



## Challenges for the multi purpose cadastre

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TS04B - Innovative Cadastre and Land Rights Management  
Jens Riecken, Markus Seifert

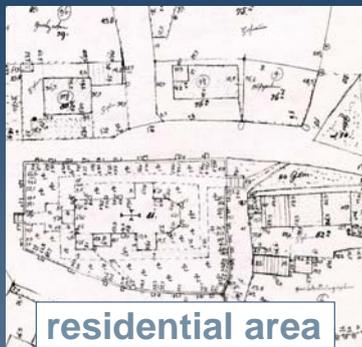
FIG Working Week 2012  
Rome, Italy, 6-10 May 2012



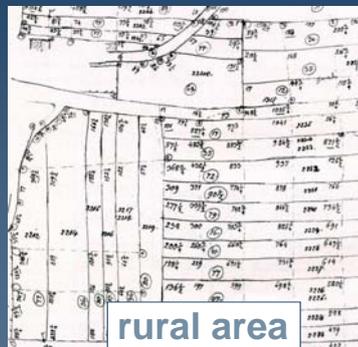
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## Cadastre always meets specific requirements



residential area



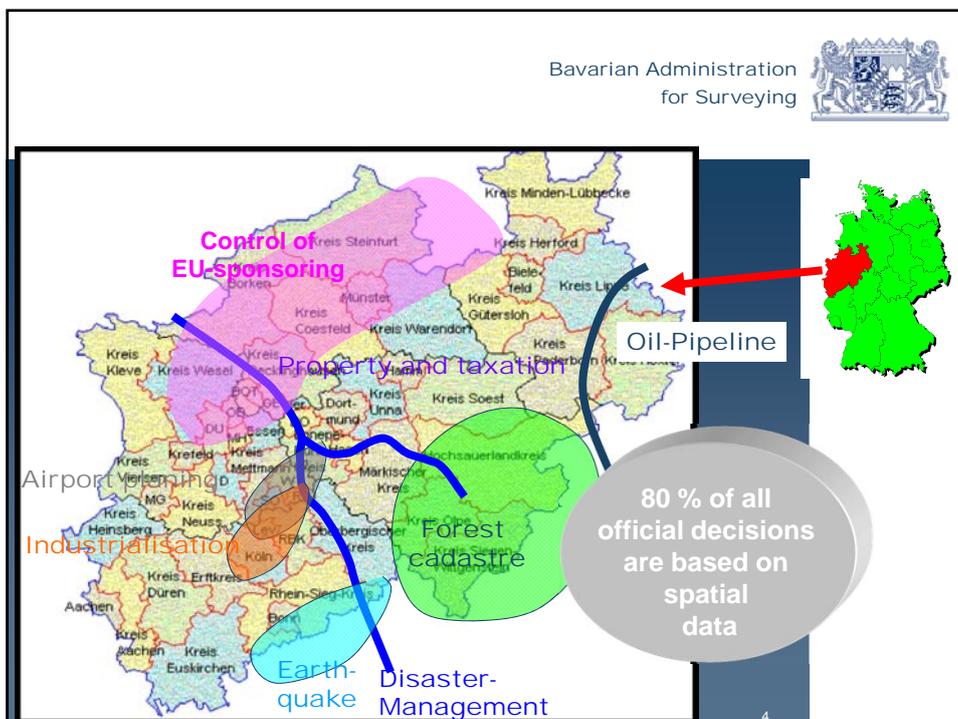
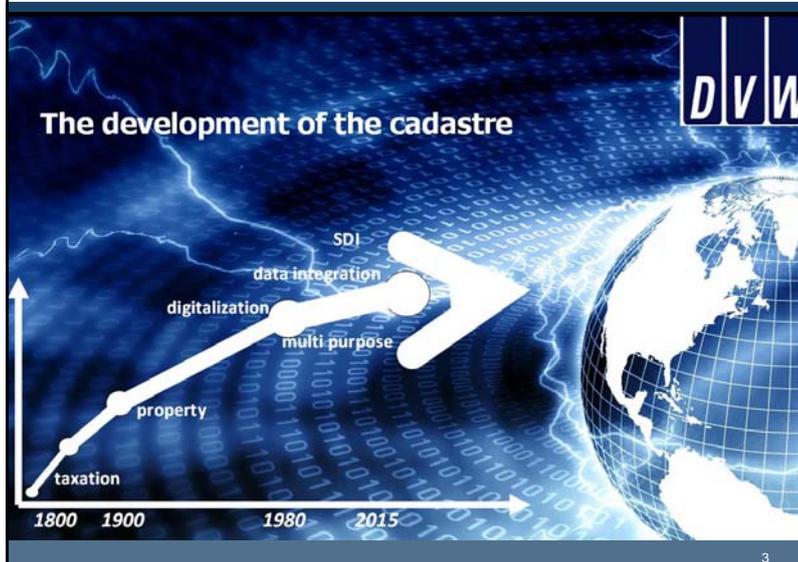
rural area

First cadastral survey of the year 1872

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# Strategical Thoughts

## 1. Development of the cadastre, the global context



**Strategical Thoughts**  
**2. Fitness for purpose, interoperability**



**ALK**  
 Automated Real Estate Map



**ALB**  
 Automated Real Estate Register



**ATKIS**  
 Official Topographic and Cartographic Information System



AFIS-ALKIS-ATKIS  
 Application Schema

**Strategical Thoughts**  
**3. Collection of new data**

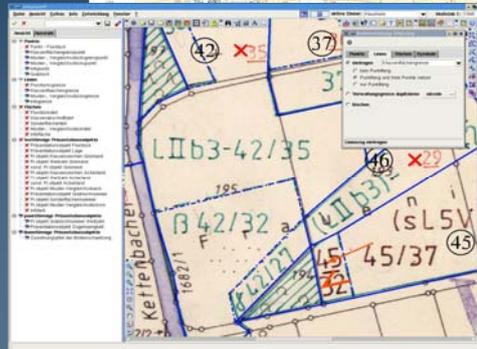


**Current activities:**  
 Digitalisation of  
 Soil Classification

Legal obligation

Users:

- Finance authorities
- Rural development
- ...



**Strategical Thoughts**  
3. Collection of new data



**Current activities:**

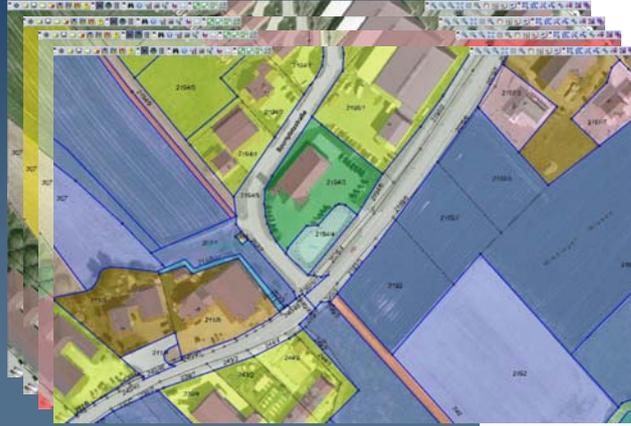
Registration of Land Use, rights and restrictions



Scale 1:1 000

Data Sources

- DCM, DOP
- Field units
- Topography (ATKIS)



**Strategical Thoughts**  
3. Collection of new data



**3D-Models of Buildings**

...as geographic core data in Germany



LoD0	LoD1	LoD2	LoD3	LoD4
2.5D Geländemodell	Klötzchenmodell	Standarddachformen	Reale Dachform	Modell von Innen- und Außenraum
finished	some states (e.g. Bavaria): finished others: until 2013	feasibility studies running	to be done by private surveyors	



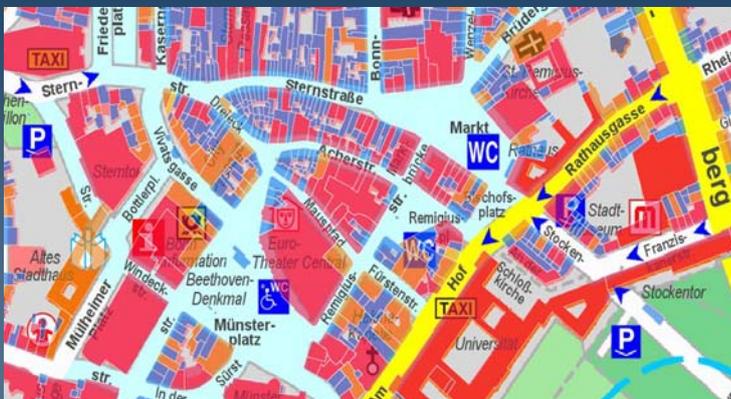
## New in Germany: 3D buildings (exported to GoogleEarth)



## Strategical Thoughts 4. Combination of cadastre with other data



## Potential solar capacity (exported to a city map)



## Strategical Thoughts

### 5. Cadastre as basis for thematic data

Bavarian Administration  
for Surveying

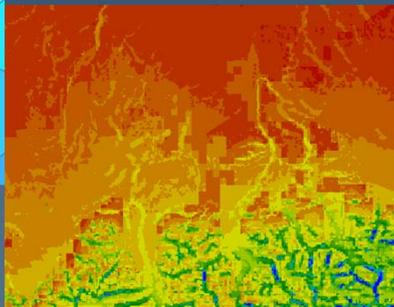


SDI provides a lot of thematic data that often need cadastral information to support sustainable development



geothermal temperature in 1000m depth

daily sunshine period



## Strategical Thoughts

### 6. Consider eGovernment activities

Bavarian Administration  
for Surveying



## SDI in Europe (INSPIRE)

... getting digital data of various topics via Internet



## Strategical Thoughts

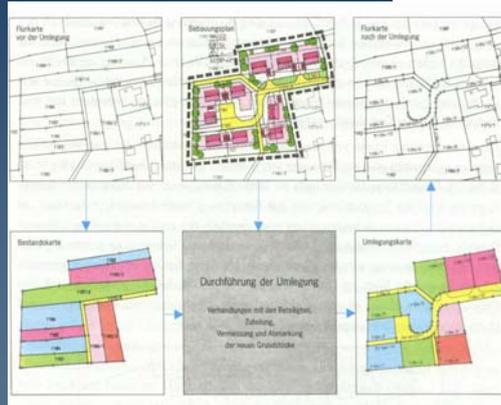
### 7. Support sustainable development

Bavarian Administration  
for Surveying



### Climate change measures start on cadastre level

The aim is to regroup the parcels in order to get a new structure that meets the requirements for buildings and other measures (e.g. solar power plants)



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## Strategical Thoughts

### 8. Consider user requirements

Bavarian Administration  
for Surveying



### What does a user need for sustainable development decisions?

- reliable data
- full data coverage of a country
- standardized data formats
- easy access (web services, open data)
- information about the data (actuality, resolution etc.)
- interoperable data (cross countries)

Knowing to

- Manage the territory
- Protect the environment
- Evaluate the cultural heritage

... the cadastre provides the basis for national and international spatial data infrastructure to support governance in sustainable development

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