

# **A Multi Layers 3D Cadastre in Israel: A Research and Development Project Recommendations**

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## **SUMMARY**

The multi layers 3D cadastre R&D project has been initiated and specified by the Survey of Israel (SOI). The R&D project started in September 2002 and had been carried out by a team of experts from several disciplines. The project has been successfully completed during August 2004. This R&D project was one of the steps undertaken by the SOI during the last 6 years concerning the efforts to replace the existing two-dimensional (2D) cadastral system by a three-dimensional (3D) one.

The principal objectives of the R&D project were to find geodetic, cadastral, planning, engineering and legal solutions, for utilizing above and below surface spaces, thus defining the characteristics of the future analytical, 3D and multilayer cadastre that will complement the existing 2D cadastre.

In recent years, the State of Israel has entered the post-industrial era, characterized by fast economic development driven by population growth, expanding economy and a rising standard of living. This is accompanied by the constantly increasing building density, primarily in the central areas of the country that are the preferred places for residence due to employment and commercial opportunities. Moreover, the growth in population, projected to rise from six millions today to nine million by 2020, accentuates the urgent need to find new solutions for building of public projects and new infrastructures in subterranean areas and above the existing surface constructions, while preserving the remaining open spaces. Therefore, Israel has a particular interest in the immediate exploitation of the spatial potential, especially in the central area of the country.

This paper introduces the recommendations of the R&D team for the immediate implementation of the 3D cadastre in Israel. The first steps to be taken by the Israeli government and parliament ("kneset") are the modifications in the existing Land Law and the Planning and the Construction Law and their Regulations and also the modification of the Survey Regulations.