

# Cadastre 2014 - A Vision on Future Cadastral Systems

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CADASTRE 2014**
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## ABOUT FIG

- founded in 1878 in Paris
  - federation of > 100 national associations representing surveying disciplines
  - UN-recognised NGO
  - focus on the surveyors ability to response to social, economic, technological and environmental change and to meet the needs of society and environment
-

**1st Congress on Cadastre in the European Union  
Cadastre 2014:**

Level	General Business	Global Development Business
Strategic (goal setting)	Sound economic development	Sustainable development
Management (measures to meet strategy)	Company management	Land management (resource management)
Administrative (business processes)	Administrative unit	Land administration
<b>Operation</b> (tools for documenting and monitoring)	<b>Accounting system</b> <ul style="list-style-type: none"> <li>• accepted principles of bookkeeping</li> <li>• reliable</li> <li>• complete</li> <li>• appropriate to needs</li> <li>• adaptable to development</li> </ul>	<b>Cadastre</b> <ul style="list-style-type: none"> <li>• accepted principles of documentation of rights/restr.</li> <li>• reliable</li> <li>• systematic</li> <li>• appropriate to needs and laws</li> <li>• adaptable to development</li> <li>• public</li> </ul>

**1st Congress on Cadastre in the European Union  
Cadastre 2014:**

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**A VISION FOR A FUTURE CADASTRAL SYSTEM**

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



July 1998

## Design of Modern Cadastral Systems

Modern cadastres are to:

- give reliable and complete information on the legal situation of land by taking into consideration all legal impacts on land;
- adapt to the changing needs of societies by flexible organizations and well defined information structures and data models;
- work straight forward and efficiently by making use of appropriate technology;
- achieve best practice and flexibility by bundling the strengths of the public and private stakeholders;
- be run at minimum cost for citizens and communities.

## Traditional Definition

### Land Parcel

A land parcel is a piece of land with defined boundaries, on which a property right of an individual person or a legal entity applies.

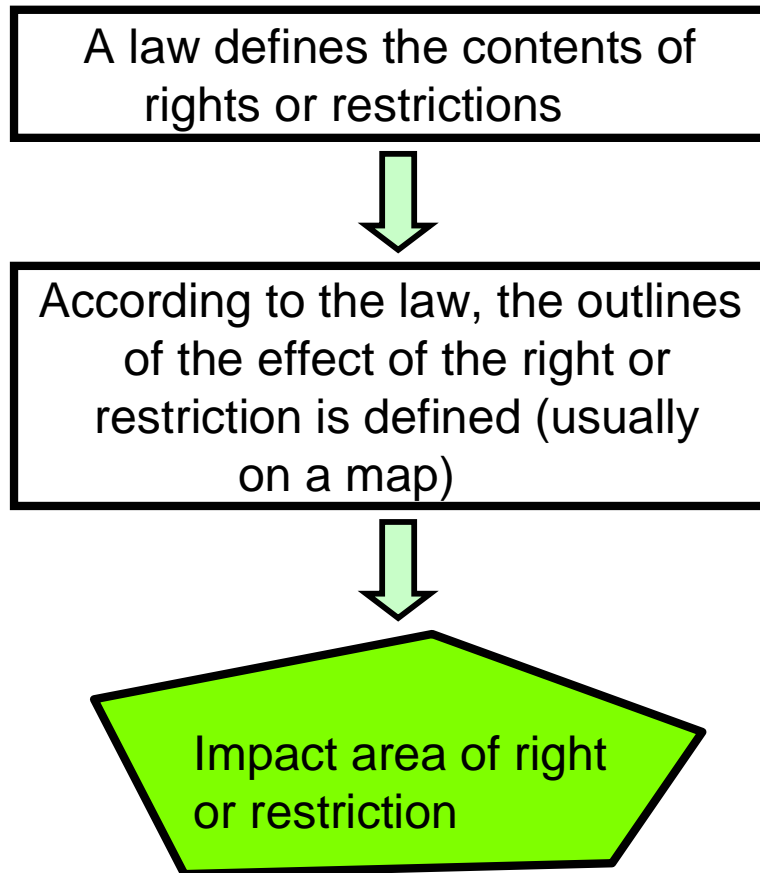
## Definition of Cadastre 2014

### Land Object

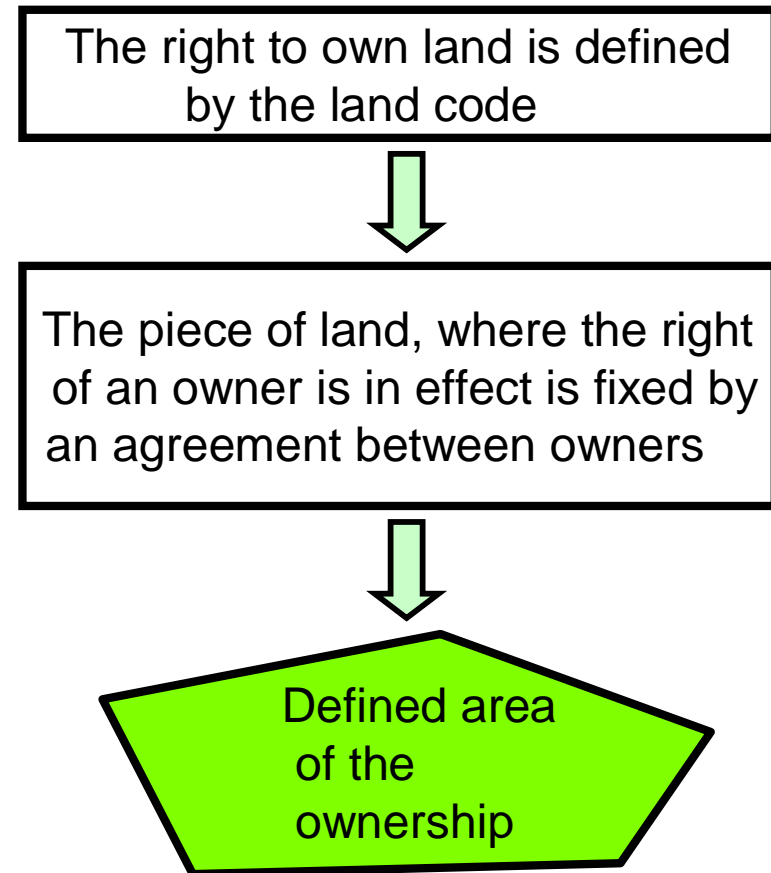
A land object is a piece of land in which homogeneous conditions exist within its outlines. The legal land objects are described by the legal content of a right or restriction and the boundaries which demarcate where the right or restriction applies.

## The coming into being of a Land Object

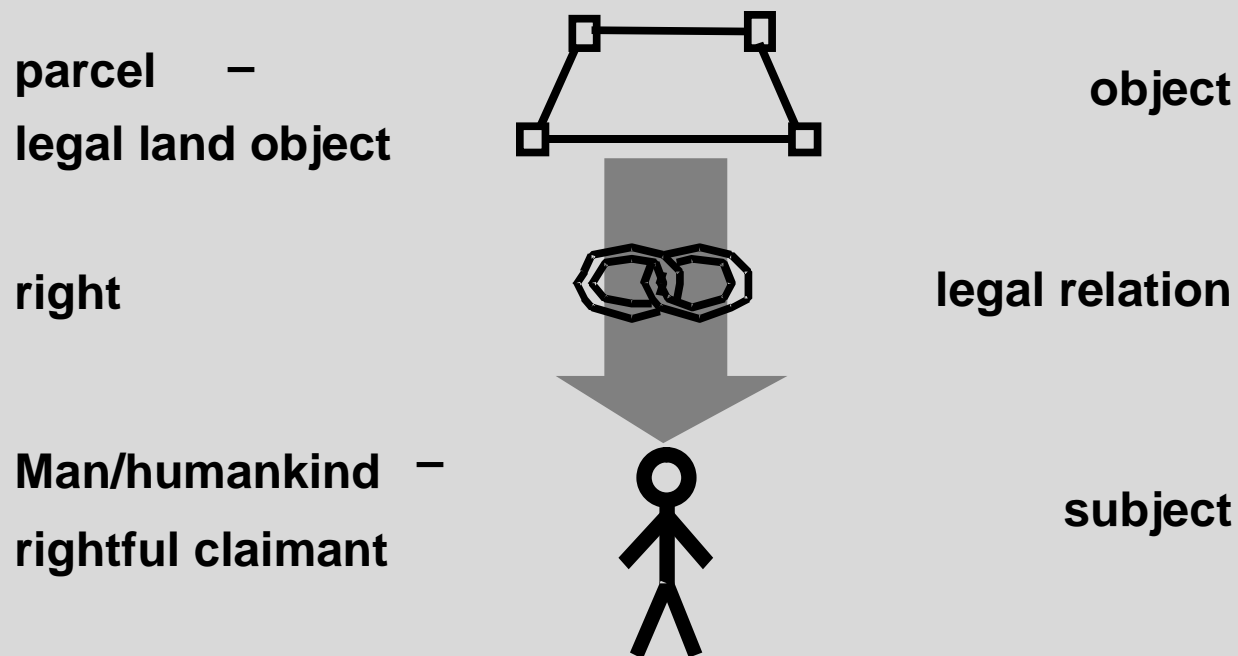
Process:



Example:



**Relation man/land  
in Cadastre 2014**



## Traditional Definition

### Cadastre

Cadastre is a methodically arranged public inventory of data concerning **properties** within a certain country or district, based on a survey of their boundaries.

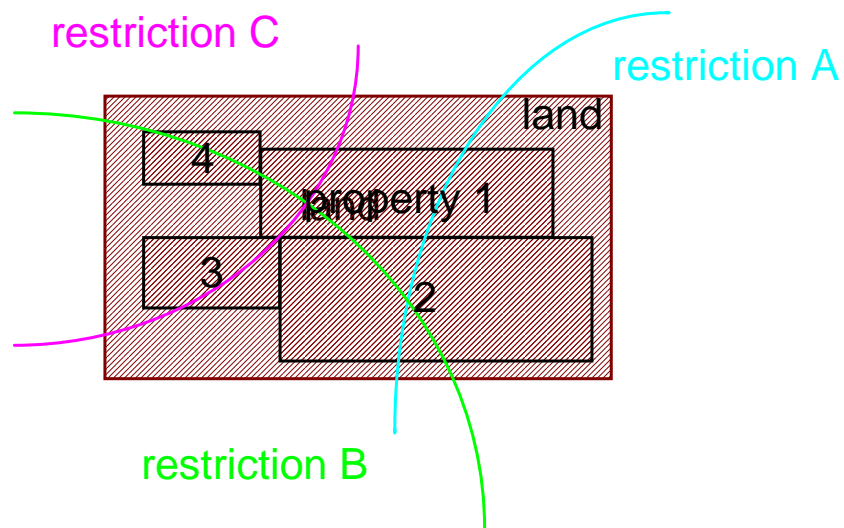
## Definition of Cadastre 2014

### Cadastre 2014

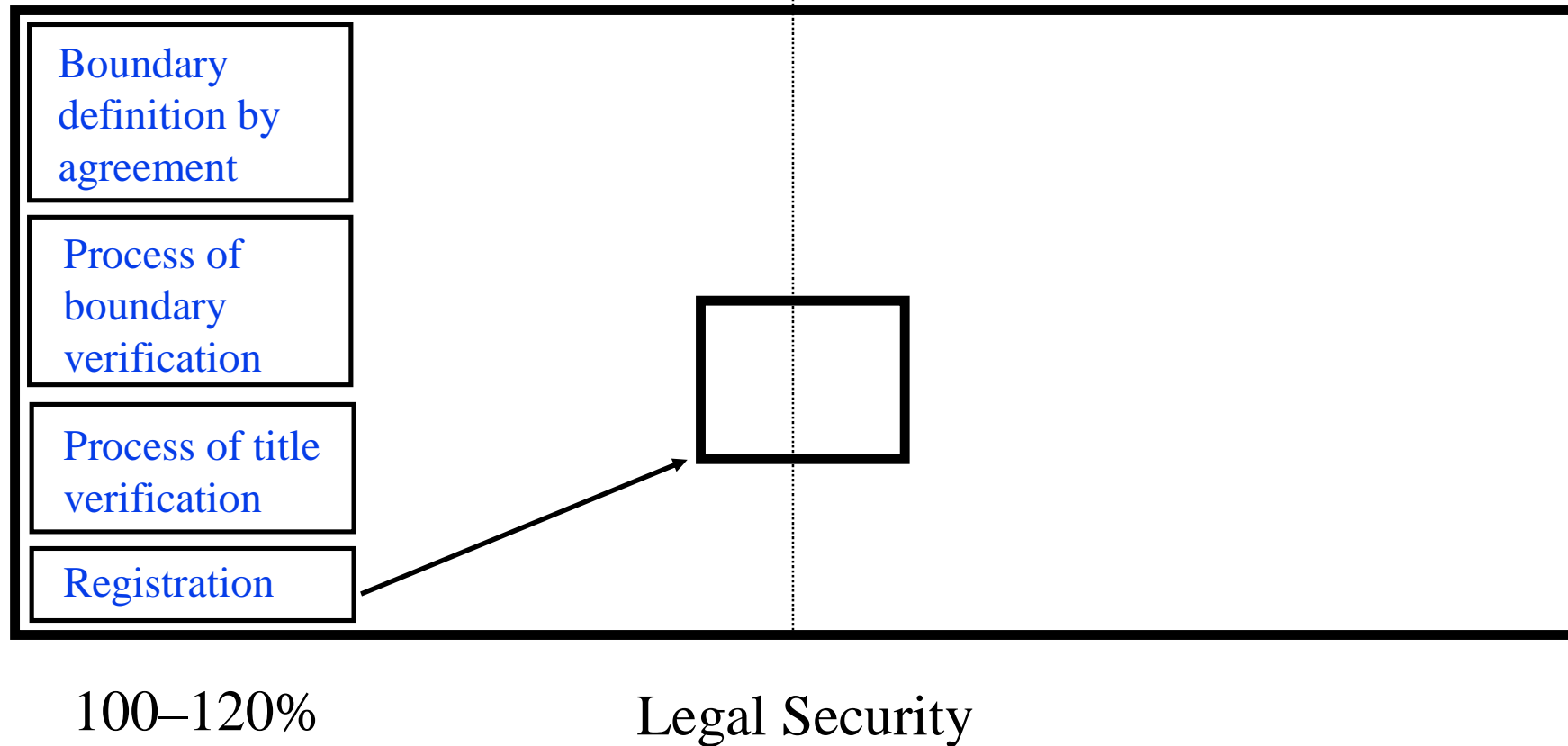
Cadastre 2014 is a methodically arranged public inventory of data concerning all **legal land objects** in a certain country or district, based on a survey of their boundaries

## Statement 1 on Cadastre 2014

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



## Traditional Cadastre based on "Private Law"

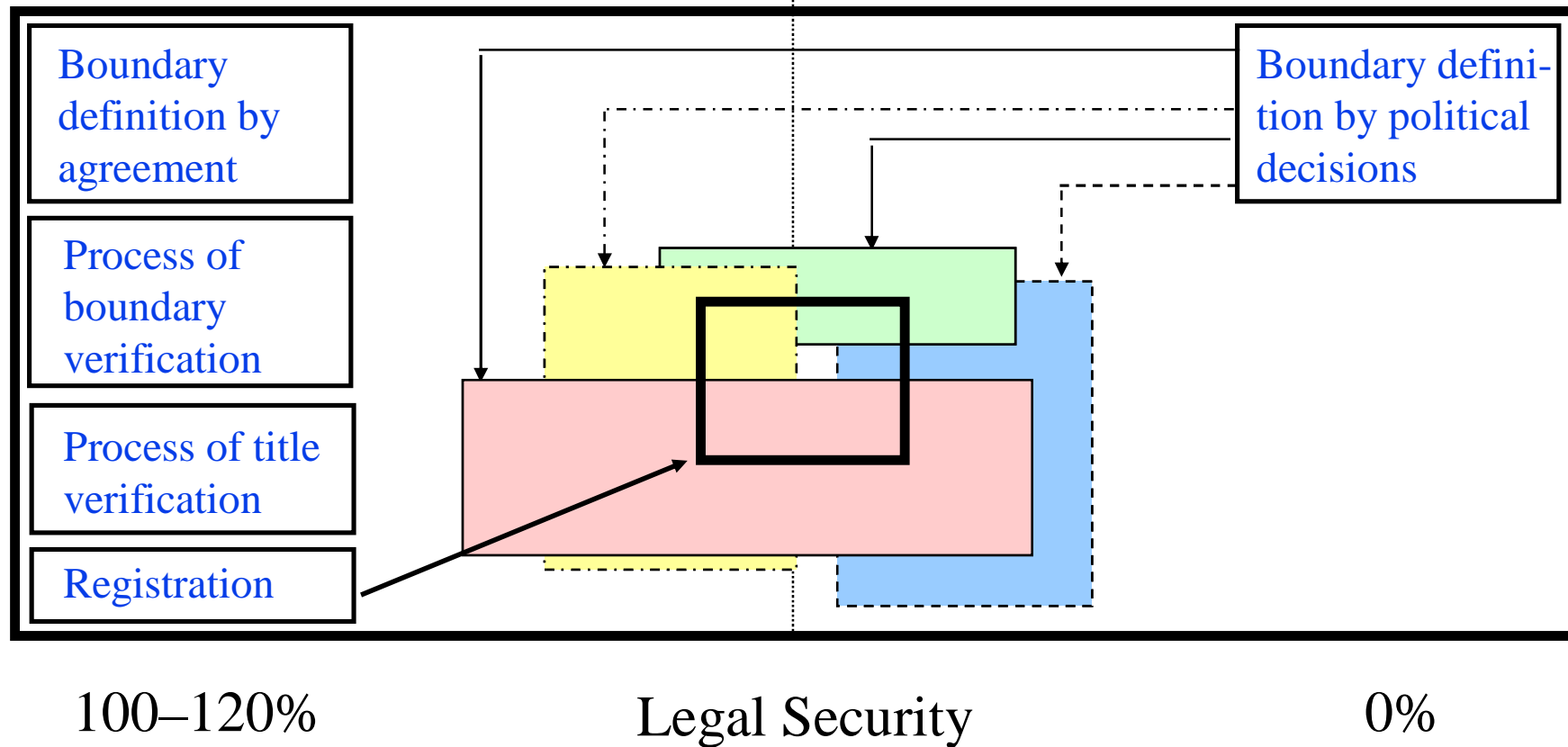


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Cadastre 2014:

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Traditional Cadastre based  
on "Private Law"

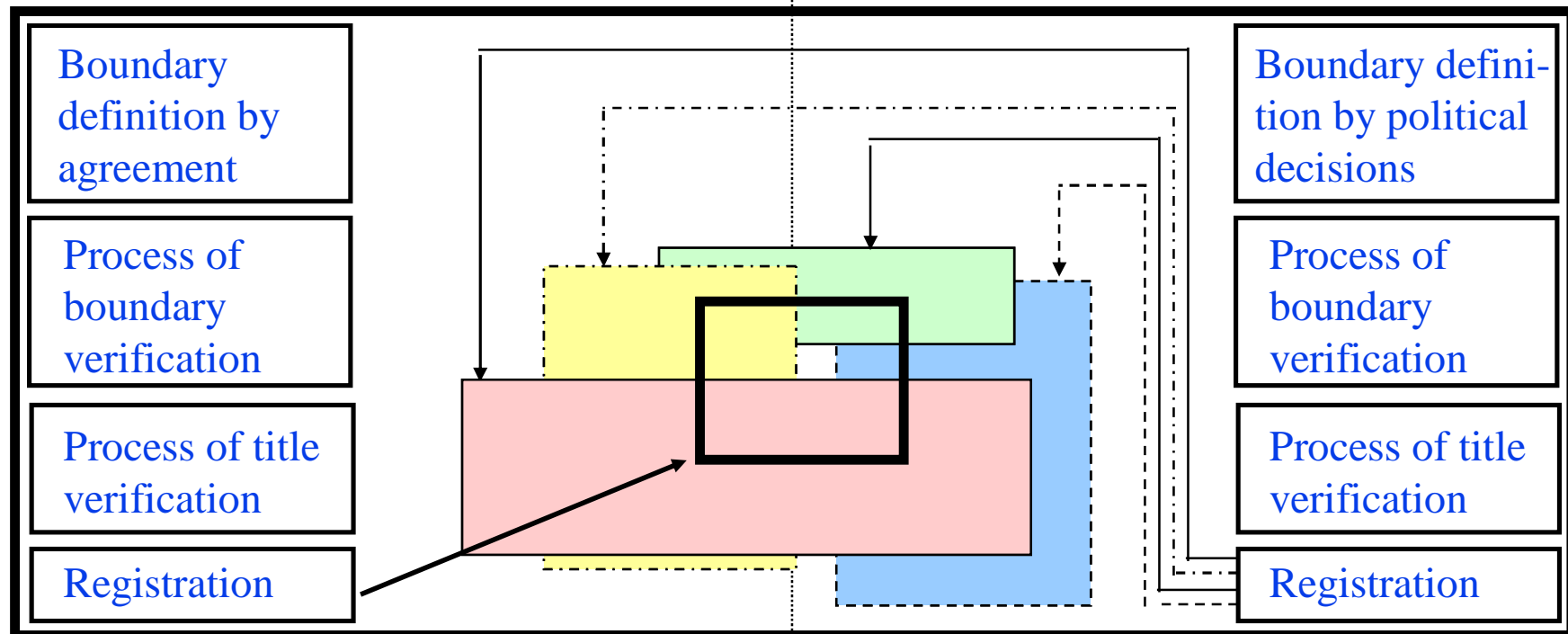
Impacts from  
"Public Law"



## Cadastre 2014 documenting "Private Law" and "Public Law"

Traditional Cadastre based  
on "Private Law"

Impacts from  
"Public Law"

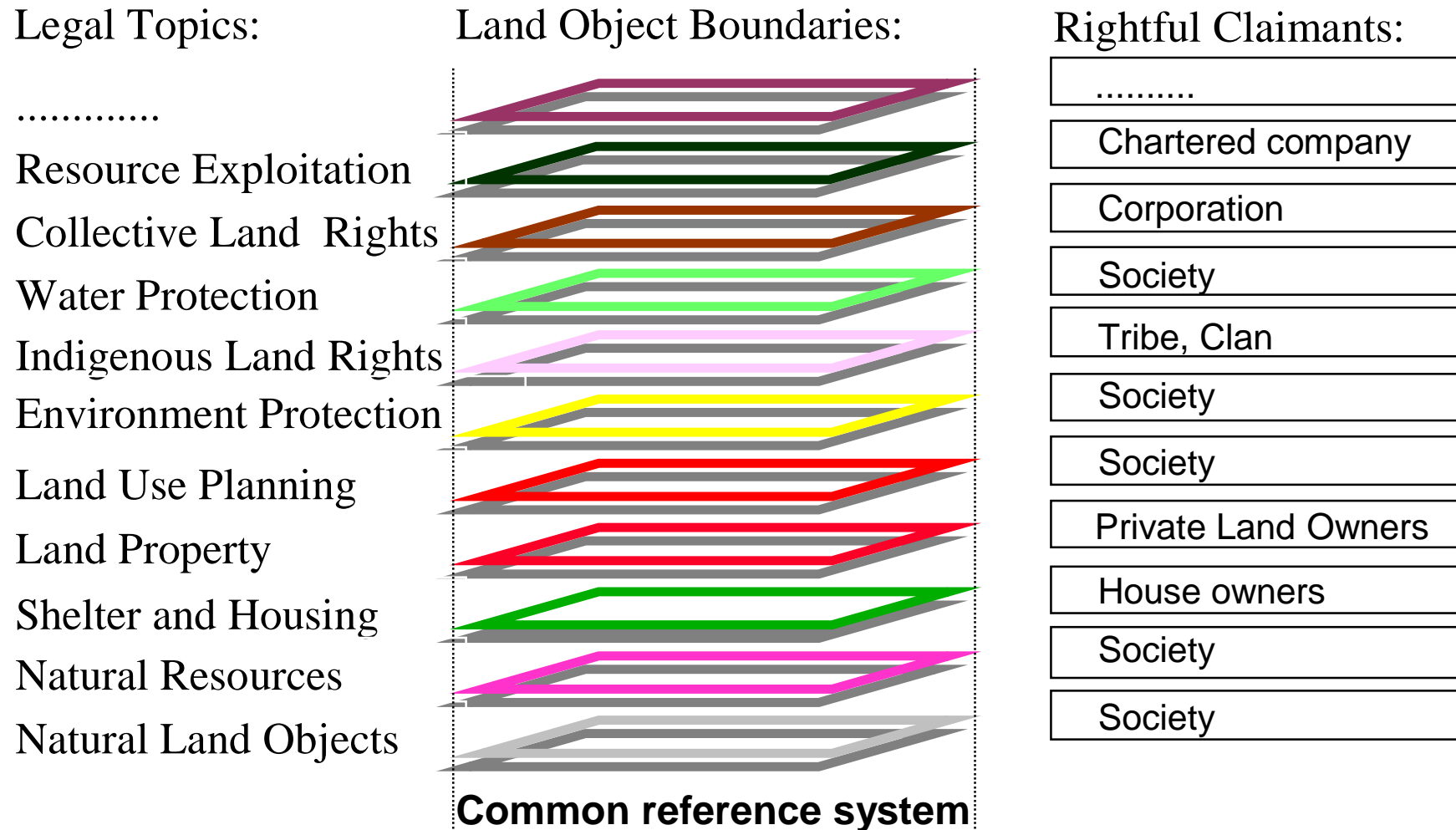


100–120%

Legal Security

100%

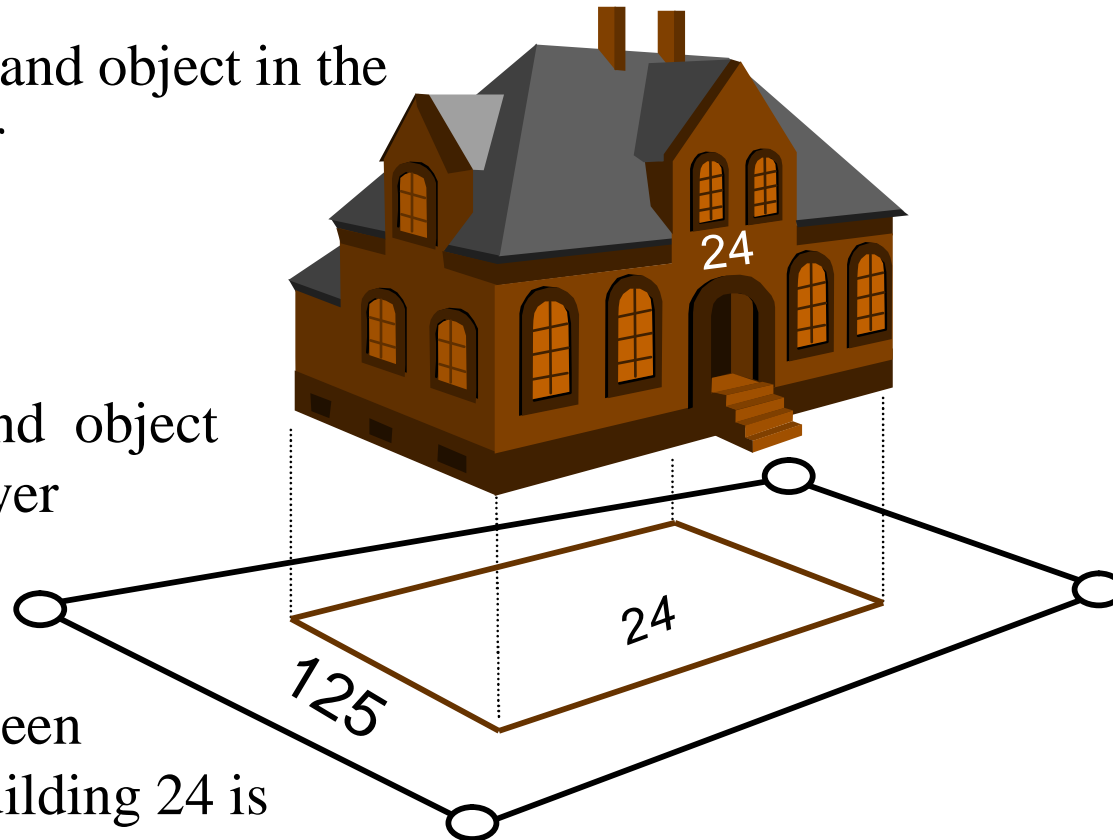
## The principle of legal independence



## The effects of polygon overlaying

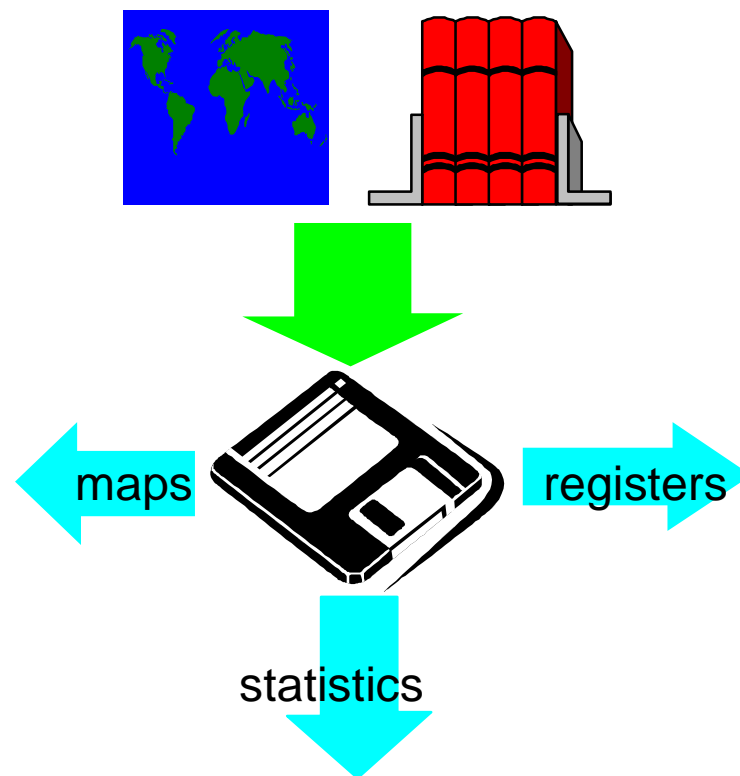
Building 24 is a land object in the  
information layer  
'Constructions'

Parcel 125 is a land object  
of information layer  
'Private Property'



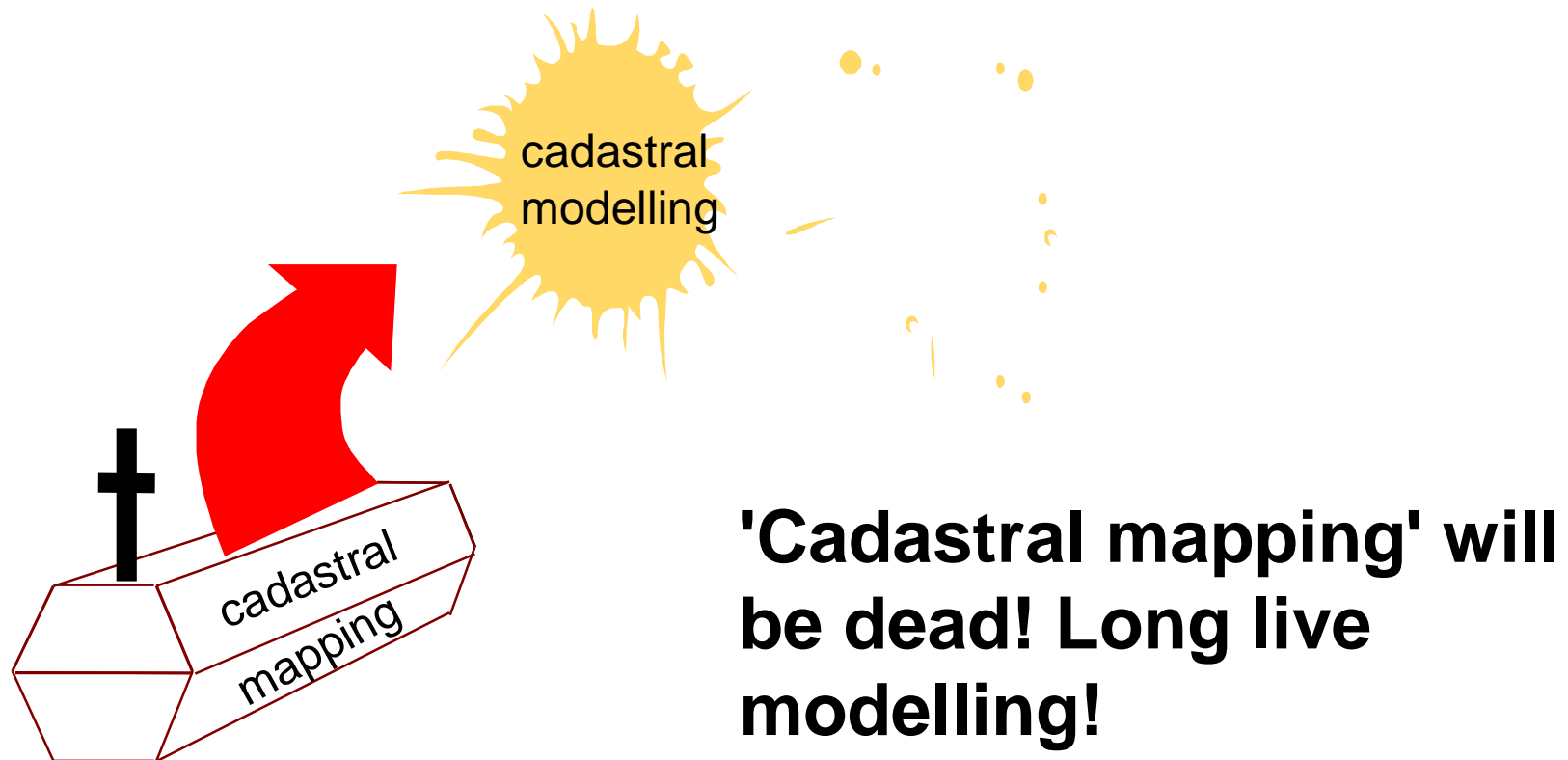
The relation between  
parcel 125 and building 24 is  
found by 'cutting' the layers 'Private Property with 'Constructions'

## Statement 2 on Cadastre 2014



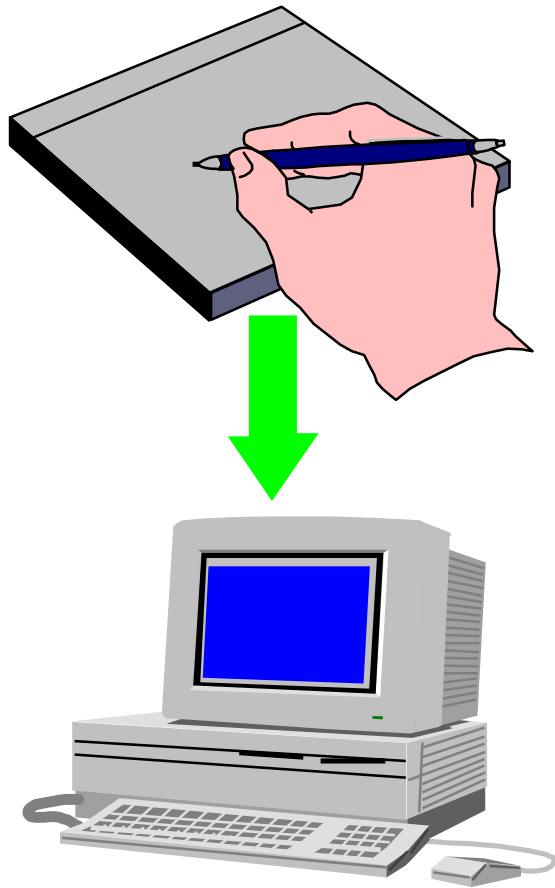
**The separation between  
'maps' and 'registers' will  
be abolished!**

## Statement 3 on Cadastre 2014



**'Cadastral mapping' will  
be dead! Long live  
modelling!**

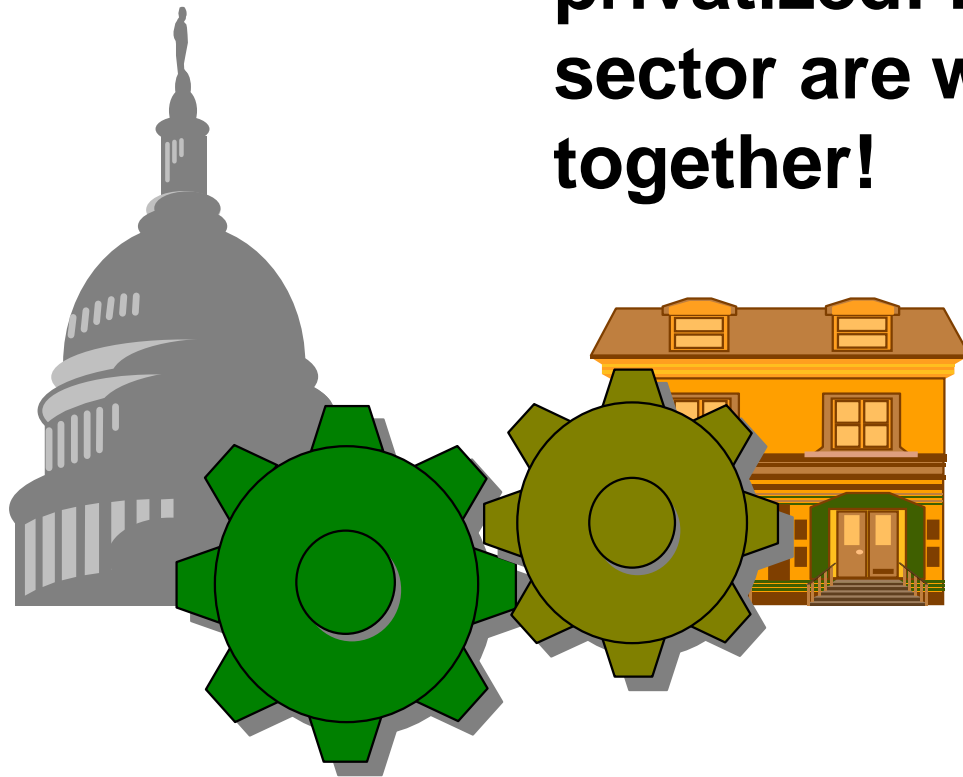
## Statement 4 on Cadastre 2014



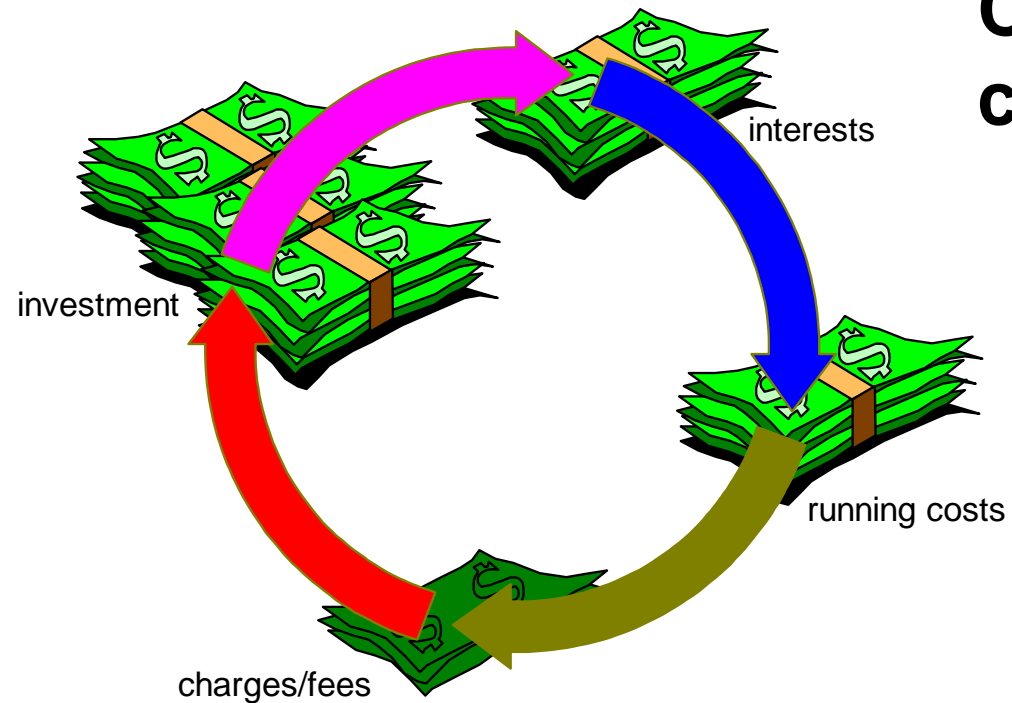
**'Paper and pencil  
cadastre' will be  
gone!**

## Statement 5 on Cadastre 2014

**Cadastre 2014 will be highly  
privatized! Public and private  
sector are working closely  
together!**

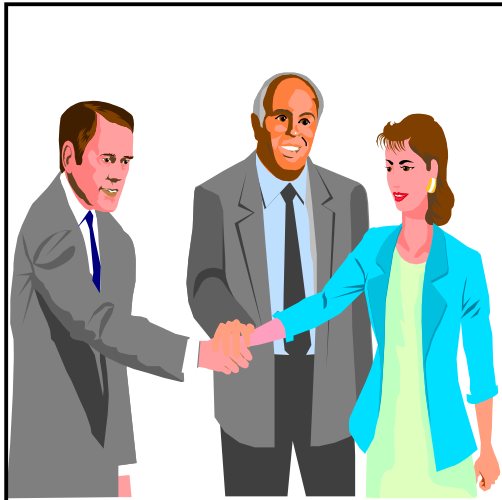


## Statement 6 on Cadastre 2014



**Cadastre 2014 will be  
cost recovering!**

## Contributions of Cadastres to Sustainable Development



Indisputable facts  
avoid fruitless  
discussions



Complete and reliable  
information prevents  
time consuming data  
acquisition exercises



Planned measures  
tested in the model  
prevent erroneous  
decisions

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More information: [www.swisstopo.ch/fig-wg71](http://www.swisstopo.ch/fig-wg71)  
or [www.fig.net](http://www.fig.net)

**Thank you for your attention!**