Cadastre 4.0 -
Integrating the community for global security on land tenure

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200 years of innovation

Fiscal  →  Legal  →  Local  →  Digital

Taxation  →  Land Tenure  →  Boundaries  →  Information

1817  →  1848  →  1970  →  2000

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**Taxation**
- affordable to owners
- individuals versus investors
- ownership/leasehold/rent
- double taxation
- property costs
- taxation of value / income
- facilitate investments
- steer property markets

**Planning**
- personal interests
- loss of value / income
- customer needs
- housing policy
- investments
- secure land for locals

**Real estate market**
- informal markets
- impact on existing value
- poverty prevention
- economy
- profit making investors
- private versus public

**Security**
- long-term investments
- loans, compensation
- trust, transparency
- responsibility
- reduce risks
- long-term investments

Social aspects

political aspects

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Global relevance

Policy

Society

Taxation
Planning
Real estate market
Security

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What about technology?

- internet of things / VGI / sensors e.a.
- everyone produces and publishes everything
- data are accessible for everyone and become a public (community) good
- data reflect visible world ≠ legal status
- smart procedures for selective processing of big data
- smart systems – automatic acquisition of data and information
- work is no longer bound to location of land
- users (land owners) equal partners in systems
- users (land owners) may be big players in systems
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Data acquisition

Professionals → Technology → Citizen → Community → Big Data

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New business models

- communities produce **substitutes**
- society is user **and** producer
- open government data vers. open data
- **ownership of data** (citizen, third party, community data…) and structures (hosts, clouds…..)
- financing / self-financing / cost-benefit models
- **shift of power** from public authorities to communities/citizen
- distributed responsibility models
- public authorities take role as facilitator and moderator
- **users** equal partners in systems
- change of paradigm for professionals
The changing paradigm

Cadastre for Society gets created by Society
- **technology** is available and cheap
- **new type** user society growing
- land owners get **active** information providers
- citizen as **passive** data providers

**Stakeholders become Decisionmakers**
- user profiles changing **communities**
- community creates their own "**regulations**",
- **standards** set by communities

**Citizen become Shareholders**
- communities are **core part** of the (formal) processes
- citizen are **owner** of information
- **self-monitoring** systems secure fit-for-purpose - quality
The 4 basic principles of cadastre

- Transparency
- Security
- Legacy
- Trust

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- services on demand by users provide **legacy** (cultural variety)
- flexible processes – defined in moment of request
- self optimising processes increase **security** for users
- datasets know at their creation where they will be integrated
- system finds data which is needed/appropriate from relevant data sources and creates product/service
- **transparent** to users ► citizen ► land owners
- infrastructures and potential of systems for big data mgt.
- decentralised steering on demand (authentity)
- users and stakeholders intervene directly into the processes
- self-monitoring systems create **trust** (blockchain)
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Cadastre 4.0

Cadastre 4.0 is a system based on fully automatically processing within a network surrounding of people and devices embedded in technological intelligence

The aim is to get to a self-operating structure built upon intelligent devices and procedures and data collections where the demand is defining the process instead of building upon defined and fixed processes.