

kadaster



# How valuable are large scale High Value Datasets for People, Profit and Planet?

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PCC Conference

Smart Cadastre – Shaping the Future

München, Germany, November 3-4, 2020



# The impact of large scale High Value Datasets



**People**

**Social Value**

**Planet**

**Environmental Value**

**Profit**

**Economic Value**



# Impact assessment of High Value Datasets (HVD) under Open Data PSI

<b>Climate Change</b> 	<b>Economic</b> 	<b>Innovation and AI</b> 
<b>Public Services and Administration</b> 	<b>Reuse</b> 	<b>Social</b> 



six macro characteristics of potential value with an analysis of expected costs and benefits

This presentation will focus on:

- Geospatial Domain (large-scale/cadastral HVD's)
- Application to the micro (or local)-domain (instead of the standard macro-economic approach)



# Large –scale (cadastral) High Value Datasets

Cadastral ‘large scale’ datasets are part of Geospatial Domain:

**1. Addresses**

**2. Buildings**

Authoritative (trusted) datasets

**3. Cadastral Parcels**

- provide access to cadastral registration and land registry
- in HVD-proposal only available as WMS (why is not clear: cost, GDPR?)

Additional dataset considered:

**4. Values** – *Not* part of HVD-proposal

Datasets listed in the implementing act to be made available for free, in machine-readable formats, via APIs and (where relevant) as bulk downloads



# Further outline of the presentation

How do cadastral high value datasets contribute to people, profit and planet?  
What is their contribution to economic, social and environmental value?

1. Energy transition: which places are best suited for solar panels?  
*predominantly environmental and economic value*
2. Foundation problems due to lower groundwater levels  
*where environmental, social and economic value meet*



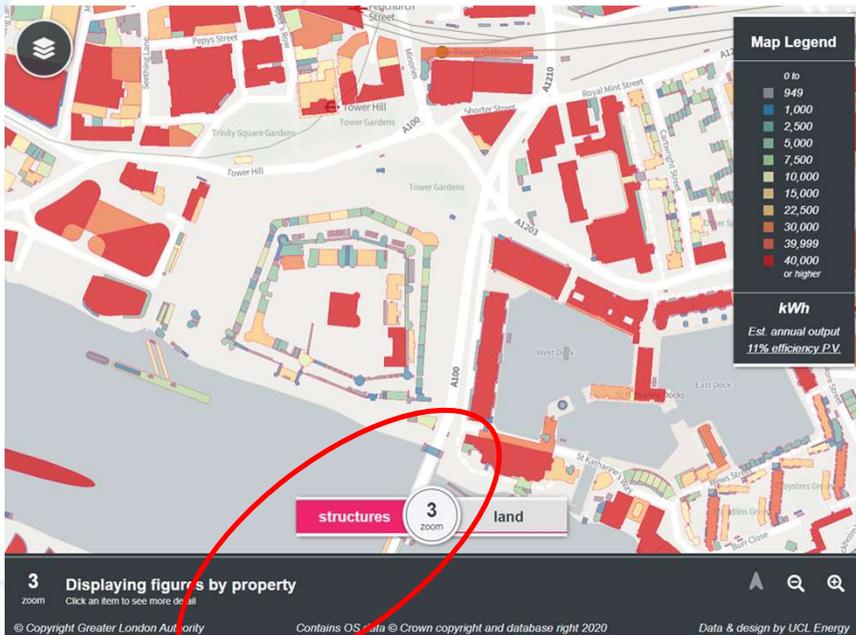
<https://www.kcaf.nl/>



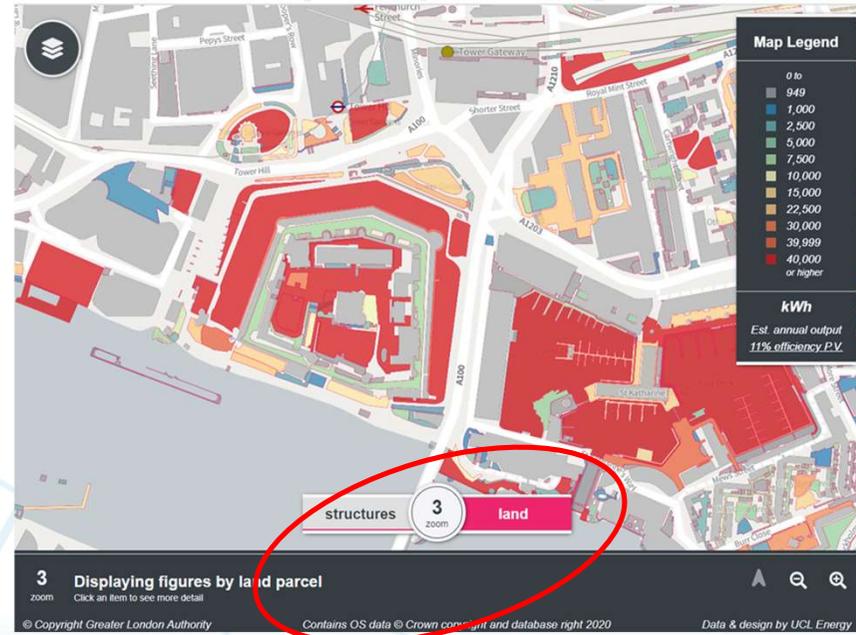
# Solar panels on the Tower of London?

## Assessing the economic and environmental value of installing solar panels

<https://www.london.gov.uk/what-we-do/environment/energy/energy-buildings/london-solar-opportunity-map>

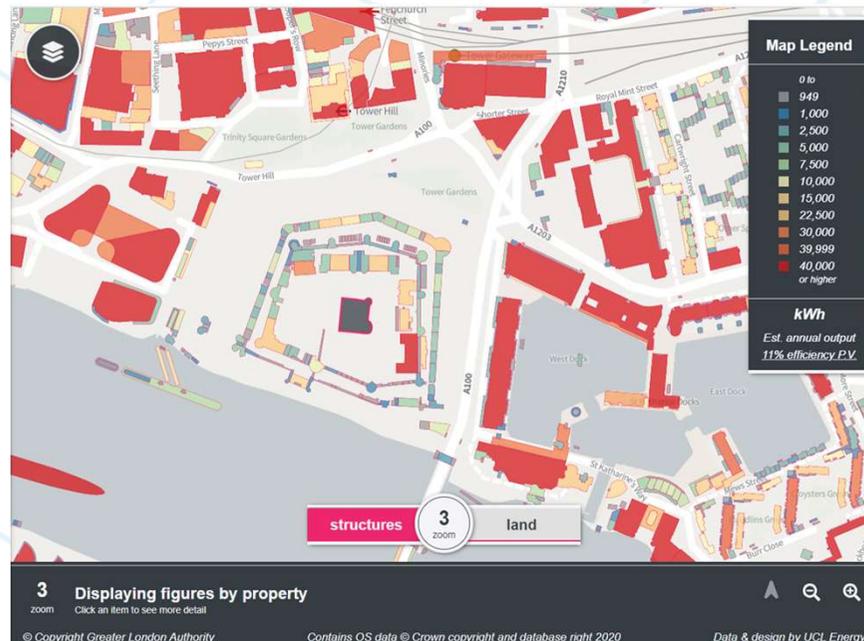
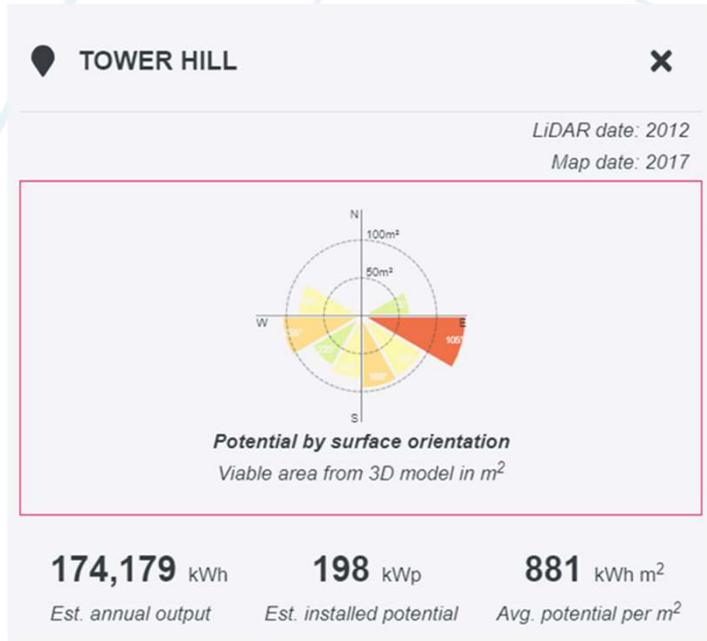


Properties, Buildings and Addresses



Properties, Parcels, Topography

# Combining information and models



Based on the simultaneous use of large-scale geodata, land registry data, solar/meteorological data and modelling environmental as well as economic cost-benefit analyses can be performed



# Foundation Problems in The Netherlands

Lowering of groundwater level leads to

- damage to wooden pile foundations
- subsidence
- damage to buildings
- drop in property value
- high cost of renovation
- emotional and financial stress for owners and residents

250.000 Dwellings urgently require action  
1.000.000 Dwellings affected in the long run





# Case Rotterdam

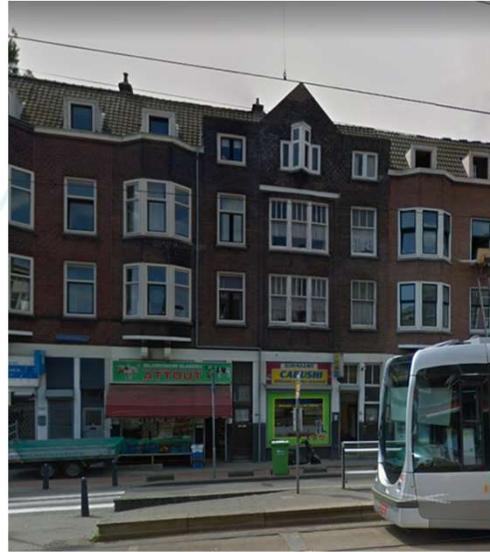
## Foundation Map



<https://www.kcaf.nl/>

Foundation Map displays the risk of foundation problems occurring

The value of large scale HV-datasets on People, Planet, and Profit



## Subsidence Map of The Netherlands



<https://bodemdalingskaart.nl/nl/>

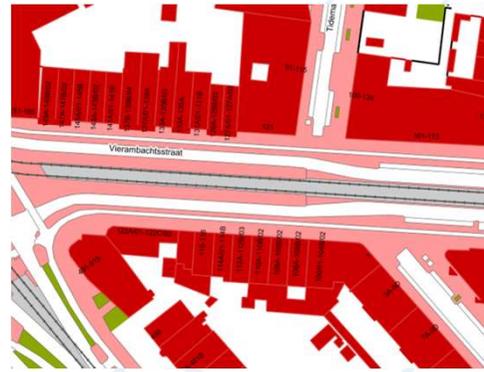


# Relevant and available Datasets

## Cadastral Map



## BaseMap



### Resultaat

**Adres:** Vierambachtsstraat 108A  
**Postcode:** 3023 AT  
**Plaatsnaam:** Rotterdam

### WOZ-waarde

Voor dit pand is geen WOZ-waarde beschikbaar. Mogelijke oorzaken:

- Alleen WOZ-waarden van woningen zijn openbaar. Dit pand is niet (meer) of deels in gebruik als woning.
- Voor deze woning is nog geen WOZ-waarde beschikbaar.

### Kenmerken

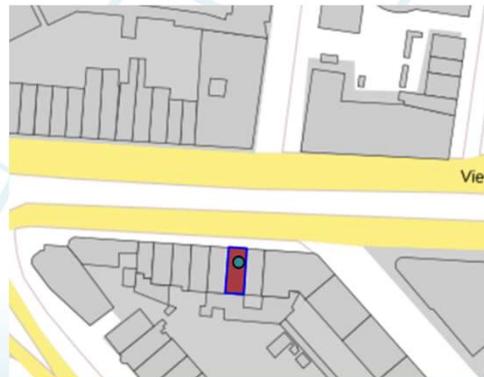
**Bouwjaar:** 1919  
**Gebruiksdoel:** winkelfunctie  
**Oppervlakte:** 104 m<sup>2</sup>

PDF

Bijgewerkt tot 17-10-2020  
**Gebruiksvoorwaarden**  
 © Ministerie van Financiën



## Property Values



## Buildings and Addresses

### Resultaat

[Vierambachtsstraat 108 A Rotterdam](#)

#### Pand

**ID** [0599100000685676](#)  
**Bouwjaar** 1919  
**Status** Pand in gebruik

#### Verblijfsobject

**ID** [0599010000189753](#)  
**Gebruiksdoel** winkelfunctie  
**Oppervlakte** 104 m<sup>2</sup>  
**Status** Verblijfsobject in gebruik

#### Nummeraanduiding

**ID** [0599200000499508](#)  
**Postcode** 3023AT  
**Huisnummer** 108  
**Huisletter** A  
**Huisnummer toev.**  
**Status** Naamgeving uitgegeven

#### Openbare ruimte

**ID** [0599300000000086](#)  
**Naam** Vierambachtsstraat  
**Status** Naamgeving uitgegeven

#### Woonplaats

**ID** [3086](#)  
**Naam** Rotterdam  
**Status** Woonplaats aangewezen

#### Bronhouder

**ID** 0599  
**Naam** Rotterdam



# Foundation Problems



<https://demonitor.kro-ncrv.nl/uitzendingen/uitzending-heel-holland-zakt-iii> (in Dutch)



## Foundation problems

- *environmental* cause
- have a large *social* impact (uncertainty, loss of security)
- costly to repair and lead to lower value of the property (*economic* impact)
- require structural measures in controlling groundwater levels and which authority is accountable (*environmental* and *social* issue)

# Added value of linking up with large-scale/cadastral HVD's

Large scale/cadastral HVD's provide pivotal links to

- physical world (topography, buildings)
- administrative world (buildings and addresses)
- juridical world (rights, restrictions and responsibilities)
- owners and users of real estate
- economy (value of properties)

Additional advantage is that many of these sources are authoritative

Value is created when linking up to various domains (energy transition, changes in the physical environment, land market)

This leads to better (evidence based) decision making

Transparency at the micro-level

Lower failure costs

Leading to better insights in costs and benefits



## Concluding remarks

- Cadastral high value datasets contribute decisively to local cost-benefit analyses in the economic, environmental and social domain
- In most cases value for the end-user comes about by merging cadastral HVD's with the specific domain expertise and data for the issue at hand
- Cadastral HVD's have a value in their own right, but lead to even more value in underpinning value creation in other domains