groundtruth2.0

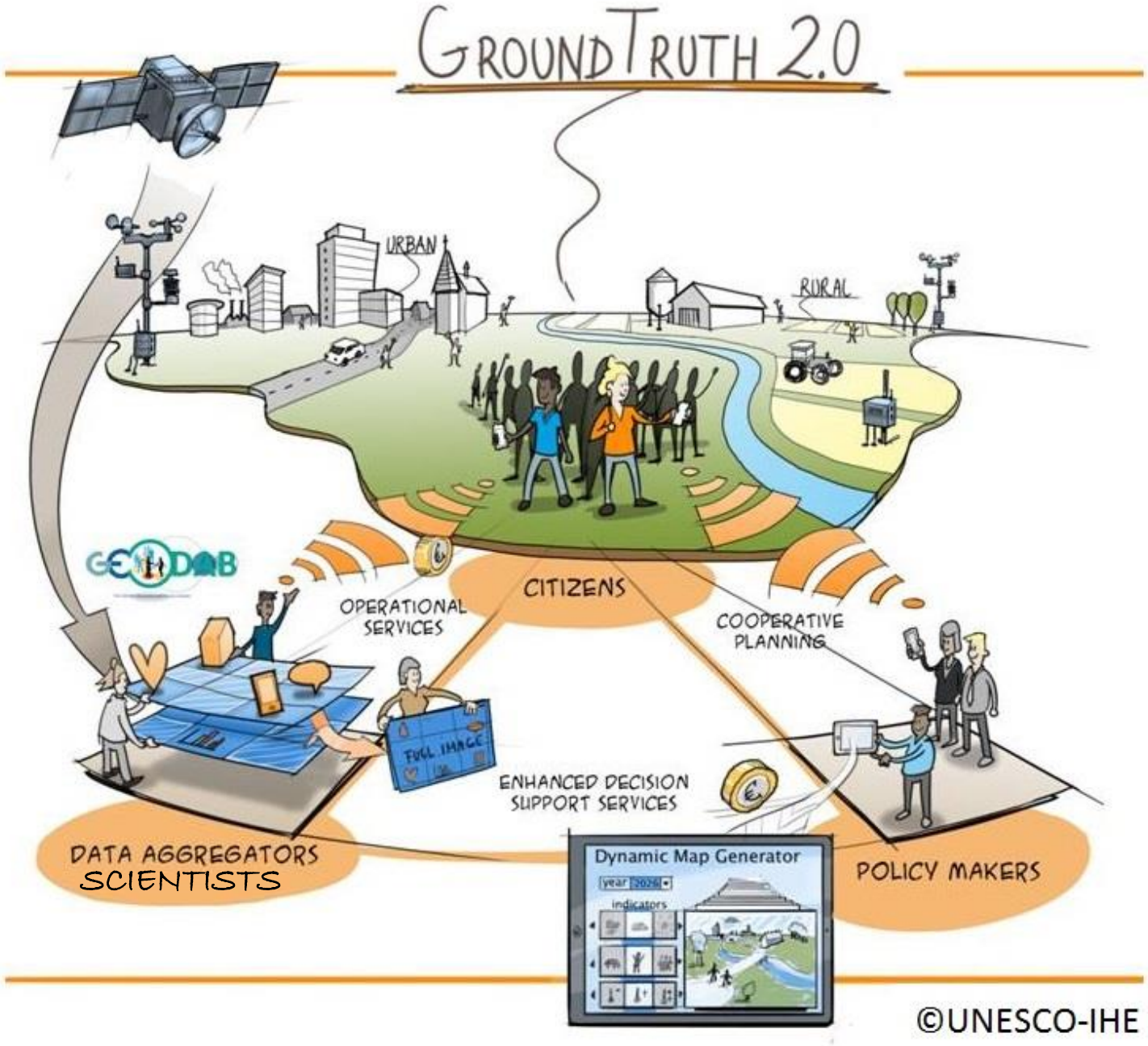
Environmental knowledge discovery of human sensed data

Achievements and challenges

Dr. Uta Wehn, Ground Truth 2.0 Project Coordinator

Associate Professor, IHE Delft

Observing the Environment: Challenges and Opportunities in Citizen Science, 10 October 2019, Brussels



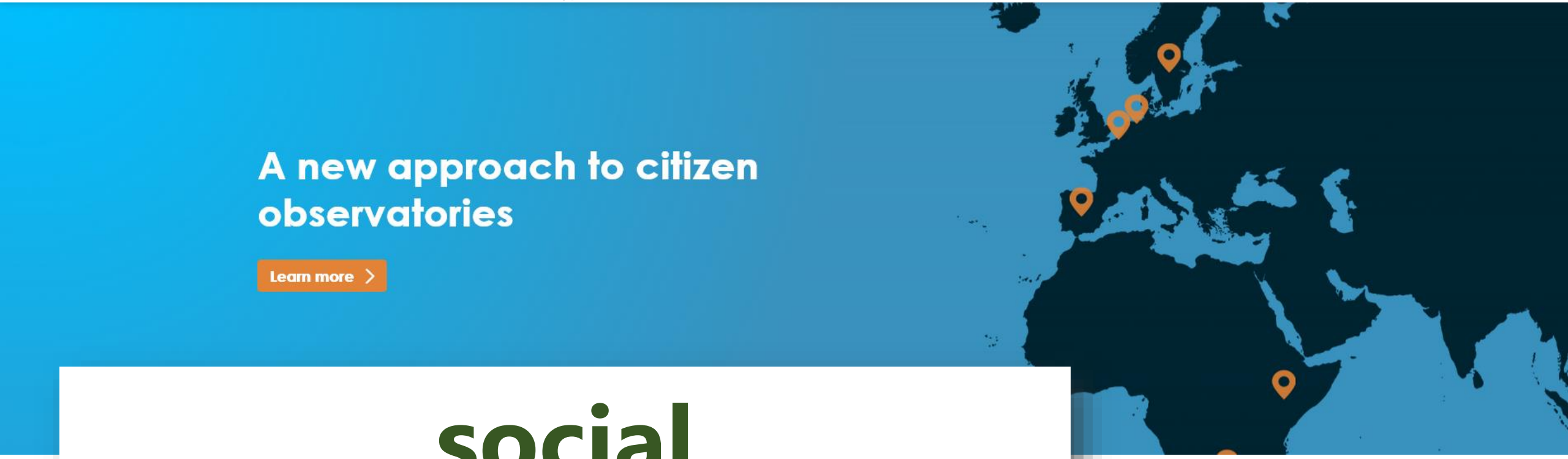
Citizen observatories

- innovative form of **environmental monitoring, knowledge co-production & engagement** initiatives
- typically implemented **at local scale**
- with a **long term** focus
- link to **policy & action**

groundtruth2.0
Environmental knowledge discovery of human sensed data

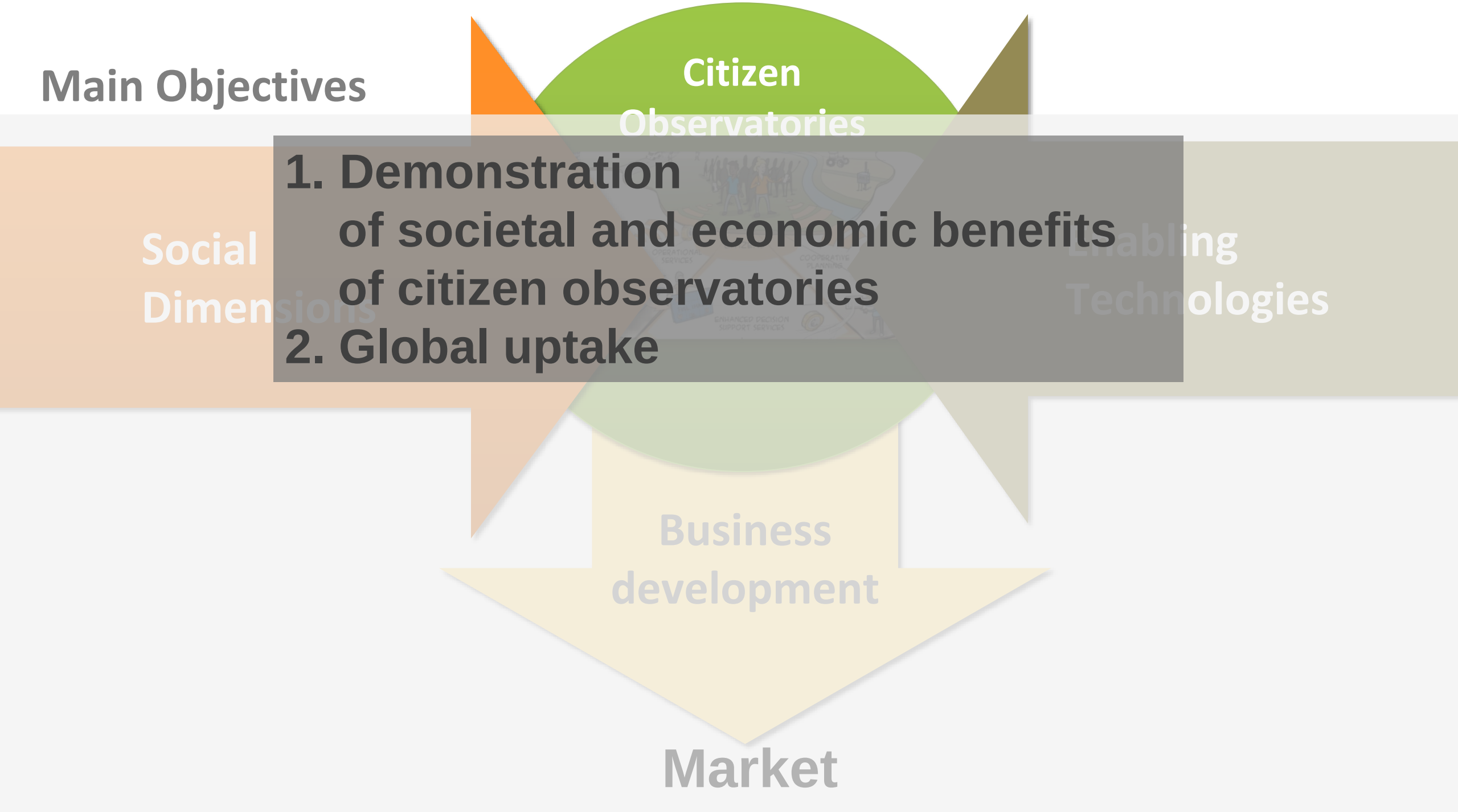
groundtruth2.0

Environmental knowledge discovery of human sensed data

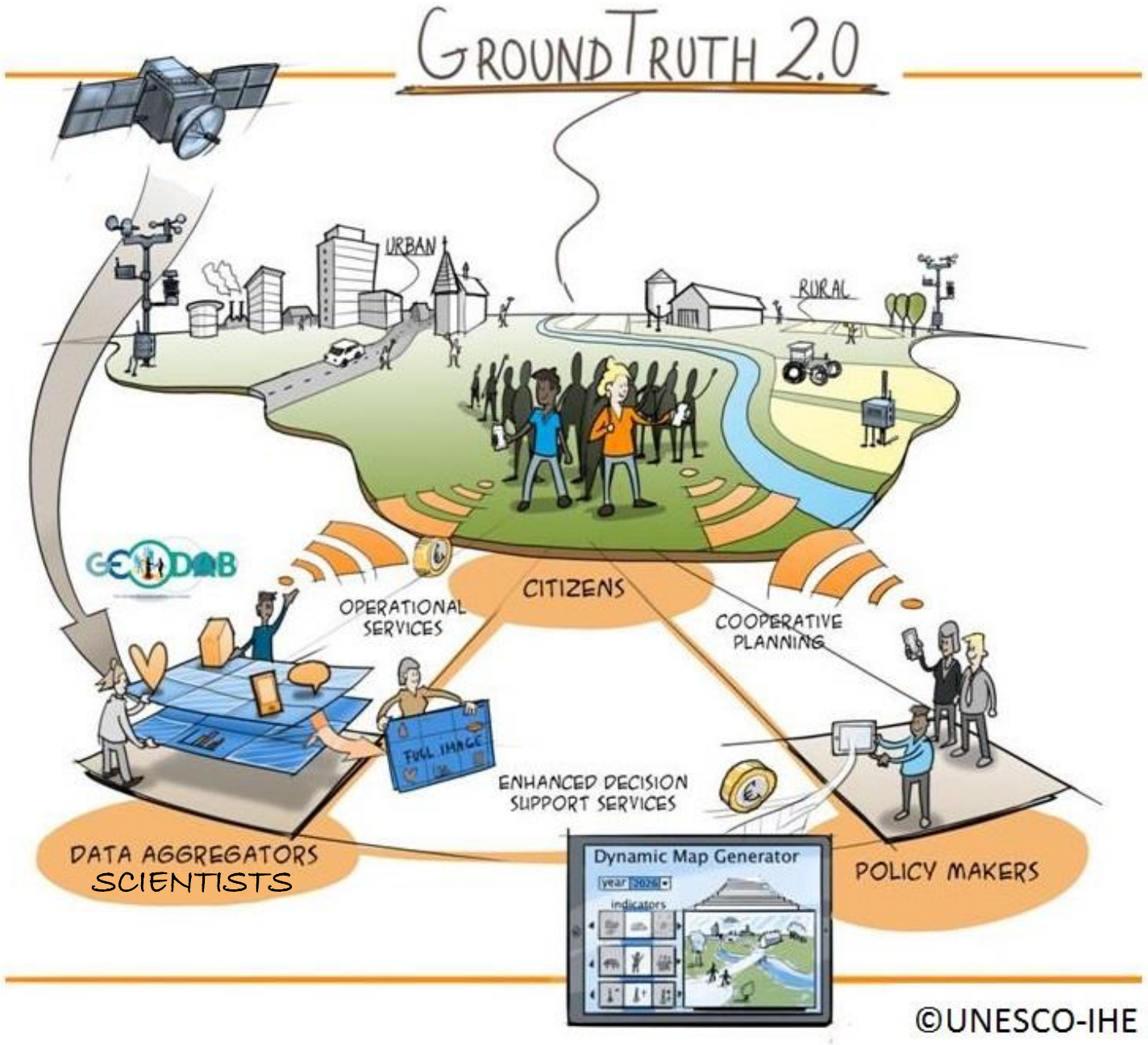


social

Main Objectives



1. Demonstration of societal and economic benefits of citizen observatories
2. Global uptake



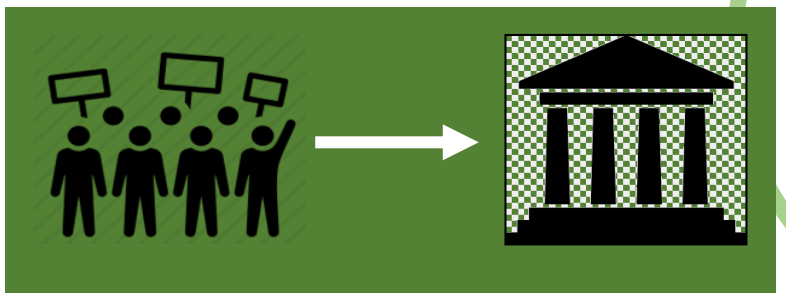
Citizen observatories

- Dedicated **communities** of citizens, scientists & decision makers
- Relying on **digital technologies**
- To actively **collaborate** in the generation, exchange and use of information & knowledge for a shared **purpose.**

groundtruth2.0
Environmental knowledge discovery of human sensed data

Citizen observatory domains

Implicit & explicit data collection by citizens

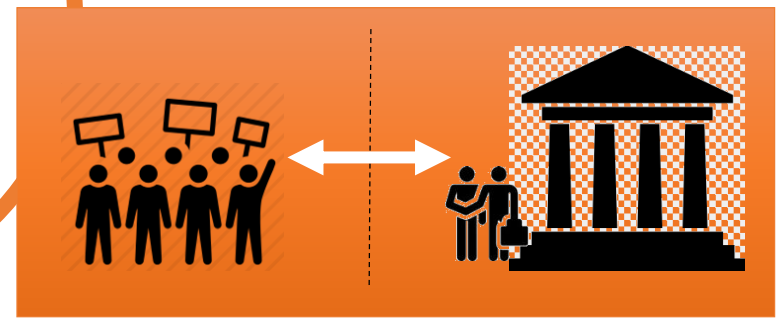


Science; Environmental monitoring

Cooperative planning

Environmental stewardship

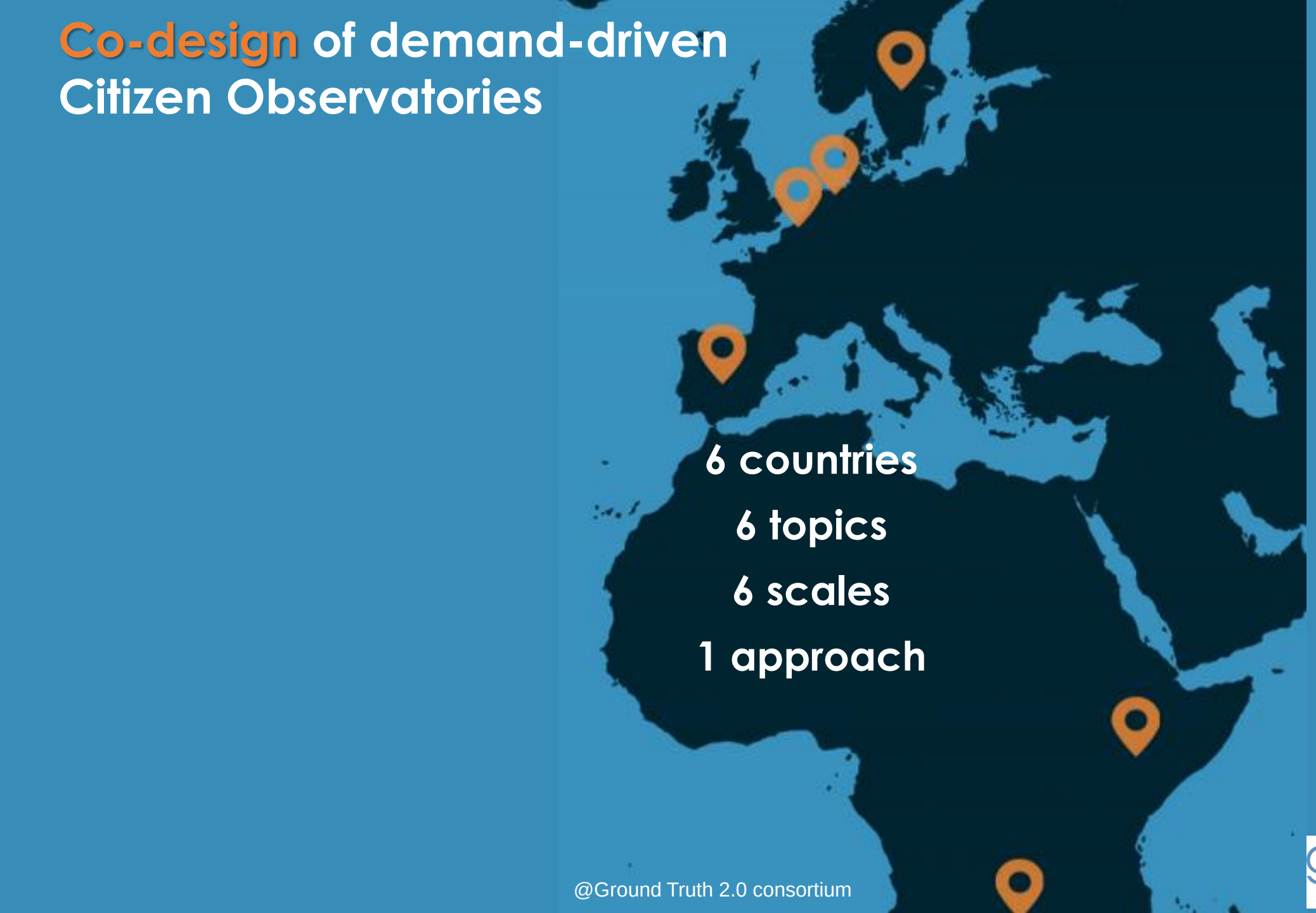
Stakeholder engagement, incl. consultation, feedback & discussion



Fully realized dialogues & shared responsibility for NRM

groundtruth2.0
Environmental knowledge discovery of human sensed data

Co-design of demand-driven Citizen Observatories



6 countries

6 topics

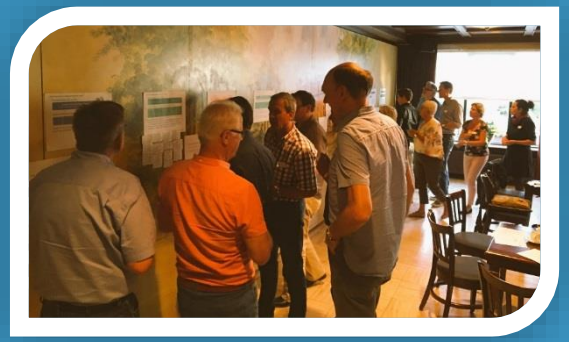
6 scales

1 approach

groundtruth2.0

Environmental knowledge discovery of human sensed data

Co-design of demand-driven Citizen Observatories



6 countries

6 topics

6 scales

1 approach

groundtruth2.0
Environmental knowledge discovery of human sensed data





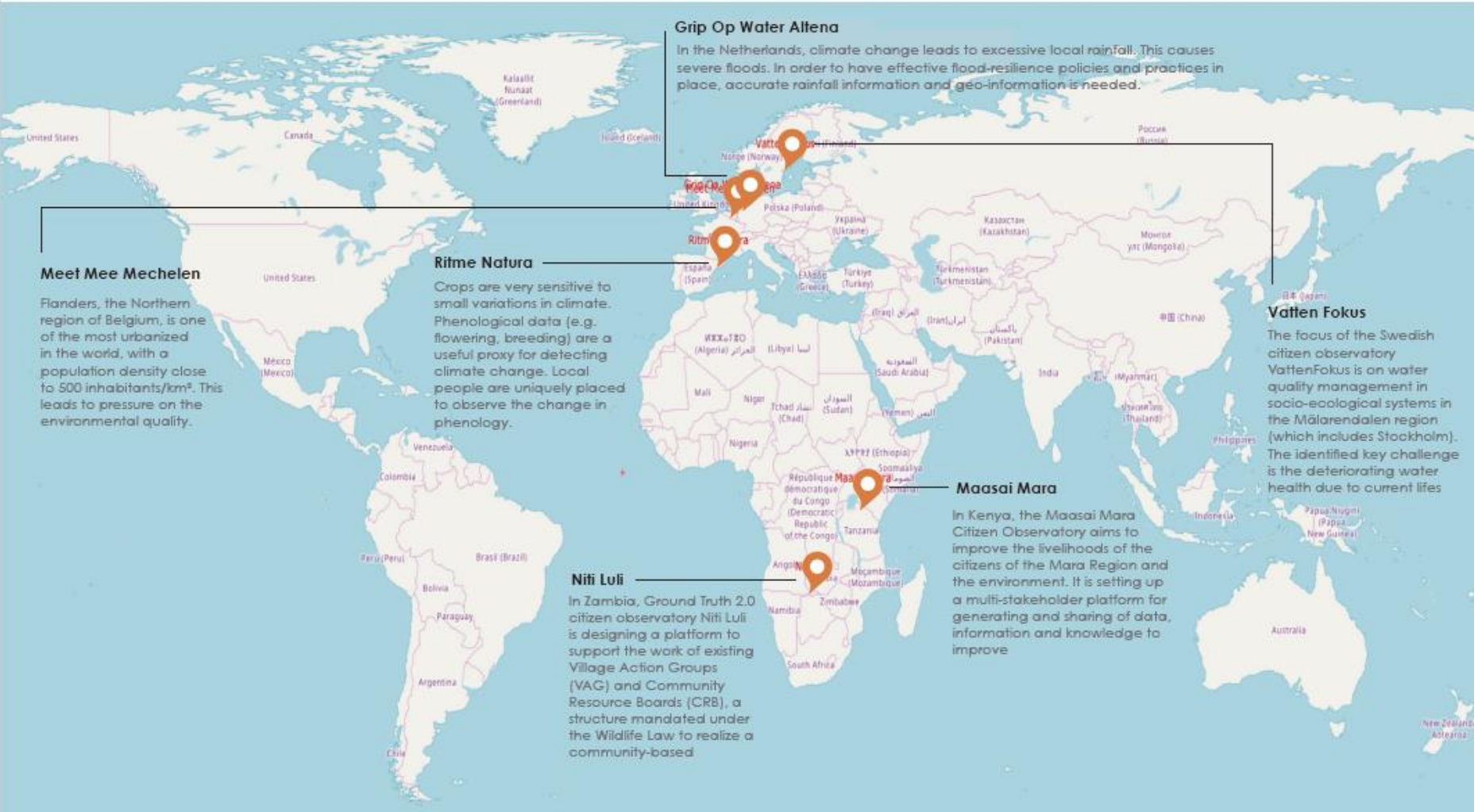

Ecosfera

ethias

THE groundtruth2.0

Environmental knowledge discovery of human sensed data

CITIZEN OBSERVATORIES



VattenFokus

Meet Mee Mechelen

KlimaatRobuust

St. Andries

stadslab2050.be/klimaatadaptatie

RitmeNatura.cat

Grip op water Altena

Maasai Mara Citizen Observatory

Niti Luli

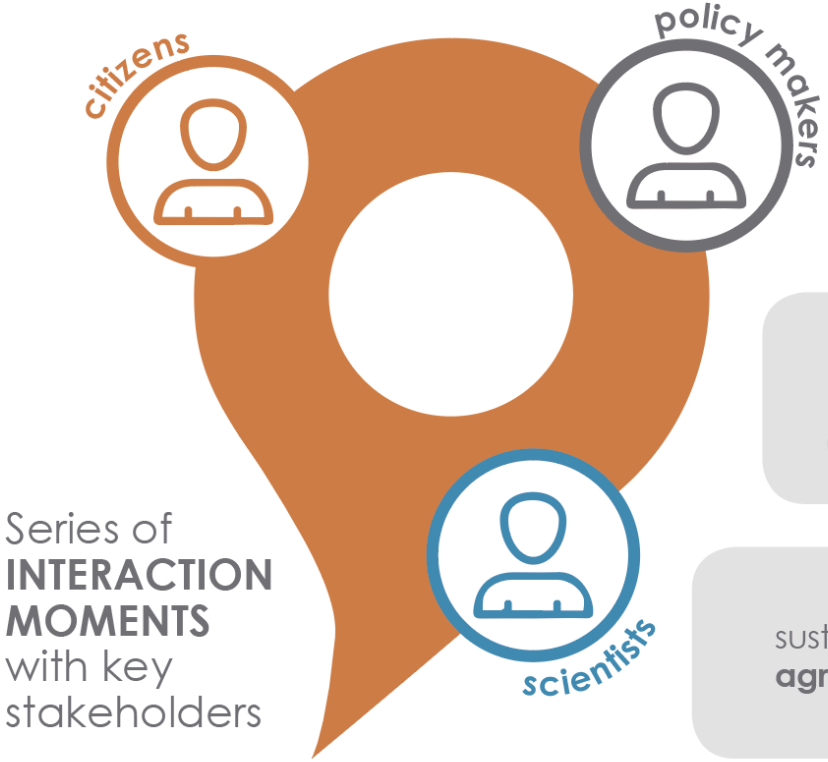
Sesheke West & Mufulani

CBNRM Observatory

THE groundtruth2.0
Environmental knowledge discovery of human sensed data

Co-design METHODOLOGY

CAREFULLY GUIDED AND SUPPORTED **ITERATIVE PROCESS**



Series of **INTERACTION MOMENTS** with key stakeholders

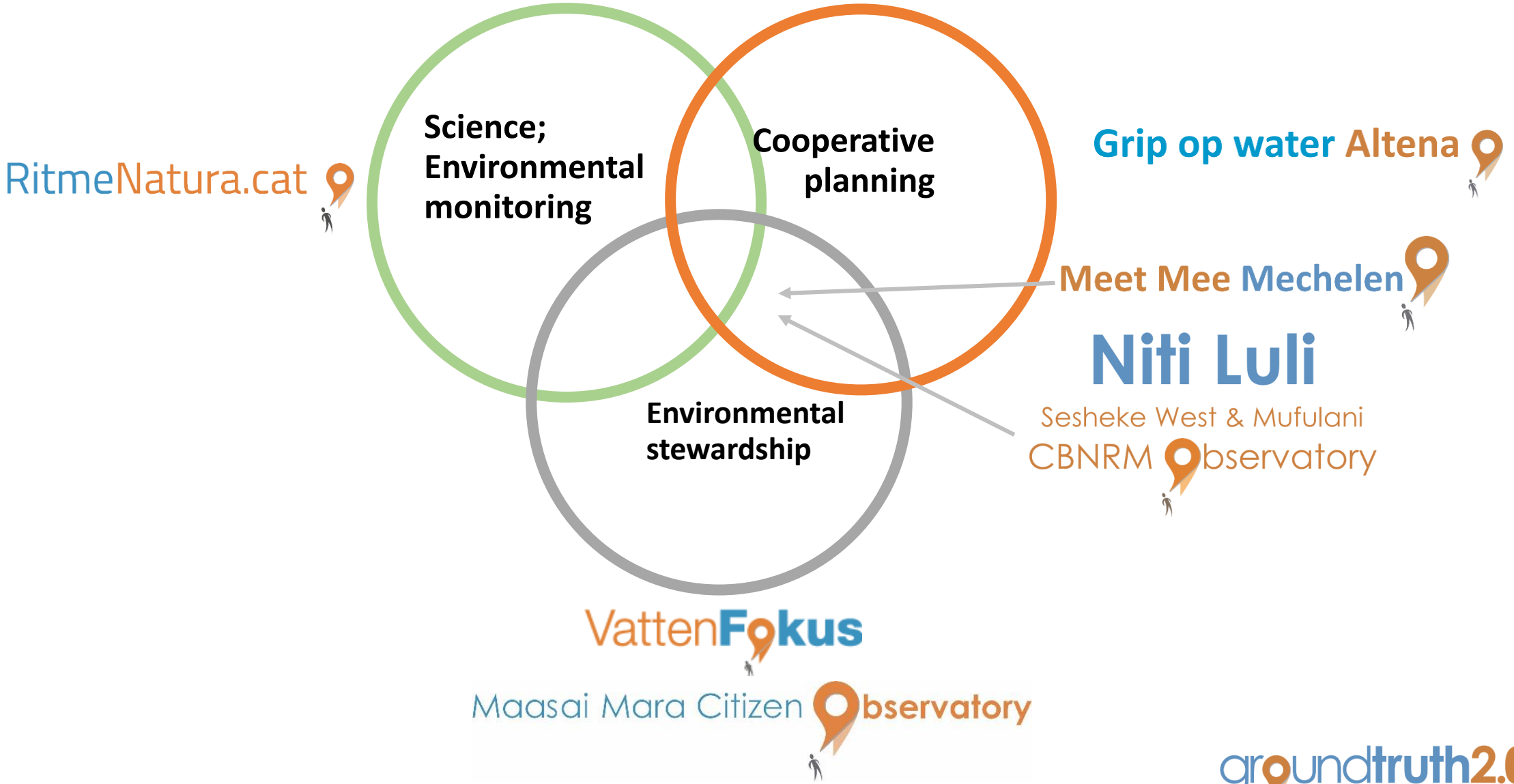
understanding their **individual and collective** needs

evolving a CO with a **shared purpose** and enabled by suitable and **tailored ICT**-based tools

sustainable CO with **agreed impacts**

- serves to bring together dedicated communities of **citizens, scientists and policy makers**,
- takes their **individual and collective needs** as a starting point
- carefully guides them through a process of co-designing, implementing and evolving a CO that has a **shared purpose**
- and is enabled by suitable and **tailored ICT-based tools**
- in order to achieve **agreed impacts**, and which is sustainable in the long run.

Citizen Observatory **domains**



groundtruth2.0
Environmental knowledge discovery of human sensed data

WeObserve

KEY CHALLENGES TO MAINSTREAMING CITIZEN SCIENCE

AWARENESS CHALLENGES

- Citizens and other stakeholders are not aware of the potential of CS

ACCEPTABILITY CHALLENGES

- Concerns about quality, standards and interoperability of CS data.

SUSTAINABILITY CHALLENGES

- Infrastructure, measures and legislation insufficient to sustain and scale CS projects.

Awareness challenges

Innovative nature of citizen observatories – not many examples around

Co-design commitment – how long is the journey**?**

CS activities/campaigns


Acceptability challenges
Pre-conceptions of CO (data) quality
Sharing (sensitive) data
Changes in communications paradigm & participation

Sustainability challenges

Continuity of COs beyond project lifetime
- sometimes question from the start

Ownership & institutional embedding
without compromising the CO purpose

Best practices

AWARENESS

All shapes & sizes of citizen observatories

Framing COs: not plug & play solutions for data collection, more than just *more data,*
and not *just* about science!

ACCEPTABILITY

Co-design - creating **value** by understanding stakeholder *needs* & *motivations* ('blank page'); **iterative** process; **matching** enabling technologies with identified needs.

CO community building as important as co-designing platform & tools; build on existing communities & networks; involve decision makers from the start.

Data quality: training; create visibility & understanding of data quality via indicators to gain trust in data

Data policy & open data

SUSTAINABILITY

Embed sustainability in design of CO: create value for all stakeholders – **feedback loop** co-designed & built in.

Demonstrate CO to **other decision makers**: collaboration & re-use of data & platform

Reach out to the **media**

Handover: business model **scenarios** & **Roadmaps** for COs

Thank you!

www.gt20.eu

@groundtruth20

Project Coordinator: Dr. Uta Wehn, Associate Professor, IHE Delft, u.wehn@un-ihe.org

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No. 689744.

•**Challenges/barriers/obstacles – under EACH of the three themes:**
•**Awareness – citizens not aware of CS, authorities not aware of potential of CS**
•**Acceptability – quality of CS/CO data,**
•**Sustainability** – infrastructure, measures, legislation hold back sustainability; deficient systems, standards, data interop

•this is important as it will be captured by our visual artist and used in the subsequent interactive session, which will focus on solutions to these named obstacles. i.e. we will not brainstorm obstacles in the session, but rather discuss these pre-defined obstacles with a focus on solutions.

•**Best practices** – this was of particular interest to the Commission to showcase what from your experiences can be carried forward to current and future COs.