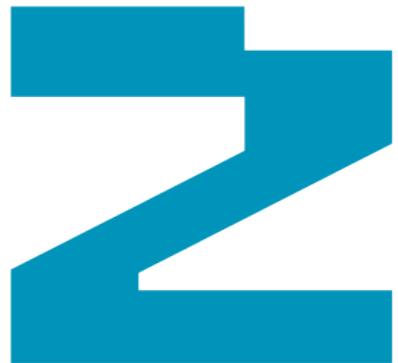




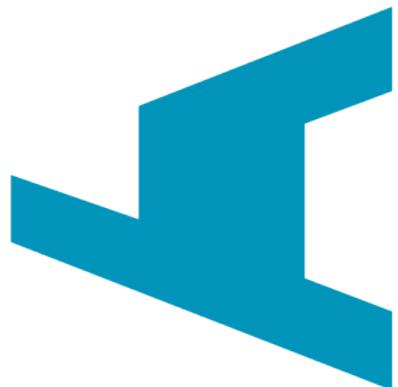
Data Archiving and Networked Services



The data behind the HuisKlus

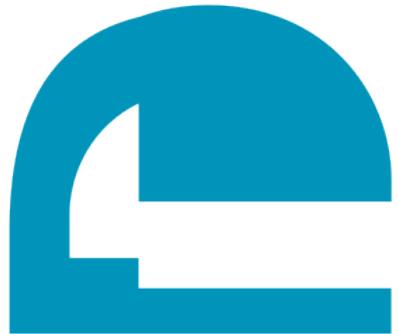
Christophe Guéret (@cgueret)

Researcher



PiLOD closing event

July 3rd 2013



DANS is een instituut van KNAW en NWO

Door data gedreven



Getting the open data in the app.



<https://data.overheid.nl/>

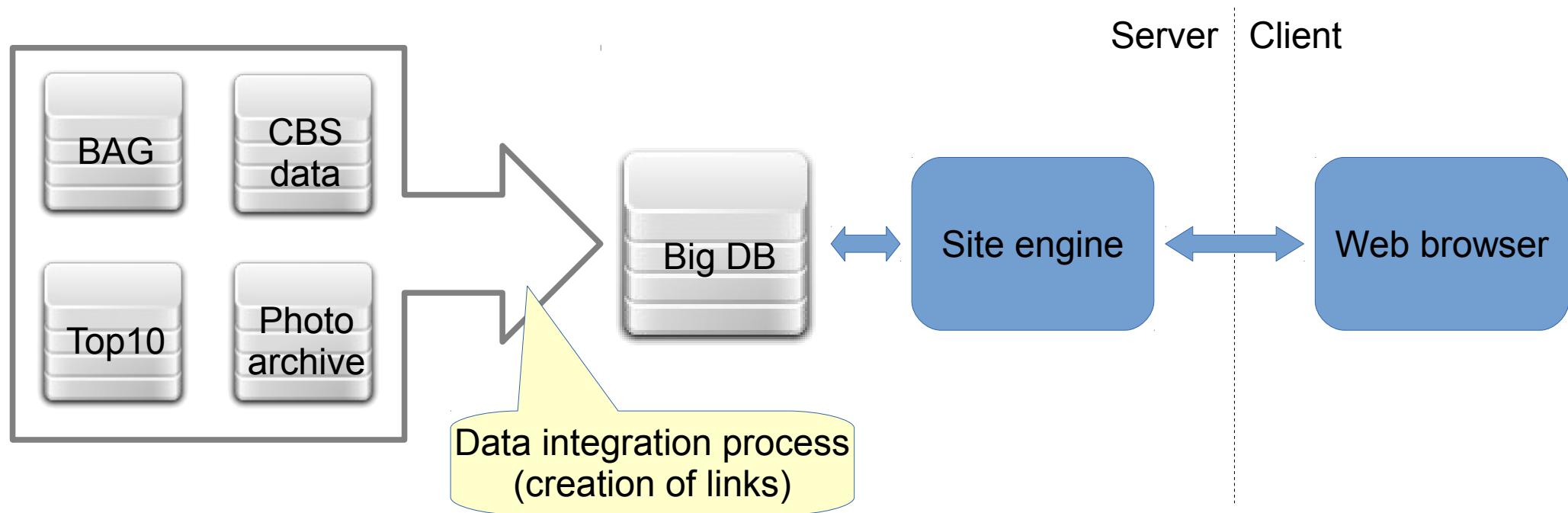
The screenshot shows the HuisKluis website interface. At the top, there's a navigation bar with links for 'Home' and 'About'. Below it is a large orange header area. On the left, there's a section titled 'What is this?' with a video player showing a video about HuisKluis. On the right, there's a section titled 'Get started' with a form for entering a postcode and house number. Below that, there's a list of examples of what can be searched, such as 'A house (1055HB 20-3)', 'Another house (7231JT 24)', 'The main building of the VU University Amsterdam (1081HV 1105)', 'Royal Palace at Dam Square (1012RJ 147)', and 'Nieuwe Kerk (1012NL 17)'. The overall design is clean and modern.

<http://huiskluis.nl>



90's style: server side black box

- Server side data store and page rendering

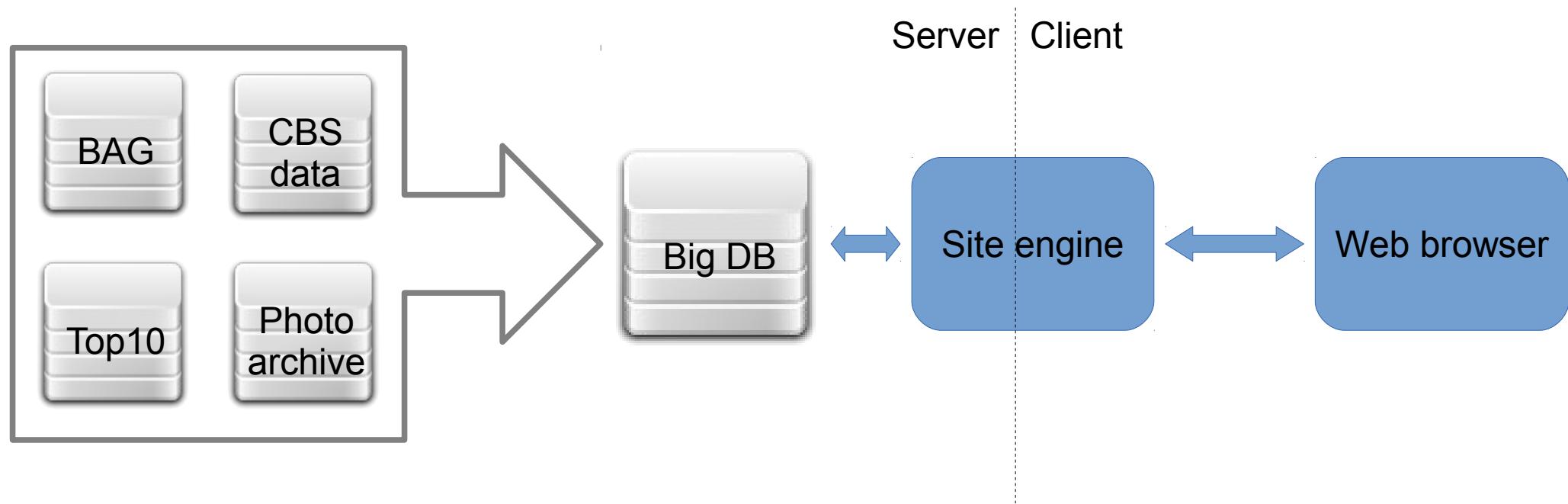


Resource intensive: server load, data integration



Modern: Use APIs and Javascript

- Split the data from the application



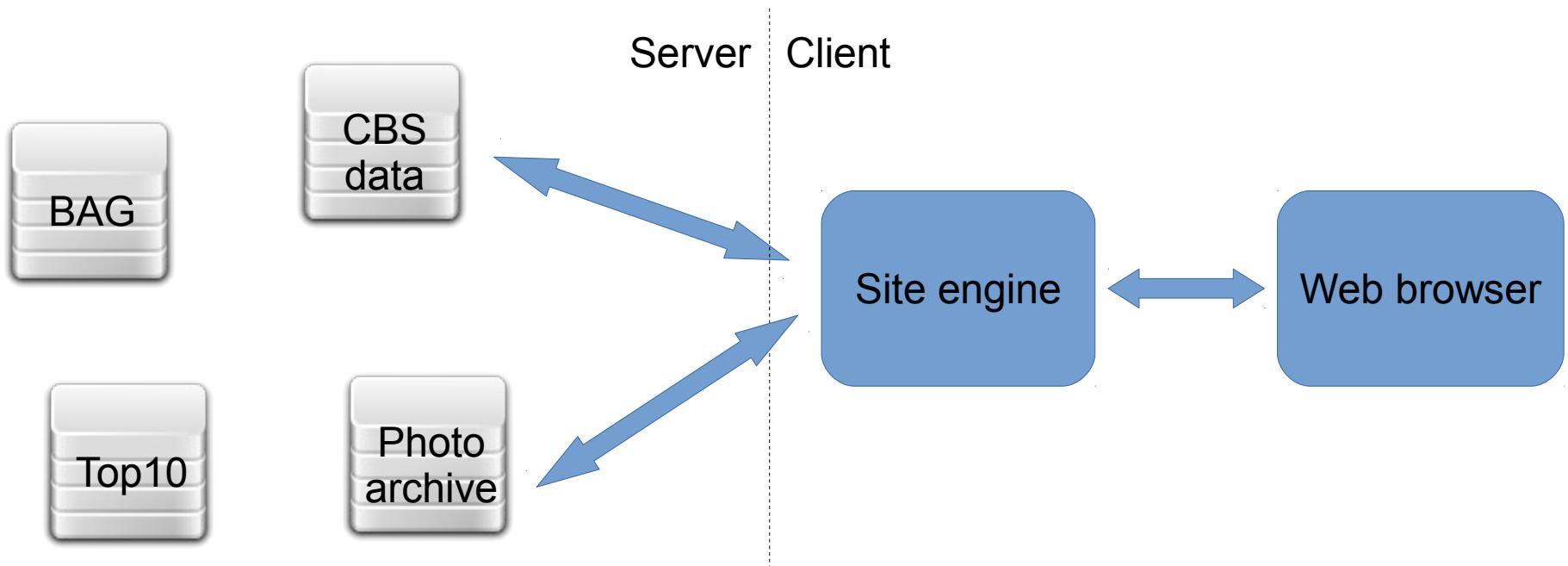


Soon: Full Web applications



WebPlatform.org

- Client side application that use only APIs





Why APIs are so cool...

- No need to get all the data into some local store
- Application send targeted information needs
 - Leaflet: draw a map showing N 52° 22' 26"E 4° 53' 30"
 - CBS: return the statistics for around 'Gravenstraat'
 - BeeldBank: list the pictures about 'Nieuwe Kerk'
 - BAG: get the contour of the home at 1012NL-17
 - ...



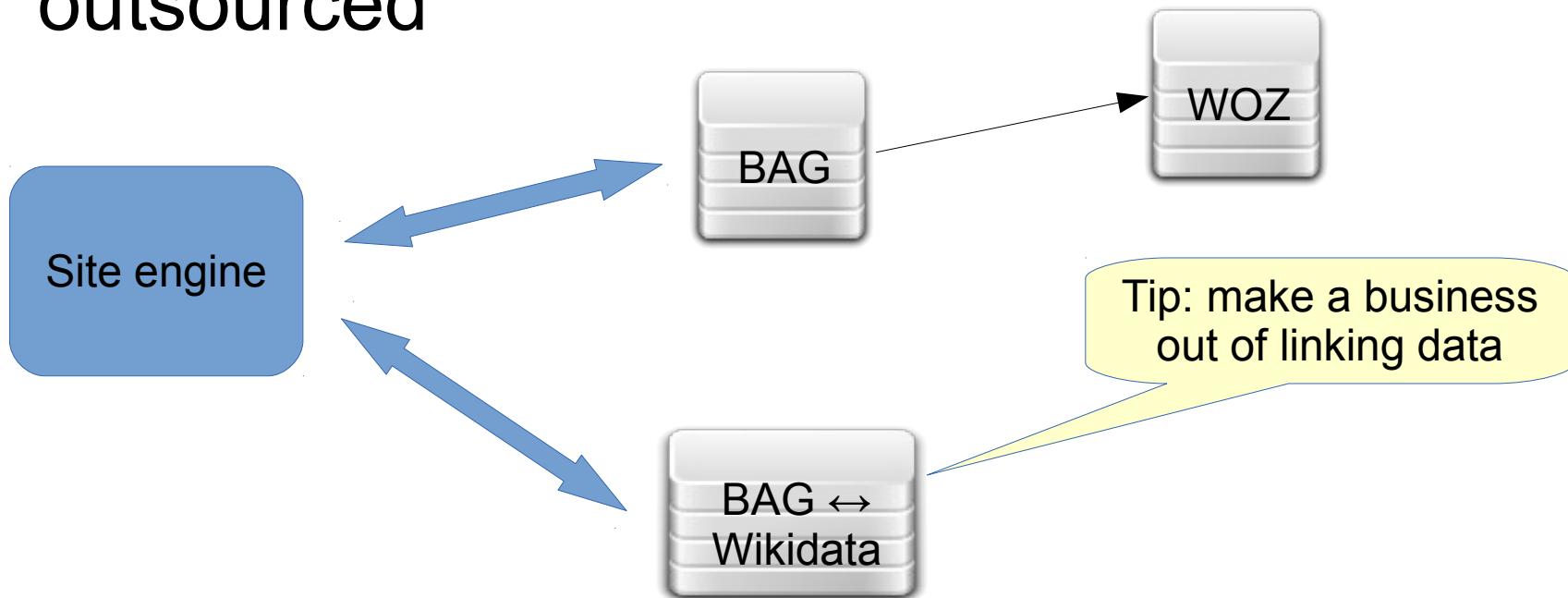
The problem with APIs

- Some data sources do not have one
 - Provide data dumps instead
- There are few standards for APIs
 - Need to learn how to dialog with the API
- Do not tackle the data integration issue
 - Need to know what to ask



APIs with Linked Data : links

- The links guide the client through the different APIs to find more information
- Thanks to URIs, data integration can be outsourced





APIs with Linked Data : SPARQL

- SPARQL is a query language for RDF data
 - In practice, a *universal API* that generate *views* over the data
 - Every data need = 1 SPARQL query
- Example: HuisKluis data need from the BAG
 - “Give me the geolocation, the contour and the construction year of the building at 1012NL-17 along with the name of the street it is on”



To use with <http://data.resc.info/bag/sparql>

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
```

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
```

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
```

```
PREFIX vocab: <http://data.resc.info/bag/resource/vocab/>
```

```
SELECT ?straat ?bouwjaar ?lat ?lng ?polygon WHERE {  
?huis <http://www.w3.org/ns/locn#postCode> "{POSTCODE}" .  
?huis <http://www.w3.org/ns/locn#locatorDesignator> "{NUMMER}"^^xsd:decimal .  
?huis <http://www.w3.org/ns/locn#thoroughfare> ?straat .  
?huis <http://www.w3.org/2006/vcard/ns#longitude> ?lng .  
?huis <http://www.w3.org/2006/vcard/ns#latitude> ?lat .  
?huis vocab:adres_adresseerbaarobject ?obj .  
?obj vocab:verblijfsobjectactueel_pand ?pand .  
?pand vocab:pandactueel_bouwjaar ?bouwjaar .  
?pand vocab:geovlak ?polygon .  
}
```



If you own a data set...

- Provide APIs, not only a data dump!
- Consider following the W3C standards for publishing data on the Web
 - Makes your data easier to use
 - Facilitates doing external linking



DANS



10 minutes overview

- Warning! Techy keywords ahead

LOD
database data 5-star SPARQL
HTML5 server-side client-side
. semantic-web linked-data client
jSP php javascript server API rdf
triples