

# 3D Property Ownership Map Base for Smart Urban Land Administration

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## SUMMARY

Most governments provide property ownership map bases as an enabling infrastructure for decision-making. These map bases represent the most complete, authoritative graphical representation of land parcel and property boundaries (cadastral information) – an invaluable source of intelligence to support land and property decision-making across government, businesses and communities. Current property ownership map bases only represent 2D land parcels and omit an array of property objects that are vertically located: apartments, tunnels,

underground shopping malls, car parks and utility networks are common examples. The implications are significant, particularly in urban areas due to the density of development.

This paper presents solutions for accommodating 3D data derived from regulatory urban subdivision processes into the current 2D property ownership map base. Considerations in institutional aspects are discussed, technical specifications for incorporating spatial information about 3D property rights, restrictions and responsibilities (RRRs) into the map base are identified, and finally, policy recommendations around transforming current 2D-based work processes to support a digital information environment are outlined.