

# No More Survey Plans! Towards Fully Digital Cadastral Survey Datasets

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## SUMMARY

Land Administration agencies in Australia and New Zealand are intending to eventually require surveyors to lodge fully digital datasets of their cadastral surveys. Currently surveyors continue to lodge traditional survey plans. While some jurisdictions also enable the exchange of matching survey data using LandXML, this has not been widely supported and is difficult for survey software suppliers to implement across the nine different jurisdictions.

Australian and New Zealand land administration agencies are collaborating to achieve a common vision for their cadastral systems - a cyclic flow of digital data between surveying professionals and the agencies. The future lies in providing and accepting digital cadastral survey datasets, as traditional survey plans are unable to meet the changing needs of data-driven users of the cadastral system.

While LandXML has provided an exchange option for the last 20 years, more efficient and interoperable options with purposeful structures are required to meet the needs of the agencies and surveyors.

The Intergovernmental Committee on Surveying and Mapping commissioned the '3D Cadastral Survey Data Model and Exchange' project to create a new standard for exchanging digital cadastral survey data between the survey industry and land administration agencies across Australia and New Zealand.

The project team, consisting of jurisdictional experts and a data modelling consortium, developed a harmonised cadastral survey data model that describes all the elements that jurisdictions require in the datasets – including 3D elements. The model is defined at the conceptual and logical levels and

uses existing internationally recognised standards and ontologies wherever possible. Jurisdictional profiles will enable agencies to implement the model in accordance with jurisdictional-specific requirements.

The next phase of work, planned for 2023, will develop a 2D standard reference implementation to test those aspects of model and the recommended JSON encoding format. It will include further development of the 3D profile specification which requires addressing some complex challenges of element representation.

This work will build on the close engagement with technology suppliers as digital lodgement will not be possible without their support.

As well as covering these matters, the presentation will provide an update on the development and testing of the model and the encoding of the cadastral survey data.

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