

**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Feedback - GEOSPATIAL ROLE & FUNCTION and GEOSPATIAL STANDARDS & INTEROPERABILITY  
**Date:** Wednesday, 15 August 2018 12:37:54 PM  
**Attachments:** [image001.png](#)

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General feedback on the review process / documentation: I found the first review 'LINZ geographic role and functions' a bit hard to follow. The second review on 'Standards and Interoperability' was much easier to understand. It would have been nice to have a presentation providing context to these reviews and a short summary of these reviews to help with the understanding and make it easier for people to provide feedback.

#### ***Geographic role and function review***

Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:

- o Increase LINZ's impact and influence?
  - Yes. I agree with the recommendations in section 4.3. In particular around thought leadership 'link customer/stakeholder needs with data' and delivering tangible benefits.
  
- o Achieve LINZ Outcomes?
  - Yes. As above delivering on tangible benefits linked to our outcomes will be important. In particular I like section 4.4 on strong leadership and aligning the work across LI, identifying the gaps or low value work which should be stopped.

#### ***Geospatial Standards and Interoperability review***

Do you think the changes to the S&I function outlined in this document will help LI to:

- o Achieve LINZ Outcomes?
  - Yes.
  
- o Develop and promote geospatial standards and interoperability within LINZ and across the system?
  - To some extent but please see my comments below:
    - o How can we make sure key customers, stakeholders, vendors (users) are included in the development of standards and LINZ are not developing (or contributing to the development) of standards in a vacuum/bubble? Also, for standards to be successful how can we adequately promote and make sure our users are supported in their adoption and uptake of these? I think this is perhaps not explicitly stated in the recommendations but contained elsewhere in the review document.
    - o The review recommends that the function to develop standards for data products should sit within the LINZ product teams. That is appropriate, but is a higher level role required around the development of standards that would potentially affect all the product teams (eg. metadata standards, OGC working groups)?
    - o I think the recommendations around Governance are good and I like the proposal that there is some oversight on the case/value for new data / data product investment. Can we also include something about ensuring that we measure the benefits of data / data product release as well – to make sure that intended benefits of the investment are realised?

[ s 9(2)(ba)(i) ]

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### ***Geographic role and function review***

- Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:
  1. Increase LINZ's impact and influence?
  2. Achieve LINZ Outcomes?
  
- 1. I think we already have strong leadership, but I agree our leaders should be working together with equivalents in other departments. I also see a lot of value with working together with the likes of NIWA and GNS.

I agree with the recommendation that our role as a government department should be clear to other government departments, but also NZ citizens. Unfulfilled expectations can be destructive, so having a very defined role and function seems like a good idea. I often hear people say, "LINZ should be doing blah blah". The blah blah is not a LINZ role and they need adjusted expectations.

The section on thought leadership resonated with me. Be a more influential advocate for geographic data – yes. Have more conversations with others to really understand the problems and issues – yes. Take the time thing about and to see the big picture and know when a little tweak could have a big impact on customer needs – yes.

So yes, these approaches will increase LINZ's impact and influence.

- 2. The key outcome I relate to is "**High-value geographic and property information** Geographic and property information are used effectively to deliver value for New Zealand". It is worded in an interesting way with the passive verb "are used". It is not about us just dishing the data up on the LDS, but the next step about effective use of the information. In order to achieve that there has to be a lot of interaction with the users of our data. I'm not sure that the review really nails that. I expected to see a lot more about evangelising.

### ***Geospatial Standards and Interoperability review***

I read this review document and nothing stood out to me as "strongly disagree" ..

Topic	Background Doc Reference	Comment
Overall opinion about geographic role and function review	Page 3	Agree
Overall opinion about geospatial standards and interoperability review	Page 3	Overall agree, but see comments below
Standards implementation principles	Page 28	Agree with these. However, when it comes to open standards, we should be pragmatic about how we apply the principle. For example ISO is not an open standards setting process, but if the community of interest exists within ISO, then it may still be appropriate for LINZ to contribute actively to the standards-setting process.
Closed ISO standards	Page 29	In general, LINZ should push for open standards where possible. But where this is not practicable, we should not dismiss contributions to ISO as there are sometimes other ways of achieving our goals. For example, the Strategy and Stewardship group has in the past drawn on aspects of ISO standards when setting standards, which has the effect of making the most relevant parts of the ISO standards openly available. Of course, it would not be appropriate to adopt large parts of an ISO standard in this way.
Data standards development should sit with product teams	Page 31	Agree. However navigating ISO, OGC or any other standards body can be challenging, so there does need to be a level of LINZ-wide support to do this. It is not a good use of time for all product teams to be familiar with all the relevant standards bodies
Governance	Page 32	This is a really good idea. This will help promote the importance of standards and ensure we focus on the areas of highest value.

**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Feedback - review reports: Geospatial Form & Function and Standards & Interoperability  
**Date:** Friday, 17 August 2018 4:36:53 PM  
**Attachments:** [image001.jpg](#)

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Hi

Thanks for the opportunity to provide feedback on the review reports related to Geospatial Form & Function and Standards & Interoperability

You asked in feedback on these reports, to answer the following questions:

***Geographic role and function review***

Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:

- Increase LINZ's impact and influence?
- Achieve LINZ Outcomes?

***Geospatial Standards and Interoperability review***

Do you think the changes to the S&I function outlined in this document will help LI to:

- Achieve LINZ Outcomes?
- Develop and promote geospatial standards and interoperability within LINZ and across the system?

My answer to each question above is 'Yes' subject to my comments below:

***Geographic role and function review***

- While noting many changes since the Geospatial Strategy was introduced (e.g. LINZ Outcomes Framework, LI Strategy, government Data Stewardship responsibility in Statistics NZ), this report also notes that "the goals and principles of the Geospatial Strategy still hold true", "LINZ's Outcomes Framework...sets a clear direction for LINZ's work in geospatial and encompasses the aims of the Geospatial Strategy", "...the principles of the Geospatial Strategy were incorporated into the LI strategy". I totally agree with and support this continuing commitment by LINZ to the goals and principles of the Geospatial Strategy. However this commitment in LINZ's current work is by and large not well understood by most external agencies and other partners to the Geospatial Strategy. I think communications around this continuing commitment are needed to rectify this situation – for instance when LI engages with external parties at a strategic level about its work programme with material such as the A3 for "Key datasets for the three LINZ challenges – Location Information priority dataset activities 2018/2019". Online material on the LINZ website referencing and communicating around the Geospatial Strategy and NZGO also needs updating.
- The four goals of the Geospatial Strategy are : Data, Accessibility, Interoperability and Governance. The one goal that does not come through so clearly in the LINZ Outcomes Framework and LI Strategy is Governance. LI is setting up advisory groups/panels in specialist areas e.g. resilience, cartography. However I think a more formalised opportunity is lacking for relevant external parties to influence/advise on LI direction at a more strategic level. The recently formed South Island High Country Advisory Group that LINZ Crown Property Group coordinates could be a model to use.

### **Geospatial Standards and Interoperability review**

- Strongly agree with the finding that there is high value in properly implementing standards and interoperability functions within LINZ to enable better reuse of NZ data and support the LINZ outcome focus areas
- Also agree that there is still a need to promote the value of geospatial standards and interoperability with customers, agencies and vendors. I think one key way to do this is to raise the visibility of standards success stories across the geospatial community e.g. the report finds that “there have been standards implementation successes within the hydrographic, addressing, imagery and elevation functions of LINZ”. Such LINZ success standards stories need to be complemented by stories from other organisations so that together they can promote the value of standards and encourage further successful standards implementations
- In addition to coordinating the publication of success standards stories, LINZ should also provide an appropriate level of technical guidance to the industry for standards implementation requirements. This would encompass making relevant to the New Zealand situation the harmonisation of ISO Data Content standards and OGC Data Interoperability standards.

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**From:** [ s 9(2)(ba)(i) ]  
**To:** [ s 9(2)(ba)(i) ]  
**Cc:** [Feedback](#)  
**Subject:** Feedback on feedback and S&I review  
**Date:** Friday, 17 August 2018 4:56:05 PM

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Hi [ s 9(2)(ba)(i) ]/all

Here's my feedback on the two documents:

- Largely I agree with the two documents and can find little fault with Deidre's document
- except that I'd like to see more of a focus on innovation in the future. It's all our jobs to be innovative but there's nothing explicitly stated in these documents about identifying areas where LINZ could make a greater contribution than we already do.
- Largely we give councils what they need, but we don't consider so much what we don't give them, and where we could be adding further value within our Outcomes Framework. It seems to be that the Key Challenges are somewhat innovative, but these aren't supported by the Outcomes which seem focused largely on need-based initiatives (which is not a criticism, I absolutely understand why this should be, but what else could we add that we don't now? Councils for instance don't know they have a need unless we show them what's possible).
- Perhaps this is not the appropriate document to raise this however, but I note the UK's drive to become "the" Geospatial World Leader <https://foreignaffairs.co.nz/2018/08/15/mil-osi-united-kingdom-press-release-government-launch-call-for-evidence-to-be-geospatial-world-leader/> which was highlighted in yesterday's daily media briefing and wonder why we don't have at least SOME funding put toward similar initiatives.
- Regarding the S&I review document, I think it's an overstatement to suggest that LDS is a "world class publishing service" (define this?) - it is a good one but it's just one, not the "best" one. No doubt it has some unique aspects in supporting open data principles which many others do not, but it's not the be-all and end-all. The business use of the data is of greater importance than the data publishing service itself, one supports the other but without turning data into information the data in LDS would go nowhere. Other organisations aren't in quite the same position as LINZ in their ability to open data up so naturally it's a comprehensive service, but there are many others out there.
- Who are the LINZ product teams? There's a separation between Data and Product, this document seems to refer to "data products" which doesn't seem to tally with the "data first, digital first" mantra. (where has "Digital by default" gone?) "Products", even "datasets", shouldn't be our focus. We provide DATA, products are a by-product of that, datasets are just a package of the data. By "product teams" do we mean the LI Topo Products team, the Topo Data team, or someone else? What about Addressing?
- Supporting the creation and maintenance of geospatial metadata should be central to everything we do. I don't think we've had enough focus on this in the past, this hasn't had the visibility that it should have had and needs more support.
- The leadership, promotion and establishment of standards has been somewhat separated from the psyche of many involved in the creation and maintenance of LINZ data in the past and performed by a select few. This should be everyone's responsibility, it's a big deal and should be front and centre of our data creation and maintenance processes. I would ask how many people in LI have experience of standards and making

data interoperable? We all need exposure to this.

- Development and involvement in standards development bein too international focused: but if it's not, they're not standards, right? If it's not directly linked to NZ problems and issues then perhaps the issue is at our end?
- Big push for local government to have more support in this area.
- OGC isn't free. Either way, we will pay to be part of standards bodies, if we want skin in the game then we'll have to allocate a budget. It needs to be reasonable but you can't stay away from the table, if you do then we're not only not contributing we're also in danger of creating our own little "bubble" and this could cause some difficult issues in the future
- Metadata, in general is hard or impossible to find on Google. That's what catalogue publishing services are for, Google should only be used as an enabler. I don't think people realistically go looking for their metadata on google.
- If proposed standards functions are to be led by domain experts, those domain expert need to be internationally connected – not sit only within LINZ. Theoretical considerations also have their place, they can't be ignored. This is where innovation comes in too.
- "LINZ should review it's long-term future managing NZ's engagement with ISO/TC211" This is a bit of a concern. If a review means reviewing how we engage then fine but I would be concerned if we would consider giving this up, even long-term. This is a major engagement leadership position in which if we're not at the table, we can't have a say, and we don't get to find out about initiatives that come in from left-field unless we have skin in this game. We'd be making a huge backward step if we were to give this up.
- If we are to support the Outcomes and our Key Challenges we should understand how the new digital economy supports these and engage wider, become an internatiponal leader in this space, not have a narrower focus.

Deep breath...

[ s 9(2)(ba)(i) ]



**From:** [ s 9(2)(ba)(i) ]  
**To:** Feedback  
**Cc:** [ s 9(2)(ba)(i) ]  
**Subject:** Feedback on review of LINZ's geospatial role and function  
**Date:** Friday, 17 August 2018 4:35:46 PM

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1. This is individual feedback.
2. I support the direction the review has taken, and in particular:
  - a. Recognition of how the world has changed and continues to evolve since the Geospatial Strategy (2007)
  - b. Acknowledgement of the increasing role of other players (e.g. StatsNZ; DIA; etc.)
  - c. Taking into account the Outcomes Framework and key challenges for NZ, and implications for functional leadership
3. I suggest that greater attention can usefully be paid to:
  - a. LINZ's role in geographic data leadership: The focus in the review appears to be "government" and "across government". But from an Outcomes Framework perspective, the leadership role should be about addressing problems that really matter for New Zealand and New Zealanders. This inevitably means a broader range and nature of engagements than just central government. For example:
    - i. The water critical challenge means ensuring that the key decision makers in respect of freshwater management in NZ have easy access to the data needed to properly inform their decision making. Which translates to (among others)
      - Regional councils – setting and enforcing freshwater standards
      - Crown Estate – owners/managers of Crown land in particular must be exemplary in freshwater management
      - (Potentially) separate freshwater agency – proposed to govern freshwater standards following Havelock North enquiry
      - Iwi – freshwater is a critical resource, for which they are taking over responsibility within their rohe in post-settlement world (e.g. Tuhoe)
    - ii. The urban critical challenge means ensuring that the key decision makers in respect of how cities function and evolve have easy access to the data needed to inform this. Which translates to (among others)
      - Major urban councils – making the statutory plans that enable/accommodate development, amenities, community wellbeing, services, etc.
      - Developers – identifying viable development opportunities
      - HUD – the new Ministry
      - Iwi in urban areas – have substantial interests in land and its use (e.g. Ngai Tahu; Hauraki Collective)
  - b. LINZ's role beyond geospatial data: The focus in the review appears to be

These are illustrative only. The key suggestion for this review is to think about engagement more broadly than just central government (i.e. also local government; Crown agencies; iwi; private sector; industry bodies; key interest groups; etc.) and in more varied forms than just "consult" or "work with" (i.e. also partnerships; joint ventures; collaborative projects; etc.)

“geospatial” data, and also “property” data such as addresses, titles, parcels etc. But again from an Outcomes Framework perspective, the intentions behind “geographic and property information” were broad and driven by what was needed to address the problems that matter most for New Zealand. For example:

- i. If, say, seismic data or lifelines data turns out to be critical to improving disaster planning and response, then LINZ should be just as interested in seismic and lifelines data as, say, river network or transport network – regardless of whether these are usually thought of as “geospatial” vs “geotech” vs. “infrastructure” data, etc.
  - ii. In property space, if the ability to quickly/easily access (non-private) property market values, sales history, building consent, resource consents, floor plans, LIM reports, building data, infrastructure data, etc. turn out to be critical to making better property transaction/investment decisions, then that should be the scope of LINZ’s interest in property data – significantly beyond the data we currently associate with IPS.
- (This may in fact be what is intended – it wasn’t evident to me in the review that this was the case.)

4. Thank you for the opportunity to provide feedback. Happy to discuss any points above.

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**From:** [ s 9(2)(ba) ]  
**To:** [Feedback](#)  
**Subject:** feedback to GEOSPATIAL ROLE & FUNCTION and GEOSPATIAL STANDARDS & INTEROPERABILITY  
**Date:** Friday, 17 August 2018 4:00:05 PM

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The report gives good direction for LINZ to build the geospatial leadership across the government agencies.

As a strong technical group, LI also have opportunities to strength the geospatial leadership within LINZ through helping on building internal geospatial capability.

There are internal needs of support the use of geospatial information in other LINZ business groups. The support we can provide is not only helping on increasing geospatial awareness within the LINZ. It could also contribute to further implementation of the geospatial strategy within the organisation.

Other business groups are also doing external engagement. Geospatial support is one thing occasionally being offered to the other organisations. If we could offer consistent geospatial support as an organisation, it's a good way to maintain LINZ's geospatial leadership and reputation.

Cheers,

[ s 9(2)(ba)(i) ]

**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Cc:** [ s 9(2)(ba)(i) ]  
**Subject:** FW: Consultation Feedback  
**Date:** Thursday, 16 August 2018 12:50:58 PM

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## Consultation Feedback

### 1. **Geographic role and function review**

Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:

- o Increase LINZ's impact and influence?
  - Agree clarity on our role and our value proposition is absolutely key. Agree stakeholders want us to tell them what we can do; we need to come up with this value proposition and test it with stakeholders, then tweak it to ensure our efforts are in the right place. Need to ensure our value proposition is supported by Stats and DIA. I would have liked to have seen this role defined as part of this review.
  - Agree we should have a role in key datasets, but this needs to go beyond identifying – the role needs to take responsibility to ensure these key datasets are accessible for NZ – be BOLD , provide tangible benefits. We also should be providing advice and guidance relating to these key datasets to ensure we have consistency in data management.
  - No mention of Local Govt specifically in this recommendation? LG is a critical player in this space – they have a key interest in much of the data at a regional level. Part of our value proposition could be coordinating regional data at a national level.
  - Agree there is real opportunity to increase impact and influence through providing consultancy and advisory services across the public sector, but again we need to take a value proposition to stakeholders to ensure we understand needs.
  - Agree aligned strategic thought leadership is required and this should provide a framework for aligned engagement.
- o Achieve LINZ Outcomes?
  - Agreed LI needs aligned strategic and thought leadership – this will be fundamental to achieving LINZ outcomes. The LI critical few go somewhat towards achieving this but we still need to understand how this is operationalised. The operational detail behind these initiatives is still emerging, the details is required to deliver on the outcomes and this should be a key focus for LI.
  - Recommendation includes tangible delivery 'identifying key datasets' – I believe to achieve LINZ outcome around high-value geographic and property info we need to do more than identify – LI needs to be BOLD – we must define our role/ value proposition in making key data accessible?

### 2. **Geospatial Standards and Interoperability review**

Do you think the changes to the S&I function outlined in this document will help LI to:

- o Achieve LINZ Outcomes?
  - Standards and interoperability for geospatial datasets is a focus outcome area. I agree with the recommendation that LINZ has a role in developing and promoting standards and interoperability, and the principles for standards implementation.
  - I support needs based /expert led development of standards and agree it would be useful to have some across LINZ resources/ foundations which can support a common consistent framework across product teams.
  - Development of standards is not enough to achieve LINZ outcomes – promotion is just as important. I believe LINZ needs to take on a more proactive role in ensuring standards become operational and are

widely adopted. Standards can be very confusing, there are many different types of standards and these can be difficult to navigate. We could do much more in helping stakeholders understand what standards exist and how they can be implemented. We should be making it easier for stakeholders to adopt standards by establish some sort of catalogue of available standards (in conjunction with Stats/DIA) - something tangible for stakeholders to refer to..

- o Develop and promote geospatial standards and interoperability within LINZ and across the system?
  - Agree Geospatial Strategy 2007 standards principals still apply and we should be promoting standardisation, and LI has a role in developing standards. Agree completely a pragmatic approach is required to the development and implementation of standards. Agree to make tangible progress this needs to be adequately resourced, however I believe we should play a more proactive role in promotion/ education and awareness around standards and interoperability. Standards can be confusing but we can play a role in making it easy for stakeholders to navigate and adopt standards (see above).
  - Effort/ resource is required to reduce barriers to standards adoption.

[ s 9(2)(ba)(i) ]

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**To:** [Feedback](#)  
**Subject:** FW: GEOSPATIAL ROLE & FUNCTION and GEOSPATIAL STANDARDS & INTEROPERABILITY  
**Date:** Thursday, 16 August 2018 3:15:03 PM  
**Attachments:** [image001.gif](#)

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Hi Jan/Feedback,

Thanks for opportunity to review and provide feedback here are a few comments:

Overall a well documented piece of work that prepares LI and the LINZ contribution to geospatial world for the next phase, and a well overdue renewal of focus for the 2007 strategy that incorporates the changes in environment and LINZ internally (e.g. LDS) since then.

#### Geospatial Form and Function Review

- p.6 LILT make shift to system leader, influencing .... Geospatial Office lost their way by focus on widespread influence, have lessons being learnt so not repeated?
- P.7 LI and international engagement ... not always aligned. Suggest LINZ needs to establish Engagement leaders within each BG and have them collaborate for pan LINZ so we are joined up, effective, and know what each is doing
- Overall agree that the approach would increase LINZ's impact and influence and contribute positively to the current LINZ outcomes

#### Standards and Interoperability Review

- Highly technical but understandable with effort
- P.22 LINZ over the last seven years ...and 4 bullets relating to Esri and LDS. Failed to understand what point this part was trying to make, lacked context to understand it
- P.30 says that elements of the National SDI that are still important but did not establish or state that the Geospatial Office vision was still right, i.e. has it been re-validated?
- P.32 agree the recommendation for operation governance is sound
- Overall agree will assist LI to achieve the current LINZ outcomes. And would improve development and promotion of geospatial standards

Ka kite ano

[ s 9(2)(ba)(i) ]

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**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Geospatial and Standards Review Feedback  
**Date:** Friday, 17 August 2018 1:30:12 PM  
**Attachments:** [image001.png](#)

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Feedback on consultation documents:

Geospatial:

- Generally agree with recommendations
- I'm not convinced that LINZ should delve into the consultancy/advisory service space. While we have some capability in this area, I do not think that it is the best use of our resources to compete with the private sector on this (even if the advice is to Govt entities).

Standards:

- Generally agree with recommendations – particularly focussing on technical open standards rather than vague ISO documents
- No mention is made of the standards writing and maintenance capability within Strategy and Stewardship (they are not listed as being consulted either). We've previously found them very helpful in developing the aerial imagery specification amongst others. It would seem strange to develop a parallel capability within LI when a larger combined function would provide more flexibility.

[ s 9(2)(ba)(i) ]

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**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Cc:** [ s 9(2)(ba) ]  
**Subject:** Geospatial Form and Function Review - feedback  
**Date:** Wednesday, 15 August 2018 11:20:03 AM  
**Attachments:** [image001.png](#)

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Hi Review Team,

Below are my thoughts about these documents – very happy to discuss if this helps / clarity is needed.

Thank you in advance.

[ s 9(2)(ba) ]

### **Geospatial Form and Function Review**

- This document resonated well with me – LILT is becoming more involved and visible in the system which is great to see. There is a great opportunity for LI to lead in areas where it can add the most value as guided by the Outcomes Framework. At a high level, it seems that government agencies are held back by not being well positioned to “work with the system” more. LI having a core activity centred around geospatial information provides an opportunity for leadership that others cannot so easily achieve.
- In my view, one point worth articulating (section 4.1) is that through connecting more with others, critical mass is created (or increased) and pooling of resources can more easily occur - this will all accelerate the Outcomes Framework and increase LI performance.
- The New Zealand Geospatial R&D document reinforced many points raised in the NZGS – one matter that came up time and time again is the need for data to be fit-for-purpose i.e. focussed on the use / end use (i.e. data quality). That said, another element that needs to be addressed is how far does government need to produce such “high quality” data? A cost / benefit approach is needed here i.e. the private sector also needs be involved where appropriate, especially if they are using government data for their goals.
- Section 4.2 – totally agree with the comment about the SDI. Mapping NZ 2025 is also an SDI – a platform that all of NZ can leverage from and align with. Awesome opportunity!!
- Having a line of sight between strategic engagement and operational engagement is underway and this is already creating value (e.g. by allowing alignment between teams) within LI. It will important to continue this path and create value within and external to LI. Also helps to avoid confusion with external (and internal) stakeholders.
- A strategic review of LI international engagement would be very useful. The information gathered would also help identify opportunities with NZ-based researchers as they also have extensive networks that LI could leverage from.
- Section 4.3 – agree, stakeholders would just **love** to see LINZ step more into a leadership role. LINZ are also seen as being trusted and neutral. Using the Outcomes Framework as a lens to prioritise activities would be essential to “hit the sweet spot” between LINZ / LI goals and NZGS goals.



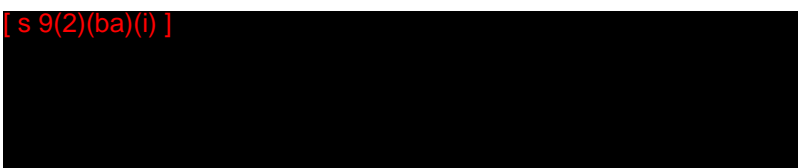
- LINZ / LI can demonstrate leadership by putting forward the “so what” / highlight the benefit of LI activities for NZ – sell the “sizzle”!
- Section 4.4 – stronger leadership is critical – agree. An integrated and collaborative approach internally and externally is needed to accelerate LI goals and make a difference. Identifying strategic partners e.g. GNS Science will be key to increasing productivity / progressing the Outcomes Framework. Also a great way to demonstrate leadership in the system and “walk the talk”.
- Section 5.2 – Set and sell the vision – being clear about what success looks like and creating this vision for others will be key.
- Section 5.3 – LINZ has an opportunity to lead the geospatial data area in partnership with StatsNZ and DIA. LINZ / LI is the expert here - this is an opportunity to input into a process that will help champion the NZGS and Outcomes Framework.
- Section 5.4 – Mapping NZ 2025 is an opportunity to do just this – create a data infrastructure that the system can align with and use. Massive opportunity that sits within LI’s core business. Working with agencies such as GNS Science (comparing work programs: Mapping NZ 2025 – Mapping Zealandia) is a golden opportunity and it also demonstrates a high performing organisation / business group.

### **Review of Geospatial Standards and Interoperability**

I won’t comment much here apart from:

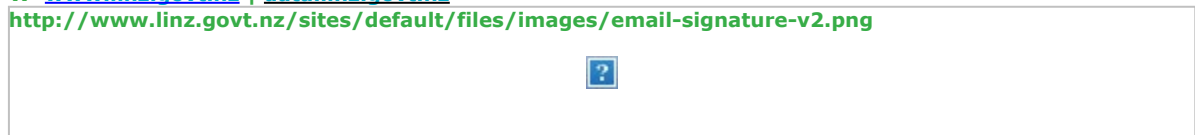
- Good work from Jeremy, well done.
- Standards and interoperability – even if key LINZ / LI datasets were fully interoperable, e.g. datasets related to Mapping NZ 2025 and property, this would be a huge step forward. It would also drive the Outcomes Framework forward.

**Check out our NZ end-user focussed R&D documents on <http://www.linz.govt.nz/about-linz/our-location-strategy/new-zealand-geospatial-research-and-development-priorities-and-opportunities>**



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<http://www.linz.govt.nz/sites/default/files/images/email-signature-v2.png>



**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Geospatial function review  
**Date:** Friday, 17 August 2018 2:04:28 PM

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Hi Deirdre

This is from the [ s 9(2)(ba)(i) ] team. There may be other comments that come to you directly, or again through me later today. However this is a summary

There were a number of questions with the accuracy of the information in the reports, and that the perception of some of the people who fed into the reports may not have been 100% correct in the information they provided. The addressing team were keen to see that those aspects did not influence decision making in the wrong way. Key to the point below were what we feel based on the material read what the future state needs to contain or consider.

- Standards needs to be customer driven/needs based, this frame needs to be made stronger as to our future approach
- Develop learn and fail fast need to also be a lens we work with
- Developing to LINZ needs is great, we need to ensure practice clearly evidences support for external customer to LINZ's needs alongside that
- We need to stop discussing and get into the acting on this
- We need to review and develop standards in the basis of reality, many don't fit the needs for which they are developed and future work needs to be done working with users at appropriate times to see pragmatic solutions in the form of standards
- Need to understand the stats leg review, if they manage open data, how does LINZ lead geospatial opening of data. What other aspects of work and how we complete it will be impacted by the leg review being undertaken by stats nz?
- Should definitely look international first, ISO is extremely relevant to work with, alongside OGC. Not necessarily one or the other. Cannot lock LINZ or NZ into boundary based standards, we are in a leadership role for Geospatial for this country and cannot afford to not be involved in international developments, or supporting international standards first.
- If reviewing means determining how we work more effectively with ISO TC211, then we would agree. However meaning not working with them would be giving up our Geospatial leadership, which would be in error
- Development of guidelines to support the application of standards is also critical to be in the work programme
- We have the technical expertise however we will need to build the capability to develop standards that use that technical expertise, this will need to be factored into the set up of any future work programme
- Whatever structures or governance etc we put in place, we need to review how its working, be ok if parts 'fail', but learn and change as we learn to get to the right way of operating
- Recognition that all teams will have to learn more about standards pertinent to them and potentially to externals, to support a member of their team to play a role in developing and implementing a work programme that needs to be delivered. This will mean additional capabilities for some staff, and additional workload that will need to be

prioritised and managed.

- Expectation is that a work programme will factor LI needs, LINZ needs, NZ needs. Prioritisation will be around the outcomes framework on the understanding that this is the LINZ view of what is important for us to deliver to NZ's needs. That existing international standards will be assessed to meet these needs as a first port of call before any potential bespoke development.
- For our day to day tasks that need to apply to our standards, having the clout/being empowered to influence changes to standards is critical. Another essential reason to be leading and operating internationally, not stepping back from this or the agencies involved.

# Feedback on the Location Information Geospatial Form and Function Review

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Group response from the [ s 9(2)(ba)(i) ] Team

## General comments and key points

Overall we [ s 9(2)(ba)(i) ] think that the quality of the feedback document is high and support the direction the review has taken.

We see spaces where we could support this review as it progresses and would welcome a discussion about our involvement. We feel that engaging on this level will help to build our [ s 9(2)(ba)(i) ] capability and understanding of the LI group and enable us to provide value to LI.

Our key points of feedback surround issues of:

- the practicalities of how the Outcomes Framework will be integrated into LI's strategy;
- clarifying the scope of LINZ's 'geospatial/geographic data mandate, and how the mandate sits alongside the new Government Chief Data Steward;
- what the term "geographic data leadership" means for LINZ and our stakeholders;
- public-private roles;
- what LINZ's role should be if the GCDS is empowered to set mandatory standards;
- how we should engage across government and beyond; and
- understanding the privacy/security considerations of the data we administer.

We expect the answers to the questions we raise will be iterative and require further thought and discussion across LINZ.

*\*Please note that we are not providing comment on the second review (The Review of Geospatial Standards and Interoperability).*

## Response to questions within feedback document

### How does the Outcomes Framework influence and change our role and functions?

We agree that the Outcomes Framework provides the basis for a new conversation with stakeholders about LINZ's leadership role. We are unsure what engagement with the GCDS has already been undertaken to ensure clarity of the LINZ mandate for geospatial/geographic data.

We suggest that the Outcomes Framework should shape our priorities and how we are framing the work we do. For example, should our work on Mapping 2025 be situated within the key dataset work (High-Value Geographic and property information outcome #1) and targeted towards the critical challenges? In any case, [ s 9(2)(ba)(i) ] would be eager for the opportunity to be involved in the work surrounding the Outcomes framework and how it might be reflected in LI's strategy and work programme.

## What is LINZ's role in geographic data leadership in government? What does taking a lead in geographic data mean and look like across government?

We think this is about clarifying the scope of our mandate, communicating it to stakeholders, and ensuring our mandate sits well alongside the new leadership roles assigned to the GCDS and GCDO and all stakeholder are well aware of what we do.

We are unsure how far LINZ's leadership mandate stretches. LINZ has various mandates relating to datasets that we collect and administer; some we are directed to collect via statute and others via cabinet directive etc. Beyond this the key dataset work goes a long way in providing us with clarity as to our ideal role by seeking to understand the current state of datasets and what 'gaps' exist.

We think this work can then feed into LINZ adopting a targeted strategy as to where we commit our expertise and resources. Additionally engagement with GCDS and GDCO will help to provide certainty, increase awareness more broadly, and ensure a joined-up approach across government and from government to the private sector.

Section 4.3 within the feedback document notes that "some stakeholders are confused about LINZ's role as geographic data leader, the previous positioning of the Geospatial Strategy and NZGO and what next steps are." Positioning ourselves as a geographic data leader, though appropriate, is a blanket term that can lead to a certain amount of confusion. The ISO/ TC 211 series of standards define geographic data as data and information having an implicit or explicit association with a location relative to the earth. LINZ may have a narrower mandate than this. What the phrase 'geographic data leader' could really be trying to capture is our mandate to collect data that is fundamental to location that allows geographic datasets to be referenced relative to the earth. In this context we do have a responsibility to ensure that we support the custodians of other geographic datasets. This is the premise behind a spatial data infrastructure, hence the importance of standards and interoperability to our work. For our mandate, we suggest this may mean that:

1. we provide the underlying data/infrastructure that is necessary to ensure other geographic data can be captured and used – for example the geodetic reference frame;
2. we are the public sector lead in collecting certain datasets and providing a spatial data infrastructure; and
3. we occupy a supporting role across the sector so that agencies that collect geographic data conform with standards for interoperability and accessibility; this also includes providing expert advice and support.

This is in line with "positioning LINZ as being part of NZ's **critical economic and social infrastructure**" as noted within section 4.3 of the feedback document; and with the key principles of the Geospatial Strategy. In this way the scope of the Geospatial Strategy is more defined than the concept of LINZ as a geographic data leader, contrary to the issues referred to in section 4.3.

Going forward, we think the following questions are important to consider:

1. Is it abundantly clear to all relevant government and non-government actors just what LINZ does with our geospatial/geographic leadership role and the expertise we have?
2. Are we joined-up with GCDS and GCDO at the right levels (from tier1/2 leaders to operational staff)?

And, that these three things should be prioritised:

1. Refreshing the LI strategy in light of the OF and also engagement work to establishing common ground with GCDO & GCDS to clarify LINZ's mandate and align work with those well known leaders across Government;
2. Clarify how LI's critical work fits within the leadership role – what we are delivering (tangible benefits) and what we are influencing using the leadership mandate (is this a space for some of the key dataset work, or increasing interoperability (IPS?), or reporting on data (possibly joined with StatsNZ?).
3. Ensure all key stakeholders are aware of the scope of LINZ's mandate and the planned 'critical work' that fits within that leadership role.

### **What is LINZ's role in geographic data standards and interoperability?**

A key consideration for LINZ is how active we should be in promoting mandatory standards. In order to fully understand LINZ's role we propose that the current Geospatial Form and Function Review needs to be completed first to feed into the Geospatial Standards and Interoperability Review.

Should the GCDS be empowered by Government to set mandatory standards across the public sector then LINZ will have a responsibility to provide expert advice on standards relevant to a spatial data infrastructure – specifically how geographic data might be collected, and organised in a consistent way that ensures it can be accurately referenced relative to the earth (noting that we will be represented on the cross-Government Approvals Board).

### **What is LINZ's role in building geographic data capability across government?**

We think this is a subset of stakeholder engagement. In this regard, we note that LI is also reviewing its approach to stakeholder engagement.

We believe LI's engagement stream should target three levels; being:

1. decision makers and system leaders, such as the GCDS, GCDO and relevant Ministers;
2. data custodians, specifically at the governance level within organisations with a responsibility for collecting key data; and
3. technical experts.

Through these three levels of engagement LINZ can both ensure other agencies are committing resources and see the value of geographic information (decision makers engagement), are developing the appropriate data governance practices (data custodians), and are using the appropriate data standards to ensure interoperability (technical experts). Engagement allows us to foster capability and build social licence so the public has confidence that government is acting appropriately.

We would also like to discuss the support role that s 9(2)  
(ba)(i) can play in this engagement stream, especially in relation to the GCDS.

### **How far down the geographic information value chain does LINZ go?**

This is essentially a sub-set of the leadership/mandate questions. We suggest the key question is what are the public and private roles in geographic information? The answer to this will drive how much 'value add' work we should be completing. This is directly related to our mandate. When

providing data, to what extent should we be processing it before release so that it is easily accessible? Following on from the above discussion it would be reasonable to expect that we process the data to the same standard that we would expect other agencies, though in line with the Outcomes Framework we may need to go further than this.

A second key question is what is the private sector's role? This comes back to where we are providing data that is not authoritative – where we do not have to guarantee it. If this is the case then what is the role of the private sector? How much guidance should we be giving the private sector when using our data to add value? And, to what extent do we have a responsibility to support players outside of government who generate data? Also this may raise a number of privacy and security implications – does LINZ have a privacy framework in place that can respond to us venturing further into the data space and taking on increased responsibilities.

**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Geospatial Review  
**Date:** Friday, 17 August 2018 1:12:58 PM  
**Attachments:** [image001.png](#)

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Just to let you know that I think it makes sense that the groups take on data management, and I think we are doing this more and more anyway.

[ s 9(2)(ba)(i) ]

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<http://www.linz.govt.nz/sites/default/files/images/email-signature-v2.png>





**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** Geospatial Review.  
**Date:** Friday, 17 August 2018 3:49:57 PM

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I am supportive of the findings in the Geospatial Form and Function Review document. I think it is well written and thought through. I look forward to supporting the implementation of the recommendations and working through how we can best to that work.

Here are some related thoughts in no particular order.

### **One LINZ**

For external stakeholders, it is not important which division we are based in as they refer to us as LINZ.

### **Greater customer focus needed**

We need to be more customer needs focused, putting customer satisfaction first, anticipating and identifying their needs, and measuring if we meet them or not. This includes identifying, describing our existing customers and especially potential future customers.

### **Iwi Maori**

There are many opportunities LI could make stronger contributions to growing geospatial capability among Iwi Maori groups that desperately seek support, training and access to our data.

The word Maori is frequently absent from LINZ reports.

We support the Indigenous Mapping Waananga, which aims to provide for Iwi, Hapu and Whanau groups to capture traditional knowledge and stories based on where they live. These are the individuals managing land trusts and working in the regions, making decisions on land use, and the regions are where we can have the greatest impact through capability and capacity building “bang for buck”.

One key dataset Iwi Maori desire, but is difficult to access are the Maori Land Survey and Sketch Plans in Landonline. These images contain a rich source of historical knowledge, places, Pa and sites of significant, detail that is often lost to living memory.

### **Awareness & Capability**

We have a strong need within LINZ for general geospatial support, guidance, mentoring and training, LI would be best placed to lead this. In addition to internal, there are huge opportunities for LINZ to lead the development of geospatial capability and capacity across government.

To increase the use of geospatial information, we also need to identify new markets where its not used much currently, for example Mobile App developers incorporating geospatial information.

To remain relevant, we must collaborate more with the largest NZ geospatial providers, Google, Apple, Here, TomTom and others. We are a very small fish in their geospatial ocean.

It is important to note increasing Awareness and Capability is not the same as operational engagement, which are the functional interactions we have with existing stakeholders to produce our operational deliverables.

There is a very high need for our work to be made more visible, it takes time to write articles, create videos and participate on social media, as part of awareness discussion, it would be useful to agree how we can increase visibility of the work our team does as well.

### **Work Programme Planning and Role Descriptions**

I have found it challenging over the past year to get agreement on a work programme. I would value having a clear set of priorities and expectations to enable long term planning, and have high confidence in where I should focus my efforts as well as measuring effectiveness. A recent report on the workshops we ran in 2017 provided very positive reinforcement I seemed to hit the mark.

We invented the [ s 9(2)(ba)(i) ] phrase I use on business cards as a temporary title, this seemed to best represent what I understood my role should be. I have sought out all opportunities that best meet what I understand the intent of the role, but this makes it difficult to plan and I've worked through the ambiguity by working where I can best make a useful contribution. It would be great to be able to confidently describe my role and the work I do.

That's my 2c.

Thanks.

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[ s 9(2)(ba)(i) ]

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**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** GEOSPATIAL ROLE & FUNCTION and GEOSPATIAL STANDARDS & INTEROPERABILITY - Feedback [ s 9(2)(ba)(i) ]  
**Date:** Friday, 17 August 2018 4:12:59 PM

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# FEEDBACK DOCUMENT

## 7 AUGUST 2018

### GEOSPATIAL FORM AND FUNCTION REVIEW

### STANDARDS AND INTEROPERABILITY REVIEW

#### ***Geographic role and function review***

Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:

- o Increase LINZ's impact and influence?
  - First we need to acknowledge as this report does to a limited extent that LINZ's impact and influence has in many ways have significantly decreased in this area since LI assumed the duties of the NZGO. There is a great deal of confusion both in LINZ and across government and beyond as to what role LINZ is playing in this leadership space. There is uncertainty whether the NZGO and the Geospatial Strategy (and its governance) still exist and have importance. Outside organisations do not know who they should talk to in LINZ about all of NZ geospatial issues. (NB – the report states, “The GM Data Services has principal responsibility for the geospatial strategy principles.” Does this mean that this role has assumed the duties of the Chief SDI Steward?) Inside LINZ there is little guidance as to how much influence standards and interoperability concerns have in strategies for LINZ business activities, such as in the design of the new networked hydrology layer. Into this void we have other external organisations asserting leadership for particular domains not necessarily aligned with others where they could or should be. Case in point is MfE asserting a leadership role in natural resource sector geospatial issues with very little influence from LINZ. Of course the biggest issue outstanding is what the ongoing relationship should be between the Chief Government Data steward at StatsNZ and Geospatial Strategy functions at LINZ.
  - A major weakness of this report was that the scope given was not broad enough to address this question. The original Geospatial Strategy was an All of NZ initiative and was governed accordingly with representatives from across government and the private sector. The directions given to focus on Standards and interoperability while not considering the broader Geospatial Strategy appears to have been a difficult ask and the report struggles to make this distinction. The natural question then we need to answer, and his makes a minor attempt to do so, is “what is to become of the geospatial strategy?” To answer this we need a broad range of the original stakeholder involvement as partners and not just their input.
  - Before we can answer if this approach raises LINZ's impact and influence, we need to decide what type of impact and influence we wish to have. Scope becomes a big issue here. I like to say “Interoperability starts at the front porch.” People can speak what ever language they wish that best suits their needs and purposes inside an organisation, but they need to be able to deliver to the outside world in more common language. Are we primarily looking inside LINZ or across national systems in regards to our impact and influence? The difference and relationships between these two realms needs to be clearly understood. The scope of this study is not clear in this regard.
  -
- o Achieve LINZ Outcomes?
  - Of course better use of standard will help make the efforts outlined in the LINZ Outcomes framework

more effective and interoperable. But the question trying to be answered here seems to be “Where does Standards and Interoperability fit in the LINZ Outcomes?” This is kind of like asking “Where does Australia fit in Queensland?” There is a relationship there but It is not ‘within’. Rather the LINZ Outcomes need be based on the Geospatial Strategy’s standards and interoperability components to be most effective. This document shows that this has been down to a limited extent inside LI. More could be done. Unfortunately, there is little of difference in suggestions as to what to do than we have done before. The list of suggestions of focus areas differ little from previous NZGO strategies. More work is needed on this front.

- For whom are we doing this work? This needs to be clearly decided and stated. The Geospatial Strategy was an All of NZ effort. The governance and structure of the NZGO reflected this. The unstated assumption here seems to be that any proposals here are LINZ proposals aimed at achieving the LINZ Outcomes. While the paper rightly states that much of the geospatial strategy has been adopted by the outcomes framework, a great deal has been left out. Namely the governance portion and the All of NZ focus.

### ***Geospatial Standards and Interoperability review***

Do you think the changes to the S&I function outlined in this document will help LI to:

- o Achieve LINZ Outcomes?
  - This report has some very good points about the value of standards and interoperability but also has some major shortcomings that affect its ability to improve LINZ Outcomes. One of the most glaring is the statement declaring that ISO Standards are not open and thus not as usable as OGC. While this may not be a desired situation and cause some unease, this does not mean the standards do not fit the usual definition of open.
    - o ISO is open, “Free as in Speech not as in beer.” The only thing that is charged for is the full documentation. But very few users need the full documentation. There are no royalties asked for those who use and implement the standard, thus these standards are open in the NZ defined sense of the term (see [openstandards.nz](http://openstandards.nz)). In the most important sense, (see Richard Stallman, FSF) ISO is open in that we can contribute to ISO standards development for free and implement them without royalties or restrictions in their platform of choice..
    - o ISO is the apex standards organisation. We cannot just ignore it and work on other standards instead. This would severely undermine the other standards work.
    - o Other open standards organisations suffer from different limitations. None are perfect. The OGC structure means that the more you pay the bigger your vote. The report correctly states that LINZ and NZ do not have a vote in the OGC. W3C is often held up as the best example of open standards, yet as the recent EME case recently illustrates, the Director can override the consensus system in place. This has caused some deep divides in that community.
  - How the Standards and interoperability team interacts with LINZ operational units and contribute to their frameworks needs clarification.
- o Develop and promote geospatial standards and interoperability within LINZ and across the system?
  - Before we have interoperability we need a community that wants to interoperate. This document says little about how we support the important function of community building for domains of interest. Data Commons provides a good perspective about the importance of and how to form such community – particularly across organisations..
  - Beyond LINZ this document seems to view others very much with the term “customer”. Our goal is to increase interoperability, so we should be looking for collaborators who have as much skin in the game as we do. These people need a seat at the table. They are partners, not customers.
  - There is a difference between implementing standards inside an enterprise and implementing standards across organisations. My analogy is this: “Interoperability starts at the front porch. I don’t care what language you speak in your home but someone better be able to communicate the important stuff to the broader community when needed.” Organisations may have very good practical reasons for doing things differently to their own standards internally, but mechanism need to

be in place to seamlessly share these data more broadly when required by external communities. More clarity is needed about the scope of work and to whom the corresponding benefits go.

- The number of standards organisations reviewed seems too narrow in this report. In addition to the OGC and ISO TC 211 LINZ is involved with the IHO, IAG, W3C, GGIM, ANZLIC, ALGIM etc. Some of these are more coordinating bodies than standards organisations, but play important roles in standards and interoperability. A broader and deeper review of these organisations and how they can contribute to future needs is needed.
- Just what is Standards and Interoperability work? It is clear that this has not been well articulated or understood. This work focuses on identification of which standards are of most import to interoperability, finding best practices for using these and guidance on implementation. In addition we feed issues upstream in the standards development process and communicate changes and their reasons and advantages downstream to practitioners. Standards are living documents and we are part of the ongoing communications.
  - Case in point - the ICSM Metadata Working Group formed in recognition that standards are living things and need ongoing attention. And that people who wish to use standards need support in doing so in ways that best increase interoperability - that lead to convergence of understanding.
  - These are communication standards. They form the language by which we share information. And things change as the world changes. It takes work to keep them relevant and useful.

### 3. Next steps

Overall, while I find these documents useful, they leave me with more questions than answers. They do not provide enough new information by which to make long lasting decisions. These questions deserve deeper research to form useful plans.

1. What is it we are trying to accomplish in the realm of Standards and interoperability? What is the scope we are trying to address? What different perspectives do we need to understand? (All of NZ, AoG, LINZ, LI?)
2. How do we insure this plan works for all of NZ if only LINZ governs it?
3. What is the nature of the relationship between the Geospatial Strategy and The outcomes framework?
4. What is the nature and structure of the relationship between the Geospatial Strategy and the Gov't Chief Data Steward and their sponsoring organisations, LINZ and StatsNZ in relation to standards and interoperability?
5. Are we meant to be reviewing the geospatial strategy or just Standards and Interoperability within LINZ? The writers of these reviews had an understandably difficult time separating these perspectives. Would it not be better to first review the Geospatial Strategy as a whole and thus provide better leadership across the All of NZ geospatial community?

Cheers,

[ s 9(2)(ba)(i) ]

**From:** [ s 9(2)(ba)(i) ]  
**To:** [Feedback](#)  
**Subject:** GEOSPATIAL ROLE & FUNCTION and GEOSPATIAL STANDARDS & INTEROPERABILITY feedback  
**Date:** Friday, 17 August 2018 11:00:14 AM

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### **Geospatial Form and Function**

I largely agree with this review, but it is general and there will be a lot of work required to outline the tangible things LINZ should do.

One comment I have that may be a bit left field: this review is entirely outward looking. i.e. what's LINZ's role in the wider NZ context. We're missing a trick by thinking only in these terms and we also should be talking about embedding geospatial use and thinking within the LINZ business. Not only would it make us work smarter and be more efficient, but staff in all levels of LINZ would be better able to increase our influence and achieve our outcomes. At the moment there are hardly any resources allocated for geospatial support for LINZ staff. There are success stories such as the Wilding Pines app, but we need to ensure more of this happens and it's not piecemeal.

### **Standards and Interoperability**

Again I largely agree with this review.

The challenge here is to make standards theory practical and usable. Standards don't succeed if they're not correctly implemented. If there are gaps in the market (such as a metadata editor for example) it could be worthwhile for LINZ to get our hands dirty and fund development work to fill the gap rather than just telling everyone what they should be doing.

ISO is too important to ignore and taking some of our focus away from them because they're not a fully open organisation may be a backward step.

LINZ has always supported open data and standards, but from time to time this needs to be balanced with pragmatism. For example should we support commonly used proprietary 'standards' in some situations? I think we should leave the option open to discuss this on a case by case basis. There's a difference between the principle of supporting open data and standards, and the principle of making our data as widely and easily used as possible.

**From:** [ s 9(2)(ba)(i) ]  
**To:** Feedback  
**Cc:** [ s 9(2)(ba)(i) ]  
**Subject:** Geospatial Role & Function and Geospatial Standards and Interoperability feedback  
**Date:** Friday, 17 August 2018 7:42:46 PM

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The following feedback was collated after discussion between the [ s 9(2)(ba)(i) ] senior technical team (cc'd):

**Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:**

- o Increase LINZ's impact and influence?**
- o Achieve LINZ Outcomes?**

It is certainly important the LINZ works with Stats NZ and DIA as they find their feet in their new roles to ensure that we retain a geospatial leadership role. Our capability and capacity, the work that we're doing already and the work that we have planned, should be familiar to the relevant people in these government departments. Refreshing the LI strategy is a good opportunity to consolidate LI efforts into an easily digestible document that makes these intentions clear.

There are a number of recent changes within LI that may have occurred simultaneous to the preparation of this report, for example:

- identification of key datasets as part of the Resilience work programme
- recent efforts to consolidate LI engagement (fortnightly engagement meetings across our teams)

It's difficult to tell whether these activities were taken into account in preparation of the final report.

From p6:

*> These outcomes (particularly the data-related ones) are a significant change for LI and will require a focused work programme to achieve.*

This change occurred years ago through other strategies e.g. the Topographic Strategy. The LINZ Outcomes Framework is building on existing efforts to focus on data and work programmes are already in place with this view.

**Do you think the changes to the S&I function outlined in this document will help LI to:**

- o Achieve LINZ Outcomes?**
- o Develop and promote geospatial standards and interoperability within LINZ and across the system?**

In regard to the key recommendations in this section - in some recommendations there is clearly a need for LINZ wide effort e.g. "The function to develop the standard for data products should sit within LINZ product teams". In other recommendations, there is clearly a team responsible and I think the recommendations would be clearer if they were named e.g. "LINZ participates in the development of new OGC API standards to ensure NZ services have fit for purpose, adopted, and modern data access mechanisms" - LINZ here should be replaced by Data Services.

LINZ subject matter experts should be leading or involved in domain specific standards development, rather than a generic standards function. Data Services has an important role in ensuring that standards related to data discovery, data access and data formats are well supported for the data that all LINZ data managers publish. The difference in responsibilities between these two standards development functions should be very clear and well understood.

The various recommendations that relate to developing best practices for standards development for LINZ data management teams would be a great asset to have and certainly help to achieve LINZ outcomes.

LINZ should apply geospatial standards and interoperability in our data management processes and then promote this practice to other agencies. LINZ outcomes should be the focus, while sharing case studies and success stories in our engagement with others.

## Location Information Review of Geospatial Form & Function and Standards & Interoperability

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Response from [ s 9(2)(ba)(i) ] 17 August 2018.

I appreciate the opportunity to be able to comment on both the Geospatial Form & Function and the Standards & Interoperability Reviews. In the majority of areas, I am fully supportive of the review findings.

To work towards an organisational objective of delivering high value geographic and property information inspires my work. To have Location Information contribute to this with a collective work programme, supported by governance roles, to implement both Information Management and Data Management Policies is a welcome outcome of the review.

Restating the role of LINZ to provide strategic leadership in standards and interoperability is central to our work, and I confirm the review's findings that local government requires support and leadership to implement standards. I endorse the proposal to support Department of Internal Affairs to improve the data.govt.nz catalogue for spatial information provision. Working with Stats NZ and supporting their role as Chief Data Steward is a given.

In terms of interacting directly with OGC or ISO, I do not have sufficient experience to be able to provide informed comment on this part of the review.

I would like to take the opportunity to raise what I see as one of the most critical issues for our resilience work, although I am keen to stress two things:

The first is that I support standards and interoperability, and have been proactive in implementing standards in my work. Most recently as Team Leader GIS at [ s 9(2) ] City Council, we adopted the four strategic goals of the NZ Geospatial Strategy to structure our internal geospatial strategy. We implemented the NZ Addressing standard AS/NZS 4819:2011 and the New Zealand Vertical Datum 2016 national standard, both facilitated by working directly with LINZ staff. I was also part of the LGGA team working with LINZ, Department of Conservation and Walking Access Commission to develop a national standard for tracks, which resulted in the national tracks dataset which is available from the LINZ Data Service (LDS).

The second is that I am committed to Location Information being a system leader, who can influence and connect the spatial industry. Please be certain that I offer the following feedback as a way to contribute to this vision.

I have now been working at LINZ for five months, focused on the LINZ key challenge of resilience and climate change. LINZ is already doing good work in this area, particularly the coordination of national LiDAR, aerial photography and building outline datasets, all of which will make a significant contribution to resilience going forward.

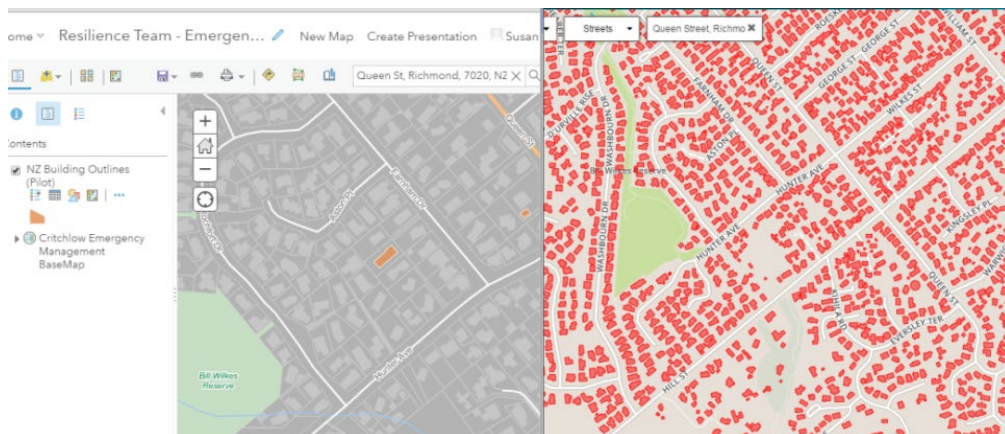
The LDS is well deserving of its awards, in terms of providing access to national datasets and promoting open data and standards, including using search engine optimisation, APIs, catalogue and change sets to support customers. This strategic and influential promotion of open data is an excellent fit for LINZ, and has enhanced LINZ's reputation within the spatial community.

However, my practical experience of using the LDS for resilience identifies opportunities for extending the capabilities of LDS, particularly if our aim is to contribute to "effective public services".

As the Standards & Interoperability review identifies, Esri users are unable to reuse the OGC WFS service provided by LDS, due to the limited implementation of the OGC standard by Esri. An example of what this means in practise is highlighted below.



The image on the right shows the building outlines in the LDS. The image on the left shows the WFS service sourced from LDS in Esri's ArcGIS Online for the same area; but only two buildings are displayed. This means the LDS is of limited value in an emergency response for Esri users.



The review identifies that Esri accounts for a large part of the NZ GIS market at approximately 55%, but my research indicates a higher proportion of Esri users in the resilience community. It is difficult to identify actual numbers, and I have only been able to infer information on GIS software usage from ALGIM, for local government, and the Department of the Prime Minister and Cabinet, for central government.

[ s 9(2)(ba)(i) ]

This increases to 100% for the Regional and Unitary Authorities. This I can back up having searched for GIS viewers on all the regional and unitary council websites. All had an external, Esri based webmap, except for Otago Regional Council who use Intramaps as a public GIS viewer. It is at the regional and unitary level that LINZ is most likely to be working when providing emergency management support.

All the central government agencies the Resilience Team has engaged with to date are Esri users, including Ministry of Civil Defence and Emergency Management, Fire and Emergency NZ, NZ Defence Force, Ministry for Primary Industries, Ministry for the Environment, Stats NZ, Department of Conservation and Earthquake Commission. The only non-Esri application we are aware of is the 111 emergency calling system, which uses Intergraph GIS software. In the last six months, the New Zealand Police and Kaipara District Council have moved to using Esri GIS software, which may indicate a further increase in the use of Esri products.

I present this information to support the finding of the review that Esri is a large part of the NZ GIS market and I would be keen to work with the LINZ Data Service Team to find a way to provide data as a web service which can be used in QGIS, ArcGIS Online and other map products. This development would make a significant contribution to improving key datasets for resilience, and would offer a pragmatic solution to improve data exchange, as promoted by the review.

In addition, the ability to offer bulk download of datasets would improve the effectiveness of a national emergency response. I also fully support the publication of the LINZ Basemaps on LDS, which will provide another highly valuable contribution to resilience. This work is impressive, and fits well with LINZ's role and strategic objectives.

One final question. I am concerned about the reference in the Outcomes Framework to a controversial commercial model for delivering high value geographic and property information. In particular, I would like to understand whether this has any implications for the LINZ Data Service.

## Part 1: Response to “Geospatial Form & Function Review” document:

“Do you think that the approaches to system leadership, stakeholder engagement and capability building recommended in this report will help LI to:

- Increase LINZ’s impact and influence?
- Achieve LINZ Outcomes?”

Thank you for the opportunity to respond to this important document.

I am supportive of majority of the recommendations and their intent. My concerns are largely around LI’s ability to implement them. There are a number of reasons for this:

- The recommendations are generally at a high-level and not prioritised or scoped. They clearly can’t all be addressed at once and require an additional and a changed balance in resource that will take time to put in place.
- Specifically, based on the evidence provided in the report, LI do not seem to be organised in the right way, or have the capabilities to play the more strategic role and cross-sector leadership role.
- If we aspire to system leadership we need to do more than deliver technical excellence e.g. LDS. We need to be proactive advocates and take a leading role in supporting and coordinating others.
- We currently are currently inwardly focused e.g.
  - The report makes reference a couple of times to the GM Data Services having responsibility for geospatial strategy principles. This seems to be the case for just LI’s operations. The Geospatial Strategy was about championing and supporting operator in all sectors to apply to these principles.
  - The recommendations are for an update of the LI Strategy. One of the strengths of the Geospatial Strategy was that though it was LINZ led, it was owned by a much wider set of players. Frequently while in my previous role I heard from our external stakeholder that this was the key reason for their involvement, and specifically that if the work and strategy was a purely “LINZ owned” they were quite happy to walk away a leave us to it.
  - I don’t mention the above because I’m recommending a return to those same arrangements, but to make it clear that if we are to be successful in achieving influence, impact and outcomes we have to have joint ownership in these endeavours and do more than focus on a Strategy for LI.
  - So, when we talk about using the LI Strategy as a means to engage with others to “set and sell” the vision this need to be more than a strategy for LI’s operations. It needs to be something that provides an all-of-LINZ view and a opportunity to drive shared benefits.
  - Question: should this be an LI Strategy or refreshed Geospatial Strategy that has a wider NZ perspective?
- We absolutely have to focus on supporting delivery of specific outcomes in our key challenge areas. This is where the value is, and where the value will be recognised. We need to do this by working strategically, with others and by applying theory of good data capture, management and dissemination etc. in practice, and learning from this. We need to champion the use of standards to achieve interoperability in the same way that we’ve championed open data access through the LDS i.e. by putting them in to practice, by working with others to do this and by being seen to do this. This is a big opportunity to bolster our “digital first” approach.
- We also need to have a big picture of what this “system” is and how the specific initiatives we are working on fit within it. We need this so that we can advocate, coordinate and demonstrate progress over time. E.g. We need to know what the key datasets are, we need to know what standards should be used to construct and share them, we need to know what principles and policies apply to their management and use. If we have this big picture framework we should be able to fit our work on IPS,

Resilience and Climate Change, Mapping 2025 and what other initiatives come along in to it, along with work happening elsewhere across the system.

- We need a clear vision of this and collective ownership of it, without this it becomes difficult to advocate and collaborate, and it becomes difficult for LI to coordinate its work programmes in a way that the report suggests we need to.
- The need to fit in with and support Stats NZ and DIA's all-of-government roles is a given.

## **Part 2: Response to “Geospatial Standards and Interoperability Review” document:**

**“Do you think the changes to the S&I function outlined in this document will help LI to:**

- **Achieve LINZ Outcomes?**
- **Develop and promote geospatial standards and interoperability within LINZ and across the system?”**

The use of standards to support interoperability has the potential to create many efficiency and use benefits. The current key problems we have are:

- Lack of capability generally within NZ to work with an implement many of the available standards.
- Lack of advocacy and support for the uptake of existing standards.
- Too few examples of demonstrable application to support advocacy.
- Inertia to invest in shifting current practices to those supported by the use of standards.
- Lack of clear implementation plans for currently well used standards e.g. metadata, address

Without addressing some of these fundamental issues at a national level the ability for standards and interoperability to make a difference is limited.

We can be more deliberate in the actions we take adopt a standards and interoperability approach in our key LINZ work programmes e.g. IPS, ASaTS, Resilience, LDS, Mapping 20205. If we can do this successfully these can act as examples for others.

### **Specific comments on recommendations:**

These are all generally supported.

Recommendation 2: content standards too are of high importance, including common schema, vocabularies and semantics.

### **Other comments:**

There is a comment that our work on standards development has in the past been removed from users. The two biggest examples I'm aware of where we have worked to put standards in place (Addressing, 3-waters) have both been heavily user driven with most of the expertise being offered up coming from public and private sector users. Bringing these users together to share expertise and find consensus at an NZ level have been a huge strength and benefit.

Also, in a similar way participation on working groups at an international level provides access to international expertise and insight that helps us solve problems being faced in NZ. E.g. our involvement at ISO has largely been specific to very relevant geodetic and address standards. We have benefited from working with other experts and bring this expertise back to NZ via our participants,

# LINZ(?) Geospatial Role & Function Review

incorporating a Review of  
Geospatial Standards and  
Interoperability



Feedback: [ s 9(2)(ba)(i) ]  
2018-08-17  
Slides have notes

## Geographic role and function review

### Top-level feedback

- Do you think that the approaches to system leadership, stakeholder engagement and capability building **recommended** in this report will **help LI** to
  - increase LINZ's impact and influence? **Partially**
  - achieve LINZ Outcomes? **Wrong question?**

Section 5.2 discusses a '**recommended approach**'

Feels like an attempt to impose a LI (or a LINZ?) view of the world onto/across 'the wider system' ... a significant 'selling job'.

Trying to retrofit (and sell) LINZ Outcomes, alone, may not be easy or sustainable.

Is it treating things as '*complicated*' when in fact they are '*complex*' ? i.e. is the right frame for analysis being used?

If not, we risk unhelpfully trying to drive square pegs into round holes.

It seems to me that we don't need more 'engagement' or more 'consultation' ... but we really need more **collaboration** i.e. much more complex ... the complexity framework is pertinent

With this comes **partners** and **information communities** who can make a real commitment to the strategy and in implementations.

As this is for a New Zealand strategy, this must include **all** sectors i.e. private, science, social, etc. The review(s) seem to focus alot on government ( or just LINZ )

Key stakeholders/partners have to have real skin in the game and therefore need a framework they can boldly **trust & influence** ... this needs effective and **transparent governance**.

And importantly, motivated data communities.

## Geospatial Standards & Interoperability review Top-level feedback

- Do you think the changes to the S&I function outlined in this document will **help LI** to:
  - achieve **LINZ** Outcomes? **No**
  - develop and promote geospatial standards and interoperability **within LINZ** and **across the system**?  
**Unsure**

Have the right questions been asked?

There are errors in the report; impact recommendations.

The investment in the ISO standards is an investment in the **policy pyramid**.

The adoption and implementation of these policies support certain **outcomes** ... like *findability*, or improved *access*, and **interoperability**. ... beyond LINZ specific outcomes

*Standards* (policies) and *interoperability* ... not the same thing.

The standards stack discussed underpins 'the system' ... a geospatial data infrastructure. NZGO's role/function is working across/on 'the system'.

LI (along with other programmes at LINZ) need to adopt the policies/patterns (while working in 'the system') i.e. craft conforming profiles that will support 'the system' yet also deliver specific objectives, scoped by specific data projects, for specific LINZ information products, optimised for LINZ's specific needs/outcomes, etc.

Where are these important distinctions highlighted?

Government noted in **1995** that “*the Spatial Data System is of great importance to the New Zealand economy*”.

**It’s a journey**

Following the release of ***Geospatial Information – The Future Role of Government Discussion Document*** in November **2004**, a programme of consultation took place which included workshops in the four main centres with participants from central and local government, Crown entities, academia, Maori and industry.

The NZ Geospatial Strategy *softly* launched in **2007**: *Understanding Our Geographic Information Landscape - A New Zealand Geospatial strategy*

NZGO *eventually fully* resourced **2011**

## Observations

We’re playing the long game ... it’s a journey  
It’s not a short dash to the dairy!

Why is it a long game? ... change of culture (wider than LINZ), new skills, a paradigm shifts  
... built on **collaboration** and wider **coordination**.

GIS and geospatial community generally remain fettered to the era of maps and data wrangling within GIS’s.

The NZ Geospatial Strategy paints a picture of fundamentals goals to lay down foundations, an **investment**, in to intervene in ways that would collectively deliver much more for the increased use of geospatial information across all sectors of the NZ economy.

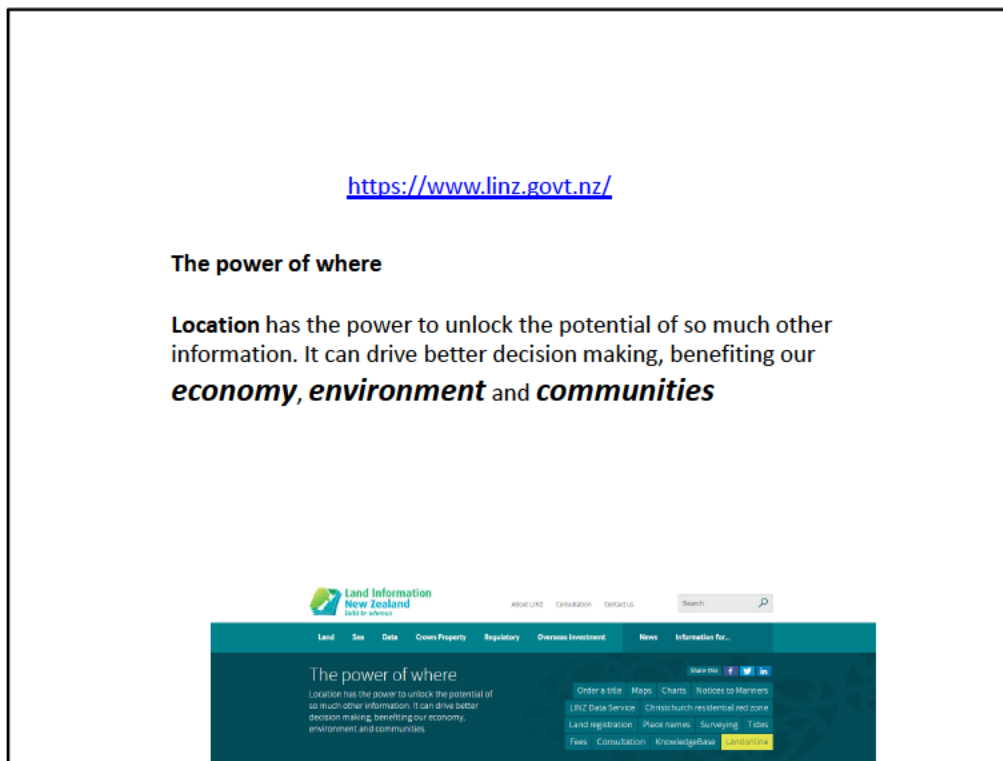
It’s much more than LINZ merely doing LINZ things better.



<https://www.linz.govt.nz/>

### The power of where

**Location** has the power to unlock the potential of so much other information. It can drive better decision making, benefiting our *economy, environment* and *communities*



In July 2018 The Treasury published discussion papers on the 4 'capitals'  
**Economic,**  
**Environmental,**  
**Societal**  
**&**  
**Technological**

The New Zealand Geospatial Strategy should assist all these dimensions.

LINZ's outputs / outcomes are contributory.

## Scope

- Confusion, ambiguity
- Scope of concerns? Which 'hat'?
  - **Location Information** Group role?
  - **LINZ's** role?
  - **Government's** role?
  - **Whole** economy role?
  - **International** obligations / roles?
- The wider Data Ecosystem
  - Implementation of a NZ Geospatial strategy?

I'm unsure / challenged to see which rock some of the comments are tethered to; there seem to be many.

i.e. which hat is being worn? The viewpoint authored from is a bit fuzzy, or confusing, in places.

p5 "*This document makes recommendation on **LINZ's geospatial functions***" ... but would seem to focus from a LI lens (?)

Perhaps a data ecosystem would seem to be a useful way conceive what the geospatial strategy is about.

It requires wider systems thinking i.e. LINZ is but one entity (let alone LI or LILT), among many, across the economy.

Are we trying to influence something inherently *complex*, but perhaps responding to it as if it is merely *complicated*? (ref *cynefin* framework )

There are two distinct roles :

- NZGO ... about working across and on the system e.g. providing some scaffolding / frameworks

- LINZ Data Services (& LINZ Data Custodians) ... about contributing data within the system

Some clarity is needed.

Which hill are you standing on? How elevated is it? ... can you see everything you're expected to see to make our decisions and develop the intervention logic?

What, fundamentally, is LINZ's **functional** leadership role? ... across the system.

Do we agree on this?

Who else will do it if LINZ doesn't do it well?

What cost ... especially if the investment isn't adequate? ( think **ACIL Tasman**, Canterbury **Plugfest**, Landcare '**Data Ecosystem**', etc etc )

## Try an Elevated Lens

- e.g. Treasury's 4 Capitals: *environmental, societal, economic, technological*
  - Precursor for the Well-being Budget 2019
- Cross-government **coordination** is key; everything is cross-cutting
  - a data ecosystem
- Review the Role that coordinated Geospatial Information plays for **New Zealand**
  - Functional leadership and Governance
  - Much more than LINZ's *internal* operations

The New Zealand Geospatial Strategy is an intervention / investment toward 'the system'.

It's just not all about LINZ ...

Therefore, it's not all about LINZ's Outcomes ...

LINZ's outcomes are *contributory* ...

that's not everything.

# Governance

- Confirm the pillars and principles
- Governance
  - Unless the players in the game have a common set of objectives, standards and measures to work towards, they will not be able to interact and coordinate well
- Appetite for cross-sector leadership & coordination?

#### Leadership and governance

4 noted that clear leadership is needed to develop a national spatial data infrastructure, and that agency participation is required to realise its greatest potential;

5 endorsed Land Information New Zealand (LINZ) as the lead agency to develop a more formalised spatial data infrastructure, in collaboration with other significant holders of location-based information, including local government, crown agents, academia and the private sector, on their involvement in a spatial data infrastructure;

p3 "To achieve LINZ's outcomes, we need a more focused, **collective LI work programme and stronger leadership and engagement across the geospatial system.**" ✓✓✓✓

the 2010 CAB paper was crystal clear on the significance of

- leadership
- governance

<https://www.linz.govt.nz/about-linz/our-vision-strategy-and-values/our-location-strategy/geospatial-strategy-for-spatial-data-infrastructure>

In reality there has been discontinuity:

- Changes in leadership e.g. at least 4 CE's @LINZ in 7yrs
- Changes in governance (and structure)
- Changes in support group management (numerous tier 2 or 3 managerial arrangements)
- Changes to culture ... & the way we do things
- Changes to systems (and data) within agencies *without* being compelled to embrace principles or standards of the New Zealand Geospatial Strategy (or SDI)

However, despite the vacuums inevitably created during these *transitions*, technical leaders focused on vision, mission, & principles across 'the system' to put some scaffolding in place

An example is the formal SDI standards framework, underpinning the ambition of *interoperability*, which has been installed and is maintained as a national level intervention

(incl. beyond government).

## Where in *the system* are we?



vs



### Working **across** boundaries

- Across and on the system
- partnering/collaborating on the system
- complexity - working out unknowns with system collaborators

### Contributing **within** the system

- coordinating, consulting
- data/products
- for known outcomes in the system
- complicated (rely on experts)

Different spheres of influence

Different competencies and knowledge

Different data cultures

Different questions

## ‘the System’

- New Zealand Geospatial Strategy
  - an intervention **across** and **on** the system
- LINZ Outcomes
  - an intervention **within** parts of the system
- A collective programme & stronger leadership & engagement **needed** across the geospatial system; Public, Private, Community sectors

p2 “The Strategy had four goals – good **governance across the system**; creating and maintaining key geospatial **datasets**; **accessible** and useable Government geospatial data; and **interoperability**.”

p3 “To achieve LINZ’s outcomes, we need a more focused, **collective** LI work programme and **stronger leadership** and **engagement** across the geospatial system.” ✓✓✓✓

Not just LI

This is why the New Zealand Geospatial Strategy has **governance** as pillar #1. It’s about wide *collaboration*, partnerships, and strategic change.

Some serious reflections needed on systems thinking, collaboration, governance, agile change management ... to shift from one paradigm to another.

Little room for parochialism with geospatial information. There’s only one planet. We need to represent it consistently well, globally. The challenges we’re facing are global ... think globally, act locally.

Geospatial data that takes much effort to use/merge with other data becomes part of the problem – it needs to be part of the solution.

**Data** as an **asset** ... is fundamental. Fundamental data is enduring.



In comparison, we transition platforms regularly.

# GeoData Infrastructure

- Governance X
  - Communities of Practice ?
- Policies
  - Standard patterns ✓
  - Best/good practices ✓
  - Policies X
- Registry
  - Catalogues ✓
  - Registers x
  - Clearing house ✓
- Training / capability X
- Research & development ✓

Governance groups not convened recently

Communities of practice ... few and far between - early adopters: Landcare, LAWA, Address WG,

Standard patterns exist to inherit  
Standard best practices exist to adopt

Big 'P' policies ... non-existent or weak (some jurisdictions legislate for SDI )

Catalogues e.g. Geodata.govt.nz

Registers ... we need something like *Aria* for geo (an a 'portal' for machines)

Clearinghouse ... LINZ has the LDS portal ... an *initial* step to contribute data (LINZ data), to 'the system'

Training - none - few grads (if any?) in geographic information modelling, information architecture, SDI, etc

R&D – NZ Geospatial R&D Priorities & Opportunities 2016-2020

## Standards

- Standards are part of the policy pyramid
- An **open** national geospatial standards framework has been established, & is formally maintained
- ISO **not** optional
  - maintains the harmonised **Data** Model !

**ISO** is not optional !

The report promotes OGC open and ISO as not - a misrepresentation of what 'open' means.

See the following slide.

A generalisation / categorisation

- ISO/TC211 is focused on standard patterns for **data** architecture for *interoperability* ; models, application schema

- OGC is largely focused on standard patterns for **technical** architecture for *interoperability* ; interface protocols , implementation schema

Two sides of the same coin. Both are required

## ISO - as *Open* as it gets

- misrepresentation of *open*
  - *open* is not *free*
  - a vote in OGC costs! i.e. affluence = influence ... *questions of balance & representation arise*
- much ISO information **is free** and readily accessible e.g.
  - Free access to the entire normalised/harmonised data model
  - Free implementation schemas
  - Free glossaries
  - + free access to some normative documents via formal liaisons
  - + online services to improve accessibility e.g. from SNZ
- ISO is for **DATA** - **the** contemporary body of knowledge on best practice to conceive and architect geodata

There appears to be a misunderstanding.

**Open** does not mean *free* ! Nothing is *free* ! (NB *free*, can also mean *costly* ... *you get what you pay for* !! ... consequences, outcomes )

*p29 "ISO and OGC have well established standards development processes for geospatial standards. When LINZ identifies a need that aligns with ISO or OGC, LINZ experts should participate. Because ISO standards are **not openly available**, but OGC standards are, LINZ should strategically **push for all new standard work to be solely done by OGC working groups** or with OGC and ISO joint working groups."*

*p30 "... because ISO **isn't providing open standards** LINZ should **review its long-term future managing NZ's engagement with ISO/TC211's work programme and the Joint Standards Australia/Standards NZ Committee involvement.**"*

ISO is the **pinnacle open** standards-setting body and international normalisation network. ISO/TC211 aggregates and normalises the entire geospatial stack ... OGC submit important specifications to ISO to ratify and harmonise them within the open stack.

ISO/TC211 is focused on geographic information standards. It *stewards* the architecture of the *General Feature Model* ... the fundamental concept underpinning **open** geospatial information

TC211 is as open as the process can be.

No subscription – open to all, including recognised international standards setting

organisations e.g. IHO, ICA, FIG, etc.

NZ has a vote ( *a very large OGC annual subscription is needed to secure voting privileges in OGC* )

Totally transparent.

Formally recognised globally – 68 member States – ISO is endorsed by the United Nations.

Carefully stewarded and managed framework of standards e.g. systematic reviews to actively maintain the stack

We *should* participate in **BOTH** ISO and OGC.

But ISO is **not optional**; NZ **must** continue to participate in ISO/TC211 – as it is the pinnacle consensus body, AND the international standards organisation focused on geospatial **DATA**, with the widest international participation. This is facilitated via Standards New Zealand, and we liaise closely with Standards Australia to help ensure regional consistency and extend the ‘expertise pool’.

With NZGO transitioning into LI, the LILT inherited this leadership role, and the need grasp the wider perspective on ‘the system’.

NZGO/LINZ has high profile in technical leadership in this arena because it underpins ambitions for the **New Zealand** Geospatial Strategy.

*(rather than a LINZ or government strategy per se)*

# Interoperability

- Definition
  - *interoperability* for whom?
    - LINZ?
    - Who?
- A Goal / an Outcome
  - significantly increased productivity

A key pillar of the New Zealand Strategy

**International standard definition** per *ISO/IEC 2382:2009, 2121317*

**capability** to communicate, execute programs, or **transfer data among various functional units** in a manner that requires the **user** to have **little or no knowledge** of the **unique characteristics of those units**

This is the ambitious outcome of the NZ Strategy ...

*Interoperability* to provide a step change Return on Investment

Influences automation, semantic geoWeb, augmented spatial intelligence, etc ... disruptive change > significant increase in productivity

... reduce the 'data wrangling' - consumes much time > reduces productivity

... get the right data joined-up faster > unleash more time/quality to focus on analysis/results, sooner

# Incongruities

- **NZGO** *disestablished* ??!
- But ...
  - General Manager DS given principal responsibility for **geospatial strategy** principles
  - NZGO role/functions/investment continues
    - *Chief SDI Steward* role (*only*) disestablished

p6 “The **Data Services remit** has **expanded** to focus on a **wider delivery of data** across the system and spatial industry. The **GM Data Services** has **principal responsibility for the geospatial strategy principles**”

OK, but ...

this looks and feels like a *downsizing* i.e. the Group Manager would seem to have insufficient time to address **both** LINZ’s contribution with LINZ’s data (*the short game at LINZ*), as well as to focus across the system and spatial industry i.e. pursue *the long game* (a more strategic game) – advancing the New Zealand Geospatial Strategy.

“In 2017, the **NZGO** was **disestablished** ...” - when?! What was this inherited from? Not been stated anywhere else.

Does CAB know?

Did the PIF Reviewers have a view on this?

LINZ website and location strategy resources don’t communicate this.

My understanding is that NZGO has been *reconfigured*; not disestablished

**NZGO** is branding to identify resources focused toward *A New Zealand Geospatial Strategy* and the associated ‘system’ (data infrastructure)

It has a different look and feel from LINZ’s Data Service ( a portal for LINZ data ) and other internally focused geodata initiatives and information products.

NOTE of course, within LINZ, geodata initiatives are not constrained to the LI Group ... ASaTS for example



## Consultation?

- Who was consulted re LINZ's role?
  - internally?
    - Strategy & Stewardship?
    - Policy?
    - Information Architects?
    - Other DCE geospatial stakeholders?
- Standards & Interoperability
  - numerous key stakeholders missing
    - SNZ, SA, MBIE, DIA ... etc
    - Sectors?
    - Was the *Geospatial data standards [project](#)* considered?

As a minimum, honour the effort and degree of consultation undertaken in the past

## Maturity?

- Where is New Zealand at?
  - a benchmark?
  - use a recognised maturity model?
- a full data management maturity matrix?
- use the UN-GGIM Tiers? ✓
- use ANZLIC – The LINK? ✓

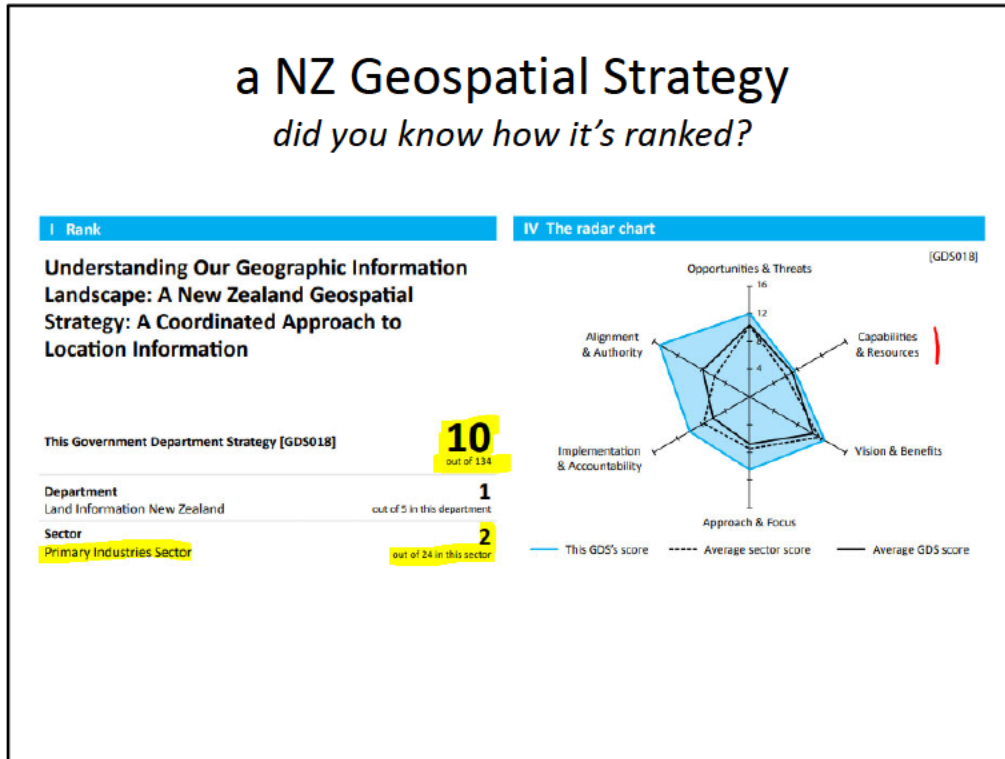
Ref *“Our Land and Water National Science Challenge – A Data Ecosystem for Land and Water to Achieve the Challenge Mission”*, Manaaki Whenua Landcare Research

Ref *“A Guide to the Role of Standards in Geospatial Information Management: Companion Document on Standards Recommendations by Tier”*, UN-GGIM

Ref *“The Foundation Spatial Data Framework”*, and the *“Foundation Spatial Data Framework LINK Platform”*, ANZLIC ( **L**ocation **I**nformation **K**nowledge platform)

# a NZ Geospatial Strategy

*did you know how it's ranked?*



As far as government strategies go the New Zealand Geospatial Strategy still ranks well among peers, 8 years after it was softly released

Evaluated as well articulated and independently ranked #10 out of 134 government strategies. Or #2 in the Primary Industries cluster of strategies.

Ref

<http://www.mcguinnessinstitute.org/wp-content/uploads/2016/08/20151103-Working-Paper-201509-Web.pdf>