

The Comprehensive Cadastre –
The Tool comprising the Wisdom of the Ages to master the
Challenges of the Modern World

Jürg Kaufmann, Switzerland

Agenda

Development of Cadastres

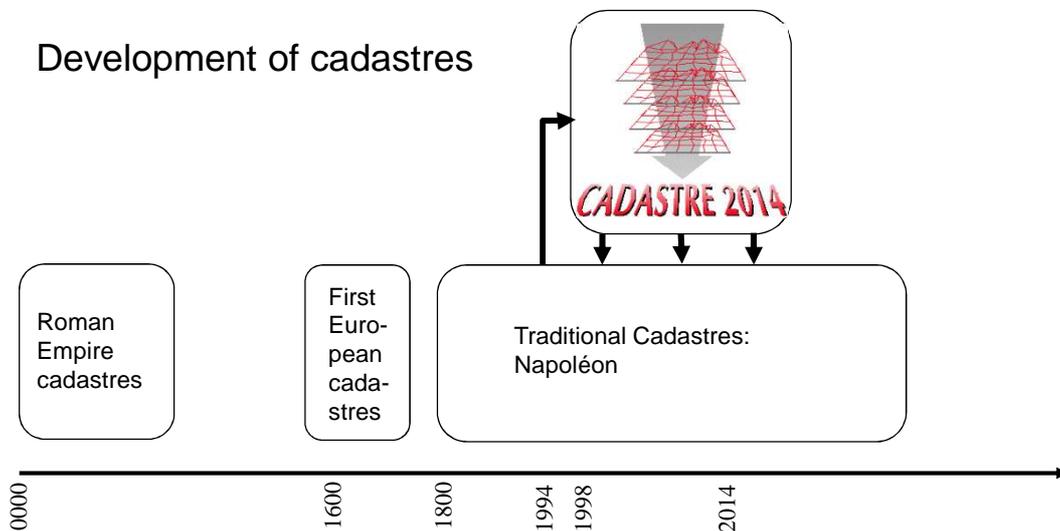
Structure of the Comprehensive Cadastre

Precondition for the Comprehensive Cadastre

Steps to Implement a Comprehensive Cadastre Successfully

Wisdom of the Ages to Master the Challenges of the Modern
World

Development of cadastres



The six statements of Cadastre 2014

Statement 1 – Cadastre 2014 will show the complete legal situation in land, including public rights and restrictions.

Statement 2 – The separation between maps and registers will be abolished.

Statement 3 – Cadastre Mapping will be dead – long live modelling

Statement 4 – Paper and Pencil Cadastre will have gone.

Statement 5 – Cadastre 2014 will be highly privatized! Public and private sector working closely together.

Statement 6 – Cadastre 2014 will be cost recovering.

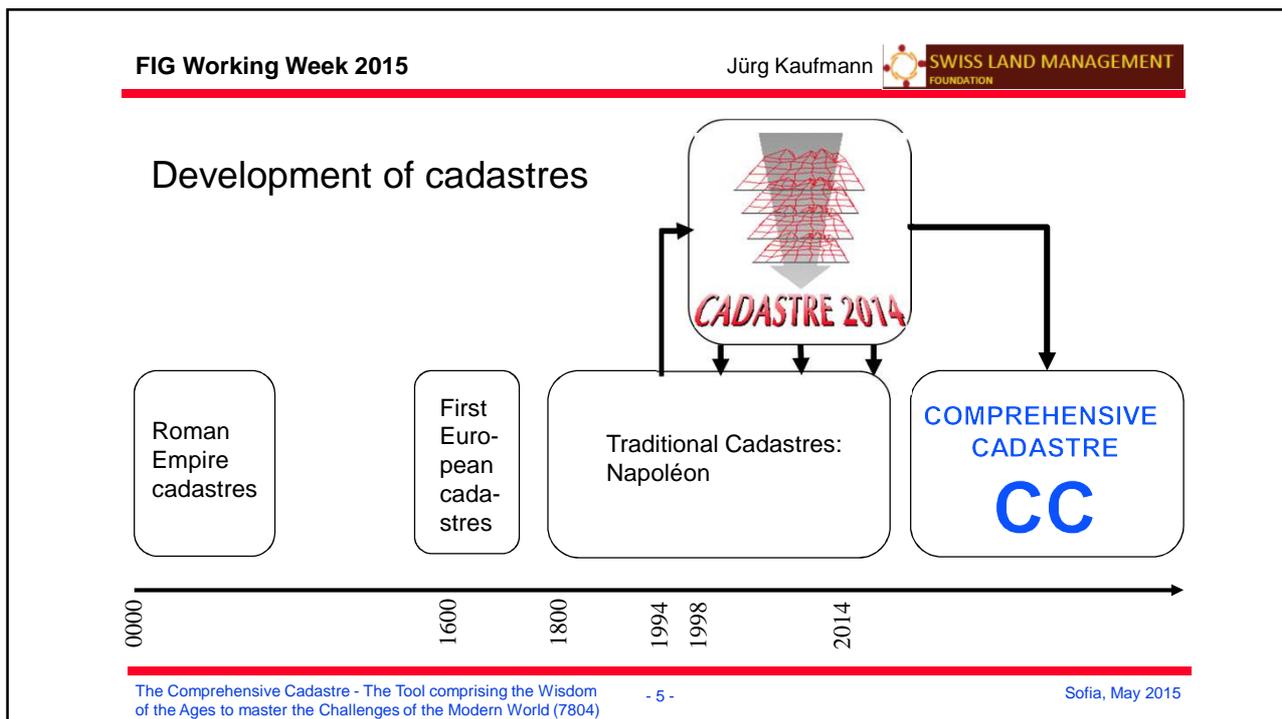
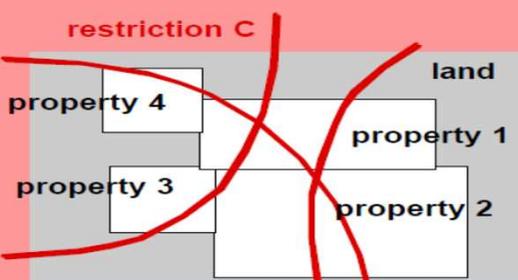


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Statement 1 on Cadastre 2014

Cadastre 2014 will show the complete legal situation of land, including public rights and restrictions!



restriction A restriction B

Comment: The population of the world is growing. The consumption of land is increasing. The absolute control of the individual or of legal entities of land is increasingly being restricted by public interest. To provide security of the land tenure, all facts about land must be made obvious by the cadastral system of the future.

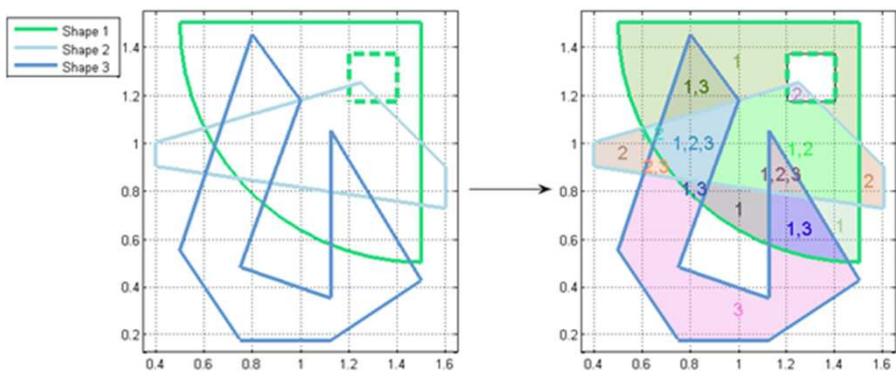
Consequences: A new thematic model is necessary. Surveyors must take into consideration public law.

The Comprehensive Cadastre - The Tool comprising the Wisdom of the Ages to master the Challenges of the Modern World (7804) - 6 - Sofia, May 2015

The principle of legal independence

Legal Topics:	Legal Object Boundaries:	Rightful Claimants:
.....	
Resource exploitation		Chartered company
Collective land rights		Corporation
Water protection		Society
Traditional rights		Tribe, Clan
Environmental protection		Society
Land use planning		Society
Land property		Private Land Owners
Topography		Society
Natural resources		Society
Natural land objects		Society

Determination of relations between land objects



Shape 1 = Land parcel
 Shape 2 = natural hazard zone
 Shape 3 = groundwater protection zone

arithmetically determined parts of parcel:
 1,2 and 1,2,3 in natural hazard zone
 1,3 and 1,2,3 in groundwater protection zone

Switzerland: Content of the Ordinance on The Cadastre of public-right Restrictions of the Landownership

Section 1:	General provisions
Section 2:	Content and Information
Section 3:	Inclusion into the Cadastre
Section 4:	Forms of Access
Section 5:	Authentication
Section 6:	Function as official gazette
Section 7:	Organization
Section 8:	Financing
Section 9:	Participation
Section 10:	Final Provisions

Switzerland Cadastre on Public.Law Restrictions (PLR-Cadastre)

Art. 16 Subject matter and form

- 1 The Cadastre of public-law restrictions shall contain public-law restrictions on landownership rights which, in accordance with the provisions of the Civil Code, are not part of the Land Register.
- 2 The Federal Council determines which official geodata under federal legislation are entered in the Cadastre of public-law restrictions.
- 3 The cantons may define additional official geodata of proprietary nature that must be recorded in the Cadastre of public-law restrictions.
- 4 The Cadastre of public-law restrictions shall be made available in electronic form either online or by any other method.
- 5 The Federal Council shall determine the minimum requirements with regard to the organisation, management, data harmonisation, methods and processes for the Cadastre of public-law restrictions.

Data modeling for the Comprehensive Cadastre

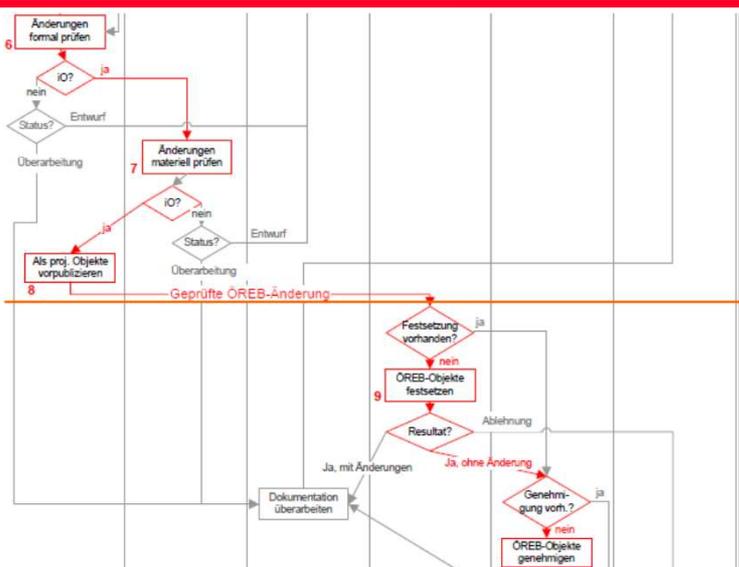
Statement 3 on Cadastre 2014

The Cadastral mapping will be dead! Long live modelling!

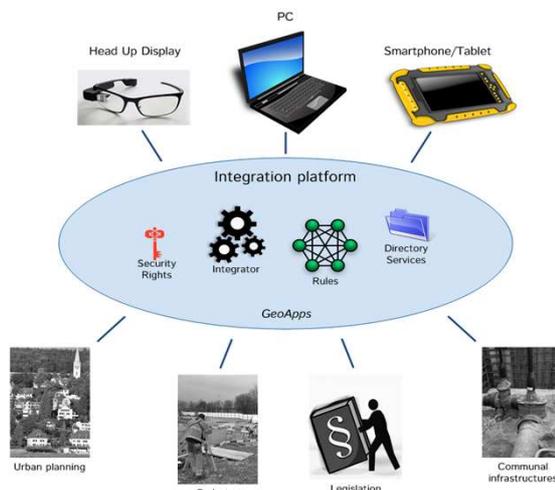
Comment: Maps have always been models, but the available technology did not allow for the use of these models in a flexible manner. So in mapping flexibility had to be brought in by different scales. Different scales had to be represented by different data models. Modern technology allows the creation of maps of different scales and registers in different forms from the the same data model.

Consequences: In 2014 there will be no draftmen and cartographers in the domain of cadastre.

Procedures for the Definition of legal Arrangements



Switzerland GeoApp: A modern Web-Application approach



Summary: 9 steps to achieve a Comprehensive Cadastre

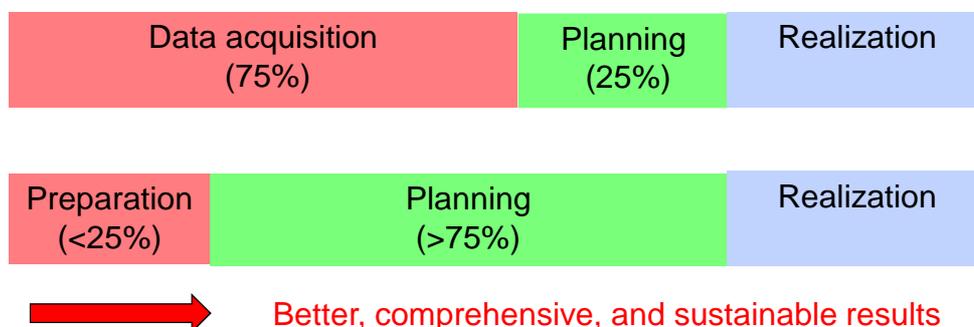
1. Introduce the possibility for the CC in your legal framework
2. Develop a short enactment on the CC
3. Introduce data and representation modeling as mandatory
4. Determine a responsible authority for the CC
5. Scan your legal framework including traditional rules
6. Identify the stakeholders
7. Create data models for all legal topics included into the CC
8. Identify the procedures for the definition of legal arrangements
9. Develop a feasible IT-Infrastructure

Wisdom Of The Ages to Master the Challenges of the Modern World

- **Base for the economic development**
- **Regularization of informal legal conditions**
- **Poverty reduction**
- **Prevention from land grabbing**
- **Implementation of Spatially Enabled Societies (SES)**
- **Land consolidation**
- **Better planning**
- **Rapid reaction on changes (technological, societal, catastrophes and conflicts)**

Tool to master challenges of the modern world

The relation between the expenditure of time for data acquisition and the time available for planning will be improved significantly:



Thank you for your attention

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FIG FIG Working Week
Switzerland 2019



Get to know us

Come along, have a drink, and get surprised!!!

**Wednesday, 20 May,
17h30-18h30
at
"Culture Beat"**

