

Land Administration and Management – Towards the Fifth Dimension

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SUMMARY

For a long time, we tried to represent the land and territories in a simple, portable but still realistic way. The map was the answer. The representation of the land by maps, that is to say the projection of the real world in two dimensions (2D) has thus prevailed. Rather soon, more information has been added in order to express more dimensions, such as contour lines to represent the third dimension (3D). With the advent of computers and the power of databases, it became possible to also create volumes and to represent the information in layers representing different attributes of the territory.

Since then, and due to the huge computer storage power, we even can keep digital data over several years – without having to delete it as in earlier times. This helped to enable and make simulations over time, which has led to bring in the fourth – temporal – dimension (4D).

The intersection of "Big Data" and "Data Mining" brings up a whole new set of questions. For example, can we anticipate the management of territories and not only simulate it? Should and can we somehow develop a new dimension, i.e. the fifth dimension (5D)?

This article will describe the identified trends and discuss the potential opportunities and challenges that land administration and management systems may face in the future.