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FEEDBACK::

Storing Landonline Data in an Offshore Cloud

To: James Mowat
Director Engagement
Property System Infrastructure
Land Information NZ
jmowat@linz.co.nz

This feedback is on behalf of the *Institute of Cadastral Surveying (ICS)*.

The ICS is an organisation whose membership is actively engaged in cadastral surveying.

This response represents the collective views of the ICS Executive Committee and is based on the experience and wisdom of our leadership team whom are passionate about the integrity and value of the survey system. It is also submitted in the best interests of landowners and the public - our clients.

We thank you for the opportunity to provide feedback on Landonline Data Storage.

General

Your 6-July-2019 email requests stakeholder views concerning the suitability of using offshore public cloud storage for Landonline data

Your email describes the objectives within the “tranche 1” development to introduce new services and functionality that will deliver information to Users via the cloud. Key to this objective, appears to be the consequential storage of the Landonline database in the cloud.

You have further identified that within this evaluation process, that LINZ are undertaking due diligence on making this move – noting data sovereignty issues; privacy concerns, and security impacts.

The ICS certainly shares these issues and concerns.

ICS General Response

In general, the ICS recognise that “cloud storage” of data is becoming increasingly commonplace. We also note that the NZ government have a ‘Cloud First’ policy that requires agencies to adopt cloud

services in preference to traditional IT systems – because they are more cost effective, agile, are generally more secure, and provide greater choice. (Source: www.ict.govt.nz)

Presumably, the LINZ evaluation process will be extremely robust and follow the government ICT (soon to become digital.govt) guidance protocols accordingly. We can but trust this level of due diligence.

Within the expected due diligence process, the ICS would anticipate that the following matters are fully addressed:

- Utmost data security
- Protection from corruption
- Robust access protocols
- Adequate data privacy (where necessary)
- Availability – free and open
- Contingency planning - on-shore duplication?

The ICS want to also emphasise that the Landonline database – being the title register of property ownership and official record of land boundaries – is of strategic importance to the NZ economy. This is adequately recorded within the LINZ “Cadastre 2034” report which notes:

“The efficiency and effectiveness of the present property rights system to New Zealand cannot be overstated. This system enables people to confidently and efficiently transact property rights. The value of residential land in NZ was \$688 billion in 2013. The property rights system...enables (this) capital to be leveraged for other economic activity.”

1.0 Data Security:

It is imperative that the Landonline data stored is completely secure.

With the often-overlooked fact that Landonline is a strategic database. It is a database that underpins the NZ economy by containing the register of land titles; the cadastral record of land information datasets and imaged plans; and many other supplementary land records. It is of vital importance that data security is paramount.

Landonline contains details of, and rights associated with, the general public’s largest purchases and mortgages, and secures their land and housing assets (shelter). Shelter and housing are fundamental human needs, and next to private medical records and national security databases, their strategic value cannot be over-emphasised.

Many financial transactions that occur daily rely on land assets as security. This must not ever be compromised.

2.0 Protection from Corruption:

Noting the above, any vulnerability to unauthorised access and manipulation must be nil.

The current Landonline system has (supposedly) withstood any and all attempts at data breaches and unauthorised manipulation. The validation processes in place appears to have been sufficient with this on-shore (internal) system.

It would be expected that an off-shore cloud based storage system that involves supplementary transactions to/from it (potentially 24/7) will be set up with appropriate high-level corruption protection.

3.0 Access Protocols:

We understand that within the Landonline Rebuild there is a requirement to introduce a new access protocol. In fact, this is being trialled in August 2019 (S-G notification dated 22-July-2019). This has been described as a two-factor digital signing solution using an application on a smartphone.

Two step authenticity is a basic standard – and provides a second level of protection against unauthorised access. We would anticipate that the “new” signing protocol that is about to be trialled – if successful - would be able to be transitioned onto the Landonline Rebuild version if it is held off-shore in the cloud. If not, the subsequent introduction of yet another process/application would appear to be inefficient.

In addition, a level of encryption may be a sensible additional layer of data protection when data is ‘in transit’.

4.0 Data Privacy:

Adequate privacy policies to protect personal and financial data of individuals and companies need to be in place.

5.0 Availability:

You have stated that the current Landonline data is predominantly public information that is accessed by Landonline customers or by direct request to LINZ. And you note that the data is currently made freely available to the public via the LINZ Data Service (LDS).

The access to Landonline is currently restricted to extended business hours (and including Saturday). Access to the LDS is effectively 24/7. It is anticipated that the level of access to an off-shore cloud-based storage/service is no less restrictive – and ideally 24/7.

In terms of data being “freely available” – this is interpreted to be freely accessed at no direct monetary cost. However, the ICS wants to emphasise that the data has in fact incurred an often significant cost to our Clients. We contend that our Clients are currently the only ones paying for or subsidising the costs of the data - and there needs to be a process that recovers fees from, or charges Users that extract and enhance bulk data for commercial purposes as a matter of fairness and equity. [It is acknowledged that this type of ‘discussion’ is outside of the purpose of the feedback review]

6.0 Contingency Planning:

In the advent of an event that restricts or stops the access to/from the off-shore cloud, a secondary pathway to access the database and undertake transactions is required.

Recalling previous occasions where the internet has failed, the loss of productivity and risk of financial exposure (thorough delayed or failed transactions) is high.