as a 'wholesaler, retailer or certifier' amongst other things. It is likely that this will evolve over time and will involve some 'market building' through innovative partnering approaches.

  Stimulating service innovation

  With this in mind, we are in the process of establishing a small, Data Ventures group, with recruitment of the Executive Director underway. Over the next 18 months the group will have earnt its first $500K through partnering to commercialise Stats NZ's knowledge

and expertise and in so doing encouraging the development of new and innovative ways to grow data access and analytics services for New Zealand.

- **enhancing government's use of data through strong and collaborative system leadership**

Data and Statistics Legislative Review

Our aim is to create enabling legislation that will underpin the efficient production of relevant Official Statistics in a modern data environment and drive greater value from data use while retaining trust and confidence. The timeline for delivery will be confirmed through consultation with key Ministers.

Data system leadership

Through our leadership role for data we will collaborate and partner across the system, drawing on existing networks of data stewards and expertise, to anticipate needs for and facilitate development of a responsive and sustainable data system. Barriers will be removed and transaction costs associated with data and analytics reduced, ensuring others can deliver. We will support existing initiatives and assist scaling for system use and impact. This will see common approaches and shared architecture developed that agencies can easily adopt. In the next 18 months we will have developed a data roadmap for New Zealand, established a sustainable approach to building capability (focused particularly on the environment and economic sectors) and will have worked with agencies to increase access to data.

- **unleashing the data and statistical expertise of our people in an sustainable, innovative, agile and resilient 'One Stats NZ'**

One Stats NZ

We will continue to finesse the balance of how we deliver on our dual roles as a producer of critical statistics and provider of data services. There is a tension to be managed in maintaining social licence through our trusted brand and mandated independence against the need to accelerate access to timely, quality data. Over the coming 18 months we will focus on building a high-performing culture across our whole organisation that is anchored in our strategic vision, reflective of our dual roles and shaped by active customer engagement.

Resourcing to enable a sustainable organisation

In order to ensure Stats NZ remain sustainable we will prioritise our existing resources diligently by focusing on our customers, becoming practiced in making hard calls and making this part of our culture. Through this we will better understand whether our current resourcing is sustainable and fit-for-purpose for a strong system leader and excellent service provider.

Statistical and data Job Family Review

We will have completed and be using the Job Family Review to recruit and develop the roles and skills needed in the organisation and across the sector to provide appropriate career opportunities for data and statistical expertise.

Our success is only possible with the support and collaboration of others

Our ambition and determination is driven by our passion to support New Zealand to use data and the insights it brings to change lives. We also know that we cannot succeed on our own.

It is paramount that we sustain public trust and balance our social licence with maximising the use of data. To be successful in our leadership role across the government system we will look to work with other functional leads, the central agencies and departments who collect, use and supply data for the Government. And we will look for support from across the State Services as we embed this new role.

To support customer-driven, system-wide prioritisation of resources for data and analytics we will lead and support decision-making processes that empower system-wide decisions and investments.

To ensure the sustainability of our organisation we will look for resources to support us to innovate and try new things. Our agile approach is one of trialling and learning through user testing where we will not know all the answers up-front. We will continue to be more measured when considering changes to our most critical statistics while driving at pace and with agility to make data available and open to others. As we drive change internally and increasingly look to co-design with customer and stakeholder we will welcome collaboration, challenge and support on our journey.

Liz MacPherson: Government Statistician and Chief Executive Stats NZ	
Mark Sowden: Deputy Government Statistician and Deputy Chief Executive Data System Leadership	**Kelvin Watson**: Deputy Government Statistician and Deputy Chief Executive Data Services
Teresa Dickinson: Deputy Government Statistician and Deputy Chief Executive Insights and Statistics	**Carol Slappendel**: Deputy Government Statistician and Deputy Chief Executive Organisation Capability and Services

Context and scope

Statistics New Zealand's legal purpose at present is to provide trusted Official Statistics and information to support decision-making by New Zealand's public and private sector organisations and to help New Zealanders gain an "appreciation of economic, social, demographic, and other matters of interest". Statistics New Zealand leads the Official Statistics System and is a major producer of Official Statistics for New Zealand.

The Government Statistician, who is also the Chief Executive of Statistics New Zealand, has a legally mandated role to coordinate statistical activity across government. The Statistics Act 1975 reinforces the independence of the Government Statistician in making decisions about the procedures and methods for production of statistics by Statistics New Zealand, as well as the timing and nature of publication of those statistics. The Act was under review at the time of this PIF Follow-up Review.

In addition to its legal purpose, Statistics New Zealand is now expected to play a key role assisting the Government and the public to access and use integrated anonymised public sector data to inform decision-making. This is a relatively new role and requires a different modus operandi, capability and responsiveness to that which has been required to deliver Official Statistics.

At the time of the 2014 PIF Review, Statistics New Zealand was undertaking a strategy refresh with extensive input from both external and internal stakeholders. This was timely as Statistics New Zealand had to reconsider its future place, role and relevance in the public system as the government considered its response to the global changes and opportunities associated with data analytics, enabled by faster cheaper computing. The Government had expressed its desire to use this opportunity to positively impact future policy, decision-making, and to help prioritise their areas for intervention. Statistics New Zealand was seen to have the potential to play an important role in this area of new demand, building off its strong brand of trust, integrity, independence and deep technical capability. At that time these trends in the availability, collection, accessibility and use of data meant that decision makers both in government and the private sector were seeking a strong enhanced data ecosystem to support their decision-making. The message to the agency was that the public management system needed Statistics New Zealand to do much more than continuing to produce Official Statistics (including collecting census data).

This challenge was recognised by Statistics New Zealand, with this being a key consideration in the strategy refresh process.

The 2014 PIF Review clearly signalled that Statistics New Zealand's strategy, culture, and operating model would need to change for the agency to step forward to take on this challenge and the agency would need to play a leadership role that was collaborative and networked across government in this new data ecosystem. This would be in addition to continuing to deliver on its responsibilities in the realm of Official Statistics.

The 2014 PIF Review identified the following seven focus areas as being crucial to achieving the Four-year Excellence Horizon:

1   Establishing clarity of role and purpose

2   Modelling leadership and culture change

3   Embedding a clear new operating model

4   Hearing the customer voice

5   Investing in robust platforms and statistical architecture and systematic prioritised asset management

6   Modernising internal business practices

7   Building capability for the future.

The vision arising from the 2014 Strategy Refresh is to 'unleash the power of data to change lives'. Statistics New Zealand now sees its purpose as 'Empowering decisions by adding value to New Zealand's most important data'. To support this vision and purpose Statistics New Zealand has articulated measurable goals and four customer offerings to support the data ecosystem:

- Statistics for critical decision-making (remains a core focus)

- Data services (offering products providing data in various forms)

- Insights (to help customers gain deeper insights from Statistics New Zealand data than can be gained from standard statistical releases)

- A consultation role (providing advice to customers and expertise on how to collate, organise, analyse and categorise data).

Since 2014, data availability and use globally has changed exponentially. Expectations in regard to data use and availability, alongside concerns about personal data security and privacy, have grown at a rapid rate.

The New Zealand data ecosystem changed even faster than was envisaged and understood at the time of the 2014 PIF Review and the demand for data in the New Zealand economy is now clearer.

As a result, Statistics New Zealand commissioned this PIF Follow-up Review to test its progress and the relevance and framing of the Four-year Excellence Horizon. The scope of this review was to include a high level review against the seven performance challenges (above) set out in 2014 and to undertake a more in-depth exploration of progress in relation to:

- the implementation challenge and the paramount criticality of ruthless prioritisation

- the shift in the organisational culture to achieve the refreshed strategic direction.

The diagnostic for this PIF Follow-up Review, using organisational material and confidential interviews, was completed during the period 15th – 30th August 2016.

The performance story so far

Overview

Statistics New Zealand embraced the performance challenge presented to it at the completion of the 2014 review with evidence of immediate response and up-take. There is strong evidence that the agency has made significant progress across all of the 2014 challenges, in what has been a very demanding and rapidly changing external environment.

During this time the Government has committed aggressively to using data for its own decision-making, while also being intent on making data available for all New Zealanders to use to drive economic, environmental and social well-being. This has raised multiple issues to resolve:

- variable quality and availability of the Government's data sets

- inconsistences between data sets

- how and when to protect individual security and privacy versus being able to use data operationally to target interventions

- capability and capacity within the wider ecosystem to progress the Government's intentions

- data processing capability, captivity and systems.

At the highest level, Statistics New Zealand has a good understanding of the new operating environment and the challenges it presents. The data ecosystem has matured somewhat, with greater clarity of roles of some other government agencies involved and a maturing of approach of individual agencies in regard to their own data, as well as significant progress in setting up formal structures and working arrangements between the agencies. Statistics New Zealand has played a positive and active role in this and is respected for its leadership and contribution. The landscape is significantly clearer than in 2014.

Statistics New Zealand needed to find its place in the data ecosystem and make progress on the data front, while continuing to deliver the Official Statistics. This responsibility included addressing outstanding legacy technology system issues, looking at new input data services, new approaches to data collection, introducing mobile technologies and innovation and efficiencies in the census process. Good progress has been made.

Specific comments on progress and outstanding issues for each of seven focus areas are noted below. The performance challenge for the future in the next section identifies the progress made in regard to ruthless prioritisation and the organisational cultural readiness for the future.

Progress since 2014 on seven focus areas

1. *Establishing clarity of role and purpose*

Statistics New Zealand finalised its Strategy Refresh in 2014, with the future vision, purpose, goals, and roles clearly documented. This has been well-socialised in the wider organisation, as reflected in the May 2016 engagement scores and the focus group discussions during this review.

The vision and purpose have been clearly represented in visual materials which are distributed widely within the agency. A significant amount of disciplined work was undertaken to achieve this understanding of the new enhanced purpose and positioning for Statistics New Zealand. There is understanding that the agency has a role in the two key areas of Official Statistics and data services. However, more work is required to articulate what the new vision and purpose means for individuals within Statistics New Zealand and to ensure the recruitment reality mirrors the vision promise.

Statistics New Zealand now needs to nuance what its actual role is in the data ecosystem and what it is not. There are now multiple players that must be 'joined up' and each has its own area of accountability and responsibility. While these entities are working together well there is a lack of formal arrangement between them; functional design and interfaces between them are critical. This is discussed further in the performance challenge section of this report.

Statistics New Zealand is formally involved in inter- and cross-agency working groups in the data ecosystem and its leadership and contribution is acknowledged. It has positive engagement with Land Information New Zealand, Department of Internal Affairs and the Social Investment Board, although further work is required to formalise and delineate these arrangements to ensure each entity is clear on what it is accountable for and where it plays a supportive role.

Statistics New Zealand's current articulation of its future (four) customer offerings is broad and must be re-examined to determine if it can resource and afford to deliver in all four areas. Statistics New Zealand was aware at the time of the 2014 Strategy Refresh that it would have to further refine its role in providing insights and consultancy. Taking on all of these offerings at once may hinder the priority role of roll-out and access to aggregated public data services. Statistics New Zealand needs to be very clear on what only it can do and only do those things. The agency needs to take heed of the Government's impatience to have anonymised public data available for all to use.

2. *Modelling leadership and culture change*

The agency no longer holds itself apart from the rest of the State sector (its previous approach to demonstrating the independent statutory role of the Government Statistician). The Executive Leadership Team (ELT) took the challenge to step up and be well-networked externally and be deliberate in playing the agency's role in the system to help develop New Zealand's response to leveraging big data. It is actively participating and providing leadership in the various data ecosystem fora. It has also done this with its sector pilot projects and feedback from external parties interviewed was positive about Statistics New Zealand's openness to work and engage with them (from all levels within the agency).

Statistics New Zealand has made significant progress and is acknowledged for working well with Māori in regard to data ownership and use, but Māori is also impatient to gain greater access to linked and aggregated data for their own decision-making.

The agency is acknowledged for its system leadership in the Christchurch and Wellington whole-of-government property projects, including readily embracing activity-based working spaces.

The agency has made significant progress, developing a more open culture that embraces its role in the data ecosystem and the dynamics required to be in this space. The agency has identified five new 'characters' to support the future organisation (IDARE), however at the time of this review these are at the early stage of roll-out. Aspects of its culture are deeply embedded from its traditional role where it added value to New Zealand through the collection, processing and analysis of data to create Official Statistics (that it reputationally 'owned'). While these cultural elements are not held by all (or all the time), they are a strong default that comes across as the agency 'seeking excellence before completion', 'being controlling and being the judge of what others can and can't do with their data/statistics' and being 'risk averse in regard to data quality and use'. This default approach adversely impacts Statistics New Zealand's need for pace and innovation and is equally prevalent in the production of Official Statistics and in the delivery of new data services. A consistent comment heard from external stakeholders interviewed is that Statistics New Zealand has excellent capability, is very willing and helpful, but is painfully slow to work with. These stakeholders attribute this strongly to the default cultural elements.

3. *Embedding a clear new operating model*

The agency has made some positive progress in developing a new operating model to enable it to collaborate effectively across the system with other key stakeholders. Statistics New Zealand has a semi-structured networked business model operating with key stakeholders. It is now respected for its contribution and leadership on the various fora and has strong strategic and operational relationships in place.

Statistics is also respected for its willingness and work, with and for the system, in regard to centrally driven property projects.

The work done and rate of implementation of the Integrated Data Infrastructure (IDI) project is considered world-leading.

Improvements made in regard to data access (number of users and user sites) have been welcomed.

Similarly, the agency has made progress in developing a more open transparent culture and has significantly stepped up its customer-centricity across the organisation. This has been noticed and appreciated externally. Less progress has been made on embedding a 'One Stats NZ' operating model to support the dual roles Statistics New Zealand must deliver. This is a key performance challenge (see next section).

Statistics New Zealand has had the courage to trial formal disruptive design. It has strong, albeit limited, external partnering in place including through its pilot projects as a means to create innovative approaches and enable pace, but this has been done in limited circumstances. There is no plan for embedding this approach.

The fiscal constraints ahead demand further role clarity and refinement of the existing operating model.

The agency risks change fatigue as it aims to implement the new operating model and cope with current demand pressures. Its operating model and internal narrative needs to embrace the concept of the agency being dynamic within a rapidly evolving environment rather than talking about constantly undergoing change.

4. Hearing the customer voice

Statistics New Zealand is committed to taking an 'outside-in' approach and has used customer journey mapping to better understand the needs of its customers. It now has a prioritised customer segmentation model to support decision-making for development of products and services. This is still to be rolled out into the day to day business.

The customer-centric focus is evident across the agency, compared to 2014, when it was something only those in the customer focus area really talked about.

The real challenge is that customers' expectations of what help they can obtain from Statistics New Zealand is increasing alongside the demand for aggregated anonymised public data to be widely available. Statistics New Zealand must be clear on what services it will provide customers in the areas of insight and data analysis and use and what it should leave for other providers to supply. It currently risks helping specific customers and missing the key priority areas it must focus on. This requires a more mature understanding of what customer-centricity will mean for its operating model.

5. Investing in robust platforms, statistical architecture and systematic, prioritised asset management

Significant progress has been made moving Statistics New Zealand away from the legacy systems which previously supported its work, particularly for Official Statistics. However, there is more work required to complete this move and ensure future functionality requirements can be met. Statistics New Zealand is in control of its own prioritisation now that the Statistics 2020 initiative has been mainstreamed into its ongoing business (approved by Cabinet in 2015). There appears to be a need for Statistics New Zealand's central view of prioritisation to be shared and understood with those working on the production of Official Statistics (given frustration being expressed related to functionality and processing time, ability to adopt new methods and other issues).

Statistics New Zealand is leveraging Software as a Service wherever possible to reduce dependency on bespoke internally developed and maintained infrastructure.

The 2018 census and online surveying is being enabled by the investment in Salesforce. However, further work seems to be needed to move from legacy systems before Salesforce can be relied upon entirely to meet the various needs of the agency. Very good progress has been made moving a number of surveys online, including the agricultural survey. This has both cost and customer experience benefits.

The development and functionality of the initial IDI system is acknowledged to be quite outstanding but it has now reached its capacity, with up to 200 users at a time. It is not scalable; this was always going to be the case. So far, the existing IDI has been able to respond to volume and processing demands beyond those originally envisaged. The

challenge now is to secure confidence and funding for Statistics New Zealand to put in place the generation 2 IDI infrastructure. This will be designed to be future proofed in respect of exponential growth in demand and to interact effectively with the other key government data platforms/exchanges.

Investment in infrastructure is going to be an ongoing demand on the agency and must totally align to its future nuanced role and priorities. What it needs to do and its priorities for IT infrastructure must be challenged and understood at ELT level. How the agency manages this will impact the confidence of the Government and of other agencies in supporting Statistics New Zealand's future role in the data ecosystem.

6. Modernising internal business practices

Statistics New Zealand has taken a systematic approach to modernising its core work practices and processes. In the areas of finance and procurement Statistics New Zealand would now meet normal State sector expectations. Financial dashboards are provided to managers but there is still a way to go to have these fully utilised and leveraged to drive day-to-day decision-making.

Statistics New Zealand successfully integrated the remnants of the large Statistics 2020 strategy into its operational strategy. The Four-year Plan is of very high quality and fully aligned to the refreshed documented strategy.

A new Information Systems strategic plan is in place which moves IT to IT as a Service.

Progress has been made in simplifying business practices such as introducing on-the-ground dynamic project management. Strong visualisation and frequent stand-up reviews are being used with positive results.

However, in other areas the historic 'family approach' with many involved in lengthy decision-making is still in place (such as for capital investment decisions). Statistics New Zealand does not have the time, people or financial resource to continue to do this. It is a relatively small agency [2] but its internal decision-making processes can be complex. Decisions can be slowed down due to the need to be sure to address all interdependencies and sometimes it is unclear who gets to make the final decision. Staff appear to accept this approach needs to change. From the review interviews it is clear staff would welcome more effective, paced decision-making supported by improved communication so they understand why decisions are made. There is support for the ELT being bolder and getting on and making decisions, and then getting the right people within the agency to implement them.

Opportunities exist to refine internal communications so staff can easily access what they need to know. For example, reducing the excessive use of acronyms and introducing a search function are seen as easy fixes to improve the effectiveness of internal communications. In Wellington the ELT is visible throughout the agency but there may be a gap in communication effectiveness or visibility at the Christchurch office. This was not explored for the Auckland office.

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[2]   In terms of FTEs and operational and capital expenditure.

There are still examples where modernisation has not been driven to completion so that the full benefits can be gained. Lotus Notes is still used (albeit it should not be required by the end of 2016!) and there are two customer relationship management systems (the old and the new) in use. Work has just commenced on re-designing the staff performance management system.

7.   *Building capability for the future*

Statistics New Zealand has invested in a number of areas to support its existing and future workforce and has a workforce development strategy in place. However, it is still exploring its role in addressing the system capability gap (as are other agencies) and what its own future needs will be: where will it require deep technical understanding and where will it require generalists. The capability it develops must support and be aligned to the future nuanced role and operating model, which must be refined urgently. The resourcing and discipline within its HR Team means the agency should be well placed to respond to this challenge.

The Performance Challenge for the future

The need for independent, timely, accurate Official Statistics still remains and opportunities exist to incrementally enhance performance and deliver Official Statistics more efficiently, reduce the survey burden further and innovate, using new data sources and methods. However, the opportunities to capture and exploit data grow by the day, fuelled by exponential advances in digitisation, data capture and processing opportunities. The expectations and demands for public data to be available within the State sector and for the private sector to inform policy, market strategies and operational priorities are also increasing daily.

Operating in this environment, Statistics New Zealand needs effective ways to prioritise the challenges and opportunities it has in producing Official Statistics as well as developing its role in the data services space. A clear lens on where the greatest value-add for New Zealand lies is required. The data ecosystem is dynamic and what is available and required now will be different from what will be expected in the near future. This situation is very demanding for any government agency and is exacerbated for Statistics New Zealand given the very different risk, data quality, independence expectations, timeliness demands and capability requirements between its two key roles (leading the Official Statistics System and providing aggregated public data access).

The performance challenge for Statistics New Zealand is to find a way to be relevant and effective and deliver to the very different demands of its two key roles within tight fiscal constraints and a demand for urgent progress in the data services space. The impact of this on Statistics New Zealand is that the Four-year Excellence Horizon needs to be reset and the agency needs to step up again to the new challenge this presents.

The progress Statistics New Zealand has made in response to the 2014 performance challenge will serve the agency well. The new challenge is not at odds with what has been achieved to date. While Statistics New Zealand's new overarching vision of 'unleashing the power of data to change lives' is still highly relevant, its role in achieving this needs to be revisited and nuanced, particularly its role in the New Zealand data ecosystem and also how it will prioritise between this area and the Official Statistics System.

The agency needs to find a way to completely unleash itself from some elements of its default historic culture which limit its ability to move at pace. In particular, these are traits of risk aversion, independence and a focus on data excellence and ownership and when detail should be released (tight guardianship). This default culture appears to take over for projects and tasks that are considered 'important', with the agency appearing to be comfortable to embrace innovative, paced solution-finding largely in areas that are considered low risk or of lesser importance.

If Statistics New Zealand cannot demonstrate its ability to move at the pace demanded in the data ecosystem there is a risk that others could be asked to deliver this role for New Zealand.

To meet this performance challenge, and for Statistics New Zealand to be relevant and respected for enabling New Zealand to maximise leverage from both Official Statistics and public data, the agency must focus on the following areas:

1. *Further refine its role both as a data ecosystem player and Official Statistics provider and define* **what** *it must deliver (and what it must not deliver)*

The Government's desire is to have public anonymised data available to any New Zealander to use in the near future. This role includes identifying and accessing public data sets, providing the 'engine' to aggregate/link different data sets (while maintaining anonymity) in response to different enquiries, clarifying the quality of individual data sets for potential users and making this data widely and easily accessible.

Statistics New Zealand's role here flows on from its success in developing and delivering the first generation IDI over the last 2 years. Statistics New Zealand's success with 'generation 2' of the IDI will be critical to its system leadership credibility for anonymised aggregated data. Statistics New Zealand must be seen to be competent in building the infrastructure and skills fast enough to meet demand. Further, Statistics New Zealand must play the influencer role with participating agencies to add value and manage risk, including convincing all relevant agencies to provide and regularly update metadata and/or sharing code.

The 'generation 2' IDI environment needs to be seen as a working environment co-created by many agencies, albeit with Statistics New Zealand in the critical central role owning and driving the effort at pace. Statistics New Zealand's data leadership role will still have a strong functional interface with the activities of the other key government agencies with related responsibilities. In future, this may result in decision rights passing to those holding the various leadership roles to drive effectiveness, efficiency, pace and accountability.

In the 'data aggregating' space Statistics New Zealand must work out what only it can do and do this with pace. It must stop doing what others can do. This was highlighted as being critical in the 2014 PIF Review and is now urgent. It will probably mean evolving and tightening the roles and functions it identified in the 2014 Strategy Refresh, for example leaving others to provide insight and consultancy services (and trusting they will do them and do them well). Statistics New Zealand acknowledged at the time of the 2014 Strategy Refresh that it would only ever have niche roles in the insight and consultancy services space and once it could get aggregated data 'out the door' it would be able to identify those niches. The expectations of what Statistics New Zealand must deliver and the continuing rate of change in the external environment means this is critical. To date Statistics New Zealand does not have a culture of stopping activity. It needs accelerator process technologies to help identify the best way forward and deal with blockages to make the progress demanded of it. Using the question "how might we achieve [the desired end point]……" could help Statistics New Zealand reach solutions in the data services space that are not iterative and incremental from where it is now, nor constrained by elements of its historic culture.

The legislation that governs Statistics New Zealand's role is currently under review; this is a strategic piece of work. It must be seen by the leadership as a critical lever to enable the desired future state for the agency in the data ecosystem and in the Official Statistics System. This must include reviewing the role(s) of the Chief Executive and Government Statistician. The current legislation gives permission for the agency to default to being cautious, rather than being innovative and moving at pace.

Statistics New Zealand is leading the review of system stewardship, which will be completed by the end of 2016. The agency must clearly define its role and responsibilities in regard to system stewardship and what it is not. As in other areas, the Government is looking for a networked and collaborative data ecosystem approach across the State sector for data services and Statistics New Zealand is well placed to understand capability, technical knowledge and with the credibility to provide system leadership/stewardship.

2. ***Develop an enhanced operating model that supports 'One Stats NZ', plus a new internal narrative that will support the redefined future roles and enable the agency to function as 'One Stats NZ'***

Statistics New Zealand does not have a clear operating model to support its future role (see above), and has a duality in its modus operandi. It has had limited success in crafting and delivering the differentiated service model with nuanced risk management that was envisaged in the 2014 PIF Review. Statistics New Zealand has added its data services role into the agency, yet still has an internal dialogue that talks of core and non-core, exciting new versus old, agile and 'waterfall' project management, old culture and new culture. It is seen to value generalists over specialists and is business process-focused and family consensus-focused. This duality is confusing for employees and new recruits, undermines the confidence of external stakeholders, can undervalue staff and negatively impacts pace, prioritisation and innovation.

The current narrative also talks of 'change' and needing to look after its people. Statistics New Zealand must be a very dynamic organisation to be successful in both its key roles. Its staff will need to be positive about this and have the skills and resilience to be flexible and innovative, constantly looking to improve and finding new ways of doing things. The narrative needs to move from being about constantly being in change mode to being dynamic. Statistics New Zealand also tends to build complexity into its operational approaches. This can be seen in the innovation board structure and the time and resource spent on this function with sub-optimal outcomes.

Statistics New Zealand needs an operating model that embraces and values 'One Stats NZ'. Within 'One Stats NZ' there will be two distinct functions which are valued and supported by the agency – data services for New Zealand and Official Statistics. There will be no rhetoric within the agency that one of these functions is core or more important than the other. Resources and focus will be optimised and prioritised across the agency, rather than within each of these distinct functions. This will mean the agency acknowledges that how it operates for one function is different from the other but is equally valued.

Within this operating model, execution must be consistent across the agency including those parts that are not 'at the forefront'. There is a need for improved, simplified internal communication that informs all staff, wherever based, of priorities and progress and is consistent with the new operating model.

3. ***Embed an internal culture that enables Statistics New Zealand to be innovative and very responsive in all areas of its business***

Statistics New Zealand must seek to fully embed its IDARE culture and be sure it behaves in a way that embraces innovation and pace. Risk management cannot be 'one size fits all', as different risk profiles and risk management will be appropriate for different parts of the business at various times. The agency must rid itself of the aspects of its

historic culture that impede its ability (and reputation) to provide the broader, fast-paced, value-adding leadership being demanded in the data ecosystem. It will be possible to do this and still maintain its reputation for integrity and trust.

4. ***Focus on robust implementation versus project completion***

Statistics New Zealand has a strong well-resourced project office and project disciplines for conventional and innovative approaches to projects. However, there is evidence that it does not put enough focus on fully implementing projects. This means projects may not be completed to enable parallel systems to be turned off and/or efficiency and effectiveness gains to be locked in. This seems to be more prevalent in the production of Official Statistics and causes significant staff frustration. The agency was considering this issue at the time of the PIF Follow-up Review. It must be fully understood and addressed, as part of being more effective at prioritisation.

5. ***Ruthlessly prioritise across the agency looking at where effort is required from a 'One Stats NZ' perspective***

Disappointingly, Statistics New Zealand has not made significant progress in this area since the 2014 PIF Review.

Throughout the agency there is a view that Statistics New Zealand does understand risk and the need for prioritisation; yet it is not good at stopping or substituting activity, or just saying 'no' to demands that others could fulfil. Its investment board structure tends to default to consideration of priorities in a siloed fashion – census, Official Statistics and data services. At the time of this review there are numerous projects underway or about to be started and staff feel under pressure. The organisational leadership must stop the practice within the agency of 'projectising' (and therefore elevating) routine work or lower priority work. There is significant opportunity cost to the agency as a result of this poor prioritisation and the continued establishment of new project teams.

Statistics New Zealand must find a way to ruthlessly prioritise across the whole agency (rather than in silos) and learn how to stop doing things. Nuanced clarification of its future role should underpin and assist this. Statistics New Zealand must be clear on what it is not. This issue was identified in 2014. The agency does not have the time or resource to continue to be ineffective at prioritisation.

6. ***Hardwire innovation improvement technologies into the agency to enable it to be responsive and innovative in all areas of its responsibility (not just the new low risk areas)***

Statistics New Zealand has explored and, to a limited degree has used, agile processes and formal disciplined accelerator technologies, with the help of external experts. The agency is to be commended for this. While its experience has been limited with variable success, staff have identified significant learnings, which will assist them to further embrace this way of working.

This new approach to finding breakthrough disruptive solutions is far from embedded. It is evident that the agency does not yet have the capacity or confidence to do this. With the dynamic environment in which Statistics New Zealand operates and the demand for fast-paced responsiveness, the agency must adopt these types of approaches to be successful. Continuing to incrementally iterate improvements in its offerings, in conjunction with its default cautious organisational culture, will limit the agency's future contribution.

What will success look like?

By 2020 Statistics New Zealand's name is synonymous with managing and disseminating integrated, anonymised data to support decision-making, this includes New Zealand's Official Statistics. New legislation is in place that empowers the agency to be dynamic and constantly improve its ability to provide aggregated data, incorporating new data sets. A smaller proportion of its work and decision-making is controlled by the independence of the Government Statistician.

The positioning and achievements of Statistics New Zealand in 2020 benefitted from work done following the 2014 PIF Review, including:

- boldly stepping into the data ecosystem (supported by a new organisational vision) and working with senior colleagues to help shape this space

- extending the first functioning IDI with diverse data sets utilised by a number of players with significantly improved access

- trialling innovative design-thinking and accelerator technologies

- embracing innovation in online surveys

- accessing and utilising more administration data

- becoming more customer-facing

- investing in a new more open organisational culture, and

- simplifying some of its internal processes.

In 2020 Statistics New Zealand is the agency that is relied on for the provision of aggregated anonymised public data for use by the Government and all New Zealanders. Comprehensive aggregated data is simple to access and readily available. Statistics New Zealand is very clear about the quality and limitations of this data and communicates this objectively to users who make their own decisions on how to use the data. Statistics New Zealand has implemented artificial intelligence (machine learning) to help users use data at the access interface and to constantly improve this function. Statistics New Zealand continues to identify and bring new data sets into the aggregated data service it provides.

Government agencies often look to Statistics New Zealand to help them make their data sets available, including advice on assuring anonymity and on defining data quality. The system that houses, aggregates and disseminates anonymised data is robust, reliable, fast, user-friendly and expands as demand increases. Statistics New Zealand is renowned for its innovative approaches to fast-track the dissemination of aggregated data.

Statistics New Zealand is respected by the other government agencies in the data services space and operational functionality and protocols are in place to ensure smooth interfaces and meet security and privacy requirements. Statistics New Zealand has a formal collaborative role with these other agencies and plays a key leadership role for the Government in the data ecosystem.

Statistics New Zealand has completed the 2018 census supported by a new processing system (EPIC) and increased automation with more than 70% of the population completing their response online. It has been agreed that 2023 will be the last 'survey' census carried out in New Zealand. In 2023 there will be a parallel census, with enhancement to the semi-automated approach of the 2018 census alongside an administration data only census. The results will be used to finalise the approach to census data analytics in the future. New legislation enables this and it is supported by enhanced electoral legislation. Statistics New Zealand secures the Cabinet's confidence in 2020 to support a 'no survey' census after 2023.

Statistics New Zealand finally eliminated the constraining legacy systems used for the production of Official Statistics, through a very focused effort. It can now process Official Statistics as efficiently and effectively as is necessary to match the agreed need/priority of the essential users. The agency has addressed agreed priorities in Official Statistics' processing speed and capacity, introduction of new methods and other changes. Significant advances have been made in using administration data collected by government agencies for the production of Official Statistics.

Statistics New Zealand reorganised itself around a simple construct for the two important areas for which it has responsibility: aggregated data dissemination and provision of Official Statistics (including census data). Both areas are valued (internally and externally) and are considered to be critical services provided by this agency. Statistics New Zealand acts as 'One Stats NZ' when it prepares its Four-year Plan, its annual business plan and when it sets investment priorities (including in people, projects, operational and capital expenditure) across the business. It has a disciplined simple process in place to do this. It is ruthless in only doing the things that are critical to its mission and evaluates not only what it must do but what it must stop to make way for the key priorities. It delegates implementation to appropriate skilled personnel, with robust governance and delegation frameworks and reporting dashboards in place. Staff are aware of investment and disinvestment decisions and understand why the prioritisation in a given year is made. The agency pulls together project teams only if they are essential, preferring to delegate operational matters to the relevant division/team. It recognises the opportunity cost of complexity and meetings. This way of working is embraced and valued by the staff at Statistics New Zealand.

The agency sees itself as a dynamic organisation and staff have an expectation that what they are asked to do today may be different in the future. This is understood and valued as staff see themselves providing services in a fast-changing world, to which the agency must be highly responsive.

Statistics New Zealand has embedded design-thinking and accelerator-type technologies that it uses to identify new ways of approaching problems and overcoming roadblocks across the business (both for data services and the Official Statistics System). It is considered to be a leader in this approach within the State sector. It chose to adopt these methodologies to enable it to constantly innovate within tight resource constraints. The culture is underpinned by an embedded 'how might we…' philosophy and a commitment to pace. Statistics New Zealand is always looking for step change innovation and improvement – not incremental linear improvement. It knows this is what is required for New Zealand to be able to reap the benefits from the data services and Official Statistics it provides.