

## **In Confidence**

**Office: Minister for Land Information**

**Committee: Economic Growth and Infrastructure Committee**

# **Advanced Survey and Title Services: Investing in the Quality and Efficiency of Survey and Title Services**

## **Proposal**

1. I seek your agreement to invest in the Advanced Survey and Title Services (ASaTS) platform through an 'as a Service' delivery model.

## **Executive Summary**

2. EGI endorsed the case for change made in the ASaTS Detailed Business Case (DBC) in November 2015 and noted that decisions on the level of investment, project funding and delivery approaches were to be made as part of the Budget 2016 process. The ASaTS DBC outlined a LINZ owned investment model funded by a capital injection from the Crown.
3. In March 2016 Investment Ministers were provided with information on an 'as a Service' option for delivery of ASaTS, through the attached "Addendum to the Detailed Business Case: Alternative "as a Service Model" (the Addendum).
4. Investment Ministers agreed that ASaTS should be delivered through an 'as a Service' delivery model because:
  - It will cost the public less to transact through the system than a LINZ owned investment model.
  - It has the same benefits as the capital injection model and requires no new investment from the Crown.
  - It has the potential to make it cheaper to make improvements to the survey and title system in the future because developments could be shared across a number of customers.
  - Like the capital injection model, it will allow integration with other public and private sector systems through APIs (Application Program Interfaces) enabling innovation and digital transformation for property information.
5. The 'as a Service' delivery model does have a higher risk profile than the LINZ owned DBC model. These risks are mostly commercial and capability related, and are centred primarily around LINZ's ability to negotiate a suitable contract for this model and effectively manage the contract and vendor on an ongoing basis.
6. However, LINZ is considered to be well placed to manage these risks as it already has experience managing outsourced IT systems (large parts of LINZ's current IT systems, including the current New Zealand survey and title system, are outsourced). LINZ will also receive specialist support from the Ministry of Business, Innovation and

Employment (MBIE) and the Government Chief Information Officer (GCIO) during the procurement phase to ensure that it is well positioned to manage these risks.

7. The GCIO supports LINZ delivering ASaTS through an 'as a Service' model, as it believes this is the future direction for government IT investments and is consistent with the Government ICT Strategy 2015. As an early adopter of this direction, LINZ would also open up this approach for other government IT systems.
8. If, after engaging with the market, LINZ is unable to develop contractual terms that mitigate the risks associated with an 'as a Service' model for ASaTS, then the Minister for Land Information will submit a bid for capital as part of Budget 2017, alongside an Implementation Business Case that outlines a LINZ owned solution.

## **Background**

9. New Zealand has one of the world's most efficient and robust property rights systems for cadastral surveying (maintaining the official record of land boundaries) and for registering title to land (transacting and recording of property ownership information) through the current electronic Landonline system.
10. Cadastral and land transfer services (survey and title services) provided by LINZ form the basis of New Zealand's property rights market and are a critically important part of New Zealand's economic infrastructure. Landonline is the only mechanism for transacting land in New Zealand. It is used for the efficient sale, purchase and development of property rights by businesses and homeowners (the residential property market alone has been valued by the Reserve Bank at \$791 billion in 2015).
11. However, Landonline is based on outdated 1990s technology that presents a significant medium-term risk of service failure without investment. This is due to decreasing technical support for, and rising costs of maintaining, ageing Landonline components. This risk is expected to reach unacceptable levels from 2020.
12. The inflexibility of the current technology platform limits LINZ's ability to meet the needs of its survey and title customers. It also limits LINZ's ability to support Government strategic priorities and objectives.
13. On 18 November 2015, the Cabinet Economic Growth and Infrastructure Committee (EGI) considered the DBC and endorsed the case for change for modernising survey and title services. EGI noted that Budget 2016 Investment and Budget Ministers were to be provided with additional information in the form of an Addendum to the DBC on the viability, risks and benefits of an 'as a Service' delivery model [EGI-15-MIN-0152 refers].

## **Proposal**

14. Since EGI, I have provided Investment Ministers with this information, in the form of the attached "*Addendum to the Detailed Business Case: Alternative "as a Service Model"*" (the Addendum).
15. The Addendum identifies the key features of the 'as a Service' model and compares it with the LINZ owned model outlined in the DBC. Given the balance of benefits against risk of the 'as a Service' model, both Investment Ministers and I support the delivery of ASaTS through this model.

### *Managing risks associated with the current system*

16. By agreeing to ASaTS now, a new system for managing survey and title services will be in place by the time the operational risk to the current system reaches unacceptable levels.
17. To maintain a stable operating environment while the ASaTS solution is being procured and built, LINZ has extended the contractual arrangements with the current provider for LINZ's outsourced IT managed services, (including Landonline support), for sufficient time to allow ASaTS to be fully implemented. The contract also allows for the staged withdrawal of services as ASaTS is implemented.

### **What ASaTS will deliver**

18. ASaTS will replace Landonline with a more flexible technology platform. It will improve customer services with the introduction of web based searching allowing direct public access to property data, automatic notification to territorial authorities (notice of sale) and financial institutions (mortgage registration), and an improved digital customer interface.
19. ASaTS will add further value by positioning LINZ to deliver wider benefits to government and New Zealand through:
  - the introduction of the digital capability to seamlessly integrate central and local government property data (data linking), an outcome sought by Integrated Property Services
  - an increase in the number of property datasets (including a register of Crown-owned land and 3D survey data capability).
20. LINZ and Te Puni Kōkiri (TPK) will seek to leverage off ASaTS to make the delivery of the Māori Land Service easier and cheaper while ensuring interoperability. LINZ and TPK will report back to Cabinet on how to deliver the Māori Land Service in conjunction with ASaTS, when the ASaTS Implementation Business Case is considered by Cabinet.
21. ASaTS will improve user interactions with government, lead to better use and development of land resources, and maintain the integrity and certainty of the New Zealand property market.
22. ASaTS will also provide a platform for private sector innovation and investment in new tools and applications that have the potential to aid decision making by a wide range of actors in the property sector, including developers, property purchasers and sellers, and the public sector.
23. The private sector will have the potential to play a larger role in the direct provision of service to LINZ's customers. For example, the private sector has indicated that they will provide an interface through their cadastral surveying software to the new system. This is expected to increase productivity through substantially reducing the amount of duplication that currently occurs for surveyors.
24. ASaTS is expected to deliver quantifiable economic benefits of \$ [REDACTED] to \$ [REDACTED] to users of the property rights system.

### *Supporting Integrated Property Services*

25. The property data linking capability delivered by ASaTS will support the Integrated Property Services (IPS) programme by allowing central and local government agencies to share and make available property information [EGI-15-MIN-0153 refers].
26. Currently, central and local government property information is held by multiple agencies and cannot be easily shared, linked or integrated. A data linking capability would enable property information to flow more easily between central and local government and to be used by private sector innovators for value added property information products and services.
27. This data linking capability could support IPS through:
  - a seamless customer experience for a very wide range of stakeholders when searching for and transacting property rights (the insurance industry, emergency services providers, utility providers and property developers).
  - the standardising and streamlining of resource management and building consent processes.
  - fundamental information support for key Government priorities such as unlocking land supply and housing affordability.
28. New property datasets developed as part of ASaTS will also support IPS' contribution to more complete and accurate property information. A register of Crown-owned land information will allow for surplus Crown land to be more readily identified and put to use. The potential to accept, hold and make available 3D survey data will enable better planning and decision making for property in built up environments and provide the ability for businesses to develop innovative new tools or services.
29. The improved customer services provided by ASaTS are aligned with IPS and support customer focused, efficient service delivery. The introduction of web-based searching will allow direct public access to property data, automatic notifications to territorial authorities (notice of sale) and financial institutions (mortgage registration), and modern platform technology to provide an improved, digital customer interface.

### *Consistency with, and contribution to, Better Public Services and the Government ICT Strategy*

30. The ASaTS investment is consistent with, and will contribute to, the achievement of the Government's Better Public Services Result Areas 9 and 10 and the Government ICT Strategy 2015 because it will help to improve interaction with Government and provide a seamless service to business and citizens in a digital environment. The preferred level of functionality is central to LINZ's ten year vision of delivering a world class location information system.

### **The two delivery models for ASaTS**

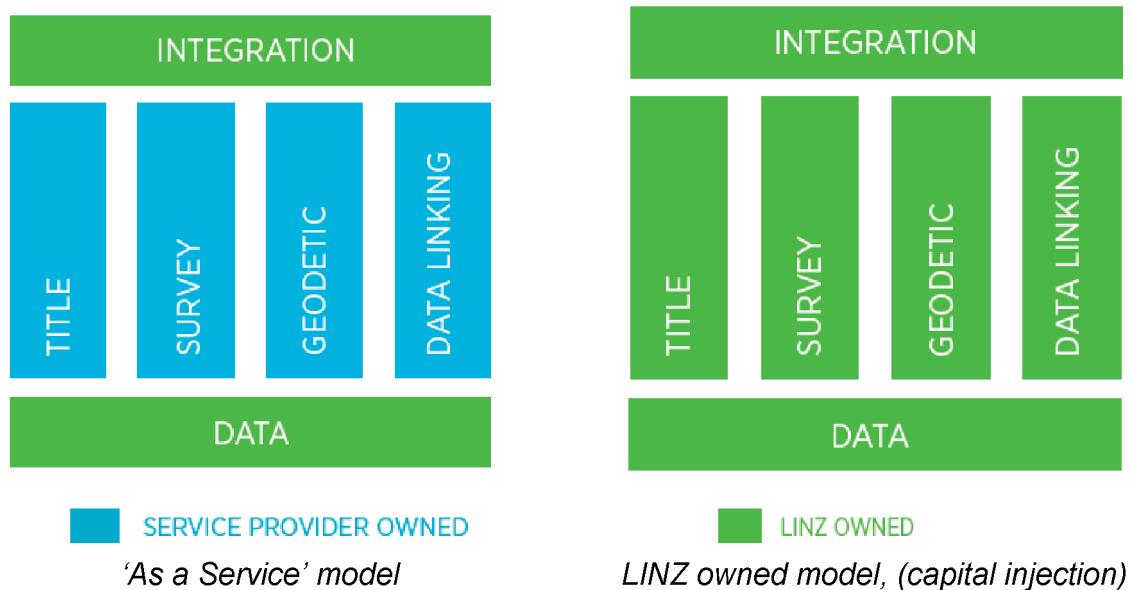
#### *The delivery models*

31. LINZ has developed two possible delivery models for ASaTS:
  - an 'as a Service' delivery model outlined in the Addendum, and

- a capital injection model (which allows for LINZ to fully own the solution) outlined in the DBC.

32. The diagram below shows the parts of the ASaTS solution that LINZ would own under an ‘as a Service’ model and compared to the capital injection model.

Figure 1: Ownership models for ASaTS



33. Under the ‘as a Service’ model the ownership of most of the IT components would shift from LINZ to a vendor. However, LINZ would still retain ownership of property data within the system. It would also own the component which enables communication and data exchanges between ASaTS and other systems, both internal and external to LINZ.

34. The capital injection model reflects the ownership model of the current survey and title system, with LINZ having full ownership of the IT platform.

35. Under both models, LINZ would continue to deliver frontline services to its survey and title customers using its own staff.

36. Under both models the system is expected to be built as a modular system, meaning that future replacements would no longer be in the cycle of 15 year big budget rebuilds. Rather, modules would be incrementally enhanced on a regular basis and the cost dispersed over a much longer timeframe.

### Comparison of the two delivery models

37. The ‘as a Service’ delivery model is LINZ’s preferred option as it can provide the same benefits, can be slightly cheaper for users, can open up new opportunities for government and will require no new Crown capital to be spent. However, this model does have a different and slightly higher risk profile than the capital injection model.

Table 1: Comparison of models on key criteria

Criteria	DBC model, capital injection	'As a Service' model
Strategic benefits	High	Higher
Quantified benefits (Whole of life present value)	\$ [REDACTED]	\$ [REDACTED]
Benefit cost ratio (relative to the 'do minimum')	[REDACTED]	[REDACTED]
Risk profile	As outlined in DBC	Slightly higher than DBC, due to commercial and capability risks.
Whole of life cash cost <sup>1</sup>	\$ [REDACTED] (50th percentile cost/most likely) <sup>2</sup> \$ [REDACTED] (85th percentile cost/including contingency)	\$ [REDACTED] (50th percentile cost/most likely) \$ [REDACTED] (85th percentile cost/including contingency)
Impact on fee payers	[REDACTED]% fee increase on 1 July 2022 (50th percentile cost/most likely) [REDACTED]% fee increase on 1 July 2022 (85th percentile cost/including contingency)	[REDACTED]% fee increase on 1 July 2021 (50th percentile cost/most likely) [REDACTED]% fee increase on 1 July 2021 (85th percentile cost/including contingency)
Capital cost	\$ [REDACTED] (50th percentile cost/most likely) \$ [REDACTED] (85th percentile cost/including contingency)	\$ [REDACTED] (50th percentile cost/most likely) \$ [REDACTED] (85th percentile cost/including contingency)
New Crown capital required	\$ [REDACTED] at the (50th percentile cost/most likely) \$ [REDACTED] (85th percentile cost/including contingency) ( \$ [REDACTED] of depreciation funds will also be used)	No new Crown capital contribution required. Capital funding would come from LINZ depreciation funds.

<sup>1</sup> Note the cost difference between the two models is primarily because of the capital charge users would pay under the capital injection model.

<sup>2</sup> An independent quantitative risk assessment (QRA) was carried out on the modelled costs of the 'as a Service' option to assess the potential impact of key risks on the cost of delivery. The QRA 50<sup>th</sup> percentile has been adopted as the expected cost of this option. The QRA 85<sup>th</sup> percentile is the level at which Government normally funds large scale IT projects as it includes sufficient contingency to allow for most of the risks identified by the QRA to occur, this has therefore been adopted as the cost including contingency for ASaTS.

## *Benefits*

38. As outlined in the table above, both models for delivery of ASaTS offer significant benefits. The benefit cost ratio for the 'as a Service' model is similar to that of the LINZ owned capital injection model.

### *Additional opportunities of the 'as a Service' model*

39. There are additional opportunities that are unique to the 'as a Service' model. The GCIO supports LINZ delivering ASaTS through the 'as a Service' model, as it believes this is the future direction for government ICT investment and is consistent with the Government ICT Strategy 2015. As an early adopter of this direction, LINZ would open up this approach for other agencies to develop sound opportunities for moving government IT systems to an 'as a Service' model.

40. New Zealand would have access to improvements or developments made by other jurisdictions using the same vendor. This is particularly likely to have benefits in areas such as development of a 3D cadastre. [REDACTED]

41. Benefits may accrue where the vendor on-sells enhancements that have been developed for New Zealand's management of its survey and title system. Vendors may charge lower service fees for the service, or provide cheaper system enhancements. [REDACTED]

## **Cost comparison**

### *Cost impacts on users*

42. Survey and title services are operated on a full cost-recovery basis. Costs (most of which are fixed) are recovered through property transaction fees and charges paid by users, who disburse their costs to clients. New Zealand is ranked first in the world for ease of registering property, a ranking that is based on the cost and number of steps necessary to complete a property transaction<sup>3</sup>.

43. The ASaTS system will result in some increase in costs to users. The following table outlines the impact on fee payers under both models using the QRA 50th percentile costs and shows that the 'as a Service model' would lead to a reduced fee increase when compared to the DBC model.

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<sup>3</sup> World Bank Group, Doing Business, 2015. <http://www.doingbusiness.org/data/exploretopics/registering-property>

Table 2: Cost impacts on users

Model	DBC model, capital injection	'As a Service' model
Cost charged to fee payers (whole of life at 50th percentile)	\$ [REDACTED]	\$ [REDACTED]
Percentage fee increase	[REDACTED]%	[REDACTED]%
Date fee increase introduced <sup>4</sup>	1 July 2022	1 July 2021
Impact of fee increase on an \$80 title transfer (based on lower end of range)	Addition of \$ [REDACTED]	Addition of \$ [REDACTED]

44. While the cost of an 'as a Service' model also includes a vendor finance cost, this decreases over the life of the asset (as the vendor's capital investment is offset by payments for service by LINZ). Under the capital injection model the capital charge does not decrease over the life of the asset.

#### Cost impacts on the Crown

45. LINZ can draw on depreciation funding of \$ [REDACTED] to fund the capital required for the ASaTS investment. Under the 'as a Service' model, no additional Crown capital funding is needed as any capital requirement for this model is expected to be met from LINZ's accumulated depreciation. Under the capital injection model an additional \$ [REDACTED] capital contribution would be required from the Crown to fund the \$ [REDACTED] capital investment required.

46. As part of a future Budget round, LINZ will seek a \$ [REDACTED] increase in Crown operating appropriation to manage the Crown land register. There may be some additional operating costs, in particular data collation costs identified as part of the development of the register, which will also be sought at this time.

#### Risk

##### Risks and mitigations associated with the delivery models

47. While the 'as a Service' model has similar delivery risks to those of the capital injection model, it does introduce additional risks in two key areas. These are:

- **Commercial risk:** The risk profile of the 'as a Service' model is primarily impacted by LINZ's ability to negotiate the right commercial arrangement with the right vendor(s). If LINZ is unable to negotiate a commercial arrangement that delivers the necessary level of control and protection, the risk profile of the model will significantly increase as LINZ would be unable to use its ownership as leverage.
- **Capability risk:** There is currently little experience of this delivery model in the New Zealand public sector. LINZ would need to develop new and/or enhanced capability in areas such as vendor/contract management. The low level of existing capability in the New Zealand market place presents a heightened risk in

<sup>4</sup> Under 'as a Service' the fee increase needs to be introduced earlier as users begin paying for services as they are delivered, whereas under the capital injection model users don't commence payment until each module is capitalised (and they are then charged through depreciation of the capital investment), which leads to a slight delay in when users begin paying for the services.



this respect; capability will need to be developed rather than acquired at the outset.

48. A break down of these areas of risks and the associated mitigations is provided in the table on page 22 to 23 of the attached ASaTS Addendum paper.
49. Delivering a largely bespoke IT platform through an 'as a Service' model is new for a New Zealand public sector agency. However, this model has been used in other sectors in New Zealand. Other jurisdictions, [REDACTED] have also delivered their survey and title systems through an 'as a Service' model. LINZ has had contact with a number of those jurisdictions and will be able to draw on their experience.
50. LINZ has already outsourced a significant amount of its IT service delivery and is in a strong position to manage an 'as a Service' model. The increased capability required to successfully deliver this model is much smaller shift for LINZ than it would be for other agencies.
51. In line with the current model, under the 'as a Service' model LINZ would maintain delivery of frontline services to its customers and ownership of the business process required to deliver the survey and title processes.
52. LINZ would, with support from other agencies including GCIO and MBIE, ensure that contractual arrangements are developed that ensure the successful delivery of an 'as a Service' model, including attention to the vendor/agency partnership and to accounting treatments.
53. LINZ has completed as much analysis as it can on the different delivery models for ASaTS; further information will only be available from formal market engagement. A decision is therefore needed to allow LINZ to take this next step.
54. The ASaTS Assurance Plan has been updated to reflect the 'as a Service' delivery model in preparation for the procurement phase of the project and has been endorsed by the GCIO.
55. In the event that LINZ is unable to develop contractual terms that mitigate the risks associated with an 'as a Service' model, then the Minister for Land Information will submit a bid for capital as part of Budget 2017. This Budget bid will seek to have ASaTS built to mitigate the increasing operational risks of the aging system.

### **Next steps**

56. Table 3 outlines the proposed next steps and broad timeframes.

Table 3: Next steps and timeframes

Milestone	Timeframe
Ministerial announcement	April 2016
Expression of Interest to market	May 2016
Market engagement	June to December 2016
Implementation Business Case to Cabinet	2 <sup>nd</sup> Quarter 2017
Decision on supplier contract	2 <sup>nd</sup> Quarter 2017
Design, develop and build ASaTS solution	2017 to 2020

## Consultation

57. The Treasury, MBIE, the Department of Internal Affairs (GCIO) and TPK have been consulted in the preparation of this paper. The Department of the Prime Minister and Cabinet and the State Services Commission have been informed of the content of the paper.
58. LINZ has worked closely with Treasury and GCIO during analysis and development of the ‘as a Service’ delivery model and alternative ASaTS funding options. Treasury support this innovative delivery approach provided the risks are appropriately monitored and mitigated. The LINZ bid for capital in Budget 2016 has been retained until Ministers confirm the decision to deliver ASaTS through an ‘as a Service’ model.
59. The GCIO supports LINZ delivering ASaTS through the ‘as a Service’ model, as it believes this is the future direction for government investment and is consistent with the Government ICT Strategy 2015. The Corporate Centre will continue to monitor the project and work with LINZ to ensure appropriate mitigations are applied across the broad range of risks that will arise during the project’s lifecycle.
60. The New Zealand Law Society, the Auckland District Law Society and the New Zealand Institute of Surveyors have been informed of proposals to update the Landonline system and see improvements in that system as important to New Zealand’s land transfer system. The stakeholders’ views range from agreement in principle to the ‘as a Service’ model, to a preference for full ownership of the system to lie with LINZ. If LINZ does not own the system, stakeholders have emphasised the need for contractual measures to be negotiated to fully protect against the major risks of the model.

## Financial Implications

61. There are no immediate financial implications arising from the proposals relating to the ‘as a Service’ model. Final costings for an ‘as a Service’ model would be provided as part of the Implementation Business Case which would be considered by Cabinet at the end of the formal market engagement phase.

## Human Rights

62. There are no human rights implications arising from the proposals contained in this paper.

## Legislative Implications

63. There no legislative implications arising from the proposals contained in this paper.

## Regulatory Impact Analysis

64. No Regulatory Impact Analysis is required as there is no proposal in this paper to create or amend legislation.

## Publicity

65. If it is agreed to proceed with an 'as a Service' model for delivery of ASaTS, I will make a public announcement in early April and LINZ will formally begin market engagement for the solution.

66. Subject to these decisions, I intend to release a copy of this Cabinet paper, the DBC and the Addendum paper. Commercially sensitive information and references to policy matters still under active Cabinet consideration will be redacted from these documents.

## Recommendations

67. The Minister for Land Information recommends that the Committee:

- 1 **Note** that EGI endorsed the case for change for modernising survey and title services through the Advanced Survey and Title Services (ASaTS) project in November 2015 [EGI-15-MIN-0152 refers].
- 2 **Note** that EGI agreed that decisions on investment options, project funding and delivery models would be made as part of the Budget 2016 process.
- 3 **Note** that Investment Ministers have been provided with additional information in the form of an Addendum to the Detailed Business Case on the viability, risks and benefits of an 'as a Service' delivery model.
- 4 **Note** that Investment Ministers support the 'as a Service' model as the preferred investment model for development of ASaTS.
- 5 **Agree** to invest in ASaTS through an 'as a Service' delivery model.
- 6 **Agree** that LINZ proceed to market with a whole of life cash cost envelope of \$ [REDACTED] (QRA 50<sup>th</sup> percentile) for procuring ASaTS.
- 7 **Note** that Cabinet will consider the ASaTS Implementation Business Case at the end of the procurement phase, which will outline the proposed solution, the level of functionality being received, the preferred vendor, expected costs and appropriate contingency, and any new risks associated with the proposed solution.
- 8 **Agree** [REDACTED]
- 9 **Note** that the 'as a Service' delivery model will require a fee increase for survey and title customers, further details of which will be provided in the ASaTS Implementation Business Case.

- 10 **Note** that the ASaTS Assurance Plan has been updated for the procurement phase of ASaTS and has been endorsed by GCIO.
- 11 **Note** that, if procurement shows it is not possible to deliver ASaTS through an 'as a Service' model, LINZ will enter Budget 2017 processes seeking urgent provision of capital to have ASaTS delivered to mitigate the increasing outage and failure risks of the current ageing system.
- 12 **Note** that if the 'as a Service' model is agreed I intend to make a public announcement in early April and indicate that we will be engaging with the market for the solution.
- 13 **Note** that once an announcement on ASaTS has been made I will release the Cabinet paper, the DBC and the Addendum, with commercially sensitive information and references to policy matters still under active Cabinet consideration redacted from the documents.

**Hon Louise Upston**  
Minister for Land Information  
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