

Beyond Cadastre 2014 – Advancement of a Mature System

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SUMMARY

The property register and cadastral system in Switzerland evolved in several stages, progressing from a cadastre for tax purposes in the 19th century, to a property cadastre, and finally to a multi-purpose cadastre in the 20th century. The digitisation process, initiated in the 1980s, saw the development of ideal structures with foresight, creating an essential foundation for the national geodata infrastructure in terms of both data and standardisation. Thanks to its up-to-date nature, geometric and content accuracy, and highly efficient processes for issues relating to boundary determination and updates due to changes, the property cadastre enjoys a very high reputation in Switzerland today. The objectives of the C2014 cadastre have also been implemented nationwide. The cadastre is widely recognised as a central pillar of Switzerland's prosperity. Compared internationally, the Swiss system is said to have a very high level of maturity, with the sole exceptions of easements and the third dimension (property and easements).

Nevertheless, the cadastral system must be regularly adapted and further developed in line with changing conditions. A situation analysis has identified the following drivers for adaptation: Firstly, changes relate to the evolving explicit and implicit needs of users. Cadastral data must continue to support major societal challenges, such as climate adaptation, inclusion, and the efficient use of limited land resources. Cadastral data should also be recognised as a relevant legal basis for developing policies in other areas. Secondly, data collection processes must align with major advances in digital construction (BIM-based data) and AI-based information extraction from imaging techniques. This increase in efficiency is also essential in order to continue offering civil society a strong alternative to large internet corporations with their extensive and rapidly growing data sets. Thirdly, growing international tensions necessitate adapting the resilience of the cadastral infrastructure, improving the control over data and algorithms, and responding to the growing pressure of legitimacy over

law.

In this paper, we demonstrate how these factors can be leveraged to advance the cadastral system in Switzerland following its digitisation.