

Towards Standardized Concept of Multipurpose Land Administration

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SUMMARY

A more extensive use of land administration data began with the development of multipurpose cadastral system. However, establishing of multipurpose cadastral systems has proven to be a task more demanding than expected, so hardly any country has one that is really efficient. Only with a start of a more extensive introduction of IT technologies have the prerequisites for developing of multipurpose land administration system really been fulfilled. Still, the differences resulting from basic concepts (e.g. deed vs. title registration, fixed vs. descriptive boundaries, institutional and jurisdictional differences) require on a per country approach to be applied when multipurpose land administration systems are to be implemented. The concept of the underlying information system to be implemented is heavily influenced by the legal and institutional arrangements, as its overall functioning depends on those two. The data is usually managed within the traditionally organized registers, which today are in electronic form, and which are under the jurisdictions of various institutions. A significant impact on the concept to be devised, comes from the historic development of the registers considered and from the traditional relations of persons towards land.

LADM can be used as a facilitator for the development of a standardized concept for a multipurpose land administration system (LAS), however it first needs to be adjusted to local conditions. LADM defines the general content and the structure of a LAS by the means of object classes and packages. The legal basis that regulates a specific land administration differs from country to country, thus in order to adjust it to LADM, a country profile is usually created. Aspects of a LAS considered to be its integral part in some countries, can be considered as external in others. The inclusion of all the involved stakeholders directly into an integrated LAS would not result in an efficient system.

Therefore, in this paper we propose a distributed concept of a multipurpose LAS based on the interoperability of its parts. Firstly, since the LAS data represent the most basic set of a spatial data

infrastructure, it must be included into it and must acknowledge its basic concepts. Within the proposed concept the valid legal framework is accepted and the maintenance of the data is left to the institutions i.e. to the registers originally in charge. Interoperability of the parts builds upon their invariance regarding the spatial reference systems.

The data remains in their original spatial reference systems whilst their combining only gets done by the means of relating them via the spatial transformation services.

Within the concept, establishing of logical relations of the data from different registers is avoided. This enables its flexibility for the subsequent system upgrades and additional developments through inclusion of additional registers or the unofficial data important to various groups of users.