

Land use control and property registration in Germany – procedures, interrelationships, IT systems

Hartmut Müller and Mirko Siebold

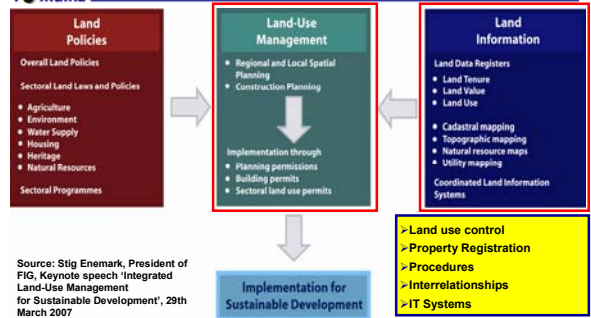
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 TS 7D – SDI for Land Management (TS 46)



i3mainz – who are we?



Fachhochschule Mainz
 University of Applied Sciences



Source: Stig Enemark, President of FIG, Keynote speech 'Integrated Land-Use Management for Sustainable Development', 29th March 2007



	Close (there is a close relationship between the objectives of the system and what happens in practice)	Distant (there is a distant relationship between the objectives and the reality of the system)
Discretionary (Departures to plans can be made)	UK	
Moderate (Mechanisms exist for departures to plans to be made)	Denmark Finland Ireland Netherlands	Belgium Portugal
Committed (no discretion for decisions to be made contrary to plans and policies)	Austria France Germany Luxembourg Sweden	Greece Italy Spain

Spatial Planning Systems - The European Perspective

Source: Stig Enemark, President of FIG, Keynote speech 'Integrated Land-Use Management for Sustainable Development', 29th March 2007



Land use control by Spatial Planning



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Member State	Type of local authority	Number	Average population
France (Metropole)	Communes	36,558	1,550
Luxembourg	Communes	118	3,300
Austria	Gemeinden	2,300	3,000
España	Municipalities	8,077	4,800
Deutschland	Gemeinden	18,040	5,000
Italia	Comuni	8,102	7,000
Suomi/Finland	Kunnat/Kommuner	454	11,000
Belgique/België	Gemeenten/Communes	589	17,000
Denmark	Municipalities	278	20,000
Nederland	Gemeentes	647	23,000
Sverige	Kommuner	288	30,000
Portugal	Câmaras	305	34,000
Irland/Éire (2)	Districts	98	40,000
United Kingdom	Districts	483	119,000
Ellas (3)	Prefecture	54	190,000

Diversity of local level authorities in Europe

Source: Stig Enemark, President of FIG, Keynote speech 'Integrated Land-Use Management for Sustainable Development', 29th March 2007

(1) Where there is more than one level of local authority (for example the UK) the table refers to the level with primary responsibility for local level instruments. The average gives an indication only of the size of units responsible.
 (2) There is a significant range in Ireland with 49 urban planning areas having an average population of only 5,100.
 (3) Local government in Greece has very limited planning powers. The prefecture is the lowest tier to which plan making powers are decentralised although in exceptional cases some powers have been delegated to municipalities.

Hartmut Müller, i3mainz, Institute for Spatial Information and Surveying Technology, Mainz, Germany, <http://www.i3mainz.fh-mainz.de>

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Parcelling of local level authorities in Germany

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German Spatial Planning level	Responsibility	Medium
Federation Spatial planning	Federation	Federal Regional Planning plan
Federal States Regional planning	Federal States' Ministries	Federal State Development Plan
Federal State sublevel Regional planning	Federal States' Ministries	Regional plan Scale 1/25,000, 1/50,000
Local level urban land-use planning • preparatory • legally binding	Municipalities	• preparatory land-use plan scale 1/5,000, 1/10,000 • legally binding land-use plan scale 1/5,000, 1/1,000
Sectoral planning	Sectoral planning agencies road construction, etc.	Sketch planning and authorization planning

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Federation Level

Population development in the Federal Republic of Germany

Source: Spatial Planning Report 2005, Federal Office for Building and Regional Planning

Bevölkerungsentwicklung 1997 bis 2003 in %

- blue: bis unter -5,0
- light blue: -5,0 bis unter -1,5
- yellow: -1,5 bis unter 1,5
- orange: 1,5 bis unter 5,0
- red: 5,0 bis unter 7,5
- dark red: 7,5 und mehr

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Federal State Level

Development Concept of German Federal State Rhineland-Palatinate

Source: Federal State Development Plan Rhineland-Palatinate, Federal State Ministry of the Interior and of Sports

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Local Municipality Level

Preparatory land-use plan in Germany, overview

Source: City of Mainz, Germany

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Local Municipality Level (cont.)

Preparatory land-use plan in Germany, detail

Source: City of Mainz, Germany

Update frequency 10 to 15 years



Local Municipality Level (cont.)

Legally binding land-use plan in Germany

Source: City of Mainz, Germany

Preparation and update on demand



The Process of Urbanization and Land Reallocation in Germany



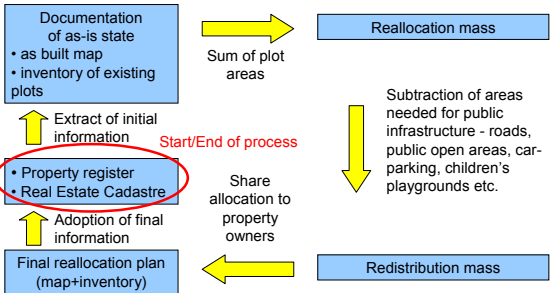
legally binding land-use plan

reallocation

plots suitable in terms of location, shape, size

- Involved parties**
- owners of properties within reallocation area
 - holders of a title entered or not in the land register
 - municipality
 - public agencies (provision of local public infrastructure)

Urbanization process in Germany - Reallocation of Land -



Process of Land Reallocation in Germany



**Land information systems
 in
 Germany**

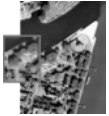


Spatial Basic Data Ressources

Data Provided by Surveying authorities



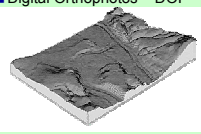
- Digital Landscape Models – DLM
- Digital Topographic Maps – DTK



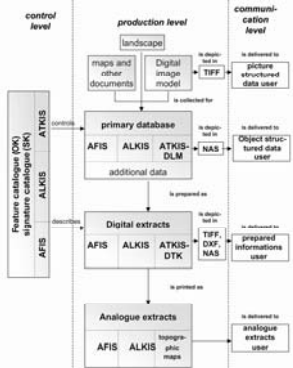
- Digital Orthophotos – DOP



- Automated Real Estate Register – ALB ownership, land use, etc.
- Automated Real Estate Map – ALK boundaries, buildings, etc.
- Property Register



- Digital Terrain Models – DGM



AAA
 AFIS-ALKIS-ATKIS
 The new Reference
 Model for German
 Spatial Basic Data

Source: AdV, 2004



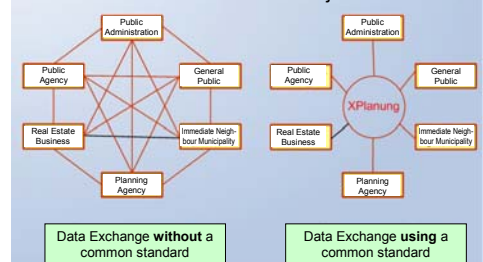

**Some Important Current
 E-Government Initiatives in Germany**

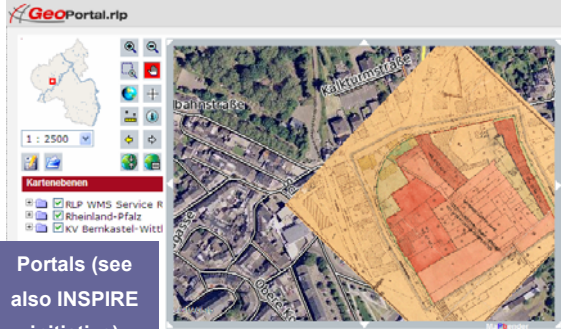
- BundOnline 2005 (Federation Online) adaption of services at the Federation level
- Deutschland-Online (Germany Online) vertical integration of processes at
 - Federation level
 - Federal State level
 - Municipality level
- MEDIA@Komm-Transfer horizontal dissemination at Municipality level



**Standard Specification for Electronic Exchange of
 Urban Land-use Plans**

The Model Project XPLANUNG





- Land development in urban areas under control by strict urban land-use and building regulations
- Provision of new urban land in the responsibility of municipalities
- Reallocation procedures for the rearrangement of land parcels according to the legally binding land-use plans
- Redistribution of the new parcels to the owners
- Update of property registration
- Participation of citizen and involved agencies in the planning process
- Development of German SDI in conformance with INSPIRE
- Emerging use of WWW technology

Principles of Urban Planning and property registration in Germany

Summary

1. Built up of an efficient Spatial Data Infrastructure has to consider the specific conditions of the given political and governmental system, ex.: the German political system of federalism
2. In the context of Spatial Information Management the interrelation of spatial planning, of land registry and of real estate cadastre plays a major role
3. The adoption of IT standards (OGC, ISO, WWW, etc.) is a driving force for the implementation of SDIs and will continue to play this role in the near future

Some Conclusions