


DEcentralised Citizens Owned Data Ecosystem

*Enabling Citizens' control
of their personal data*

SMARTCITY
EXPO WORLD CONGRESS
14-16 NOVEMBER 2017



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**DECODE in a
nutshell...**

decode



What is DECODE?

- EU – H2020 - CAPS call funded project (5 M Eur.)
- 3 years (Jan. 2017-Jan. 2020)
- Coordinated from BCN (Francesca Bria, CTID)

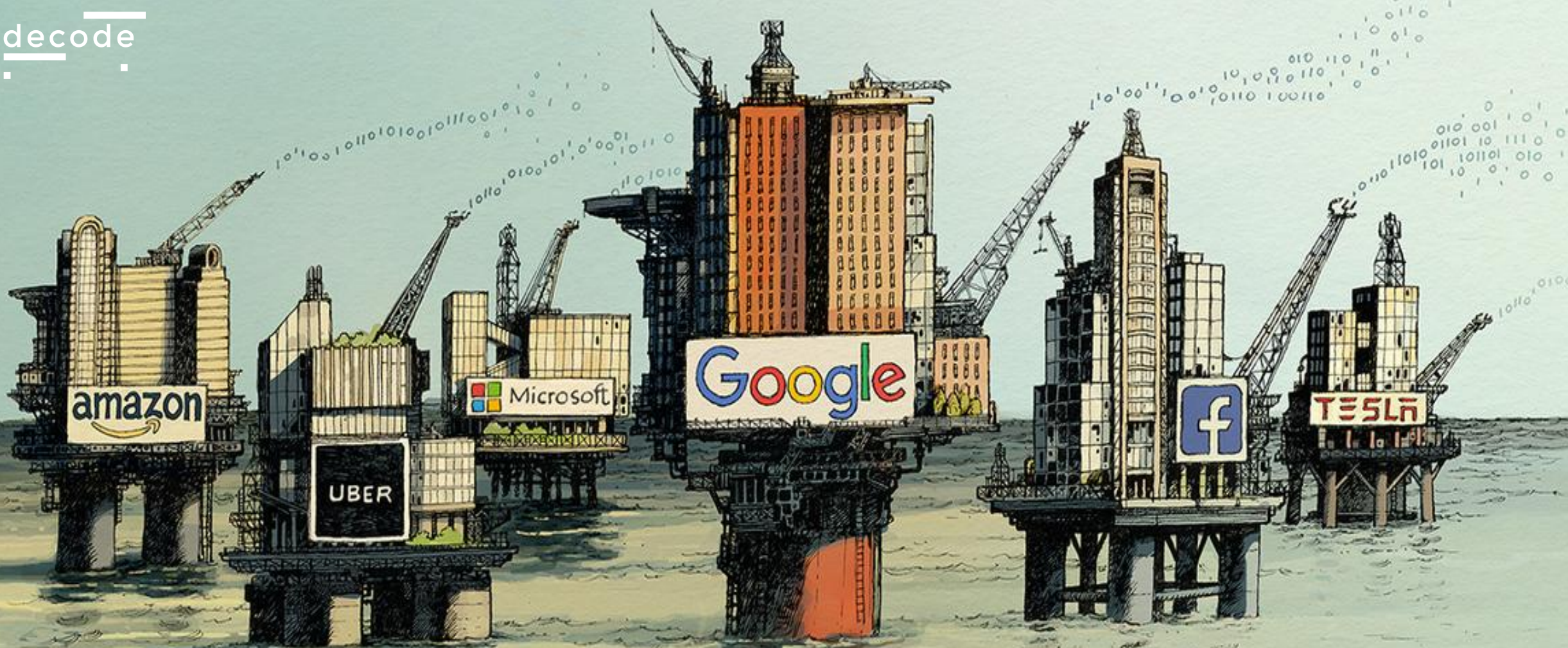
Who is DECODE?

14 partners, 6 countries (ES, NL, UK, FR, IT, SW)



ThoughtWorks®





IS DATA THE NEW OIL?

**DATA (SHOULD BE)
THE NEW SOIL!**

Challenge: Enabling the Digital Commons

Can we **regain control** of our data?

We want to decide *liquidly* **who** to share it with, under which **rules**, **when** and for **what** purpose and we want to do it in a **transparently**.

In short: Real **data sovereignty**



Digital Commons - 3 Axes



People /
community

Projects

Support /
playing field

3 main challenges



Technological (Support/playing field)

- Distributed
- Fully transparent
- Secure?
- Portable / open standard!
- Free & Open source!



Societal (People/comm.)

- Incentives?
- Legal implications?
- Social awareness?
- Governance?



Practical (Projects)

- Are there good use cases ?
- Can we make it work?
- Will communities understand it?

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**Praxis:
DECODE
Pilots**

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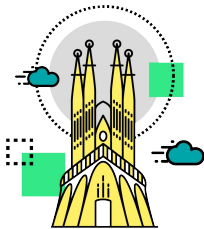
decode

Introducing the Pilots



Open
Democracy

DIGITAL / BCNOW PLATFORM



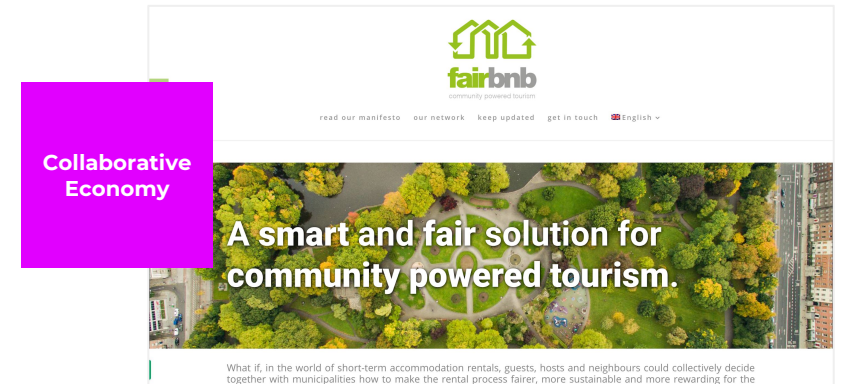
Citizen
Sensing / IoT

IOT PILOT INVOLVING #CITIZENSENSE



Collaborative
Economy

GEBIEDONLINE (NEIGHBOURHOOD ONLINE)



Collaborative
Economy

HOLIDAY RENTAL REGISTER / FAIRBNB

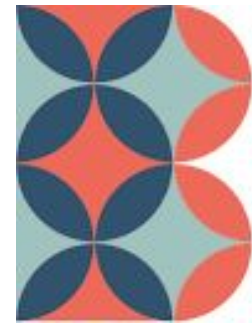
BCN Participatory democracy: Digital + BCNNow!

Community:

decidim.barcelona users

Need:

- **Accountability** on signing petitions, yet **privacy** on political beliefs
- Detection of city problems

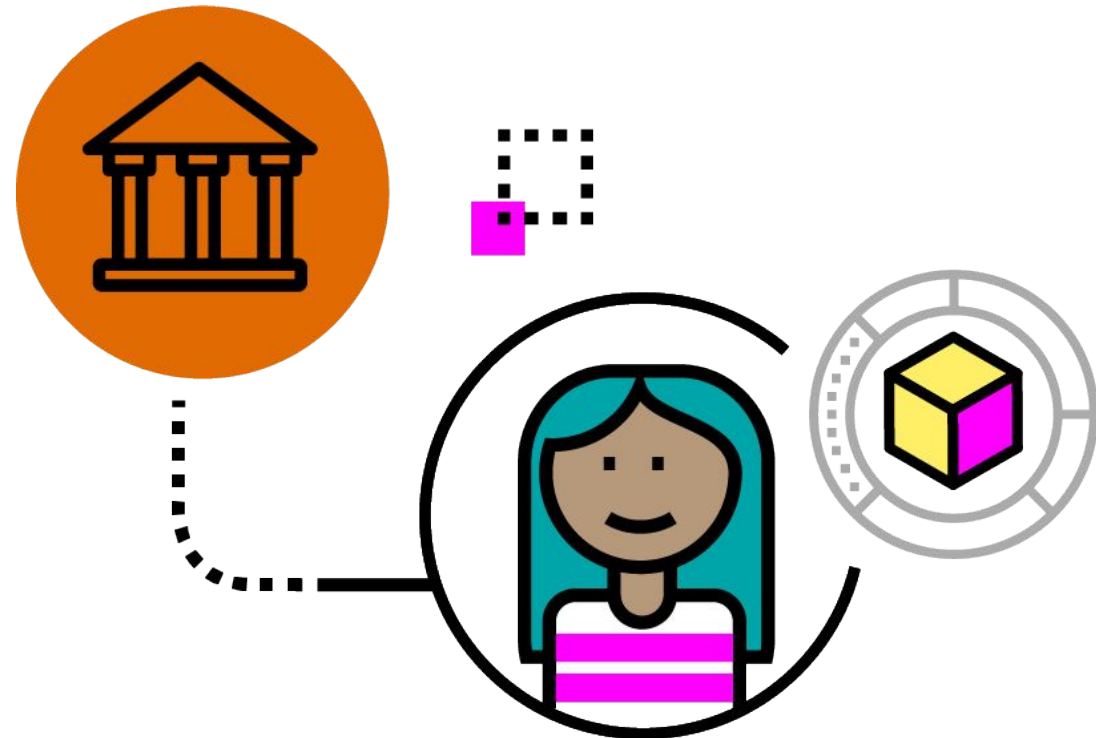


Decidim
Barcelona

BCN Participatory democracy: Digital

Carme wants:

- To **participate**
- To stay **anonymous**
- To be **counted!**
- To **contribute** to make the city better



BCN Participatory democracy: BCNNow!

Júlia wants:

- To be **informed**
- To be **found** by peers



BCN: IoT, Let's talk about data rights!

Community:

smartcitizen.me/makingsensecommunity

Need:

- IoT data might be privacy-sensitive
- Crowd sensing



Making Sense

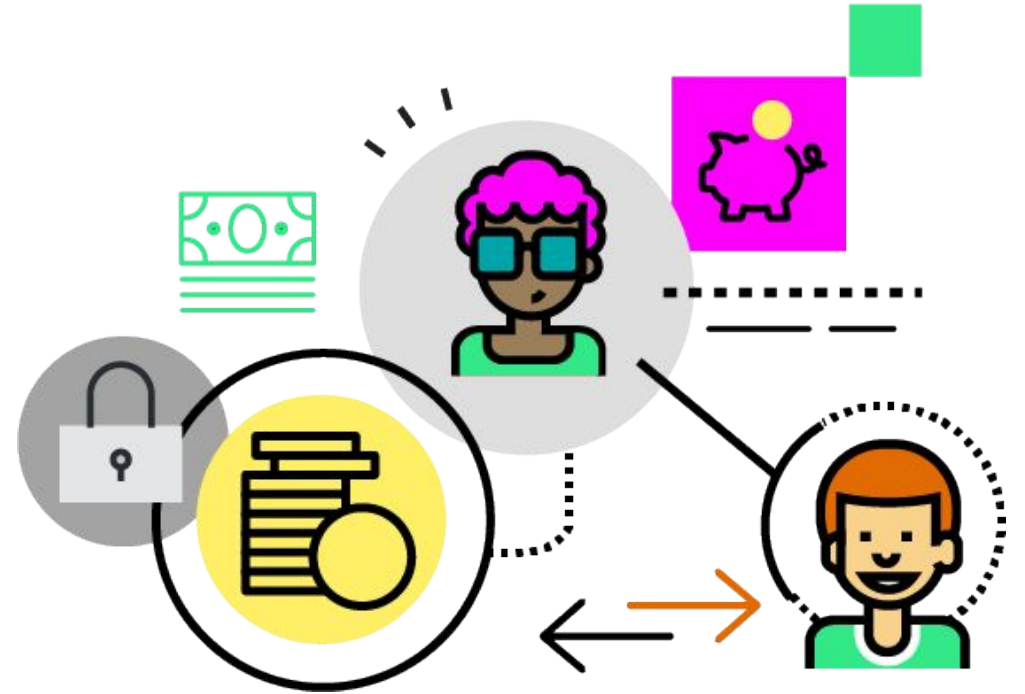
Advances and experiments
in participatory sensing



BCN: IoT, Let's talk about data rights!

Alba and Joan want:

- To **collaboratively** gather data
- To **choose how to share their data**

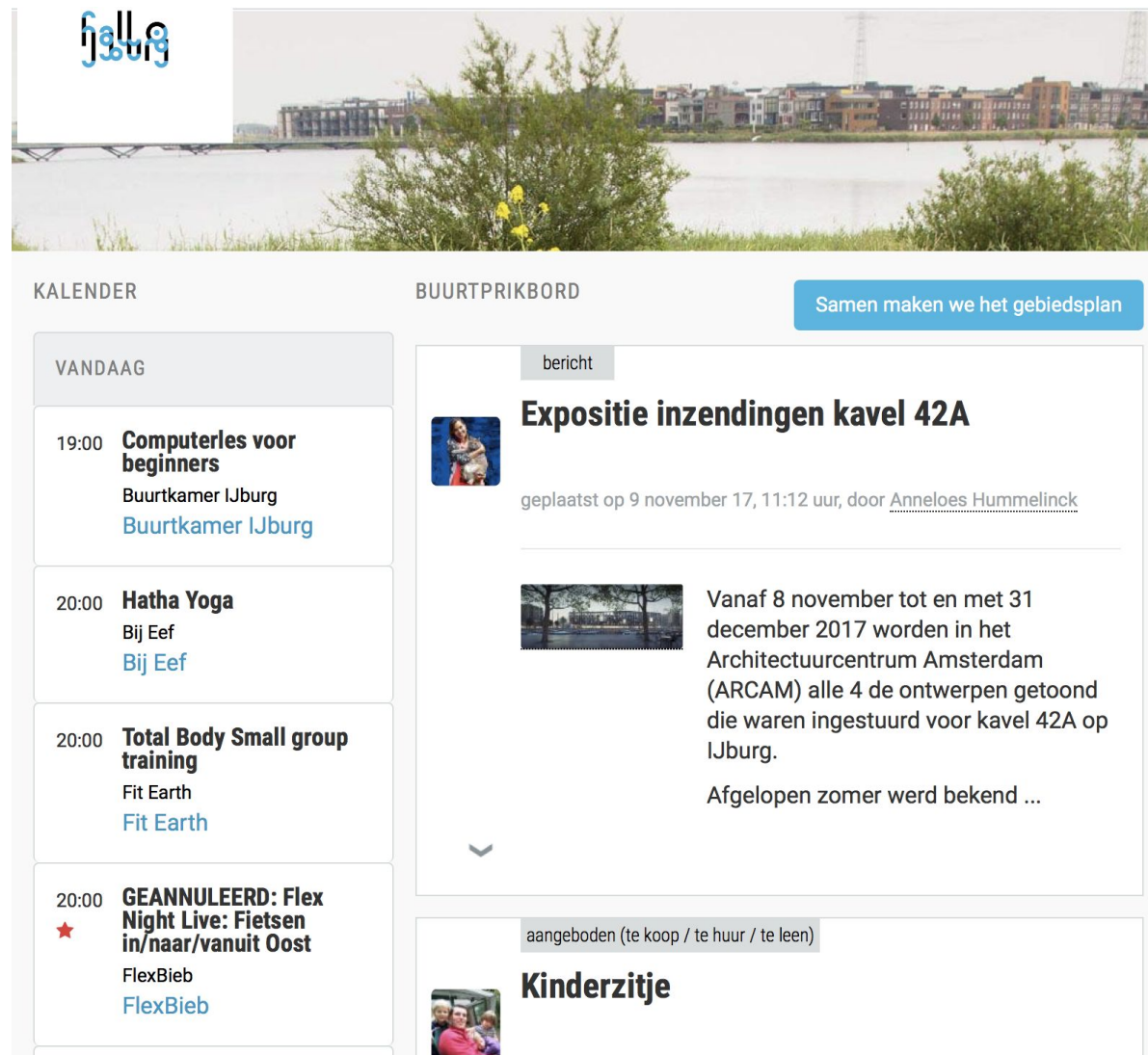


AMS: Local social networks

Community: gebiedonline.nl

Need:

- P2P verification by your neighbours
- Make it transparent & auditable



The screenshot shows the 'gebiedonline.nl' website interface. At the top left is the 'IJburg' logo. Below it is a banner image of a modern residential building complex by a canal. The main content area is divided into two columns. The left column is titled 'KALENDER' and shows a list of events for 'VANDAAG' (today). The right column is titled 'BUURTPRIKBORD' and features a blue button that says 'Samen maken we het gebiedsplan'. Below the button is a 'bericht' (message) section with a profile picture of a woman and the title 'Expositie inzendingen kavel 42A'. The message text describes an exhibition of architectural designs at the ARCAM center. Below the message is an 'aanbieden' (offer) section with a profile picture of a woman and the title 'Kinderzitje'.


KALENDER


VANDAAG

- 19:00 **Computerles voor beginners**
Buurtkamer IJburg
[Buurtkamer IJburg](#)
- 20:00 **Hatha Yoga**
Bij Eef
[Bij Eef](#)
- 20:00 **Total Body Small group training**
Fit Earth
[Fit Earth](#)
- 20:00 **GEANNULEERD: Flex Night Live: Fietsen in/naar/vanuit Oost**
FlexBieb
[FlexBieb](#)


BUURTPRIKBORD [Samen maken we het gebiedsplan](#)

bericht

 **Expositie inzendingen kavel 42A**
geplaatst op 9 november 17, 11:12 uur, door [Anneloes Hummelinck](#)

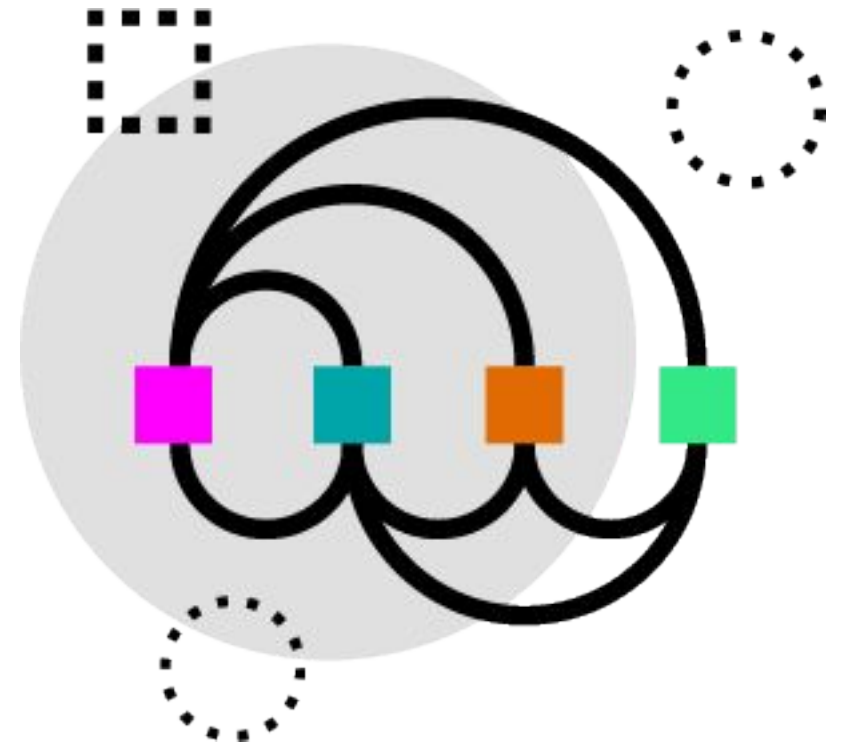
 Vanaf 8 november tot en met 31 december 2017 worden in het Architectuurcentrum Amsterdam (ARCAM) alle 4 de ontwerpen getoond die waren ingestuurd voor kavel 42A op IJburg.
Afgelopen zomer werd bekend ...

aanbieden (te koop / te huur / te leen)

 **Kinderzitje**

AMS: Local and social networks

- IJburg (AMS neighbourhood) wants:
- To **listen** to everybody's opinions
 - To **distinguish** between certified IJburg residents and the rest.



AMS: FairBnb & Rental register

A take on the “sharing” economy

Community: fairbnb.coop /
AMS city council

Need:

- Monitor touristic policy in a secure and traceable way
- Minimize data gathering.



AMS: Local and social networks

Mariska wants:

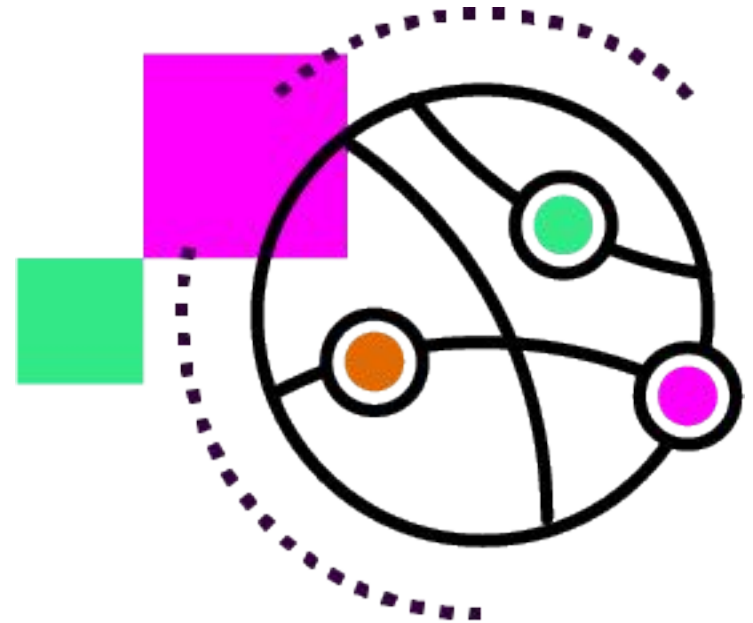
- To **ensure** rules are respected

Teun wants:

- To **redistribute** benefits to the neighborhood

Ellen wants:

- To **be informed** on area tourism use



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DECODE
under the
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decode

PRIVATE



Under the hood

**Distributed
ledger**

**Zero Knowledge
proofs**

**Entitlements & smart
rules**

IoT Data

Distributed Ledger

51.36	1.36	+180.98	-
21.88	5.56	+740.21	-
78.69	8.24	+122.56	-
18.75	9.62	+140.04	-
51.36	1.36	+180.98	-
21.88	5.56	+740.21	-
78.69	8.24	+122.56	-
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Zero Knowledge proofs



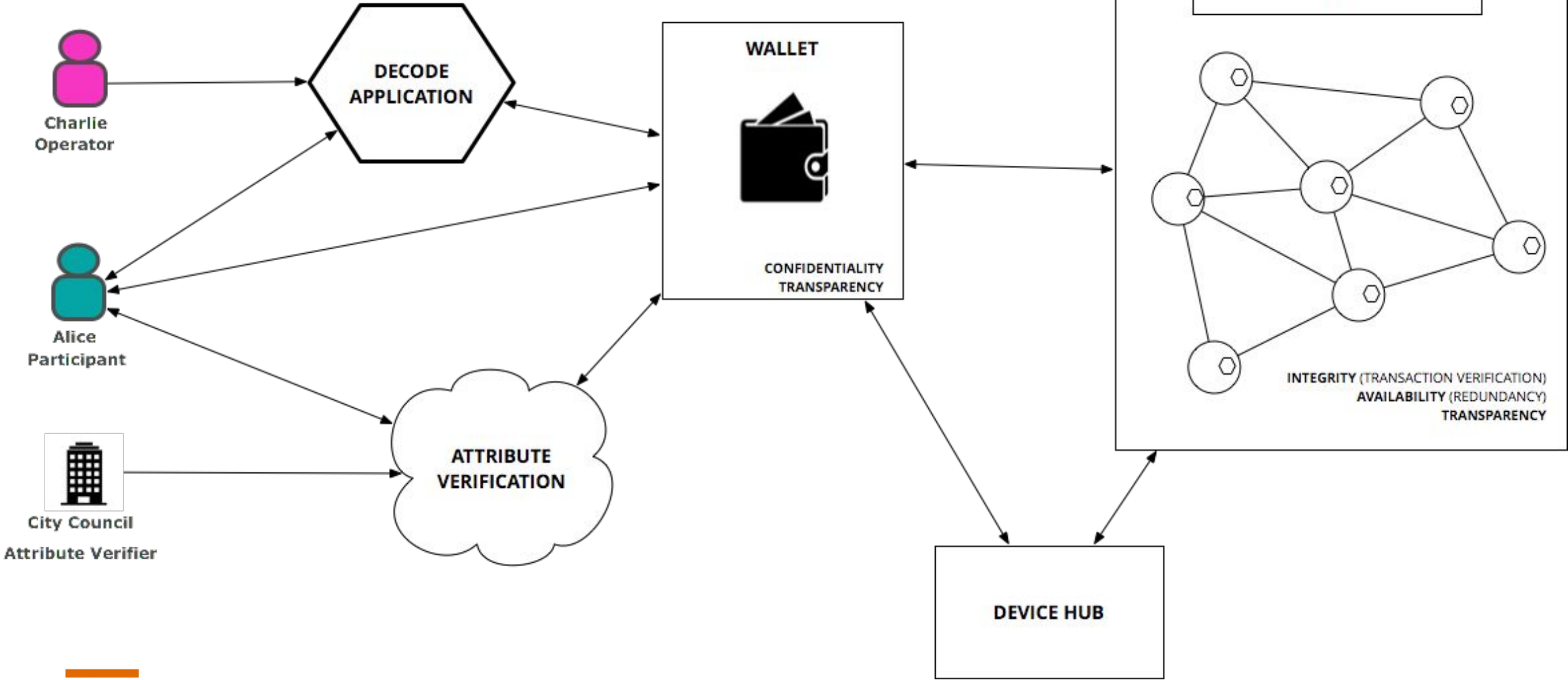
Entitlements to your data

YOU
HERE

IoT Data



DECODE Overview

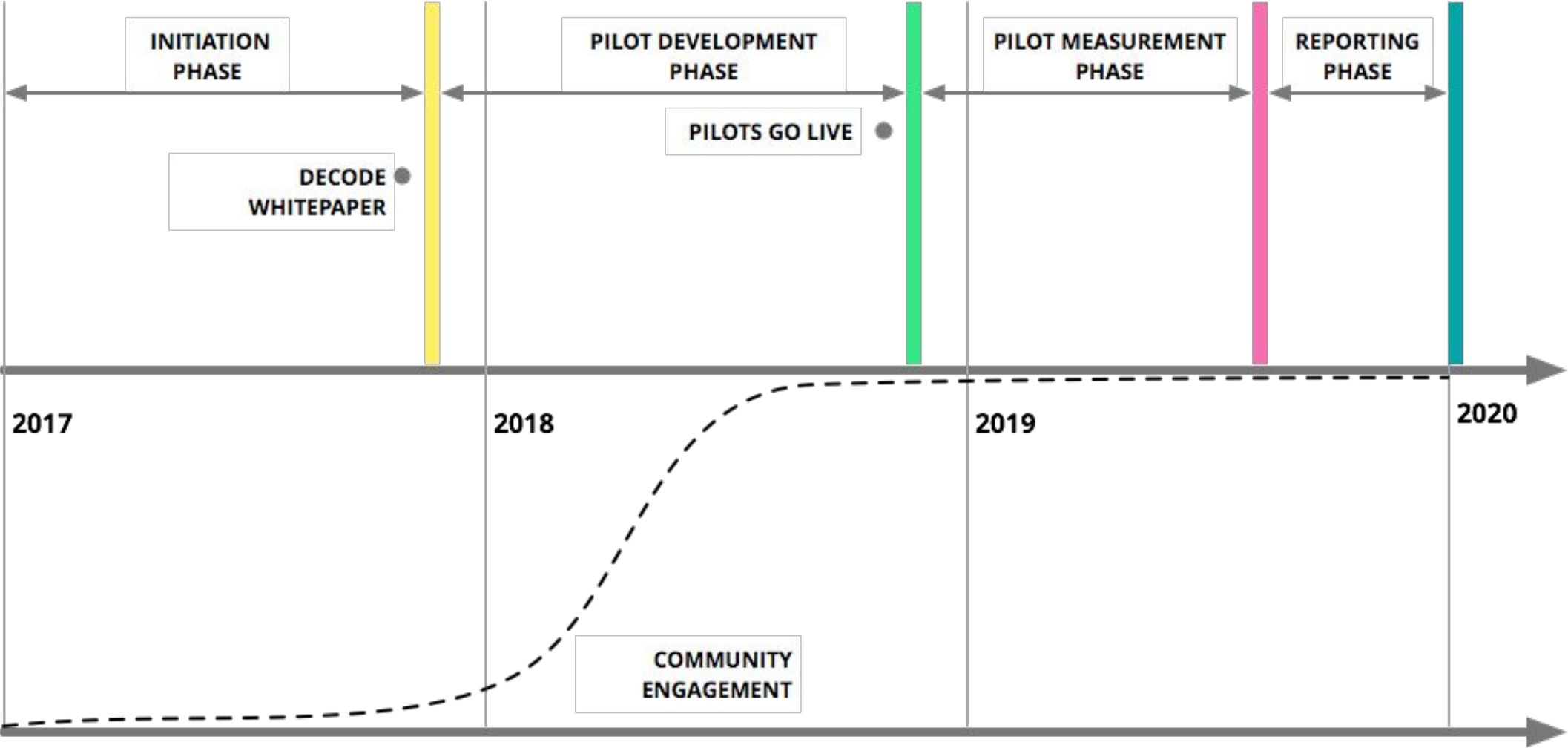


What's next?

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High Level Plan



Community



How can I get involved?

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www.decodeproject.eu

 **@decodeproject**

