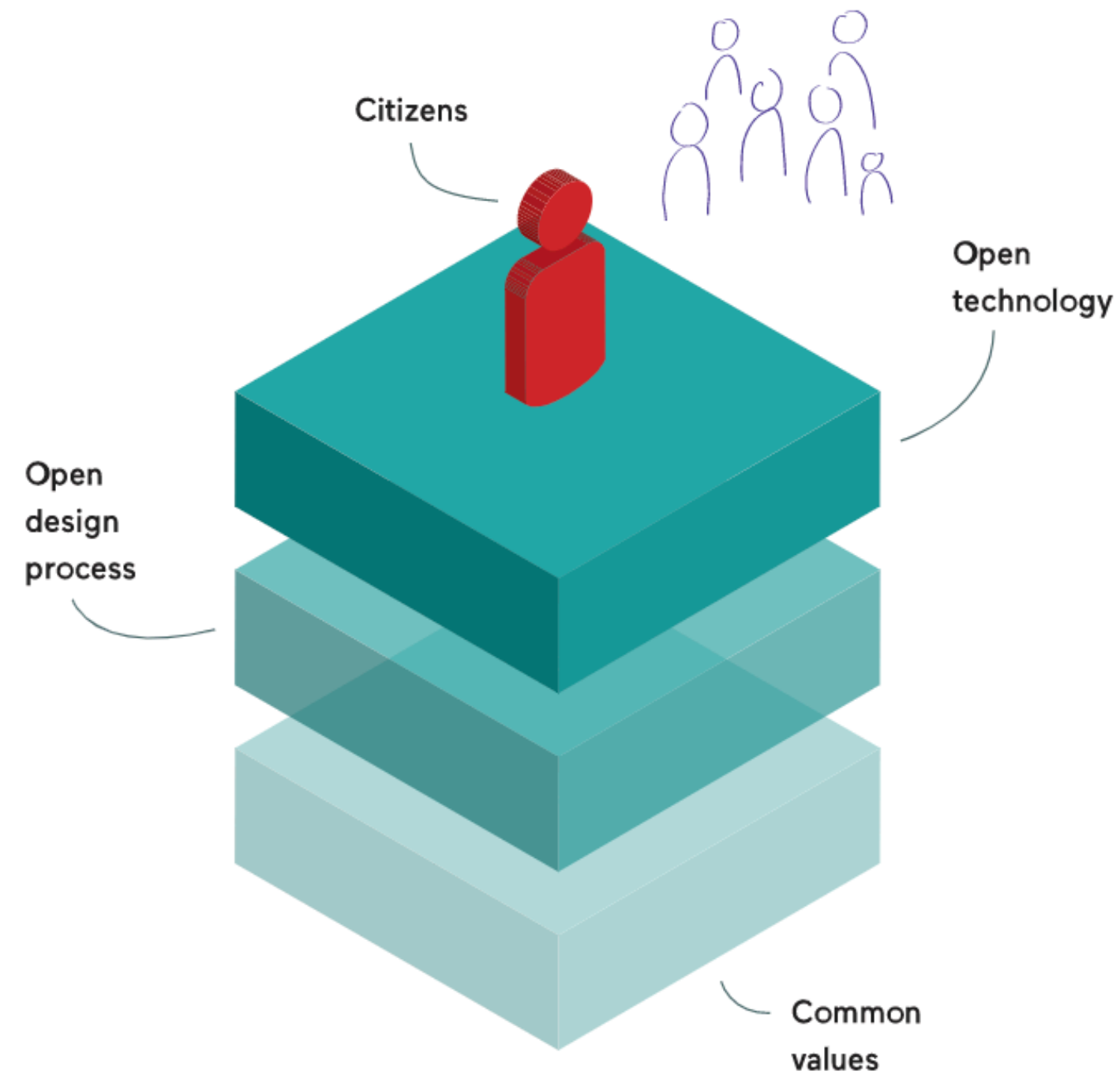




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Public Stack for energy

Open technologies, Open design, Commons

Marleen Stikker & Socrates Schouten

Energieontbijt 02025 - 10 December 2020



Activiteiten

research labs

14 labs

academy

6 academies

events

100+ bijeenkomsten

planet B expedities

7 expedities

Locaties

Waag
poort

HQ

Maak
plaatsen,
festivals,
partners

landelijk
netwerk

planet B

Science
Park Hub
museum
as a lab
pilot

Online

Digital
Public
Space



IF YOU CAN'T
OPEN IT,
YOU DON'T OWN IT

makezine.com



**WE DO NOT
CONSENT TO YOUR
TECHNOCRACY**

**DON'T BLOCKCHAIN
OUR BABIES! WORLD
ECONOMIC FORUM**

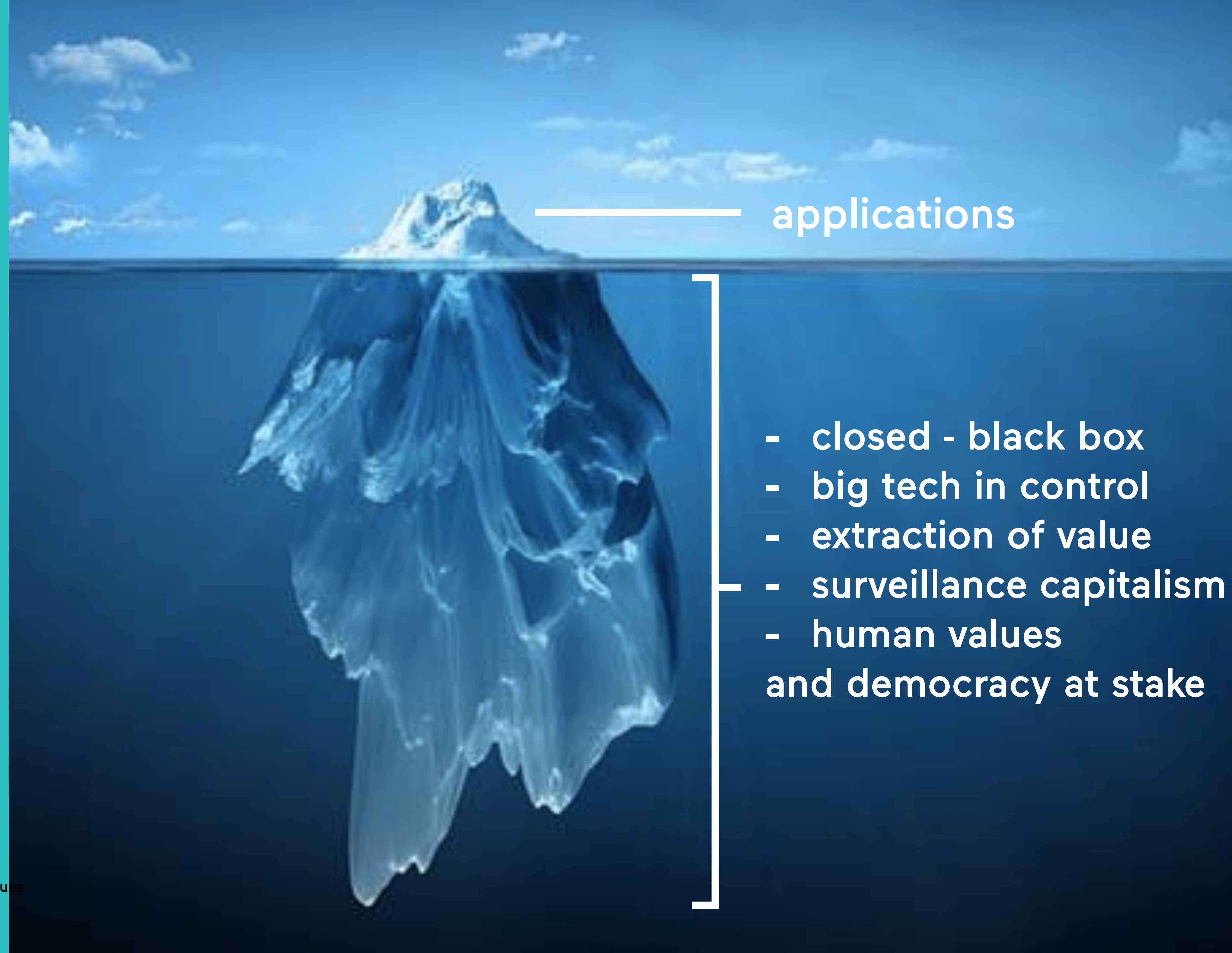
CITY JOURNAL



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Waar zijn we nu?

values



applications

- closed - black box
- big tech in control
- extraction of value
- surveillance capitalism
- human values
and democracy at stake



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Waar willen we
heen?

values

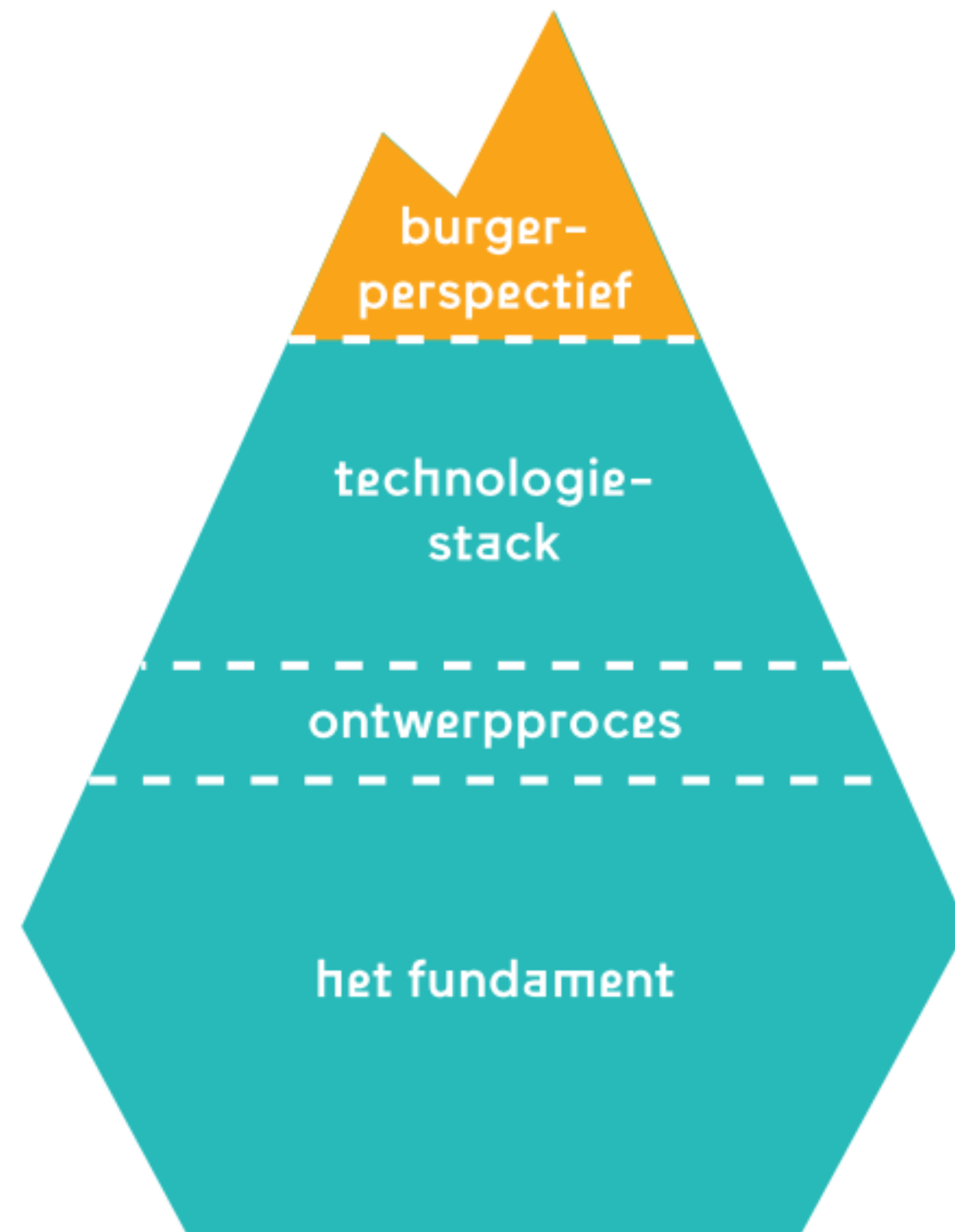
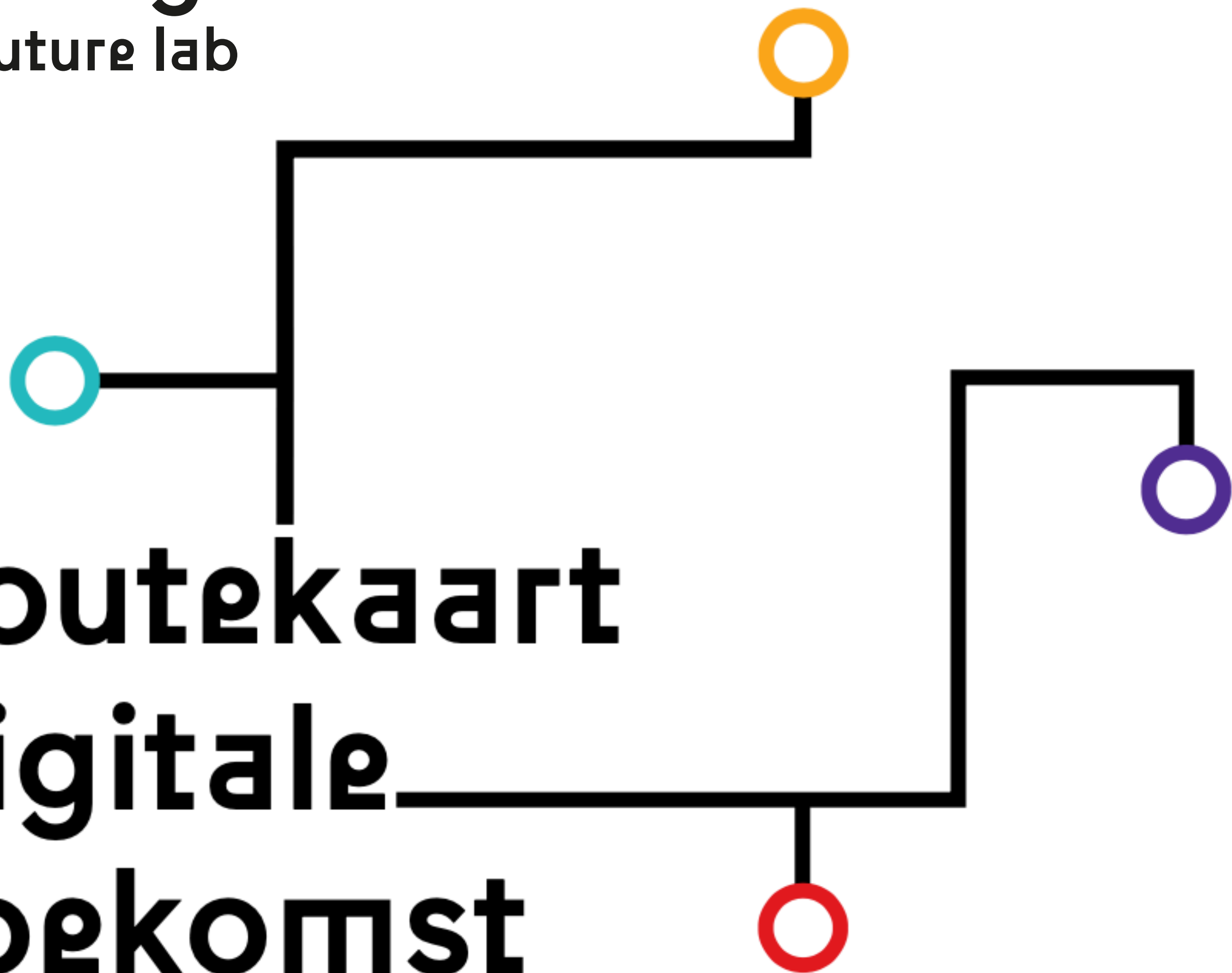
applications
In the future

- open / public
- society in control
- regenerative
- data minimalisation
- fair and sustainable



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Routekaart Digitale Toekomst





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Public Stack for climate & energy

Achieving a **climate neutral Europe** by 2050 requires unprecedented action across all layers of society.

Citizens and local stakeholders need to be enabled to join in the energy transition. The required enabling factors range from new technologies to public frameworks* and municipal programs.

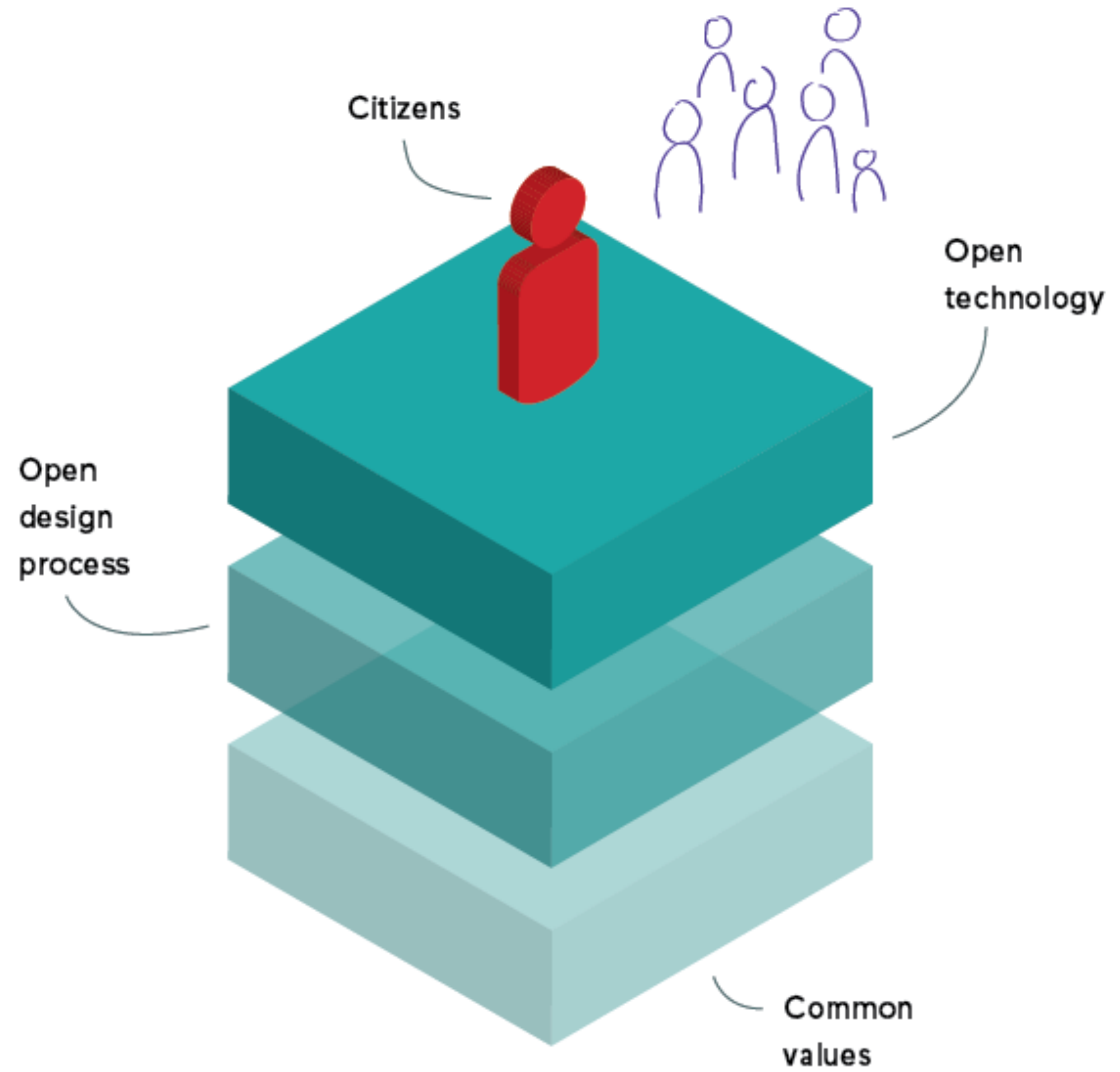
Waag wants to make sure the right **digital technologies** are designed, with the highest ambitions in terms of **transparency, usability, civic empowerment and sustainability outcomes.**

* such as the European Green Deal and the Dutch Climate Agreement



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Public Stack





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Public Stack

1. **Uitgangspunten en aannames**

Handelingsperspectief en eigenaarschap van burgers als basisprincipe. Energie basisrecht, geen commodity

2. **Grondrechten en waarden**

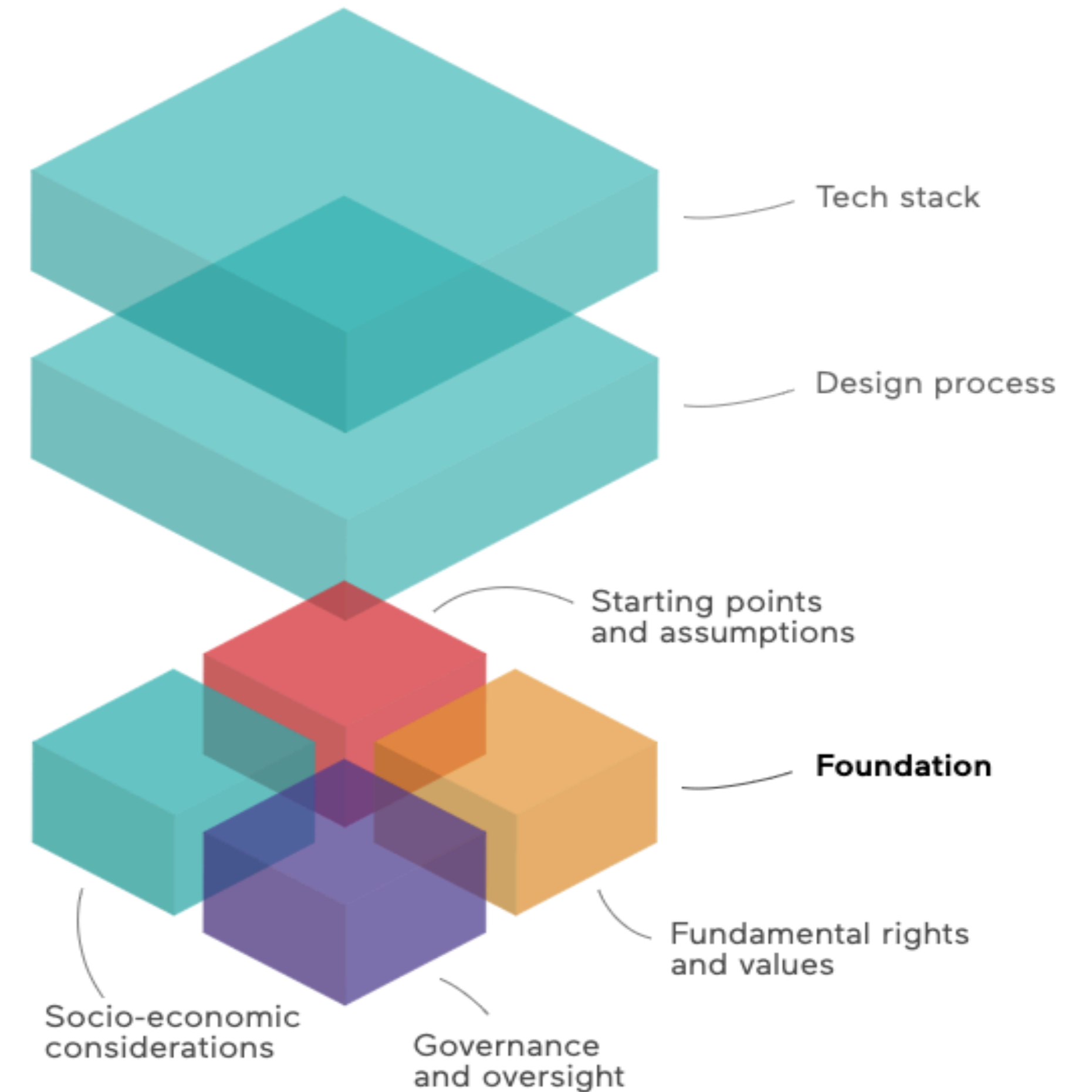
Gebouwd op publieke waarden: open, democratisch, duurzaam

3. **Governance en toezicht**

Getrapte governance niveaus. Potentie datacommons en andere innovatieve governancevormen

4. **Sociaaleconomische overwegingen**

Eigenaarschap, non-extractieve verdienmodellen





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commons are
shared resources,
maintained and/or
created by a
community,
organised around
commonly defined
shared rules

Nature

Air...water...dna...photosynthesis...seeds...topsoil...airwaves...minerals...
animals...plants...antibiotics...oceans...fisheries...aquifers...quiet...
wetlands...forests...rivers...lakes...solar energy...wind energy...

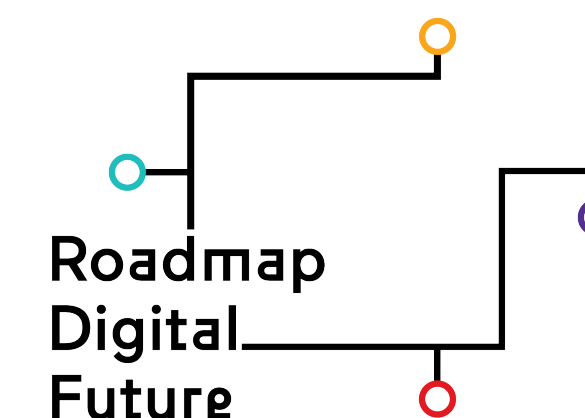
Community

Streets...playgrounds...the calendar...holidays...universities...libraries...museums...
social insurance...law...money...accounting standards...capital markets...
political institutions...farmers' markets...flea markets...craigslist...

Culture

Language...philosophy...religion...physics...chemistry...musical instruments...
classical music...jazz...ballet...hip-hop...astronomy...electronics...the internet...
broadcast spectrum...medicine...biology...mathematics...open source software...

**The
Commons**





The city as a commons



Urban green

Housing

Energy

Public space

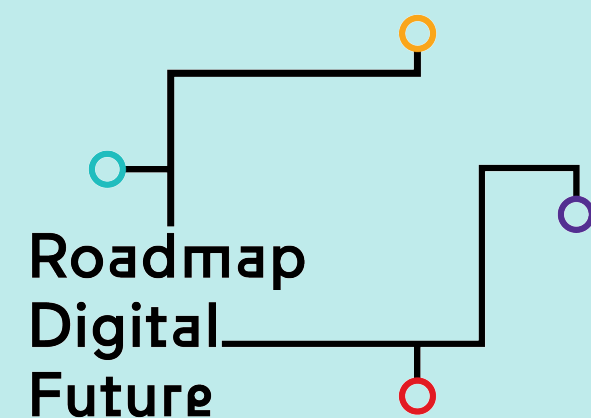
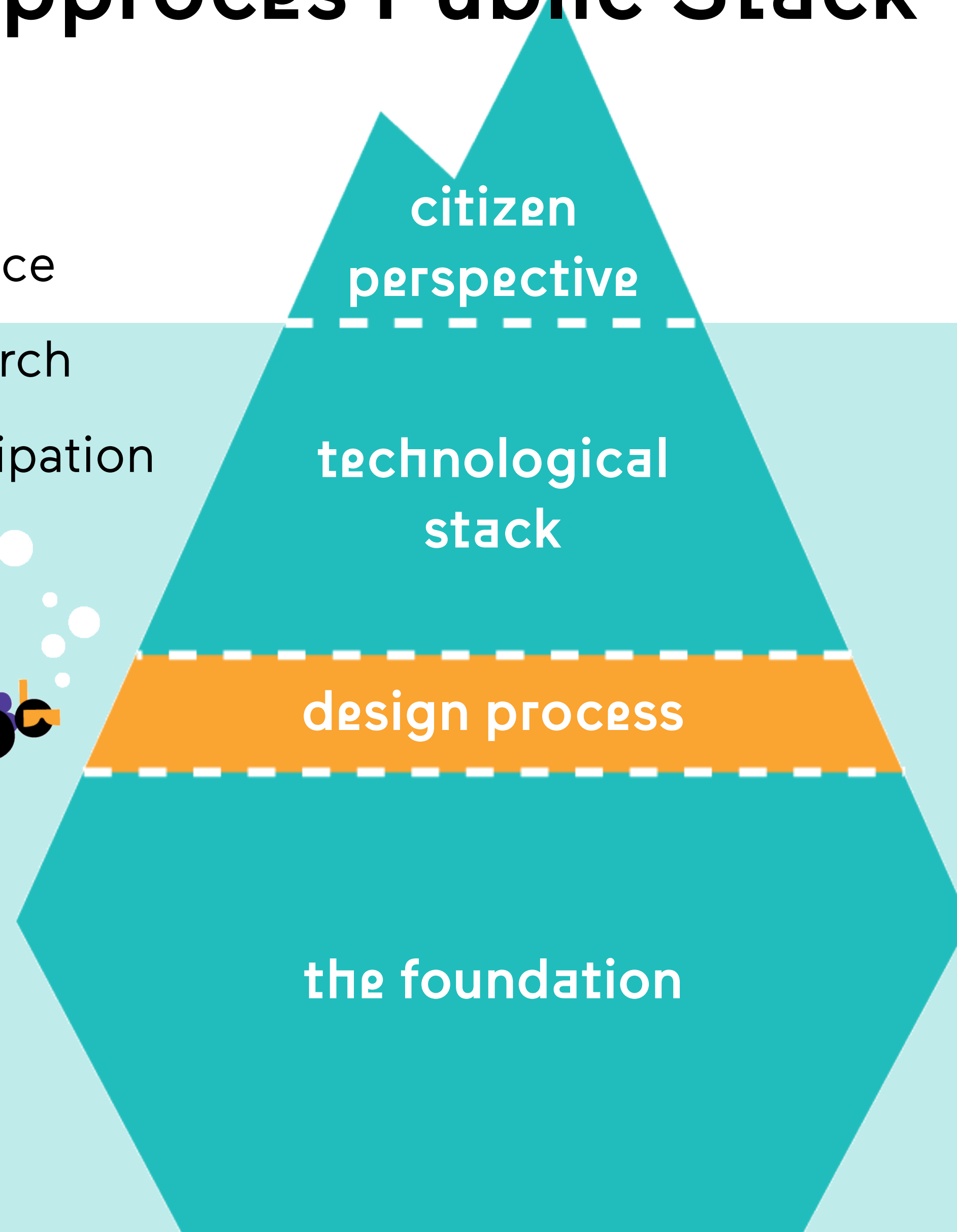
Smart city



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Ontwerpproces Public Stack

- Co-creation
- Citizen science
- Public Research
- Public Participation

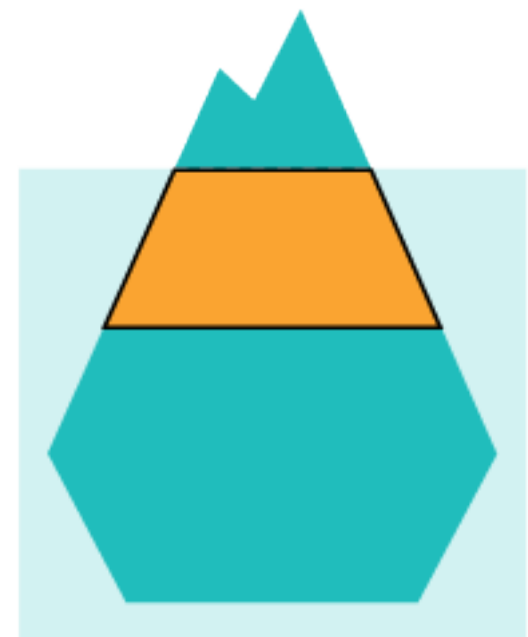
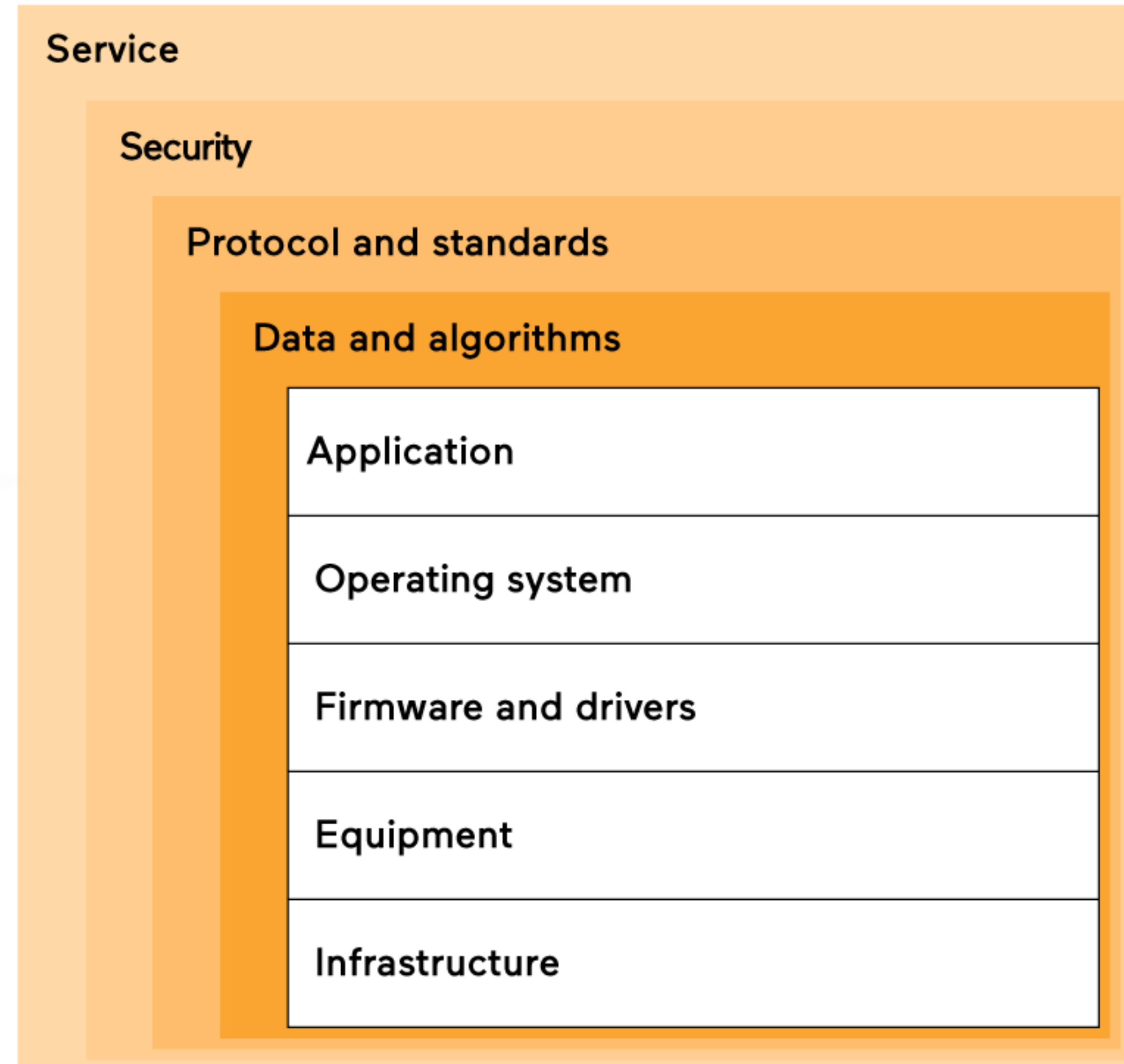




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Technology Stack of the Public Stack

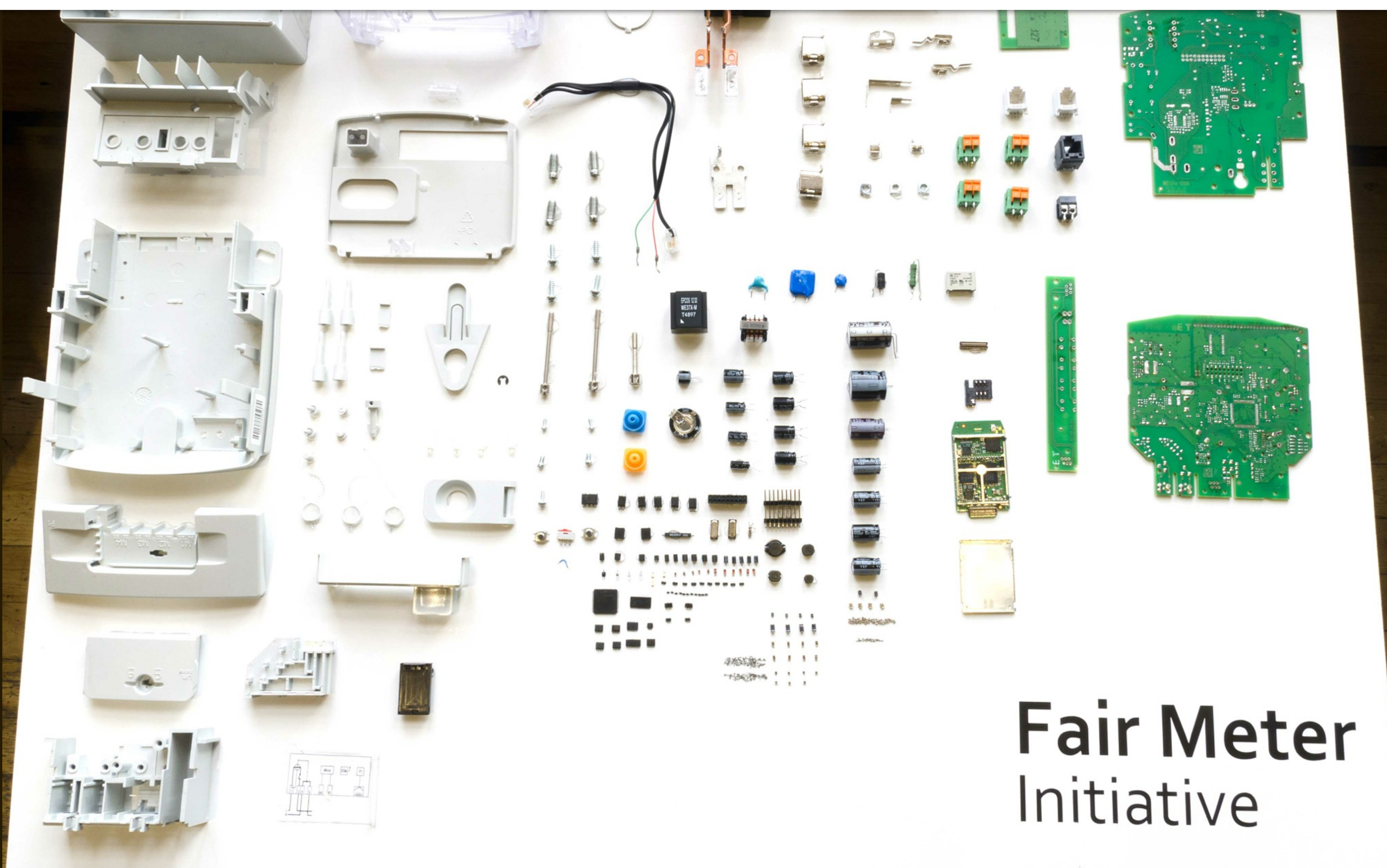
Voorbeeld



Open hardware voorbeeld (uit 2013)



Open hardware voorbeeld (uit 2013)



Fair Meter Initiative



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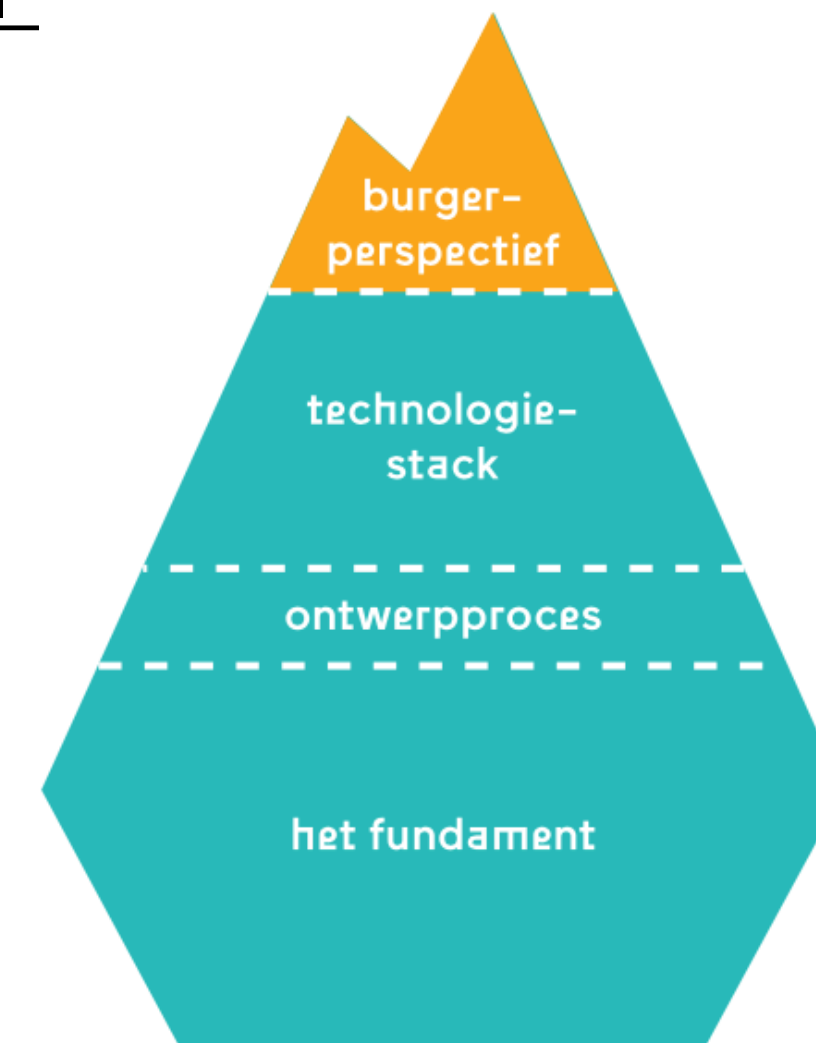
Naar een betrouwbaar Internet of Energie gebaseerd op publieke waarden

Meer informatie:

<https://publicstack.net>

<https://waag.org/sites/waag/files/2020-05/routekaart-digitale-toekomst-v0.3.pdf>

<https://waag.org/sites/waag/files/2020-06/Roadmap-Digital-Future-EN-v0.36.pdf>





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Waag past deze principes toe in

ATELIER project (2020-2024)

The Positive Energy District



ATELIER project (2020-2024)

Amsterdam and **Bilbao** have set the ambitious goal of being energy neutral by 2030. This will have consequences for the design and organisation of the entire city. What will the energy transition look like for citizens? And what kind of technology will it involve?

ATELIER is a five-year project funded by the European Commission that focuses on shaping **Positive Energy Districts** (PEDs). Residents, local stakeholders and companies will work together in these neighbourhoods to create a local energy system that generates energy sustainably.



Aerial photo of Buiksloterham area, Amsterdam
(Photo: credits unknown, from website Republica)



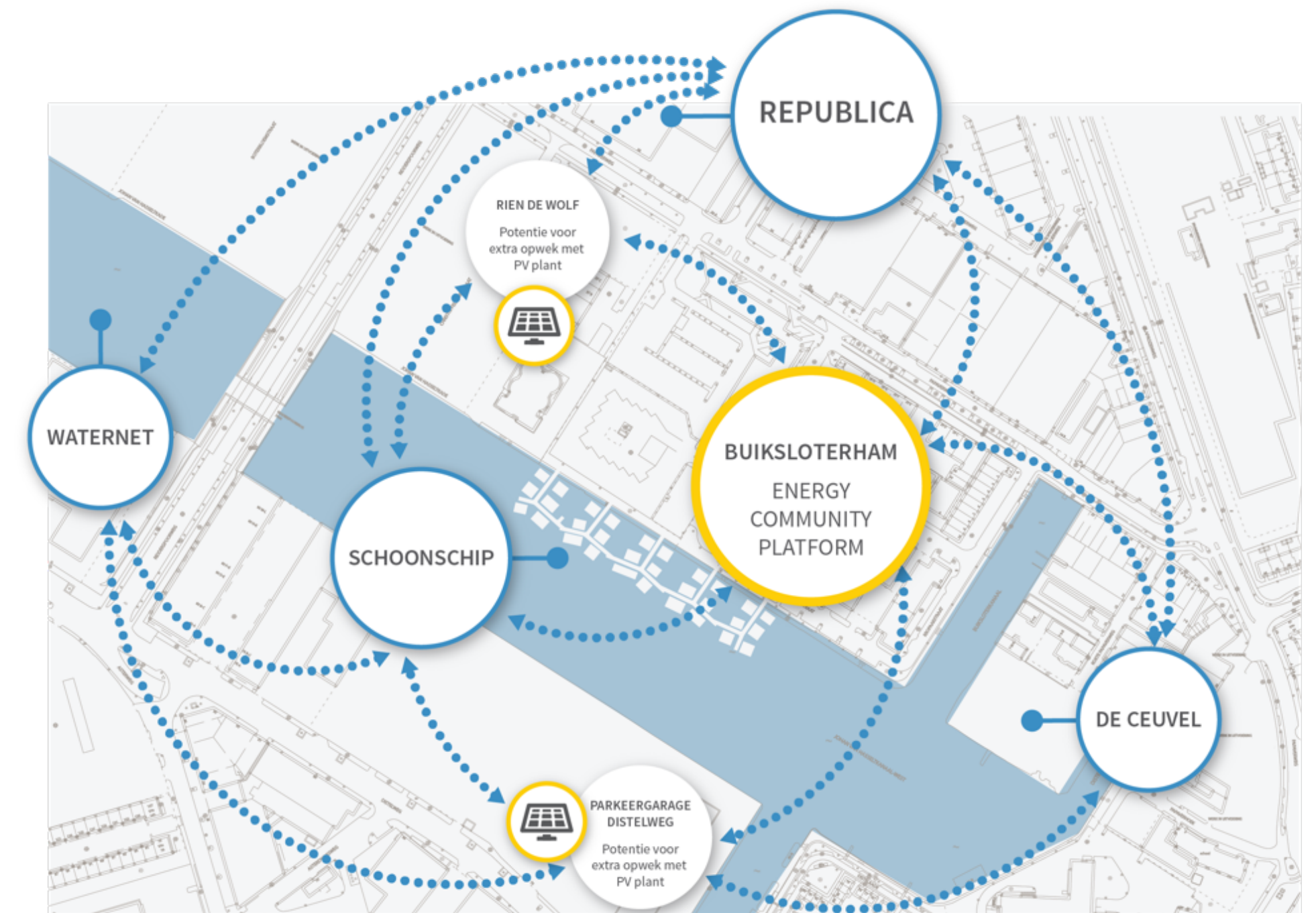
Current situation at Zorrotzaurre island, Bilbao
(Photo: City of Bilbao)



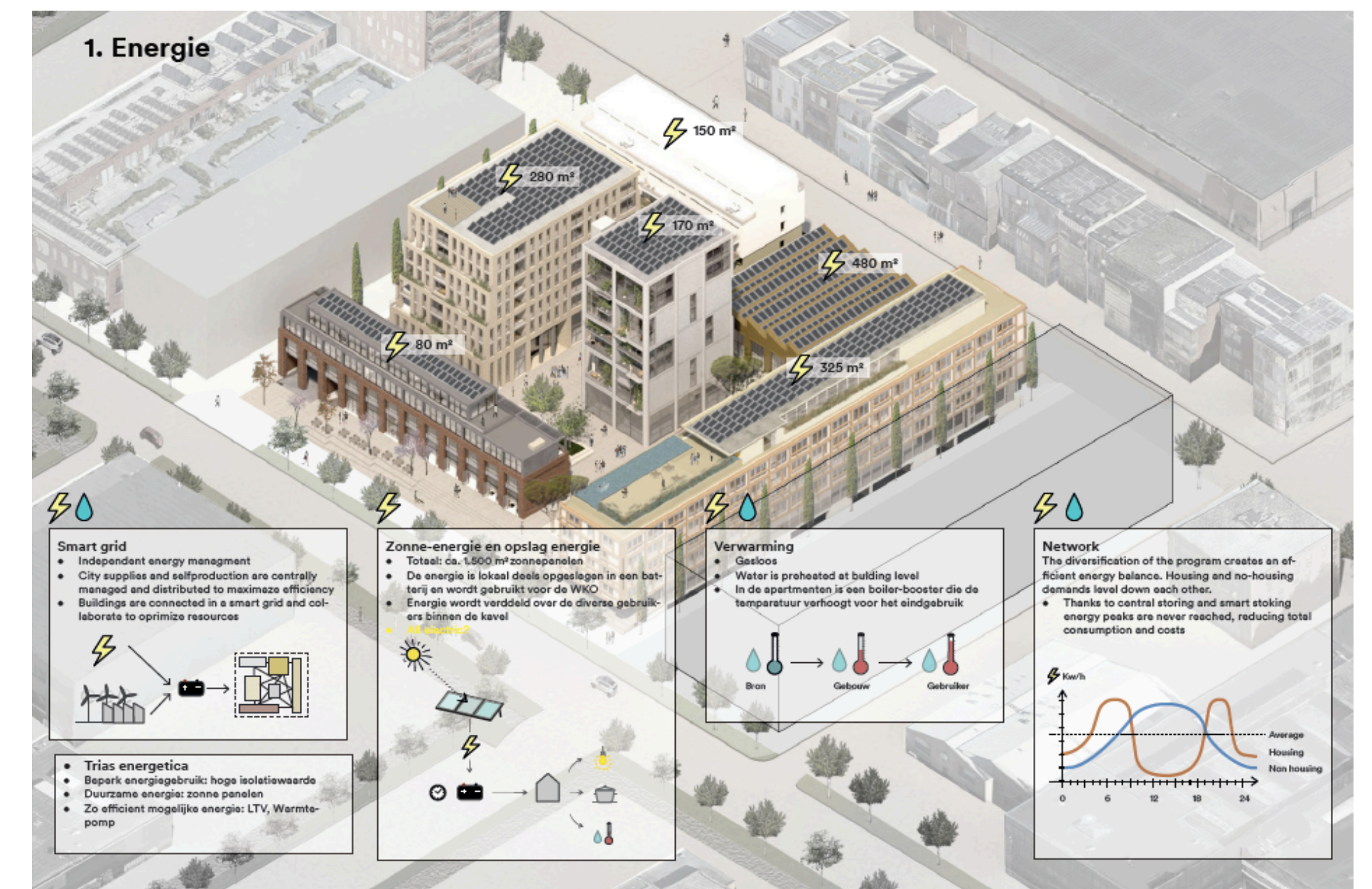
ATELIER in Amsterdam

Two blocks in Amsterdam North will implement advanced technologies to achieve PED status. They will collaborate with pioneer (microgrid) projects Ceuvel and Schoonschip.

Waag is researching the socio-technical dimension. For example, how can data be shared among residents? And how can the neighbourhood learn from these PEDs?



POPPIES project (Credits: Marc Koehler Architects)

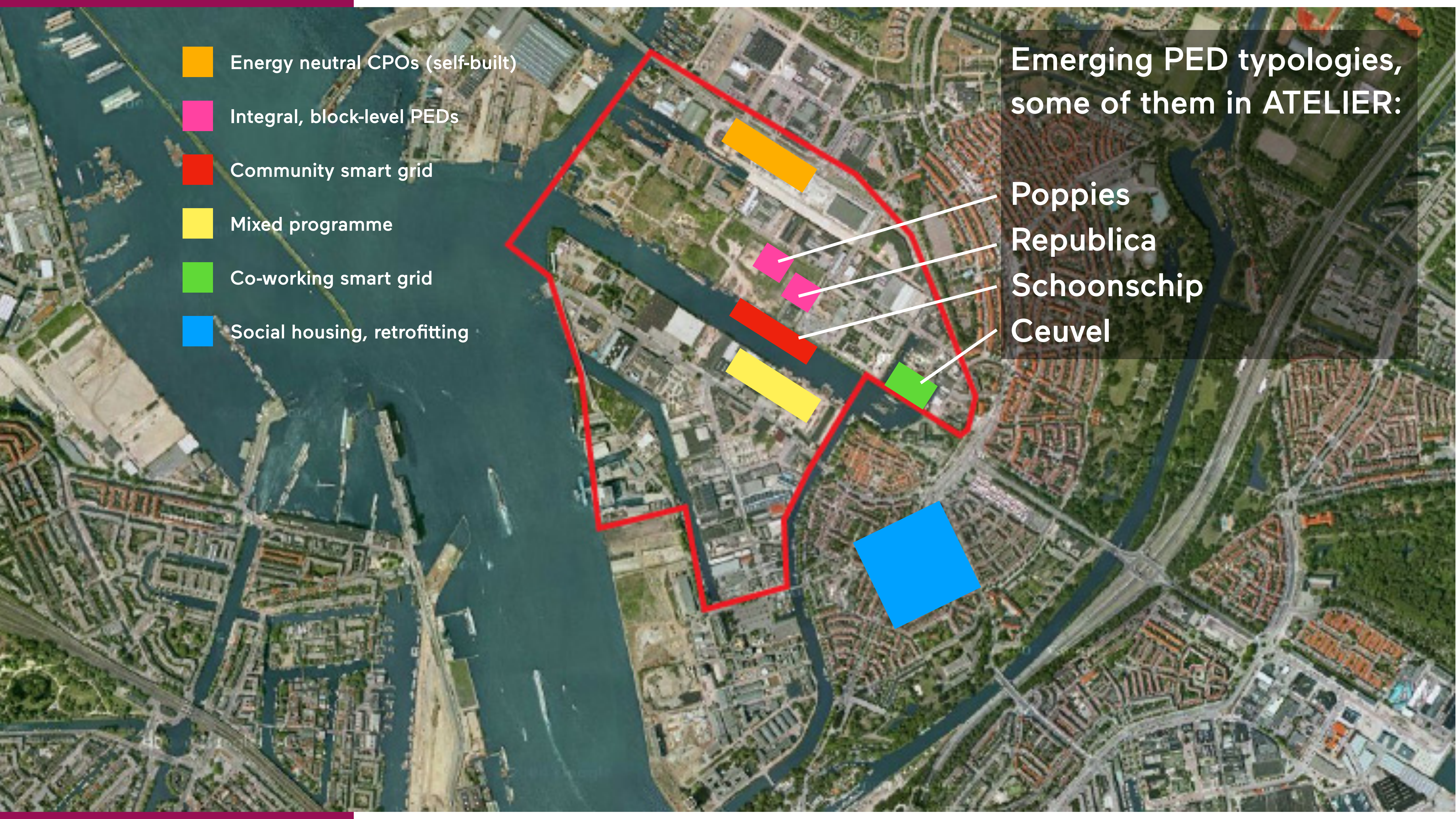


REPUBLICA project (Credits: ATELIER)

- Energy neutral CPOs (self-built)
- Integral, block-level PEDs
- Community smart grid
- Mixed programme
- Co-working smart grid
- Social housing, retrofitting

Emerging PED typologies,
some of them in ATELIER:

- Poppies
- Republica
- Schoonschip
- Ceuvel



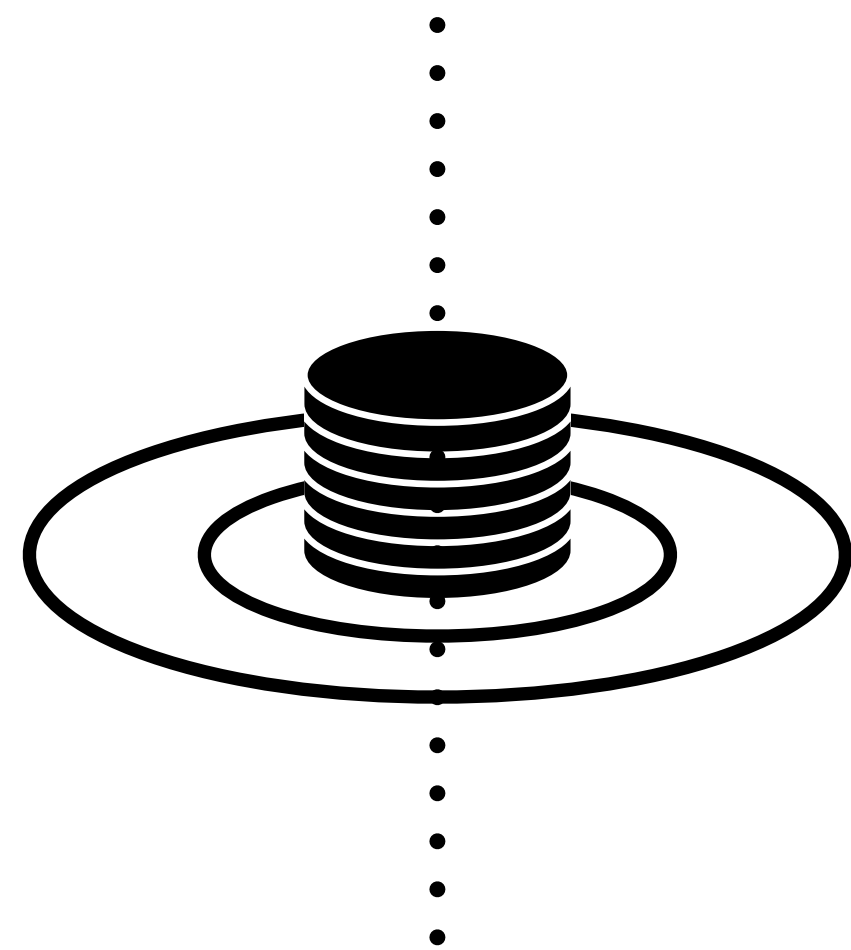


Putting the local in the centre

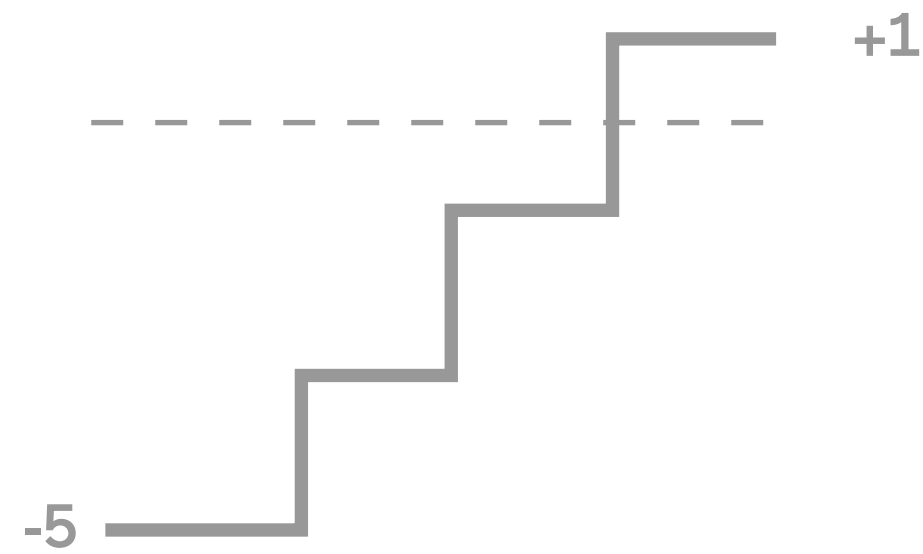
Although many solutions and components will exceed the local scale, some will. And everything comes together at the local level. That's why any ET strategy should culminate at the local level.

In the design of localised transition strategies, we identify three pillars:

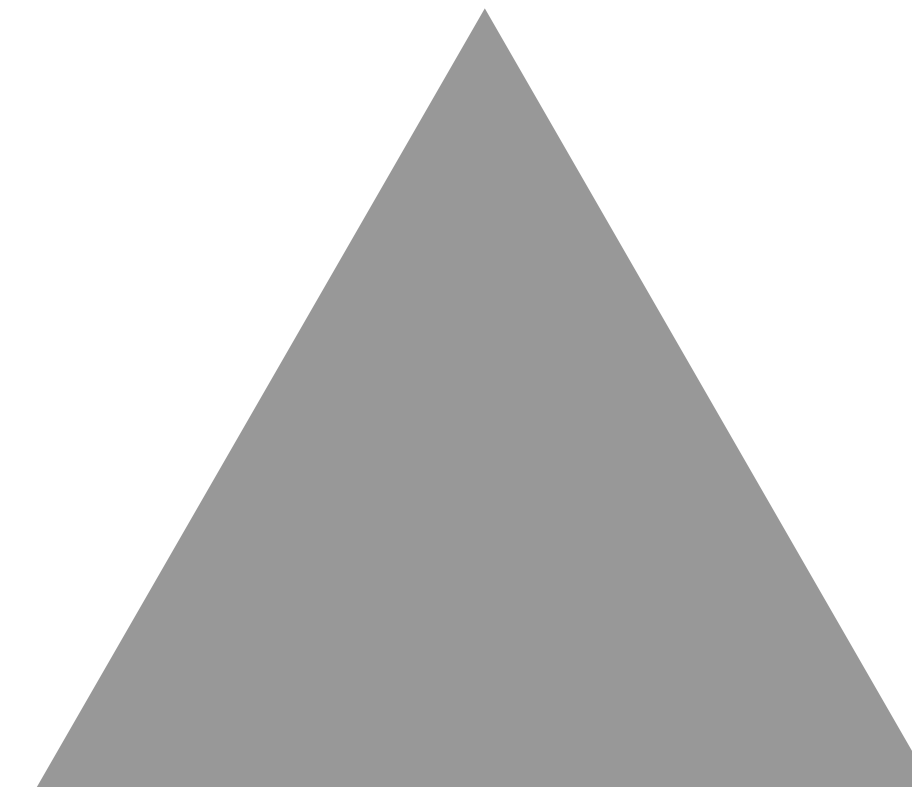
Positive energy districts (PEDs)



Positive energy transition plans



Appropriate governance & incentive mix





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Public stack & energy Masterclass / design workshop

Februari 2021

@marleenstikker @waag