Cadastre and the crowd: a brief encounter or a long-lasting marriage?

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Cadastre and Crowdsourcing

**Definition Oxford dictionary of crowdsourcing:**
The practice of obtaining information or input into a task or project by enlisting the services of a large number of people, either paid or unpaid, typically via the Internet.

So what will the future of cadastres in combination with crowd sourcing look like with a focus on the European context?
National Bird Count

Without community and crowd no (public) data

46.226
Tellingen

61.298
Deelnemers

946.475
Vogels geteld

De Nationale Tuinvogeltelling 2017 vond plaats op 28 en 29 januari. Zet de data van 2018 alvast in uw agenda: 27 en 28 januari!

BEKIJK RESULTATEN

Hoe druk was het?
Aantal tellers per uur

Top 10 - NEDERLAND
Klik op een vogel in de Top-10 om hiervan de concentraties in Nederland te zien

1️⃣ Huismus
158.386

2️⃣ Koolmees
97.165

3️⃣ Merel
95.525

Cadastre and the crowd
Contributor to or participant in a platform
From community to institution

From a community of farmers to the largest financial institution in the Netherlands

Friedrich Wilhelm Raiffeisen
Ecosystem of the Land Market

private sector

Buyer Seller

Surveyors
Banks/Lenders
Notaries Solicitors
Valuators
Real Estate Agencies

public sector

Land Register
Cadastre
Public Sector
Authorities
From institutions to communities to crowd?

Professional crowd

Institutions

Land Register
Cadastre

Crowd

Legitimacy

Public Sector Authorities

Banks/Lenders

Surveyors

Valuators

Bureaucrats

Solicitors

Buyer
Seller

Land Register
Cadastre

public sector authorities

Crowd

Legitimacy

Institutions

trust
Improving maps with the crowd

Users can report errors in our maps providing feedback on the map itself. Earlier feedback and status of actions undertaken are visible on-line.

https://www.verbeterdekaart.nl/
Example of a feedback report

Melding BRT00003134

Gemeld op: TOP10
Geregistreerd op: 23-11-2016 21:10
Status: Goedgekeurd, ingepland door bronhouder
Omschrijving: school gesloopt na brand
Bronhouder: Kadaster
Gewijzigd op: 23-01-2017 08:27
Toelichting bronhouder: Bebouwing zal worden aangepast met fotobeeld 2016, in release R2_februari_2017
Results of reporting of errors by users 31-07-2017

Large scale Basemap
Feedback reports: 3138; reporters: 979

- Private sector: 300
- Municipalities: 280
- Public: 260
- Utilities: 40
- Public sector: 20

Topographic map
Feedback reports: 354; reporters: 143

- Private sector: 70
- Municipalities: 60
- Public: 50
- Public sector: 40

Types of reports:
- Rejected
- Finalized
- Correct
- Under investigation
- New
- Rerouted to other key register
Experiences so far

- (Professional) Crowd is willing to report back. General public is the most active reporter!
- Providing feedback to users on the corrections applied is critical for users’ motivation to keep on reporting errors. This is our challenge in the value chain!
- Feedback mechanism is also introduced November 1 for Building and Addresses.
Professional crowd: preliminary boundaries

Notaries draw preliminary cadastral boundaries

The cadastral surveyor verifies and measures the boundary after transfer of the property
Involving communities in reallocation

Flexible and fast
High level of participation
High end technological support
Intermediate observations

- Our value chain is very institutional
- Professional crowd is a logical starting point
- Rules of engagement provide clarity and trust and empower the crowd and communities
- New functionalities: consider the crowd as a potential solution

Could parties in the land market do a cadastral survey?

*Why not?*
Personal and object information

GDPR (general data protection regulation): privacy

Intelligent objects

How do we organise
- Personal Data Management
- Object Data Management
Participatory Approach requires sharing of data
All parties become participatory wrt data

Authors → Formal data → buyers, sellers estate agents banks → Informal data

Old

Network based protocols and rules, with transparency to the land market to provide trust

New
Less institutional environments in a global context
Communities and Land Rights
Concluding remarks

• All parties in the land market are digitally enabled
• Institutional arrangements are useful, yet classical means to provide a secure land market.
• Digitalisation enables innovation and process redesign between partners in the chain and involving the crowd
• This also requires rules of engagement and sharing mechanisms to maintain trust between all parties. Take care of legality and legitimacy!

Then a first brief encounter of the cadastre with the crowd may be the start of a long-lasting marriage!