

Automating National Mapping & Cadastre with GeoAI

Nick Land (United Kingdom)

Key words: Cadastre; Cartography; Digital cadastre; Geoinformation/GI; Artificial Intelligence; GeoAI; Automation; Change Detection; Feature Extraction

SUMMARY

National Mapping & Cadastral Authorities (NMCAs) are continually looking at ways in which they can be more efficient and effective in maintaining and delivering authoritative, timely, land and geographic information to their users. Advances in GIS technology, and adoption of new capabilities such as Artificial Intelligence (AI), can make a significant contribution to meeting these needs.

AI is not a new topic. However, with advances in computing power, availability of large (big) data, and its incorporation in GIS (GeoAI), AI is now a highly relevant and timely capability that can be applied today to automate, amongst other things, change detection and feature extraction. This will help reduce costs and the time taken between change happening on the ground (in the ‘real world’) and being reflected in the topographic maps and cadastre (the ‘digital world’) improving the quality (currency) of the products and services available from the NMCAs.

The paper and presentation will highlight these new GeoAI capabilities and illustrate how they have been applied to support change detection and feature extraction in a number of case studies from the European NMCAs.