

Benefits of Stakeholder Involvement

Jeffrey NEEDHAM, New Zealand

Key words: Stakeholder, automation, acceptance, digital lodgement.

ABSTRACT

This paper documents the creation and contribution of the Stakeholder Representative (Survey) on New Zealand's Landonline automation programme. This position is based in the Land Information New Zealand (LINZ) Landonline Change Management team.

LINZ is the Government Department whose purpose is to:

- provide policy advice to the Minister for Land Information on matters concerning land, seabed and property information;
- ensure the integrity and consistency of property valuations for rating purposes;
- maintain the survey system network which provides spatial support for the State guarantee of title and the topographic and hydrographic databases;
- maintain the land titles register which provides a true and up-to-date picture of the ownership of freehold land and to minimise any risks to the State guarantee of title;
- manage the Crown's collective interest in land and property (outside the conservation estate) including acquisition, administration, disposal, Crown liabilities in land and property and assistance in the settlement of Treaty claims through the utilisation of surplus Crown land; and
- to maintain and enhance the core topographic and hydrographic databases.

The role of Stakeholder Representative (Survey) is twofold, aiming to:

- Facilitate communications between LINZ and the **Landonline** programme, and the New Zealand Institute of Surveyors, its members and surveying professionals; and
- To represent the surveying profession within the programme applying real world experience into the definition, development and implementation phases of the **Landonline** project.

As Stakeholder Representative (Survey) I have been on the project team for two years. This development and implementation team is scheduled to wind up in the third quarter of 2002 at the completion of the nation-wide launch of Stage Two of the project.

This experience has indicated the importance of stakeholder involvement and representation with respect to the management of a land registration system and throughout any attempted automation of such a system.

Landonline is a revolution in land information for New Zealand. It is the meeting of two disparate systems that have co-existed for over 140 years. The government mandate for the maintenance of this Torrens type land register was managed by the Department of Justice up until a merger with the Department of Survey and Land Information who were charged with

the setting of spatial information standards relating to mapping and surveying.

Land Information New Zealand has brought these two inter-linked but separate systems together in a digital environment.

The resultant solution is **Landonline**.

Landonline has been developed in two stages.

Stage One has been a transitional implementation within the LINZ business and was focused on LINZ using automated methods to carry out traditional land transaction requirements. A spin-off of the Stage One technology has been a Remote Access searching facility, effectively letting external parties search the core records supporting the Land Transfer Register from their own PCs.

Stage Two, currently under development, will enable digital transactions to be created and lodged with LINZ negating any need for presentation of survey data or simple titles transactions in paper form. This stage is scheduled for implementation in the second half of 2002.

Landonline significantly impacts business practice for private sector surveyors and their staff. Optional use of the system motivates proof of value and benefit on its own merits but following significant take up, LINZ will logically look to make this system mandatory for the lodgement of all surveys.

This paper attempts to highlight the value and benefit of the Stakeholder Representative position in achieving satisfactory outcomes for all involved despite all the issues and influences encountered through the development and implementation of an automated system.

CONTACT

Mr Jeffrey Needham
Tel. + 64 4 471 6231
E-mail: jneedham@linz.govt.nz

Land Information New Zealand
Private Box 5501
Wellington
NEW ZEALAND
Fax + 64 4 498 9860
E-mail: landonline@linz.govt.nz
Web sites: www.landonline.govt.nz,
www.linz.govt.nz

New Zealand Institute of Surveyors
PO Box 831
Wellington
NEW ZEALAND
Fax + 64 4 471 1907
Email: nzis@clear.net.nz
Web site: www.surveyors.co.nz

Benefits of Stakeholder Involvement

Jeffrey NEEDHAM, New Zealand

1. INTRODUCTION

Landonline is Land Information New Zealand's automation project. It has taken a Victorian era paper-based land transfer system and reshaped the conveyancing and surveying landscape with the application of leading edge technology, providing online records and, in 2002, digital lodgement allowing for real time updating of core land registers.

The impacts of a change on this scale to professional business practices were recognised as immense, significant effort has been undertaken by LINZ to mitigate the impact on external users. One of the mitigating strategies has been to involve the external user community in the development of **Landonline** wherever possible.

As the consultation effort progressed through the early days of Stage One, it became apparent that those individuals identified as ad hoc representatives for the professions were being taxed beyond their voluntary constraints. LINZ acknowledged that this situation was falling well short of achieving the goals of the mitigation strategy and consequently risked failure to achieve the required end user buy in that was needed for a successful transition to an automated environment.

In conjunction with the New Zealand Institute of Surveyors (NZIS) and the New Zealand Law Society (NZLS), LINZ created two new roles on the project. The purpose of these Stakeholder roles was to provide a day to day representative presence within the project, providing input and opinion on the development efforts and to assist with planning for implementation and further consultation where needed. Communications was seen as one of the key functions of these roles, maximising the value of having one of their own on the project by telling how it really is and what it really means.

This paper outlines the roles undertaken by the stakeholder representatives on the project, the areas of involvement and what impacts and benefits have accrued from that involvement for both the project and end users.

2. BACKGROUND

Over 140 years of survey and title transactions have created an archive of upwards of 30 million documents. It's so unwieldy that LINZ has been adding over one kilometre of shelving every year just to cope with the volume of new records.

The efforts required by the Government to undertake the necessary work to process the volume of lodged land transactions was becoming excessive and under this system the projected costs for end users were going to increase significantly. Additionally, land professionals were pressuring LINZ to automate, driven by good business practice where they themselves had taken on technologies offering significant benefits in areas such as information sharing and better utility of core data.

Once they began to experience the advantages of digital data and electronic communications, the paper based processes the government had maintained for decades became less tenable for the professional communities.

As a result this drove the formation of LINZ in 1996 from the Department of Survey and Land Information (DOSLI) and a portion of the Justice Department, traditionally known as Lands and Deeds. One of the key mandates of LINZ was to look forwards to a future of digital land titles registration and survey transaction approval.

The subsequent result was **Landonline**.

3. SCALE OF CHANGE

The **Landonline** vision was and is to create a digital survey and title infrastructure, underpinning the New Zealand economy with a system that delivers a range of benefits to customers, the Crown and the public.

The change due to **Landonline** is significant. This change has been effective in areas such as information format, detail and value as well as in organisational structure. In conjunction with the benefits delivered from automation of data and processes are the changes in the structure of LINZ as a public service.

3.1 Integration of Existing Records

The conversion of paper records into digital format has been a key to the viability of a digital environment. It has been a massive undertaking and has involved converting:

- 3 million title records;
- 2 million title instruments;
- 1.2 million plans;
- 1.3 million parcels; and
- 40,000 existing and 50,000 new geodetic control network marks and nodes.

3.1.1 Titles Conversion

From this, 1.8 million live digital titles will be created. Each of these titles will have associated all of the live instruments listed in the memorials captured from the paper versions and of those a large portion will have the scanned image of the original paper instrument linked for online viewing.

3.1.2 Survey Conversion

The Digital Cadastral Data Base (DCDB) previously developed by LINZ as the core spatial index for both parcels and as a reference for survey data, is converted into **Landonline** as the base data. The intensely developed areas (70%) are then enhanced by adoption of boundary observations taken from approved and authoritative survey plans. This primary cadastral fabric is then connected to the national geodetic database via traverse observations and other inter-block connections, creating a network of observations. Adjustments are then run over this network to apply accuracy status to individual marks and nodes. This then gains Survey-

accurate Digital Cadastre (SDC) status, based on the quality of the existing data, providing the basis for lodgement of digital cadastral survey data sets (eSurveys) and for validation of eSurveys using automated business rules.

3.1.3 Integration of Information

Within **Landonline** the converted titles information is then logically linked to the Survey-accurate Digital Cadastre to provide the integrated database. A complete investigation of any parcel can be achieved using either textual or spatial methods, providing a comprehensive tool for both the surveying and conveyancing professions.

The foundation for this integration process was the extensive effort that was undertaken to map existing data structures, components and formats, and then conversion of that information into a data model that underpins **Landonline**. This data model takes into account all the differing data elements and how each of those relates to the “products” required by both users and legislation, including all of the inter-dependencies and relationships.

3.1.4 Digital Infrastructure

Stage One of **Landonline** provides a digital environment allowing LINZ staff to process transactions in a structured way, facilitating standardisation, audit security and flexibility in resource usage. Paperless workflow has been one of the foundation concepts of the **Landonline** vision and this has allowed LINZ to manage work on an individual, regional and national basis.

Further, in Stage One this digital infrastructure provides the online and real time data searching capability for external users.

For Stage Two, many of the processing functions that LINZ undertakes are migrated to the parties generating the transactions. Surveyors and conveyancers will create transactions in a LINZ hosted workspace, in a defined and controlled format, tested using published business rules and submitted with certification made non-repudiatable by the use of digital certificates. This new process structure significantly impacts the external users’ business and traditional professional practises.

3.2 Organisational Change

LINZ inherited twelve Land Districts. A LINZ office serviced each of these districts and a wide range in service levels and interpretation of standards had developed across these. One of the major benefits seen in the automation programme was the removal of location dependence for searching of records and for transaction processing. **Landonline** offers the opportunity for a virtual workforce to respond dynamically to the demands placed upon the business, applying national business rules and standards.

The twelve LINZ offices have been rationalised into 5 regions with seven branch offices now closed, allowing for a reduction in staff and better use of commercial accommodation for record storage. No longer is prime real estate required in central business districts for the archive of seldom-sought paper records that can now be accessed from anywhere via “Remote Access” searching mechanisms.

This rationalisation has impacted significantly on a minority of LINZ stakeholders in affected areas but has provided significant benefits across the majority of users. In the locations of the seven closed branches there was resistance to these changes for obvious reasons; the removal of local records has remained a hot topic through the transition, with LINZ customers in these areas feeling aggrieved at the perceived loss in service. Conversely a far better service is now available to many land professionals who are working in areas where LINZ has never had a physical presence.

The loss of local LINZ staff has been a change that has caused considerable angst to land professionals. Significant support efforts have been developed for the **Landonline** system and the regional office regulatory and operational teams augment these. LINZ continues to maintain a high level of emphasis on the interdependent benefit of the relationship between the land professionals and the operations staff processing land transactions.

4. STAKEHOLDER DEVELOPMENT

The genesis for Stakeholder positions was identified through the ongoing consultation LINZ and the **Landonline** Programme had with key stakeholder groups.

A major strategy within the programme had been to maintain a high level of consultation and to ensure that the wide sweeping effects of the project would be acceptable to these groups. As this consultative effort continued, the Programme management became more frustrated with delays and the inability to engage with these groups due to the voluntary nature of involvement from the individual external users. LINZ were keenly aware of the need for end user buy in to the concept and working solution that the **Landonline** Programme was to deliver.

The land professional community is a relatively small one, some 600 registered surveyors and 1200 solicitors who regularly undertake conveyancing work. This has meant that the professional bodies have been stretched providing input and involvement to the automation programme. In addition, regulatory review has begun altering the governance of professions in New Zealand and this was having consequential impacts on the ability of the representative bodies to respond to LINZ consultative efforts.

4.1 Steering Committee

Very early on in the concept phase of the Programme it was identified that external survey and conveyancing input would be needed. LINZ itself has staff from both professions but these people tend to have a more regulatory focus and generally have not had extensive experience in general public practice.

As a result the Steering Committee was set up as a permanent body. Its role was to provide guidance to the fledgling Programme on the requirements of users, both internal and external, and for procedural functions such as signoff of deliverables.

This early involvement was extremely important in the political arena where the LINZ CEO was required to justify business cases and demonstrate support of affected parties. The external involvement helped to add weight to the financial benefits of the business case by verifying the detail and scale of the benefit model using real-world experience. The support

of the Key Stakeholder groups (NZIS and NZLS) hinged on the involvement of their representatives in this early work.

4.2 Advisory Committee

The Advisory Committee came into existence through examination of the structure of the Programme and its accountabilities. Once the Programme was established with the government mandate for Stage One and internal LINZ structures were developed to deal with the large number of management level reviews and signoff decisions, the role of the Steering Committee was found to be inappropriate. A new body was established with the specific task of providing advice on a wider forum to the LINZ Chief Executive Officer.

This committee continues to provide oversight to the Programme, and its members include representatives from the surveying and conveyancing professions as well as government control agencies such as Treasury and the State Services Commission.

4.3 Representative Positions

At the same time as the creation of the Advisory Committee it was identified that the Programme required greater access to external professional representation. As a consequence the Stakeholder Representative roles were created. The NZLS and NZIS canvassed their respective memberships and provided LINZ with a shortlist of members that they saw as being able to provide appropriate representation.

These roles sit on the Programme Change Management Team. This team is charged with many tasks and specifically aims to facilitate the smoothest possible transition from the manual and paper system to the automated **Landonline** environment. This task is wide-ranging and encompasses internal LINZ structure and staff as well as the key LINZ customer groups such as surveyors and conveyancers.

Some of those on the team are specialists, undertaking the migration of the LINZ workforce from the 12-office manual-processing model to a five-office automated-processing environment. This process has been seen as a major success by staff, management and the Public Service Association who are the Union of choice for the majority of state sector employees.

Another major focus has been comprehensive training for staff under the **Landonline** organisational structure. This effort included delivering training in each of the five regions whilst maintaining business as usual leading up to and including the transition to the **Landonline** implementation.

Specific communications people are based on the team and have been heavily involved in the change management strategies surrounding staff, customers and the media.

Liaison and relationship efforts have proven to be a key strategy in the maintenance and progress of the Programme.

The level of influence of the Change Management Team is seen as key to the success achieved to date by the Programme. The Change Management Team is located at the hub of the Programme reporting directly to the Programme Manager and having direct involvement

with the broad management group who oversee each of the development components. This level of involvement has meant that full disclosure is provided to the Stakeholder Representatives. There are no limits placed on the Stakeholders and all information is accessible to them. They are members of the LINZ Automation Management Committee. This committee provides the internal LINZ control over the project having the most senior membership from the regulatory groups, policy, business support, contracts, operations and the CEO, as well as the **Landonline** Programme Manager.

5. STAKEHOLDER ROLE

The Stakeholder Representative (Survey) position serves two masters. The first role is the representative of the members and body of the New Zealand Institute of Surveyors (NZIS). Secondly it provides LINZ with a representative resource from a stakeholder group, enabling user focus and involvement in the development process for the automation programme.

5.1 Representation Role

The NZIS has traditionally had very strong ties with the various government departments who have administered land issues. Until the formation of Land Information New Zealand, surveyors undertook a combined role of Director-General/Surveyor-General. More recently, with trends in management and the creation of LINZ, the role of surveyors has been re-focused on the regulatory framework and standards of practice.

With these changes and the devolution of operational work from LINZ to the private sector there has been a growing level of frustration within the NZIS. In addition, early initiatives from LINZ included the Process Integration Project and Cadastral Surveyor Accreditation. These changes began to affect the relationships that NZIS and its members have had with LINZ and its staff, and the general feeling was that these were government-imposed changes without user consultation or involvement.

Subsequently, with the establishment of the representative role, the NZIS Council was conscious of the need to establish the profile of the position and to ensure that there were open communication channels. User-involvement and communication have been identified by members as key factors in their understanding and acceptance of future LINZ change.

Key responsibilities identified by the NZIS for the Stakeholder role are:

- liaison with representatives of the NZIS;
- representation in the general interest of surveyors; and
- communications with members.

5.2 Professional User Role

LINZ and the **Landonline** Programme are undertaking the development and implementation of **Landonline** in agreement with and with the support of, the key stakeholder organisations. Ongoing support from these groups is fundamental to the viability of the project. Funding of the **Landonline** Programme is a managed arrangement between the Government, LINZ and the NZIS and NZLS, where the cost of the system is being recovered through a levy added to the products and services LINZ provides to end users, specifically clients of surveyors and

conveyancers. The long-term value of the programme is balanced against the short term cost to users, and subsequently funding is paid for by users now to reduce costs in the longer term.

For the full benefits of the **Landonline** Programme to be realised LINZ requires significant uptake by external users - the surveyors and conveyancers. The **Landonline** application achieves much of its benefit by creating a purely digital workflow from transaction inception through to registration. This reengineering of workflow moves a portion of the work effort from the LINZ Operations Group to the generators of the transactions. To achieve the required uptake, and therefore benefit, LINZ recognised that user involvement in the Programme was a major requirement.

The Stakeholder Representative role provides the vehicle to:

- ensure that a focus is maintained on the end user of the application;
- have an end-user presence that is visible and provides transparency to external stakeholders; and
- maintain the credibility of the Programme with stakeholders via communication.

6. REPRESENTATIVE INVOLVEMENT

With the wide-ranging impact the **Landonline** Programme has on both internal and external environments there have been a large number of opportunities for the Stakeholder Representatives to become involved. Areas include LINZ as a business, external users on an individual basis, and in-groups as well as the NZIS as a representative body and specific involvement in the Automation Programme.

6.1 Involvement supporting LINZ Business

Across all groups of the LINZ business there has been a need to provide external user focus to development and support initiatives. Examples of some of the main areas include:

- policy issues, including legislative review, fees and charges development and representation to government ministers;
- regulatory issues, including regulatory change impacts, programme impacts on existing regulatory regime and application of regulatory regime to automated environment;
- operational issues, including the support of regional implementation and transition for existing LINZ customers, providing feedback to management on user issues and concerns and involvement in the development of internal support structures with the Operations group; and
- communications issues, where external user focus has assisted in tailoring the flavour, content or format for better absorption or relevance to the surveying profession.

6.2 External Acceptance

In addition to this level of ongoing support of the LINZ organisation the stakeholder role has required a high level of interaction with NZIS members. To gain acceptance of changes such as the LINZ organisational structure, the **Landonline** application and the flow on effects

these have on both the profession and individuals, communication has been one of the key mitigating strategies. As stakeholder representative it has been very important to disclose the mechanics and motivations that drive the change process so that transparency is evident to surveyors.

Where and whenever possible it has been extremely important to face those being represented and to listen first hand to their issues and concerns and to be open and accepting of the opinions they have regarding the Programme. Communication has been a key to gaining buy-in and acceptance and to opening channels for feedback from those willing to contribute.

After two years of “coal face” involvement it can be difficult to separate personal interaction from the objective impact changes can have on represented users. An individual can only bring one opinion to the argument if they are not open to wider discourse and the weight of the profession can only be used when it is supported by a clear mandate of the governing body.

As dependent parties LINZ and the NZIS recognise the importance of open and honest communication to ensure that trust paves future steps through the **Landonline** change process.

6.3 Representative Focus

It has become evident through Stage One that usability should be a major focus for the Stakeholder Representatives. Functionality is a key to viability, and is generally self-policing. If the functionality isn't there then the system doesn't work, but if the solution doesn't do the job well or as expected then nobody will use it, and that is a greater risk. The testing regime for an automation project will determine if the system does what was asked for, the danger lies in the acceptance of the usability when the system is released.

If it does do the job but badly then this is major issue. The real issue is expectation, specifically owner, developer and user expectations. LINZ as owner are not in the business of building a golden goose; their needs are simple - build it to do what's necessary at the least cost. Developers want to build what the technology lends itself to, this is easiest route for them and makes them look good. Users want it all, that is, to do everything (not just the necessary), all possible ways (not just the LINZ way) and right now (and not over the next two years or longer)!

The responsibility for blending these expectations within the constraints belongs to the Programme Management. The responsibility of the Stakeholder is to ensure that focus is kept on the end user to ensure the final product meets all of the expectations. Part of this focus is working to set an appropriate level of expectation in the end-user. Once again if it doesn't work (subjectively) then no one will use it, resulting in significant issues for LINZ and the Government.

This issue highlights the hardest part of the role: getting the best result possible and then presenting that result to the represented users.

6.4 Material Benefits

Measurable benefits are difficult to quantify but positive changes to the core direction of the project directly attributed to the Stakeholder Representatives include:

- introduction of Citrix technology;
- development of “Quick Start User Guides” and help materials;
- pilot implementations;
- user education seminars on behalf of the NZIS;
- newsletters and articles in professional publications; and
- technical exhibit stands at national conferences.

These changes have occurred due to the involvement of the Stakeholder Representatives in the day to day progress of the automation programme.

An example of the benefit of Stakeholder involvement was in User Acceptance Testing (UAT) for Stage One of **Landonline**. It was quickly identified that the planned “Fat Client” delivery option was unsuitable due to the inability of the developers to achieve even the minimum performance expectations. This quickly prompted the programme to rethink the delivery of **Landonline** to Remote Access customers. The subsequent result has been the use of Citrix “Thin Client” technology – a resounding success ensuring that even those end users in remote locations with lower quality telecommunications options can achieve workable results. Another spin-off of this change was a vast reduction in the cost of supporting users; Citrix allows for centrally applied software upgrades that do not require end user effort, with no need to send out numerous CDs. Citrix also allows the LINZ support call centre, known as the Solutions Team, to shadow user’s sessions, which allows LINZ experts to watch users on the system and provide real-time advice over use of the system (which can extend to short online one-on-one tutorials).

Other peripheral benefits include representation of the land professional’s issues with respect to operational concerns. As **Landonline** has been implemented regionally, users encountered degradation in service. With the help of the Stakeholder Representatives, LINZ was able to focus their efforts in those areas that helped smooth these difficult transition periods.

7. CONCLUSION

The unsustainable maturation of the paper-based Land Titles System became the change motivator from the point of view of both the Government and the land professionals. The desired outcome was an automated system that satisfied the needs of all stakeholders.

With the **Landonline** Programme being primarily developed by LINZ, as the Government agent, there was a clear need to ensure the representation of the other stakeholders.

This has been achieved via the mechanism of the Stakeholder Representative positions providing transparency for those affected parties outside of the sphere of influence.

The impact on the two land professionals who have filled these roles has been significant. It has been imperative to remain objective and unbiased from all influences and to hold foremost the underlying vision of the Programme as seen from the point of view of

Represented bodies. Not an easy thing to do in an arena where we have at times been accused of being stooges for the “Other” side. Similarly, the close proximity to the development process has its dangers and the focus on end users can easily be eroded when technology, cost and political pressures are continually influencing the development process.

Without a high level of transparency there would have been a lower level of focus on the end users of the system, potentially leading to a disastrous level of usability and therefore lack of acceptance.

Without the profiles of the Stakeholder Representatives’ roles, communication between the end user communities and LINZ would not have been achieved and again there would have been a subsequent high level of user dissatisfaction, irrespective of the quality of the solution, which would have compromised the acceptance of **Landonline**.

The Stakeholder Representative positions have become invaluable to LINZ and the **Landonline** Programme providing significant weight to many of the arguments and discussions that provide direction to the development of the **Landonline** system. These positions are seen to be impartial of the politics that surround Government IT projects and help to maintain the trust relationships with the stakeholder groups.

BIOGRAPHICAL NOTES

Jeff Needham, NZ Cert. Land Surveying, B. Surv, MNZIS

Jeff began his involvement in the Surveying arena with the Department of Lands and Survey as a drafting cadet, working mainly in Land Transfer plan examination. He subsequently moved to private practice and undertook the Technician qualification whilst working for multidiscipline consulting firm Murray North Ltd. Prior to undergraduate study he was involved in utility mapping with Natural Gas Ltd servicing the distribution network in the North Island. In 1992-93 he gained the B.Surv qualification and then began post-graduate work with Ross Stewart Surveyors Ltd concentrating on rural and coastal development whilst gaining registration. He then moved to Bolam and Associates Ltd, a practice concentrating on large urban and rural development, where he acted as survey manager and quality assurance manager until taking up his current position as Stakeholder Representative (Survey) in 1999.