

# Investigating an Interoperability Platform for Sustainable Land Management

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## SUMMARY

Land has always been an asset of great value to man, being used for dwelling, economic and social purposes. Technological development and urbanization have, among others, led to overpopulation, intensive exploitation of land and increased number of necessities in modern societies, which result to the need of constructions above and/or below the ground. Therefore Sustainable Land Management (SLM) becomes of paramount importance.

SLM is based on two essential principles: a) Sustainable use and development of land and b) Operational Land Administration Systems. Sustainability (LAS) is an interesting aspect of the Architecture Engineering Construction Operation (AECO) industry, due to the fact that sustainable development focuses mainly on maximizing the quality of the built-up environment while minimizing or eliminating negative impact on the environment. Building Information Modeling (BIM) is a fast-growing technology and a promising development in AECO industry that allows for the development of an n-Dimensional (nD) virtual model of the facility by involving many stakeholders throughout its lifecycle. Using BIM data generated during design and built over the whole project lifecycle enables faster, safer, less wasteful construction and more cost-effective, sustainable operation, maintenance and eventual decommissioning (6D BIM). The cadastre is at the core of any land administration system providing integrity and unique identification of every land parcel. Facing the development of three dimensional (3D) spaces, developing a 3D cadastral management mode is imperative. Therefore, the integration of BIM and cadastre would exceedingly be useful to this scope. Owing to many disciplines involved in the aforementioned parts, an interoperability platform for SLM is crucial.

This paper facilitates an overall understanding of an interoperability platform for optimal land management. It also assists identifying an ideal collaborative platform for servicing the needs of

governments, private businesses and the public, utilizing the latest technologies, servicing rights, restrictions and responsibilities (RRRs) and risks in relation to land and delivering much broader information about sustainable development.

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