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# SMART SURVEYORS FOR LAND AND WATER MANAGEMENT CHALLENGES IN A NEW REALITY



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The Cadastre of Public-law Restrictions on landownership in Switzerland

Session 7.2, 22 June, 22:00 – 23:30 CEST

ORGANISED BY



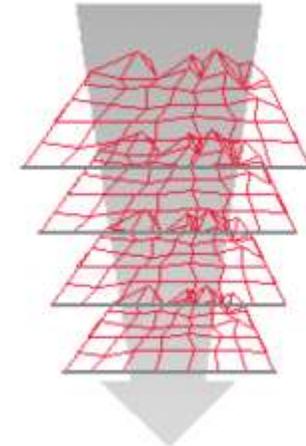
PLATINUM SPONSORS





## Introduction

- Landowners are subject to private and public law restrictions.
  - ~150 public-law restrictions (PLR) in Switzerland
  - Spread between various departments.  
-> loss of time, risk of forgetting and lack of legal safety.
- Issues discussed in the publication of “Cadastre 2014” in 1998 by the FIG.
  - PLR Cadastre: Swiss realization of this vision



### CADASTRE 2014

A VISION FOR A FUTURE CADASTRAL SYSTEM

Jürg Kaufmann • Daniel Steudler  
with the Working Group 1 of FIG Commission 7





## Introduction

- What is the PLR Cadastre?
  - It's an official information system concerning public-law restrictions on landownership.
  - Developed by the federal Office of Topography swisstopo and the cantons.
  - The project was launched in 2012, and since 2020 covers almost whole territory (25 cantons out of 26)





## Content of the PLR Cadastre

- The most important public-law restrictions:



### Contaminated sites

Cadastre of contaminated sites  
Cadastre of contaminated military sites  
Cadastre of contaminated sites at civil airfields  
Cadastre of public transport contaminated sites



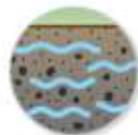
### Railways

Project planning zones for railways  
Building lines for railways



### Airports

Project planning zones for airports  
Building lines for airports  
Security zone plan



### Groundwater protection

Groundwater protection zones  
Groundwater protection area  
Watercourse corridors



### Noise

Noise sensitivity levels (in land-use zones)



### Motorways

Project planning zones for motorways  
Building lines for motorways  
Building and distance lines outside the scope of land use plans



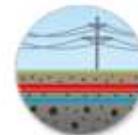
### Spatial planning

Land-use planning (cantonal/municipal)  
Planning zones



### Forests

Forest perimeters (in building zones)  
Forest distance lines  
Forest reserves



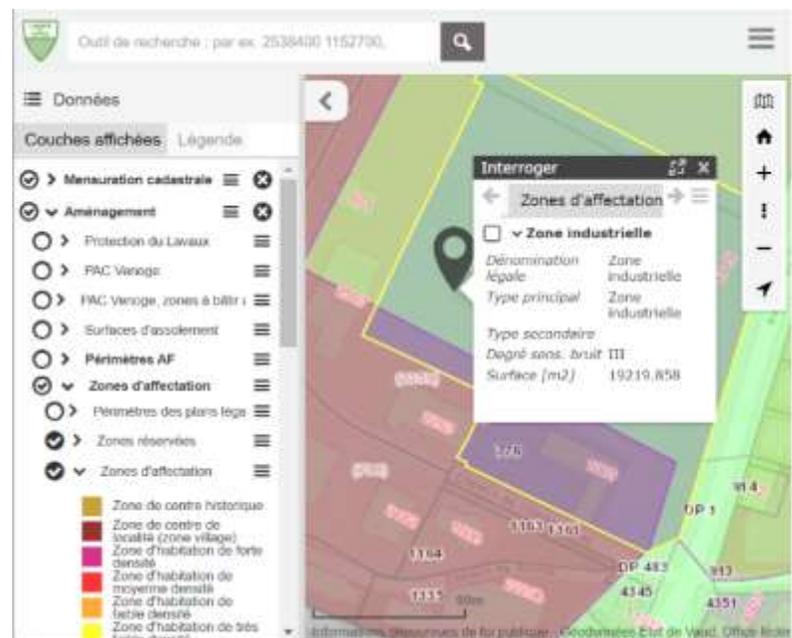
### Power supply

Reserve zones for power lines with a nominal voltage of 200 kV or higher  
Building lines for high-voltage installations



## Content of the PLR Cadastre: added value compared to a classical geo-portal

- Complete overview of all restrictions
- Information completed by the legal provisions and legal bases



Classical geo-portal



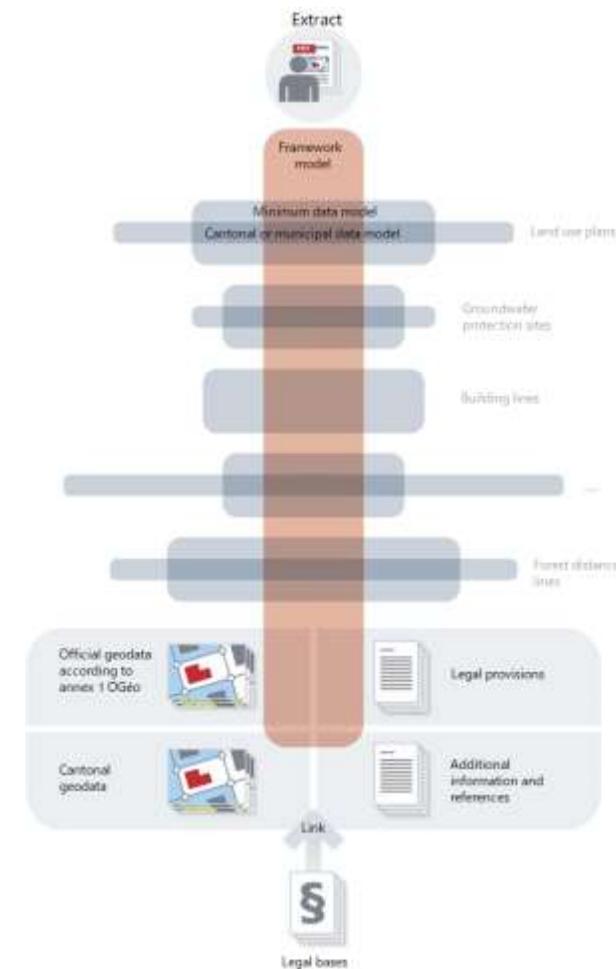
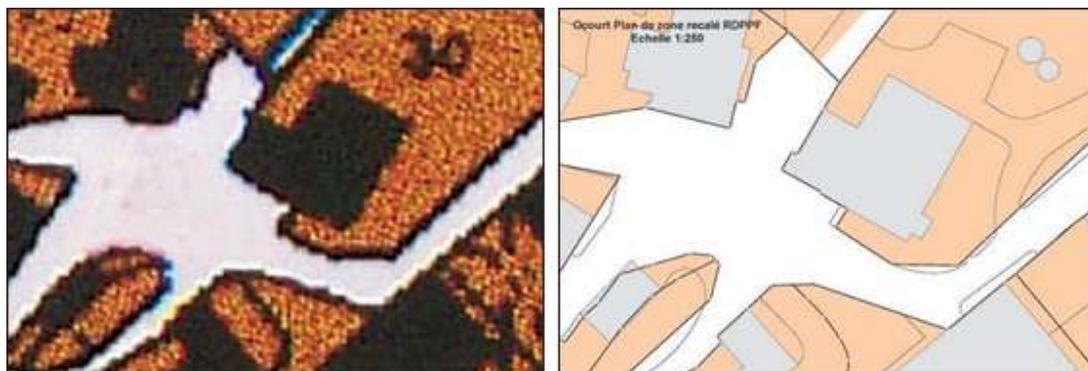
PLR Cadastre





## Technical aspects – Challenges faced

- Heterogeneity of the restrictions: need to standardize the data: Framework model
  - Guarantee interoperability between all actors
- Dematerialization of the information
  - Delicate task: need to be accurate in the transcription, and adjusted to the data of cadastral surveying





## Benefits, limits of the concept and return on investment

- Benefits
  - Centralization of the information and easy to access at all time  
-> Increase legal safety of land property
  - Digital transition: better availability of geoinformation
- Limits of the concept
  - Not all restrictions are available yet
  - The PLR Cadastre does not enjoy public faith
- Return on investment
  - Hard to quantify direct costs savings
  - Evaluated by a survey: Positive impact of the PLR Cadastre: time saving and efficacy shown.



## Conclusion and prospects

- Essential tool for all operators who work with the landowner property.
- What is planned next for the PLR Cadastre:
  - Expanding to new restrictions
  - Diversifying the kind of restrictions



Thank you all for your attention!