Embracing AI in Land Administration

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SUMMARY

The two-dimensional (2D) cadastral maps have been relied upon by tax assessors for centuries but are limited due to their inability to show what is happening above and below ground. By leveraging GIS, New York City developed a state-of-the-art three-dimensional (3D) tax map and a one-stop shop portal for property owners. Property owners can verify their building and land data for accuracy, view and challenge their assessments and exemptions, view their sales, mortgages and recordings, and trace the history of lot changes to their parcel. Developers can digitally submit their BIM models to seamlessly populate the 3D cadastre. The three-dimensional perspective lets assessors walk around buildings and see interior floor plans. The 3D feature enables the potential development of 3D variables, such as views and weathering, for valuation. The 3D visualization is particularly important for air lots as it shows the potential for development. We will discuss the limitations of 2D maps, the long-term benefits of moving to a 3D system, challenges in building a 3D cadastre, applications of the 3D parcel map beyond the use for assessments and taxes, and integration with other city agencies, along with advances in technology that made it all possible.