

Transitioning from paper to digital survey plans

Department of Customer Service
November 2020



Opening remarks (NSW Government)

Over 12,000 Deposited and Strata Plans were registered in NSW last financial year. These plans created over 63,000 new land parcels and strata lots that contain the homes the NSW community live in and the workplaces NSW businesses operate from.

The construction sector, the largest sector by GDP and largest employer in NSW, depends on an efficient property pipeline to keep businesses profitable and meet the needs of a growing population.

The NSW land title system, which has existed for over 200 years, is undergoing a major digital transformation. With eConveyancing now the norm, the transition to digital survey plans remains a core component in establishing a fully digital titling system.

At the same time, digital reforms such as ePlanning and eConstruction are progressing at pace. Both reforms are closely coupled with property creation and establish the platform for NSW to realise a world class digital property pipeline.

A world class digital property pipeline will be a job creation engine and make NSW the preferred choice for investment in land and property development.

This delivery plan recalibrates the NSW approach to implementing digital survey plans to ensure the transition from paper to digital plans is successful. Critically, the revised approach has been developed with the customer in mind, whether that be registered land surveyors who prepare deposited and strata plans, the broad range of Government and industry stakeholders who use their plans or the broader community who benefit from these plans.

Narelle Underwood

NSW Surveyor General

Jeremy Cox

NSW Registrar General

Opening remarks (NSW LRS)

NSW Land Registry Services (NSW LRS) is working hard with our industry and Government partners to reshape and digitally transform the NSW plan and titles system. Our work ranges from eConveyancing to new digital lodgment options to special measures to bring our platforms online during COVID-19.

Underpinning much of this transformation is clear consultation and definition of user-requirements in NSW when it comes to land titling, and the commitment and investment to deliver technology improvements.

The next part of our investment plan is focussed on transitioning from paper to digital survey plans, which will bring increased efficiency and functionality via Digital Plans.

In this Delivery Plan, we are working toward;

- a more efficient plan registration process, reducing the time taken from survey certificate completion to plan registration, meaning the public can move into their homes quicker
- more accurate and consistent plan examination processes, reducing plan requisitions and the likelihood of errors or amendments
- making use of digital solutions to pre-populate data and enhance the integrity of the register

We're delivering on an industry request to leverage intelligent data to save time for everyone involved in the plan registration process.

We believe this Delivery Plan is a customer-centric blueprint for future engagement on our journey to have a best in class land titles system for NSW residents and businesses.

NSW LRS has welcomed the opportunity to incorporate the insights of our colleagues across the surveying industry into this Delivery Plan. We know we will be able to rely on the strong design and collaboration on Digital Plans across industry, the Office of the Registrar General and DCS Spatial Services.

This successful joint-working stands us in good stead for an efficient, consultative and user-friendly rollout of a new Digital Plans system in NSW, with the entire industry working together to digitally transform the NSW plans and titles system.

Adam Bennett

NSW Land Registry Services CEO

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Executive summary

Survey plans are the culmination of expertise across many disciplines necessary for the creation of new property in NSW. This includes: financial analysis and town planning to determine the type of development as well as the size and shape of new lots and strata units; engineering and construction to design and build supporting infrastructure; and legal considerations such that appropriate property rights, responsibilities and restrictions are in place to balance the ongoing needs of various parties. Survey plans describe how all these components relate to one another on the ground.

Digital transformation has already had a huge impact across all these industries, and surveying is no exception. In fact, the creation of survey plans is one of the few applications of surveying that still remains largely paper based. With broad cross-industry support, surveyors are well placed to lead this digital transformation and deliver benefits to their clients and the community.

The benefits of transitioning to digital survey plans are significant and include improved stakeholder coordination, efficiency and quality, while also further strengthening the integrity of the NSW cadastre. These benefits closely align with the NSW Government's customer commitments, and the outcomes and actions identified in this delivery plan have all been formulated with the customer, of which there are many, in mind.

The key outcomes of this reform, to be delivered over the next 3 years, include:

- Establishing best practice plan creation processes to ensure alignment between digital data and plan visualisations
- Creating a common source of truth for survey plans and data ready for consent gathering
- Making it easier to generate accurate forms and associated instruments online
- Enabling a concurrent digital consents process for plans

All these outcomes have a common driver, being an efficient digital property pipeline that reduce cost overheads for delivering new property in NSW.

Introduction

The NSW Government is committed to a digital reform agenda that enhances the customer experience and quality of services for the people and businesses of New South Wales.

With this in mind, the Department of Customer Service and NSW Land Registry Services (NSW LRS) reviewed the approach to transitioning from 'paper' to digital survey plans in NSW. Plans prepared by Registered Surveyors for the creation of new land parcels and strata titles in NSW form the bridge between the planning process for land development and the land titles system.

A move to intelligent digital survey plans will support a more efficient, accurate and accessible land title system. It will deliver benefits back to industry—and be tailored to recognise a monument-based cadastre. For example, it will allow for:

- simpler, user friendly survey plans
- significant improvement in timeframes between final survey and plan registration—from months to weeks
- prepopulating documents and moving away from wet signatures
- eliminating or very few errors
- parallel approvals
- closing the gap between subdivision works and construction of new homes commencing

Of course, this is a big change - the surveying profession is probably NSW's oldest dating back over two centuries - and this is an industry-wide transformation. Along with eConveyancing, this is a critical part of making NSW land title system fully digital.

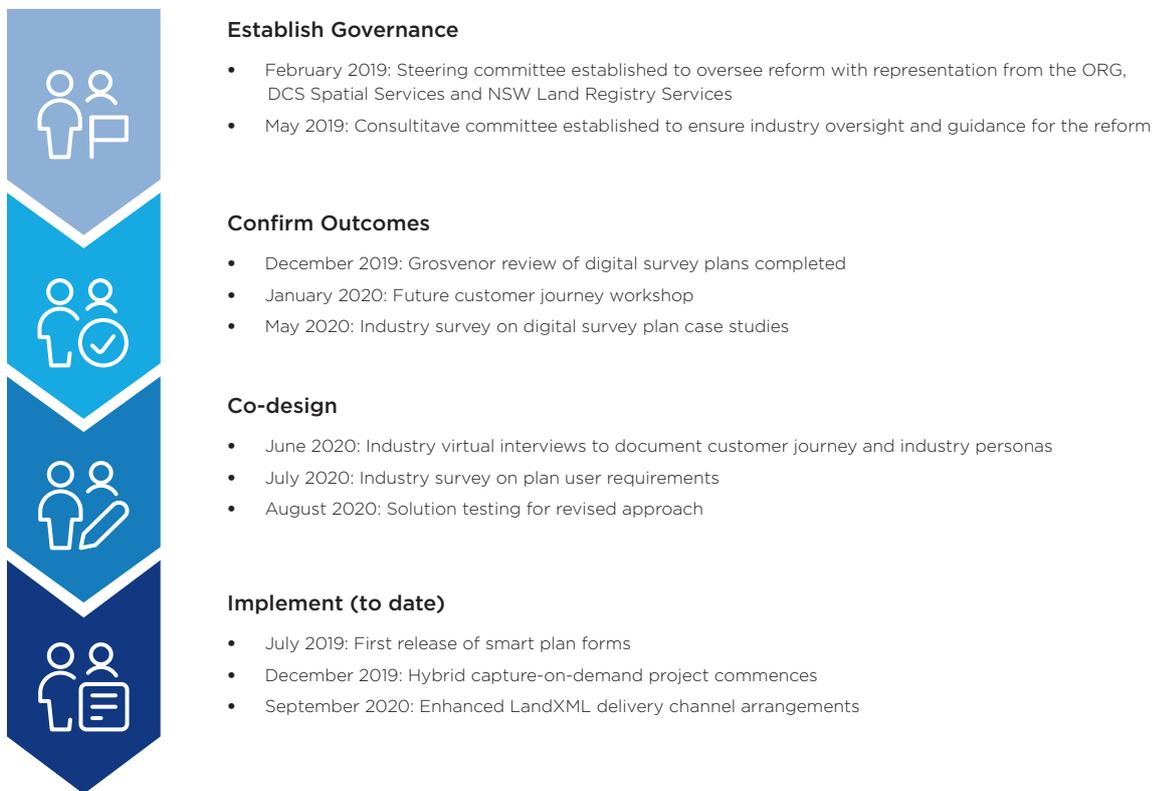
This delivery plan sets out the key actions required in order to complete the transition from paper to digital survey plans in NSW.

Development of this delivery plan

This delivery plan is the product of over a year of engagement with industry and other stakeholders. While this section provides some background and context to the reform, further details can be found in the ‘Grosvenor review’ on the [Office of the Registrar General \(ORG\) website](#).

Reform roadmap

The ‘Grosvenor review’ set out a recommended roadmap to undertake a strategic reset of the transition from paper to digital survey plans. The chart below provides key progress milestones achieved against each of the four stages of that roadmap. Reform roadmap



Stakeholders

The journey of deposited and strata plans within the property creation pipeline involves many stakeholders with a diverse range of roles and requirements. The current paper-based process operates in silos with no overarching organisation able to effectively monitor, analyse and drive improvements across the end to end process.



Surveyors play a unique role in the creation of new properties. While they always perform key technical functions for land development through precise measurement, calculations and boundary definition, they often deliver a much broader value proposition for land development. Their knowledge of how to manage development constraints and challenges, navigate the complex array of approvals and gateways and various nuances across different Councils and agencies is crucial in maintaining productivity across the property creation pipeline. It is expected that their skills and knowledge will continue to play that same crucial role in a digital pipeline.

The Department of Customer Service (DCS) would like to thank all those who have contributed to the reform through representation on the industry consultative committee, participation in the 'Grosvenor review' and involvement in the co-design activities such as online surveys, interviews and testing.

Stakeholder views

For more than 12 months, the Digital Survey Plans Consultative Committee has provided guidance and advice for the development of a revised approach to digital survey plans. Peak land surveying representative bodies in NSW have, in particular, made significant contributions, given much of the content of the delivery plan will impact the surveying industry. Statements of support from the Institution of Surveyors NSW, and the Association of Consulting Surveyors NSW are included below:

“The specialist knowledge of land surveyors in determining the location of property boundaries underpins significant community benefit and economic activity across the NSW property sector. Land surveyors are also experts in the application of innovative tools and digital technology, and are well placed to lead the property sector through the transition to digital survey plans”.

- Leigh Finlay, President Institution of Surveyors NSW

“NSW Land Surveyors play an integral role in the delivery of new property in NSW. ACS NSW support an industry led transition to digital survey plans which improves the customer experience for all stakeholders and delivers productivity improvements to the sector”.

- Andrew Halmarick, President Association of Consulting Surveyors NSW

The Digital Survey Plans Consultative Committee also consists of a range of other professional bodies and stakeholders, which are listed below.

- Association of Accredited Certifiers
- Australian Bankers Association
- Australian Institute of Conveyancers NSW
- Law Society of NSW
- Local Government Professionals NSW
- NSW Department of Planning, Industry and Environment
- Owners Corporation Network
- Planning Institute of Australia NSW Division
- Property Council of Australia NSW Division
- Sydney Water Corporation
- UDIA NSW
- Valuer General of NSW

The NSW Department of Customer Services would like to extend its thanks to all those who have contributed to progressing this reform to date.

A revised approach for digital plans

A revised approach for transitioning from paper to digital plans is necessary to overcome the low levels of digital plan lodgments to date and realise the significant benefits on offer from digital transformation.

The NSW Department of Customer Service is tasked with making it easier to deal with government by driving improvements in customer service. That means keeping the customer at the centre of all programs and initiatives.

Our commitment to the customer

The ‘Grosvenor review’ of digital survey plans in NSW found that transitioning to digital plans aligned with the NSW Government Customer Commitments in the following ways. This delivery plan and the consultation undertaken in order to produce it is also intended to deliver on the two remaining Customer Commitments:

- Act with empathy – show you understand my situation
- Explain what to expect – be clear about what steps are involved

OPPORTUNITIES		NSW CUSTOMER COMMITMENTS
Improved access to existing plans and transparency of process		EASY TO ENGAGE Make it easy to access what I need Make it simple for me to understand
Faster registration and reduced manual effort; facilitated by: <ul style="list-style-type: none"> • Simplified and pre-populated data in plans and associated documents • digital signatures • parallel approvals • structured data enabling enhanced workflow management • automated validation of digital plans 		RESPECT MY TIME Tell me what I need to know before hand Minimise the need for me to repeat myself Make what I need to do straightforward
Improved data for land administration; facilitated by: <ul style="list-style-type: none"> • smart plan data for automatic ingestion • submission of plans separated from registration • minimise chances of error 		RESOLVE THE SITUATION Be accountable for your actions Be clear in decision-making Reach an outcome
Continual engagement with industry		ENGAGE IN THE COMMUNITY Listen to the community to understand our needs Ask us how we want services delivered

The following sections outline the key outcomes from a transition to digital plans and highlight what we heard throughout our engagement with industry and what success looks like once these outcomes are realised.

Enhanced data and searching services for industry

A digital titling system must encompass both the way in which new information is added to the register as well as how information is extracted from the register and presented to users. While NSW has come a long way since the use of paper charting maps and indexes, there is still a significant amount of manual interpretation of plans and related documents required to support information gathering and decision making.

While some of these manual requirements will need to continue, NSW is already taking steps to provide digital survey plan products and services to users in ways that better meet their needs and promote greater productivity across industry. For example, industry now has access to intelligent digital data extracted from registered deposited plan images that will underpin more comprehensive search tools, 'faster to field' outcomes for surveyors and enhanced validation capabilities that will lead to greater accuracy, less rework and improved integrity for titling information.

What we heard

- Digital survey plans should deliver benefits to industry, not just to NSW LRS and Government
- Service outages and the limited functionality of the Cadastral Records Enquiry service creates a poor customer experience for industry

What success looks like

- Surveying businesses incorporate the use of digital survey plan services into their survey and plan creation procedures and, as a result, realise productivity improvements
- Industry has access to dynamic and reliable searching services

Submission of digital survey plan data

While LandXML has been adopted by many firms across NSW, it tends to be used more commonly for larger greenfield subdivisions. This is demonstrated by the roughly 5% of deposited plans being lodged with a LandXML file representing over 30% of lots being created.

Analysis of the LandXML creation processes in surveying firms across NSW has highlighted that there are various approaches being used. While some firms have implemented an integrated process where the plan image and LandXML file are created in tandem, other firms re-enter data after the plan image has been drafted. While the non-integrated approach was reported to be helpful for quality assurance purposes, it clearly requires additional time and effort and increases the risk of misalignment between the plan image and digital data.

For many surveying firms, preparing larger subdivision plans does not make up a large proportion of their workload. This is highlighted when considering that over 70% of deposited plans are small two lot subdivisions or single lot redefinition or consolidation plans. Preparing plans for registration also makes up a relatively small proportion of activity for some surveying firms, making the additional training and software costs even more prohibitive.

As a result, an approach that better caters for smaller developments and surveyors who lodge plans less frequently is required. This approach needs to better align with existing plan creation processes and software capabilities across surveying firms. More specifically, surveyors have indicated that they would be more inclined to lodge digital survey plan data if they had the option of using common industry formats such as DWG or DXF files. These are also the preferred formats suggested for digital strata plan data.

In addition, a new service for surveyors to export validated digital plan data will be established. The service will allow for annotations to be automatically generated from that data to minimise manual data entry of information, such as parcel dimensions and areas, and avoid associated typographic errors. Surveyors, or their support staff, will then be able to finalise the presentation of their plan image within their preferred software package.

It will be essential for industry to develop best practice guidelines to minimise the risk of discrepancies occurring between the digital plan data and the drafted plan image.

Data first, then drafting: this is a key underlying principle of the revised approach for a successful transition to digital survey plans in NSW. Providing services that better support industry to validate their plan data prior to final drafting is expected to lead to less errors on plans, and as a result, lower requisition rates.

What we heard

- The approach to date for digital survey plan lodgments (LandXML) did not sufficiently consider the views of industry and required on average 30% additional effort
- The available submission formats need to better align with existing plan creation processes and software capabilities in surveying firms
- Many surveying firms and software vendors have already made a significant investment in and commitment to LandXML
- The LandXML rendering service does not meet surveying industry expectations for the visualisation of plans

What success looks like

- Co-designed, industry endorsed digital survey plan lodgment process that caters for LandXML as well as other common industry formats
- Lower requisition rates as a result of enhanced pre-lodgment validation services
- A data export tool for surveyors that assists with the efficient and accurate preparation of plan images

Digital forms and associated documents

Digital forms and associated documents that accompany deposited and strata plans, such as the administration sheet and s.88B instrument, are generated in various ways by surveyors. Surveyors reported that they may utilise word templates, PDF forms or CAD drawings. Irrespective of the way plan documents are created, all approaches require a significant amount of manual data entry of information gathered from a wide range of sources.

A more customer friendly approach to generating and interpreting these documents is required to facilitate faster document creation, faster approvals and reduced requisitions as a result of data entry errors.

What we heard

- The information required to accompany a lodged plan is often duplicated across multiple documents and some data fields are already held in the titles register or other Government datasets

What success looks like

- Online forms that generate required documents online and minimise requirements for manual data entry
- Reduced requisitions as a result of pre-populated data and pre-lodgment validation services

Visualisation of digital plans

Land surveyors take significant pride in the presentation of their plans and reported that they see the next surveyor as the primary end user of their plan. There is a significant amount of information contained within deposited and strata plans and presenting it in a coherent and meaningful way is a complex task. The way a surveyor presents their plan describes to the next surveyor the decision-making process they adopted in order to reinstate the relevant parcel boundaries.

The initial approach to digital survey plans in NSW aimed to automate the rendering of survey plans from LandXML data, allowing surveyors to save time they would otherwise spend drafting. Given the complexity and variability of plans it is not surprising that the 'Rendering Service' has not been able to meet industry expectations and this purported benefit to industry has not been realised.

NSW LRS recently undertook a survey of users of plans, which identified that most saw benefits from greater flexibility in the way they visualise plans. In particular, the ability to overlay plan data with aerial imagery and in conjunction with other spatial datasets was the most popular concept, with two thirds of users selecting a high benefits rating.

Plan users other than surveyors also identified that some information may not be required for their needs. The most common types of information not seen as essential by these users was reference marks and connections, permanent control mark information, occupations (such as fences and buildings) and non-structural boundary dimensions in strata plans. However, surveyors and a portion of other plan users expressed a strong desire to retain all the information currently contained on plans.

Finding the right balance between all these interests is going to be crucial for the successful transition to digital plans in NSW. By adopting the ‘data first, then drafting’ principle described earlier in this document, flexible visualisation options of plan data can be generated to better meet the needs of consenting parties and plan users.

However, it’s also essential that users have clear guidance for what documentation is required for particular user applications. For example, what information is required to be shown in a property sales contract. Further industry consultation will be undertaken through the publication of a discussion paper that outlines key issues such as the legal point of truth for plan information, the purpose of each visualisation option and proposed requirements for industry using this information in practice.

What we heard

- While surveyors use all the information on a survey plan, many users of plans, including surveyors, saw benefits from more flexible and less complex visualisation options

What success looks like

- Flexible visualisation options for plans that can be tailored to suit the needs of different users
- Clear regulatory requirements that set out what plan visualisation is required to be used for various user applications

Plan version control and notifications

The typical timeframe from a plan being certified by a surveyor to registration is approximately five months for deposited plans and three months for strata plans. During this period a range of parties will review and execute the plan and/or associated documents. Realising greater efficiency in the consents gathering process hinges on the creation of a single trusted source for accessing plans and associated documents.

Surveyors take on varying degrees of involvement in the consents gathering and lodgment process. For example, a surveyor may certify their plan and pass it on to their client to manage all subsequent consent and lodgment requirements. At the other extreme, a surveyor may coordinate the entire consent gathering process and act as the lodging party on behalf of their client.

This means that, in some circumstances, the surveyor has effectively 'lost control' of their plan and may not be aware that the plan has been lodged 'until they receive a requisition'. Recent regulation changes have introduced some limitations, with a requirement for surveyors to re-certify the plan prior to lodgment if the original certification was more than two years ago. However, with a largely paper based process, it remains difficult or impossible for interested parties to track the progress of plans and become aware of any changes made to them.

What we heard

- Most plans will undergo change during the plan consent gathering and registration process
- In practice, multiple copies of plans are often used to gather consents as efficiently as possible, with signature pages collated prior to lodgment

What success looks like

- A single point of truth for surveyor certified plans that can be securely shared with consenting parties and other surveyors
- Notification services to advise consenting parties of changes to plans that identify if they are required to re-consent
- Inclusion of surveyor certified plans in searching tools to enable greater industry coordination

Concurrent digital plan consent gathering

Gathering all the approvals and consents required to lodge a plan for registration is a complex and time-consuming process. Wet signatures were the only way of providing that consent until the recent COVID19 guidelines for executing plans with electronic signatures were released. Those temporary arrangements for electronic signatures have highlighted the support from stakeholders in transitioning away from wet signatures more permanently. Longer term, a secure digital signature-based solution for consent gathering needs to be realised.

At the same time, significant progress has been made in establishing a one stop shop for planning transactions through the NSW Planning Portal. This includes a module for the submission, assessment and determination of subdivision and strata certificate applications.

The combination of electronic signatures and online portals, such as the NSW Planning Portal, has presented an opportunity for NSW to implement a more efficient and secure consent gathering process. To this end, the NSW Department of Planning, Industry and Environment has already commenced work incorporating referrals to typical consenting agencies and utility service providers into the subdivision certificate workflow. Data insights from the digital process will uncover where opportunities exist to deliver further efficiencies.

Direct integration between key Government systems and NSW LRS will be necessary in order to realise a fully end to end digital consent gathering process. This will need to be underpinned by defined requirements for digital signature technology and agreed roles and responsibilities between different organisations.

What we heard

- A concurrent digital consent gathering capability is the biggest opportunity for digital plans to deliver benefits to industry and the broader community
- Plan changes that require consent gathering to be repeated cause significant additional delays to the plan being registered

What success looks like

- Consenting parties can provide their consent online via a digital signature and track the status of plans as they progress through the consent gathering process
- Consenting parties can be confident that they will be notified of changes made to plans that may impact on their consent
- The typical timeframes from surveyor certification to plan registration are significantly reduced

Phasing out manual lodgments

Over 10% of plans lodged for registration are submitted at the NSW LRS lodgment office. This has remained the case even during the COVID19 period where an alternative 'virtual lodgment office' has been made available.

As only registered surveyors can currently lodge plans online, it is likely that non-surveyor lodging parties are the primary source of plans submitted at the NSW LRS lodgment office. With no time limitations in NSW for when a plan must be lodged for registration after the consent of the certifying authority, it is anticipated that there will always be some requirement for lodgments from non-surveyors. As a result, an alternative digital channel that enables non-surveyors to lodge a plan is required which must seamlessly integrate into other consent gathering processes.

What we heard

- Surveyors reported that some clients wish to act as the lodging party for plans
- Not all surveyors wish to be the lodging party for plans

What success looks like

- Suitable digital lodgment channels that cater for both surveyors and non-surveyors

Enhanced electronic examination and registration

Plan examination occurs in the final stages of the plan registration process and involves detailed interrogation of plan information. The majority of plans require some alteration prior to registration in order to meet regulatory requirements.

The development of enhanced electronic examination tools, with as much functionality as possible exposed to surveyors for pre-lodgment validation, will realise a more consistent and efficient examination process. Where queries on plans do arise, leveraging now commonplace audio-visual technology, screen-sharing and chat style interfaces will assist in fast and convenient resolution.

For consenting parties and essential service providers, notifications that advise of status updates to plans, in particular when they are registered, will deliver flow on benefits for the efficient delivery of services to new land parcels.

What we heard

- Surveyors want plan examination to focus on sound boundary definition practices rather than a tick box mentality
- Effective communication between surveyors and plan examiners is crucial in order to efficiently resolve queries and requisitions
- It is difficult for essential service providers and consenting parties to become aware of when a plan is registered

What success looks like

- Greater use of enhanced examination tools to deliver a more consistent and accurate plan examination experience
- Effective online communication with plan examiners to resolve queries and requisitions as quickly as possible
- A closed information loop for notifying relevant parties of plan registration outcomes

Reform implementation

There are several other areas for consideration to ensure successful implementation of the digital survey plans reform.

Regulatory functions

Regulatory changes to support the reform will be required in order to cater for changes in the way plans are prepared, consented to, lodged and registered. Similarly, the regulatory functions of NSW Government to monitor the quality of plans and operations of NSW LRS will need to be reviewed and adjusted appropriately.

Surveying industry standards and training

Supporting industry in its transition from paper to digital plans will be key to the success of the reform. NSW Government, NSW LRS and peak industry bodies will all need to play a role in developing standards and providing training and support.

Mandate roadmap

In order to provide certainty for surveyors, NSW LRS and other stakeholders, a mandate roadmap will be developed for the transition to digital survey plans. This roadmap is likely to include a variety of mandate components implemented in a staged manner. The mandate roadmap will be developed in close consultation with industry to ensure sufficient lead times are provided for adoption.

Stakeholder coordination

With so many stakeholders involved in the end to end plan registration process, it will be essential to maintain regular and ongoing communication channels. This will ensure stakeholders are aware of and prepared for changes as they occur.

Governance arrangements

The existing industry led governance arrangements for digital survey plans must be continued to maintain ongoing transparency and oversight of the reform.

Actions to realise digital survey plans

As the concession holder for the land titling business, NSW LRS is responsible for implementing digital survey plans. However, to ensure that maximum benefits are derived from the reform a range of actors have been identified for the delivery of reform actions.

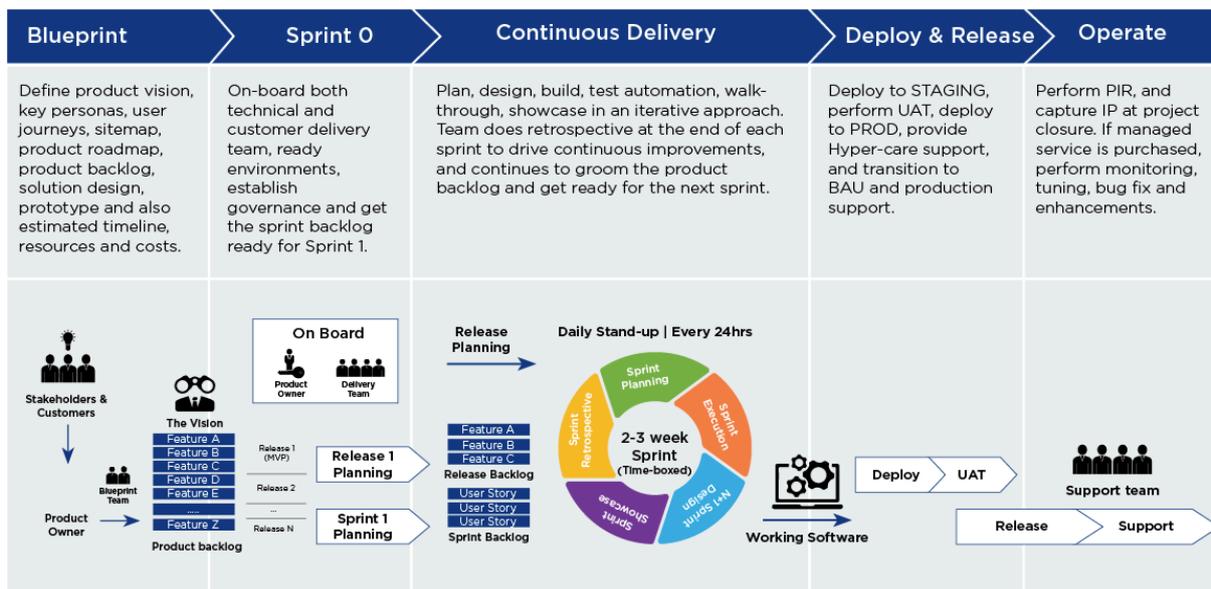
The action items listed on the following pages will need to continue to be reviewed and revised as the reform progresses.

NSW LRS delivery model

The approach taken by NSW LRS to implement digital survey plans in NSW will adopt an agile-based software development methodology with clearly defined checkpoints and stage gates to assure product quality. Discovery stage for the reform commenced in July 2020 with the view to capture essential scope and high-level requirements by September 2020.

It is intended that the creation of the Minimum Viable Product (MVP) will occur within 6 months from October 2020 via continuous integration and deployment every 10 - 12 weeks afterwards.

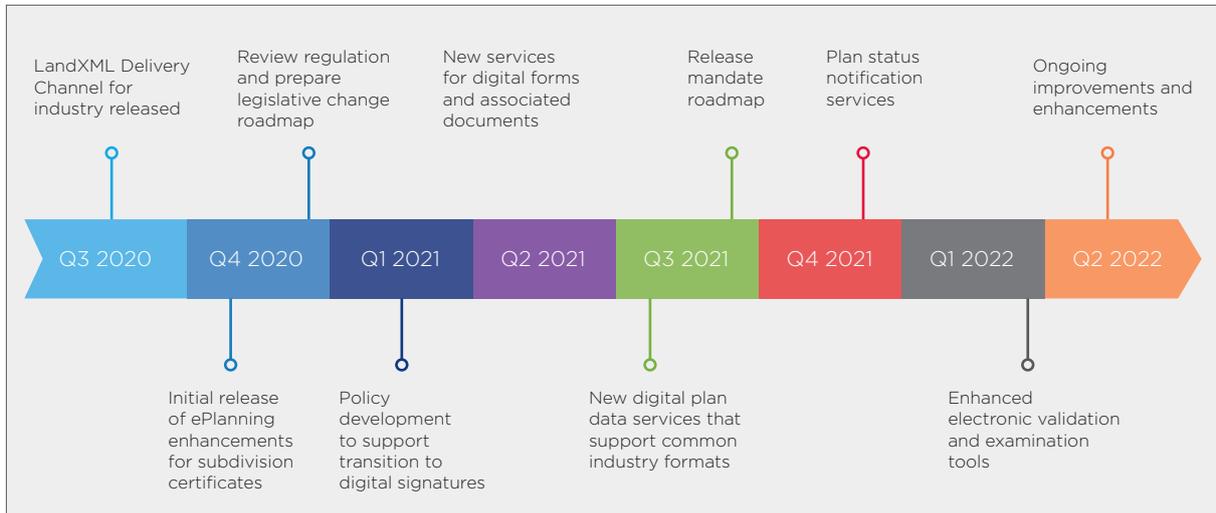
NSW LRS will continue to engage external parties on design collaboration and to conduct joint integration testing. ORG will be invited to conduct relevant health checks where required to ensure progress is aligned with NSW Government expectations. Post implementation compliance activities will also be factored into the program.



Delivery pathway

The key milestones shown below are indicative of the likely sequence of activities and should not be interpreted as the precise timing for the release of new services.

Overview of key milestones



Detailed milestones by theme

The following pages provide high level actions required in order to transition from paper to digital survey plans. Actions are grouped into key themes or outcomes with each action assigned one or more responsible stakeholders along with indicative timeframes.

Outcome	Action	Responsibility	Timeframe - calendar year (initial release)
Enhanced data and searching services for industry	Implement a LandXML channel to make digital survey plan data available to industry via NSW LRS Information Brokers	NSW LRS and DCS Spatial Services	Q3 2020
	Review and improve cadastral records services so it provides a dynamic and reliable searching capability that better meets the needs of industry	NSW LRS	TBC
	Migrate spatial web services that support NSW LRS cadastral record searches to the Spatial Collaboration Portal	DCS Spatial Services	TBC
Submission of digital plan data	Continue to support and improve LandXML related services	NSW LRS	Ongoing
	Develop specifications and provide online services for the digital translation of common industry formats such as CAD	NSW LRS	Q3-4 2021
	Enhance pre-lodgment validation services to reduce the frequency of plan requisitions and plan amendments	NSW LRS	2022
	Provide a plan export capability to assist industry with drafting final plan images and avoid discrepancies with data	NSW LRS	Q3-4 2021
Digital forms and associated documents	Provide online services for creation of tailored digital documents (such as administration sheets and s.88b instruments) that pre-populate information from digital plan data, the register and other data sources	NSW LRS	Q1-2 2021
Visualisation of digital plans	Provide a capability to visualise digital plan data that is beneficial for those who interact with plans	NSW LRS	TBC
	Review regulatory requirements necessary to support the utilisation and management of digital plans	ORG	Q4 2020
	Release a discussion paper outlining the proposed regulatory model and legislative changes required to transition from paper to digital survey plans	ORG	Q1 2021

Outcome	Action	Responsibility	Timeframe - calendar year (initial release)
Plan version control and notifications	Provide facility for Registered Surveyors to digitally certify and re-certify their plans online	NSW LRS	Q3-4 2021
	Provide the capability for surveyors to securely provide access to their Surveyor Certified Plans and associated documents with consenting parties and others as required	NSW LRS	TBC
	Provide notification services for changes made to Surveyor Certified Plans or associated documents	NSW LRS	Q3-4 2021
	Provide mapping services for NSW LRS that enable industry to identify where Surveyor Certified Plans are located	DCS Spatial Services	Q3-4 2021
	Develop regulatory requirements to support the management and use of Surveyor Certified Plans	ORG	Q4 2020
Concurrent consent gathering	Enhance subdivision and strata certificate application workflow to enable concurrent consent gathering	DPIE ePlanning	Q4 2020
	Develop system integration roadmap to streamline digital consents process and enhance the integrity of the titling system	NSW LRS, DCS and DPIE	Q4 2020
	Develop policy to support transition to digital signatures for consenting parties	ORG and NSW LRS	Q1-2 2021
	Develop and implement framework to efficiently manage re-consenting requirements as a result of changes to plans or associated documents	ORG and NSW LRS	Q3-4 2021
Phasing out manual lodgments	Develop alternative digital lodgment channel to replace the submission of plans at the NSW LRS lodgment office	NSW LRS	Q3-4 2021

Outcome	Action	Responsibility	Timeframe - calendar year (initial release)
Enhanced electronic examination and registration	Enhance electronic examination tools to improve quality, consistency and efficiency of examination, registration and title creation	NSW LRS	2022
	Develop improved tools to interact with surveyors, such as audio-visual links and chat style interfaces	NSW LRS	Q3-4 2021
	Provide notification services for status changes of Lodged Plans for consenting parties	NSW LRS	Q3-4 2021
Regulatory functions	Prepare digital survey plans cabinet submission/bill	ORG	Q4 2020
	Develop auditing procedures and regulatory actions for the quality of plans	ORG and OSG	Q1-2 2021
Surveying industry standards and training	Provide support and training to industry for the adoption of digital plan services	NSW LRS, ORG and OSG	Ongoing
	Develop best practice business process guidelines and provide support for surveying businesses to transition to digital plans and improve the quality of plans	ISNSW and ACS NSW	2021
Mandate roadmap	Develop and adopt a mandate roadmap for the introduction of compulsory requirements as part of the reform	Steering Committee and Consultative Committee	Q3-4 2021
Stakeholder coordination	Ensure stakeholders are aware and prepared for changes implemented as part of the reform	Steering Committee and Consultative Committee	Ongoing
Governance arrangements	Regularly review progress and refine approach as required in order to achieve reform outcomes	Steering Committee and Consultative Committee	Ongoing

Department of Customer Service
Address: McKell Building, 2-24 Rawson Place, Sydney NSW 2000
Phone: 02 9219 3600 | TTY: 1300 318 998