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Sensor register:

Who is measuring what and where
in the public space?



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Portal

Excavation damage

Cables and pipelines

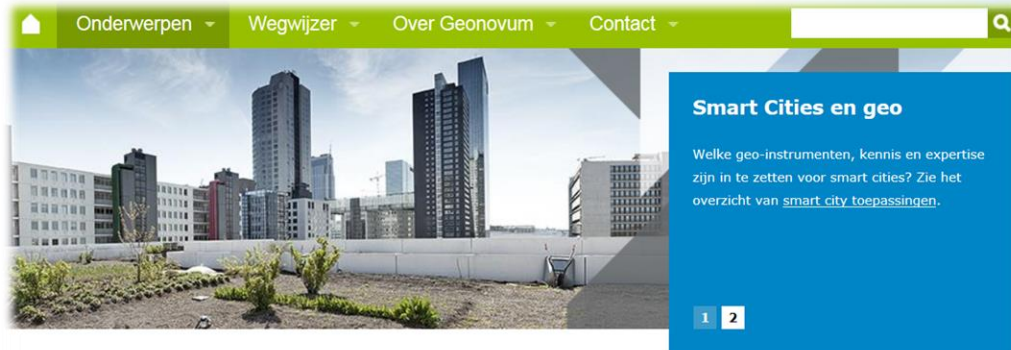
Web services

Creating a data infrastructure on cables and pipelines

Legal certainty for all

Knowability for all

Building an ecosystem: Making sense for society (2017)



In het voorjaar van 2014 is het Platform Making Sense for Society gestart, een Living Lab voor the Internet of Everything. Via dit Platform doen wij kennis op over het inwinnen, opslaan, beschikbaar stellen en verwerken van sensordata en de standaarden die daarbij toepasbaar zijn. Vanuit het Platform formuleren wij ook vragen aan het beleid. Bijvoorbeeld over hoe om te gaan met sensormetingen in de openbare ruimte, open sensor data, governance en privacy.

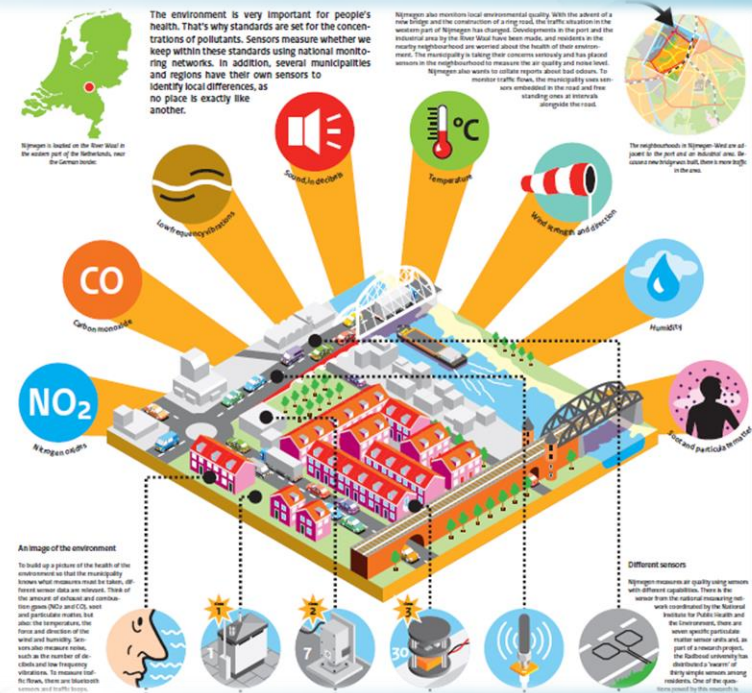
Over Sensor-data en Smart Cities

- ▶ Bijeenkomsten Making Sense for Society
- ▶ Platform Making Sense for Society
- ▶ Sensordata: de uitdaging
- ▶ Smart City toepassingen
- ▶ Smart City: indicatoren voor duurzame ontwikkeling

Meer weten?



Hans Nieuwens
aanjager
Stuur een e-mail



23 februari 2018 | **OGC consultatie: uitbreiding Internet of Things standaard**

Het Open Geospatial Consortium (OGC) ontwikkelt en beheert internationale, technische standaarden voor geo-informatie. De OGC kandidaatstandaard SensorThings API is een standaard die bedoeld is voor



**A smart city
knows about
where**

**Everything that happens,
happens somewhere!**

What we are working on

A. Sensor registration / sensor portal

B. Smart city information model

C. Sensor data platform

What do you want to know about a sensor if you see one in the surrounding?



And why??

Sensor register

Why?

Where can I
find the
sensor data?

Who owns
the sensor?

Where are
the sensors?

Am I being
sensed right
now?

Can I use
the sensor
data?

How many
sensors are
there?

What do they
sense and
how?

Who
maintains
the sensor?

Sensor register

How?

Bèta version with Smart City of Eindhoven

The city council of Eindhoven decided that everyone who wants to place a sensor in public space is obliged to ask permission and to publish the sensor data as open data!



OPEN DATA PRINCIPLES

Beyond personal data!

Data residing in the public space (further on: data) belong to everyone. These data are an asset of the public. Data that are collected, generated or measured (for example by sensors that are placed in the public space) should be opened up in such way that everyone can make use of it for commercial and non-commercial purposes. While doing so, privacy and security aspects should be taken into consideration.

- Data may contain personal information. These data can therefore impact the private life of individuals. The rules specified in the Personal Data Protection Act are applicable here. These data may only be opened up after they have been processed (for example, by anonymization or aggregation) such that there are no privacy threats anymore.
- Data which do bring privacy or security risks along may only be used according to the privacy legislation. Storage and processing of these data should be performed according to the existing legislation.
- Data that do not contain personal information (anymore) should be placed in such way that everyone can access these data in an equal manner (for example, through an Open Data portal). We call this

1



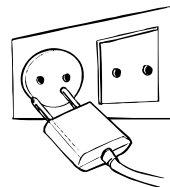
Privacy first

2



**Open data
& interfaces**

3



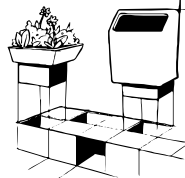
**Embrace
open standards**

4



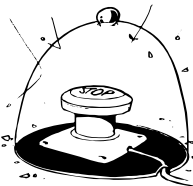
**Share
where possible**

5



**Support
modularity**

6



**Maintain
security**

7



**Accept social
responsibility**

Sensor register

What?



Information about ‘what is being sensed where and by whom’

Accessible for everybody (companies, citizens, knowledge institutions and government)

Public and easy to find.

Uniform, nationwide and trustworthy

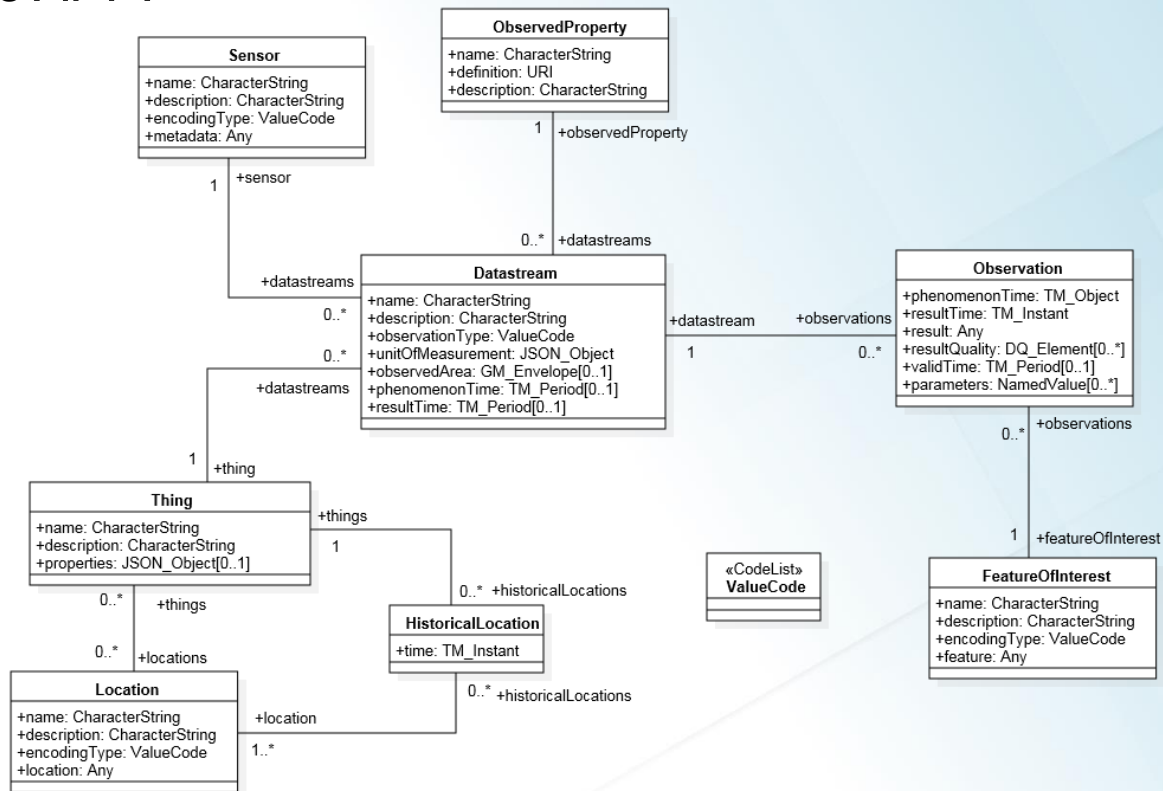
Create awareness of what’s happening where

Living Lab Eindhoven 27 maart 2018

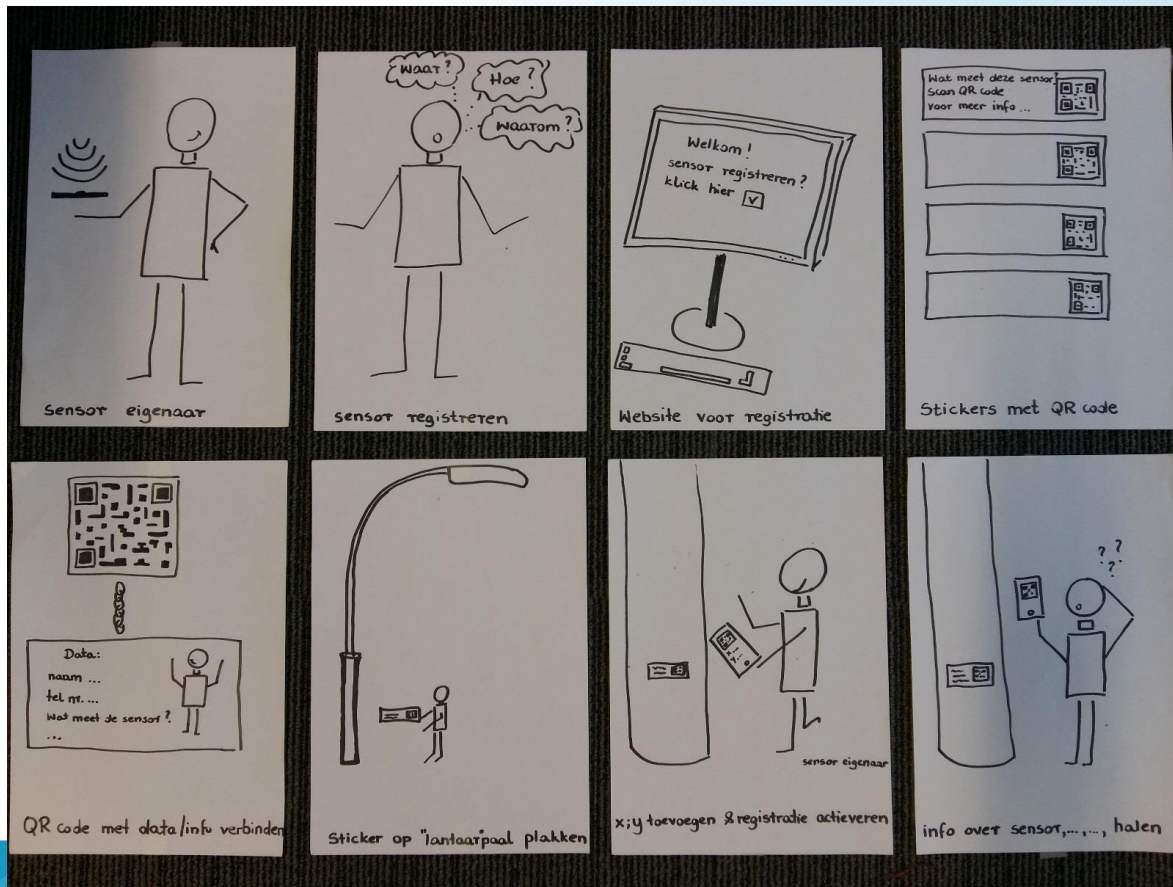


Datamodel

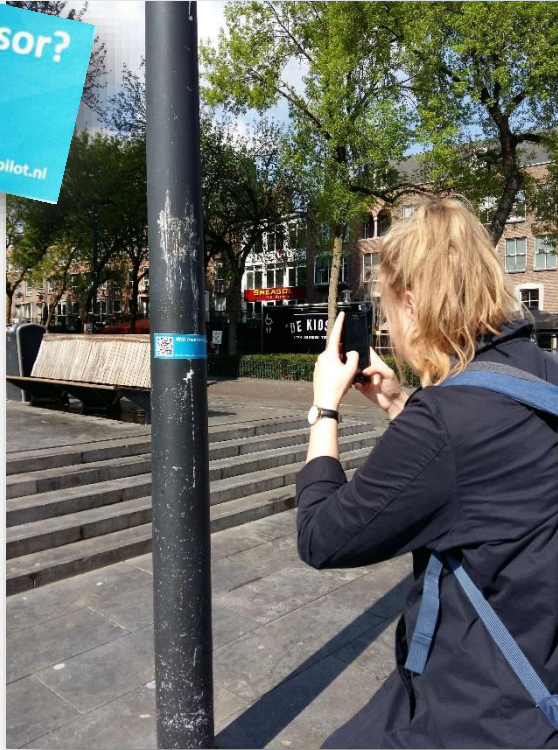
De SensorThings API ?



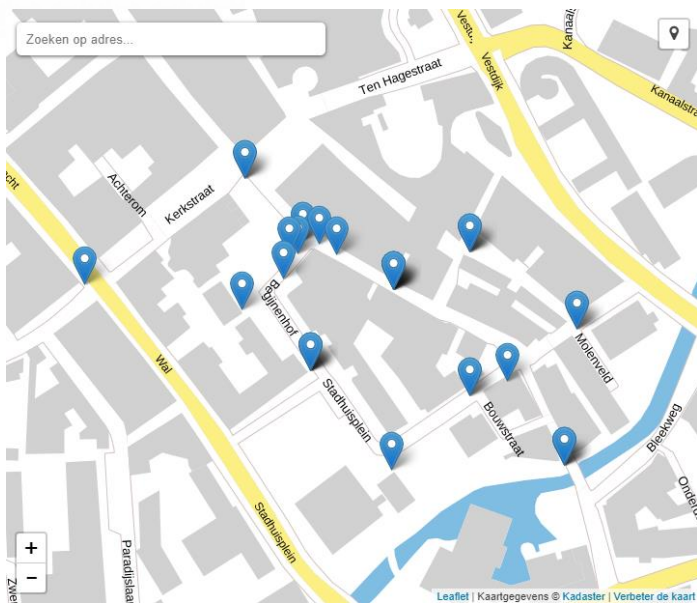
Project aanpak field research



Results field research



Creating a bèta version



Welkom bij de pilot van het Sensorregister

Gemeente Eindhoven en Kadaster hebben een pilot voor het sensorregister opgezet voor de vaste sensoren in de openbare ruimte op Stratumseind in Eindhoven. Iedereen is welkom om mee te doen. Doe jij ook mee?





Any questions?

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Sensor register:

workshop



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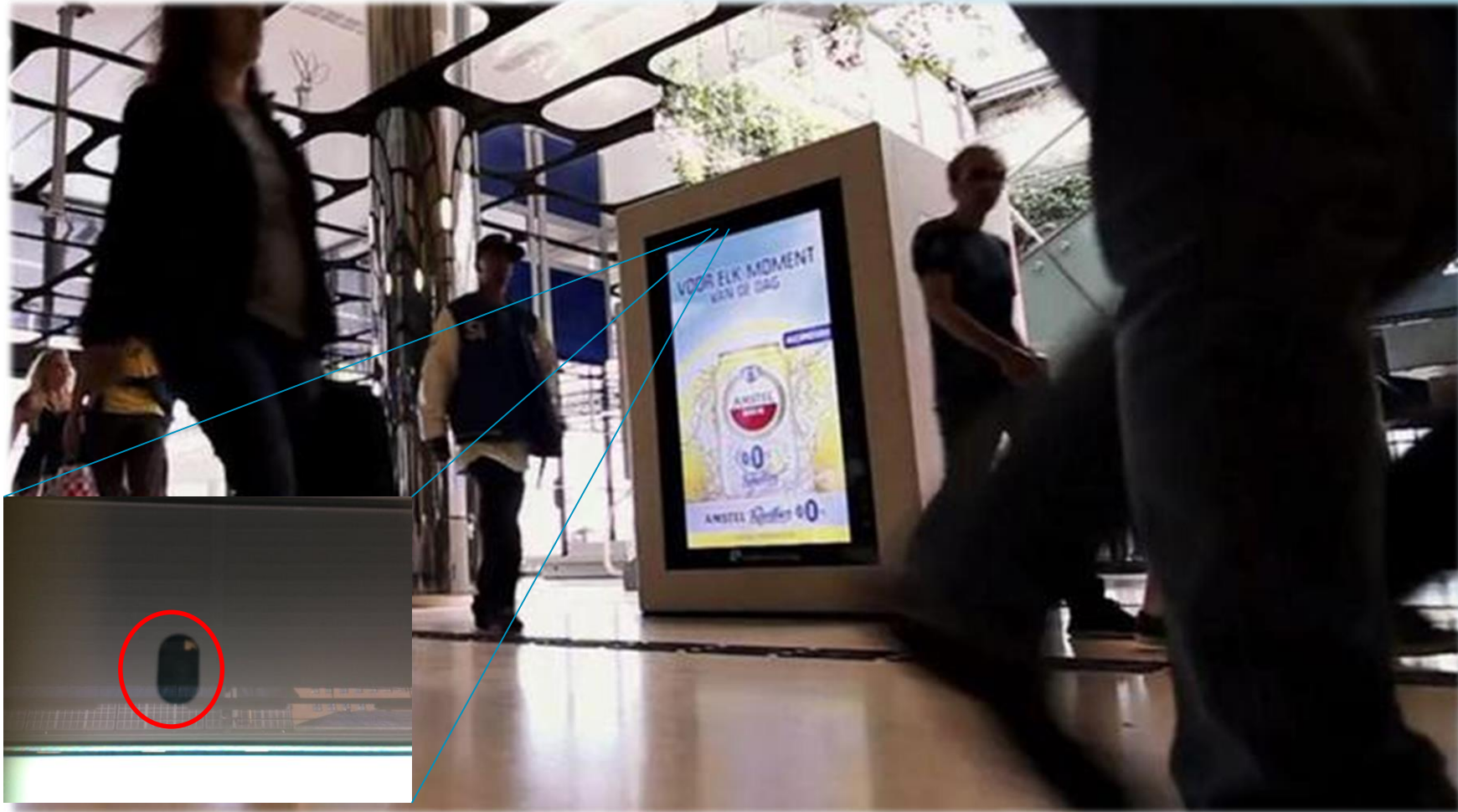
What do you think?

Am I allowed to place a sensor in the public space of Delft without permission?



What do you think?

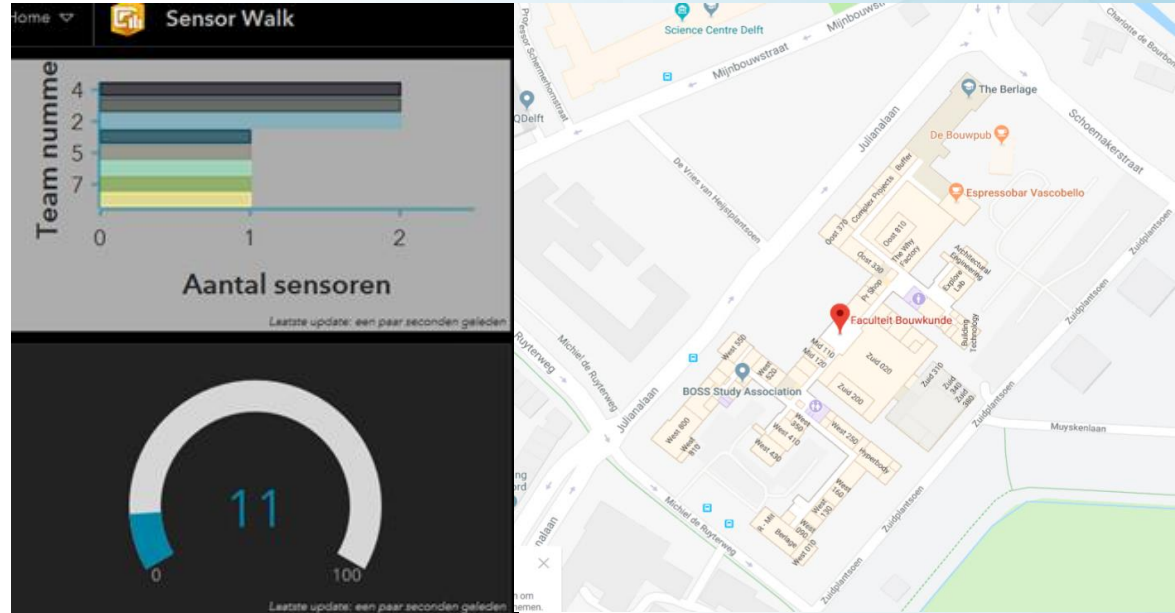
**Who knows or thinks that
he or she is being sensed
right now?**



Sensor Walk



<http://arcg.is/yqzj4>



Geen gegevens

Laatste update: een paar seconden geleden



Laatste update: een paar seconden geleden



Proces of registration

Request for help/brainstorm: how to trigger sensor owners to register and maintain their sensor information ...

Membership of the platform

Validation tool

Sensor itself

By law

Gamefication

Thank you!

