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1. What is Citizen Science
2. Who, why and how?
3. Examples of citizen science
4. Q&A

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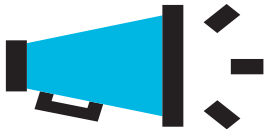
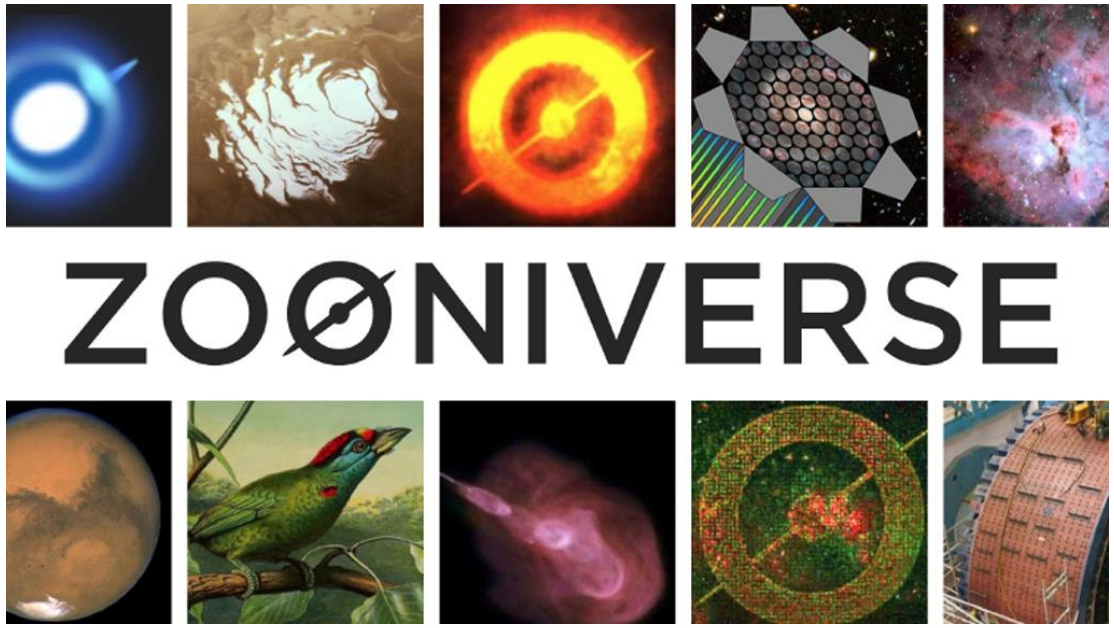


Promoting citizen science

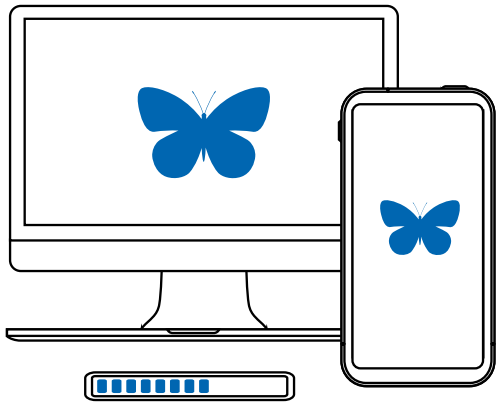
Find synergies and foster collaboration opportunities

Advise and support projects

Research and experiment with citizen science



Luftdaten.info / Sensor.Community



Waarnemingen.be

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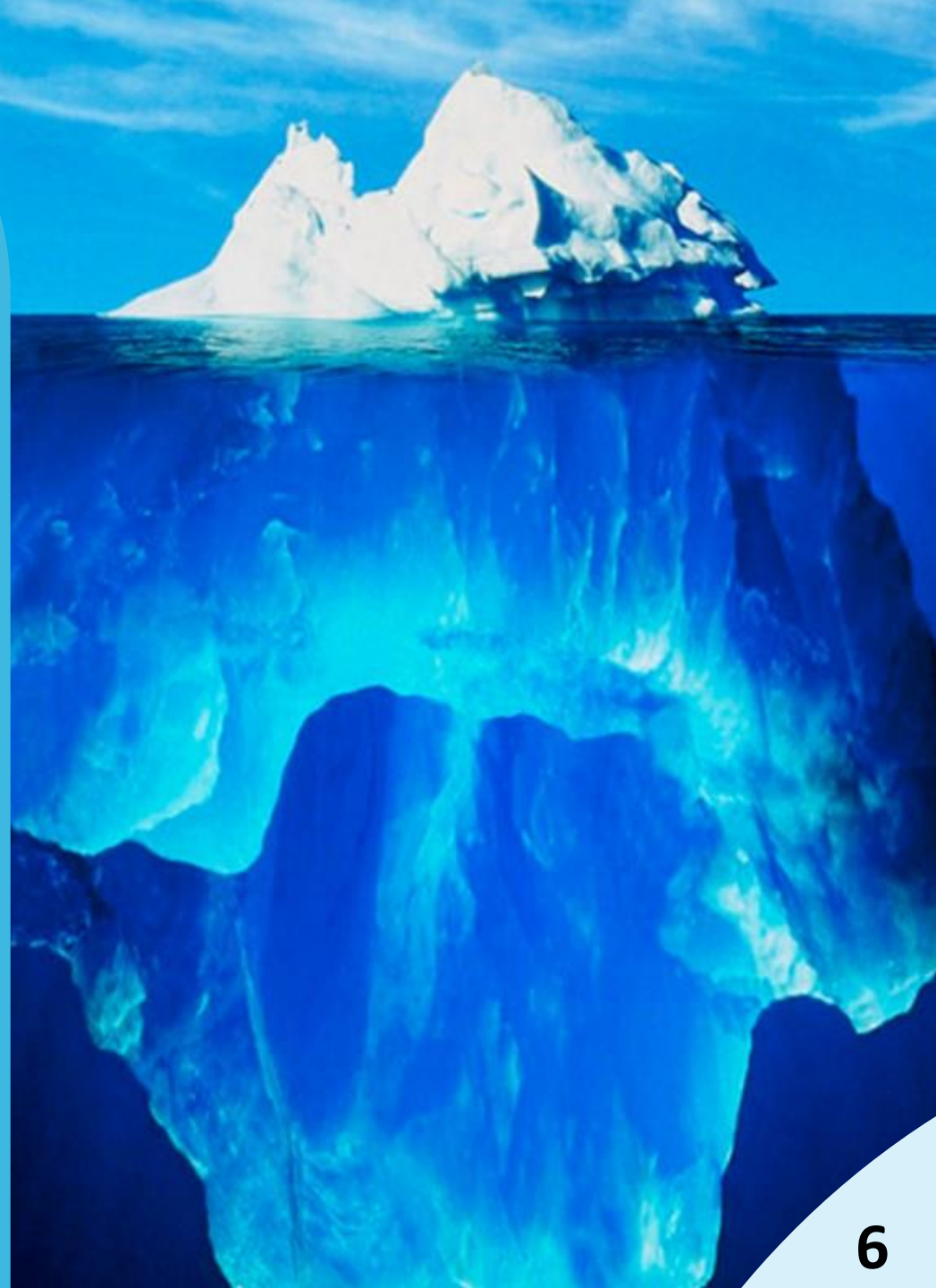
Air quality
Mobility
Biodiversity
Water quality
Noise pollution
Archaeology
Astronomy
History
Health
Arts
Sociology
Wellbeing
Bio engineering
...

Sensors
Measurements
Counting
Observations
Photography
Analysis
Annotation
Transcription
Interpretation
Story telling
Interviewing
Communication
Research question
Method design
...



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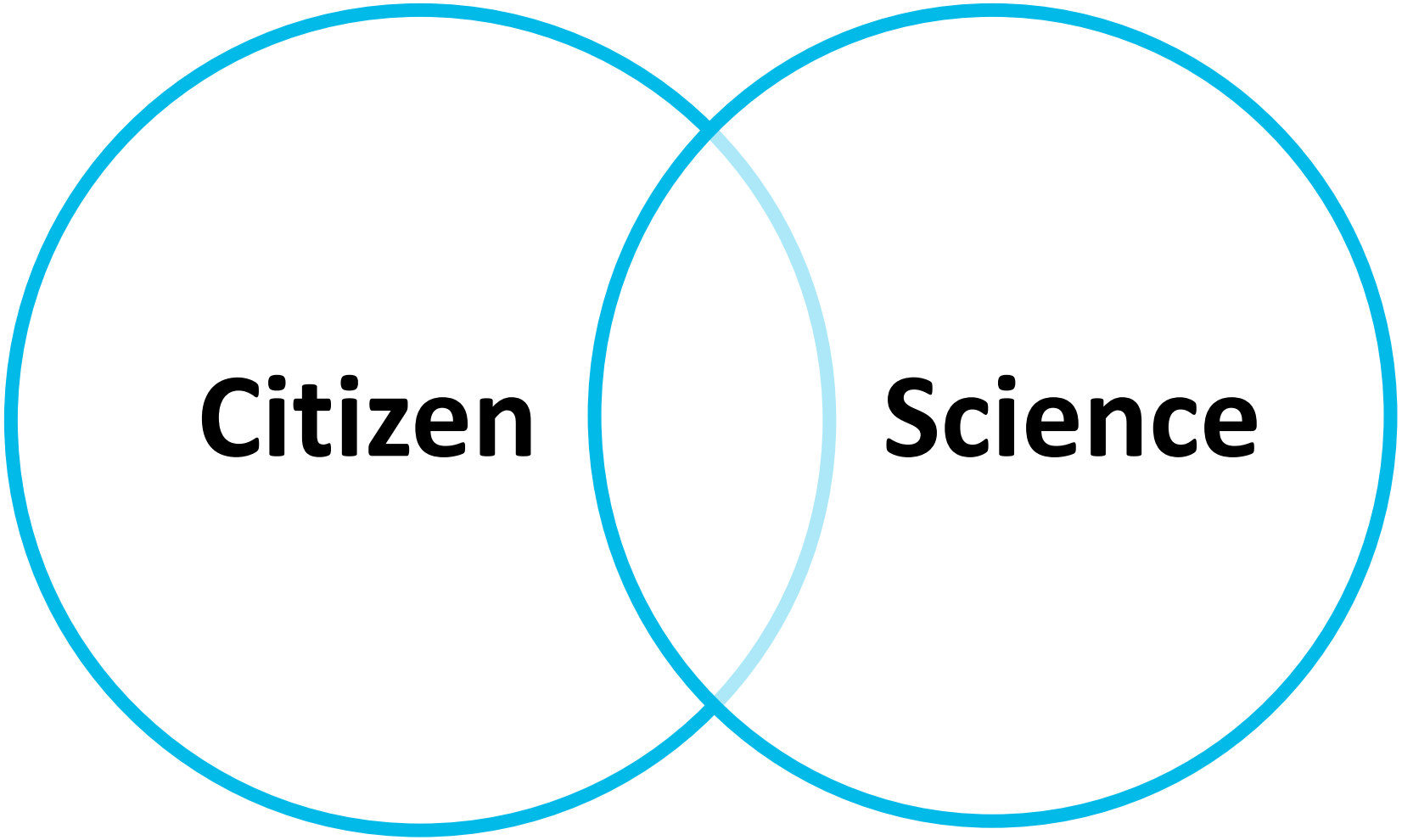
What?



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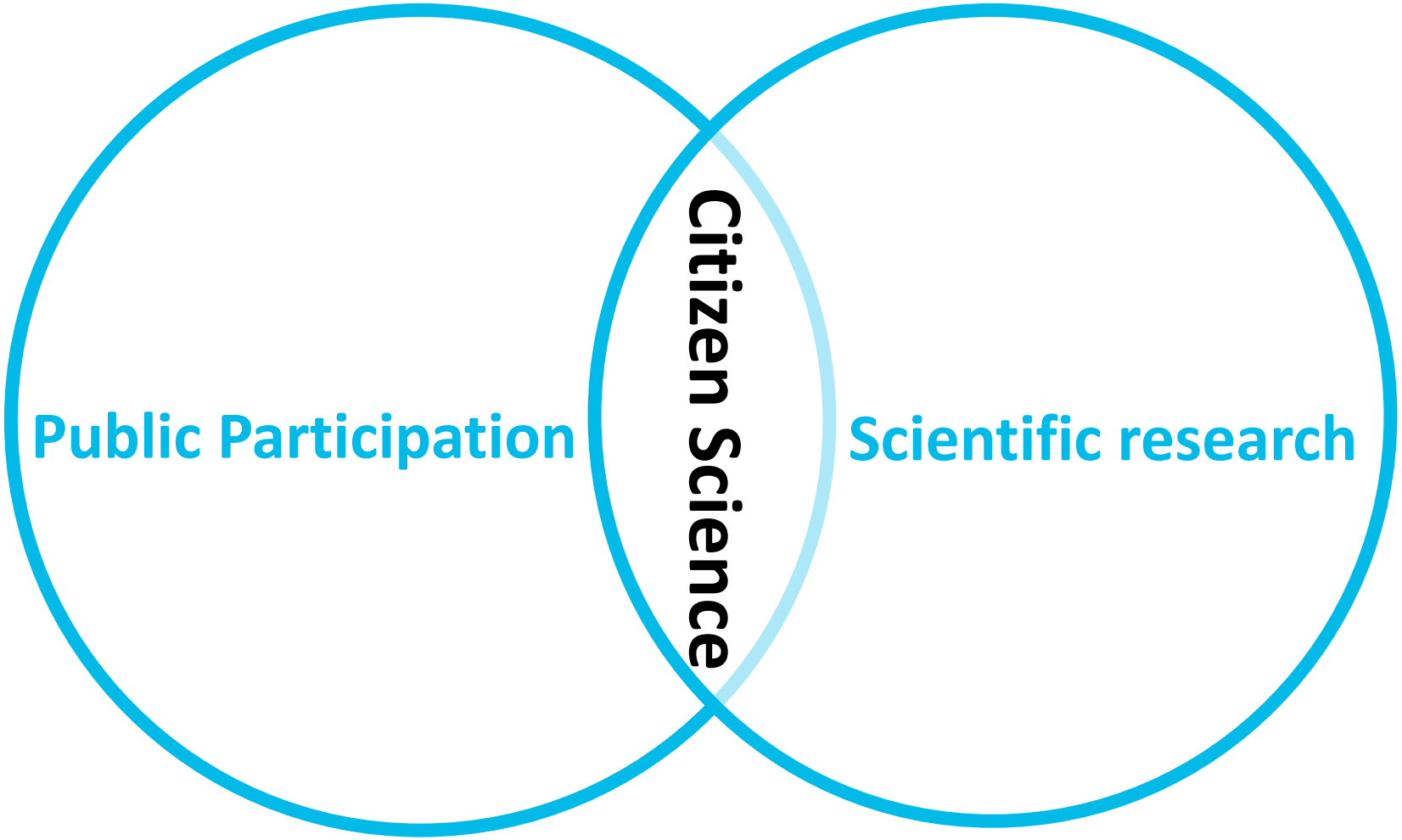
What?



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What is Citizen Science?

Citizen Science is scientific research conducted, in whole or in part, by **nonprofessional scientists** (citizens). Citizen science is **often** (but not always) conducted in collaboration with **professional** scientists.

Citizens conducting **scientific actions**

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Who?
Why?
How?

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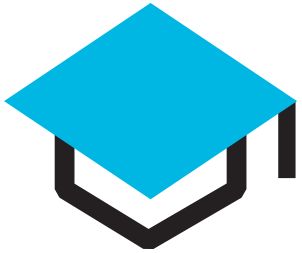
Who?

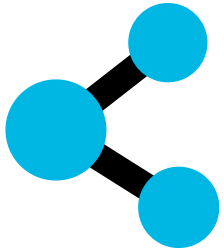
(professional) Researchers

Government



Educators

Citizens



Companies

NGO’s

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Who?

Diverse perspectives

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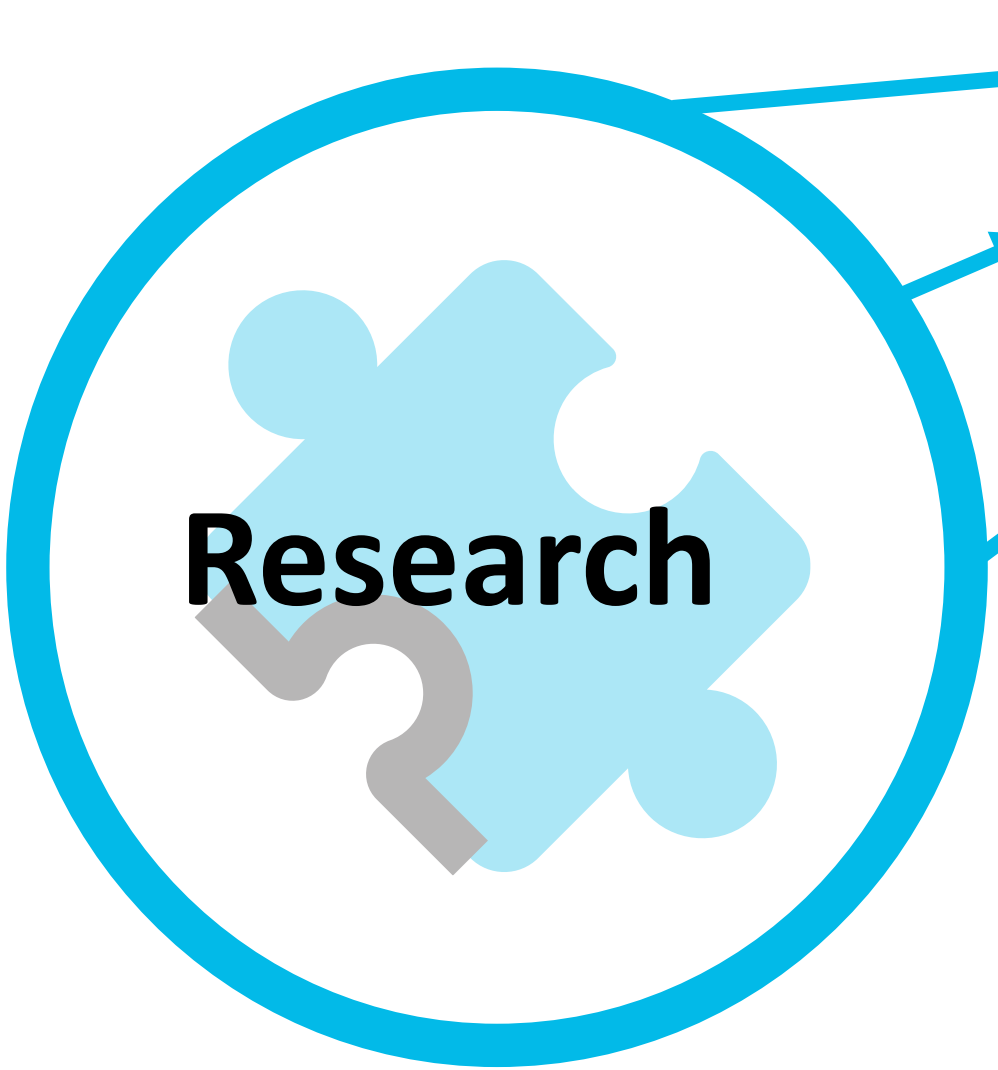
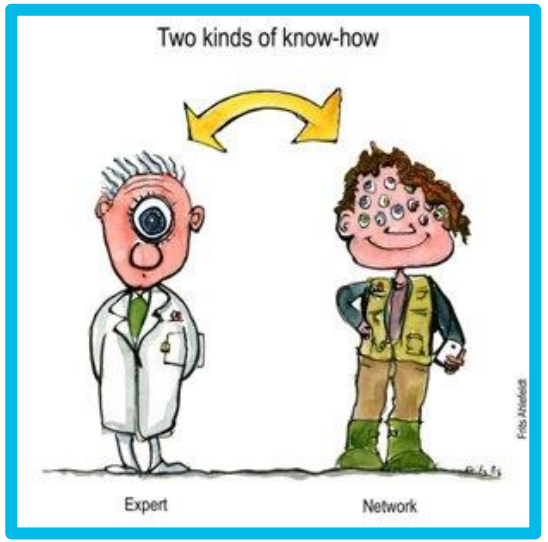
Why?



Citizen expertise

New places

Large datasets



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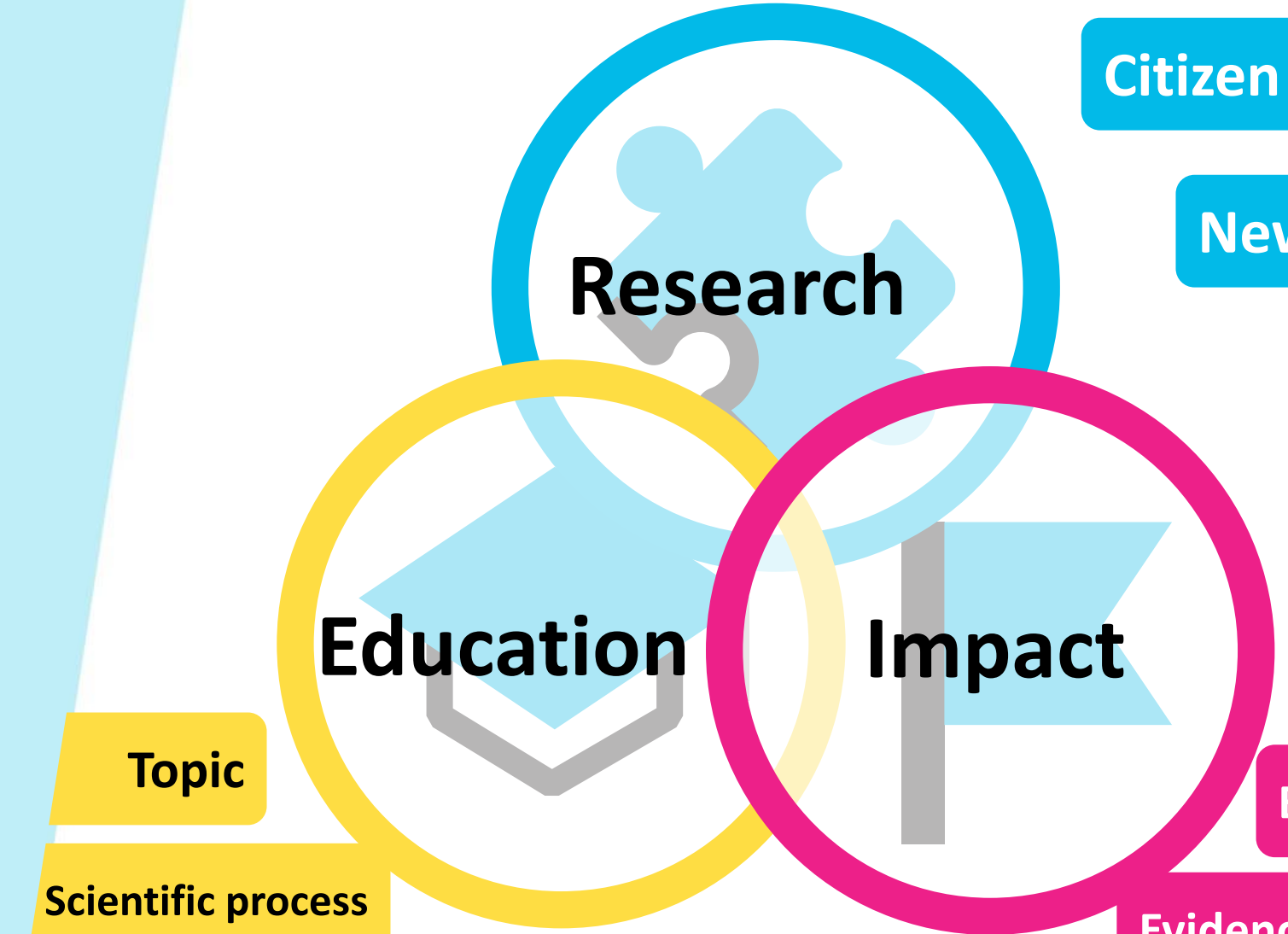
Why?



- Citizen expertise
- New places
- Large datasets
- Topic
- Scientific process
- Critical thinking
- Empowerment
- Behaviour
- Evidence-based governance

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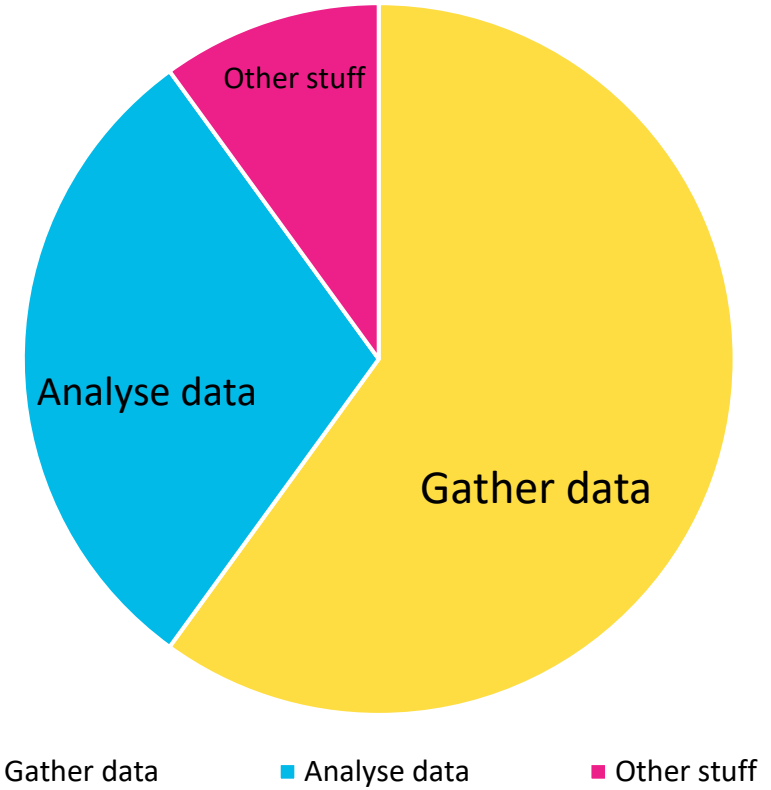
How?

What do citizen scientists do?

(chart by no means based on empirical data)



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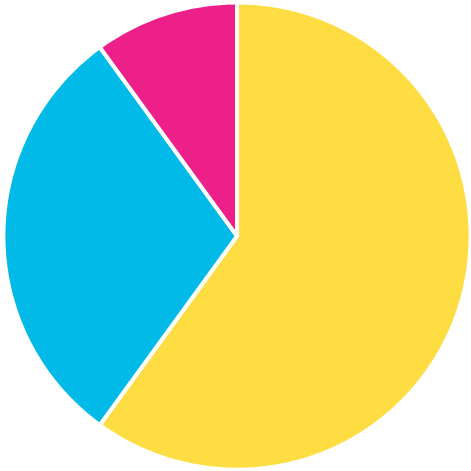
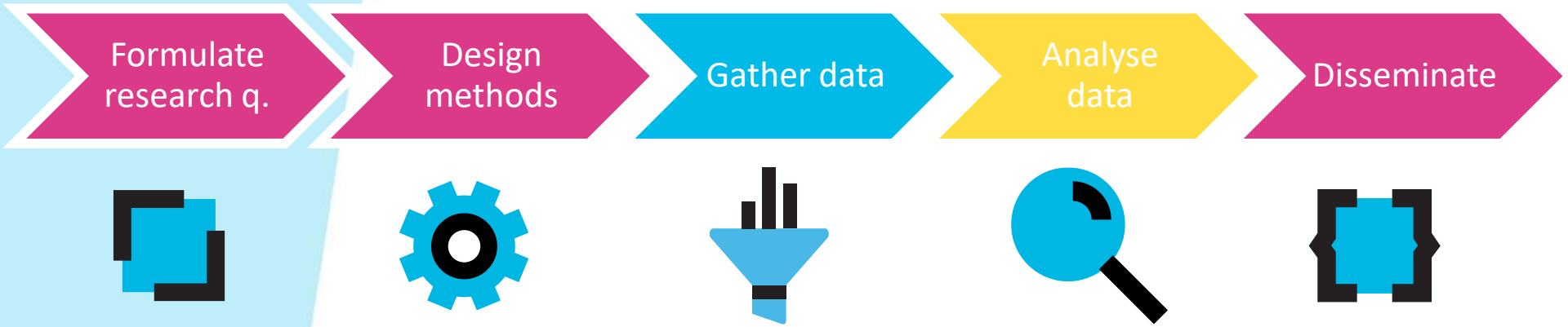
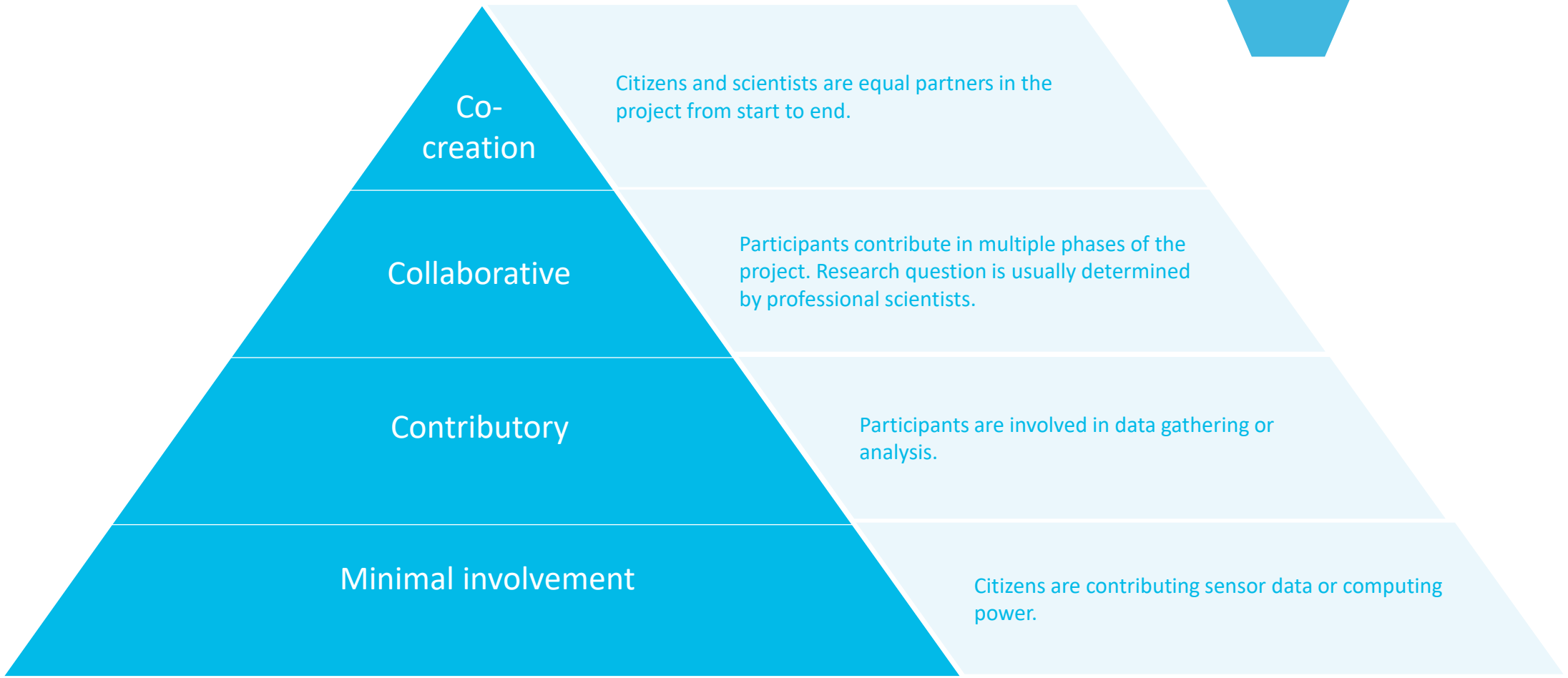
How?




Formulate research q.
Design methods
Gather data
Analyse data
Disseminate

Participation pyramid



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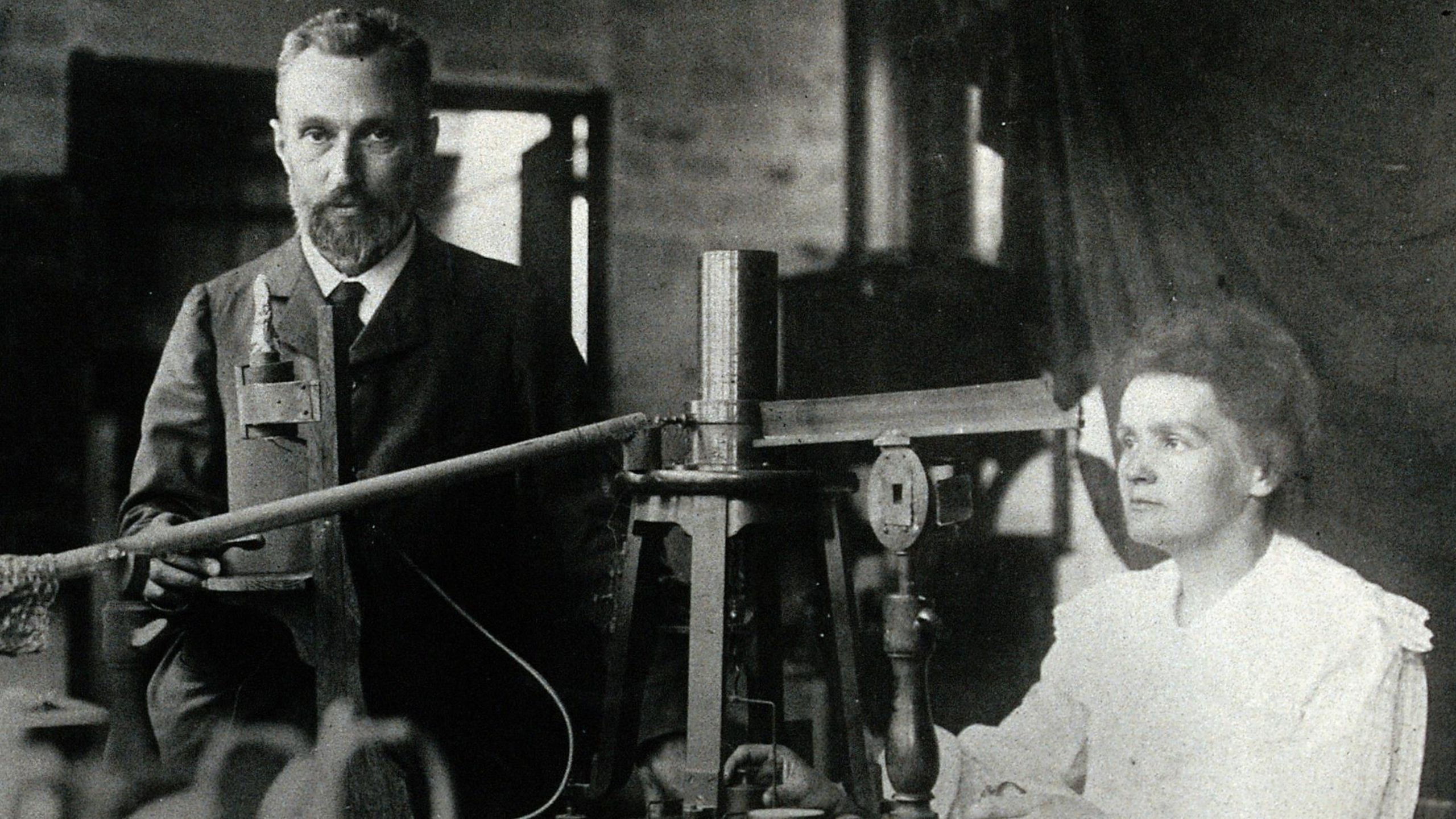
Based on http://www.openscientist.org/2013/01/the-levels-of-citizen-science.html

Participation slider

Many citizen scientists
Crowdsourcing

Few citizen scientists
Cocreation

Examples of citizen science



Weather observations, Frankfurt, 1828 (5 to 11 January). Kaspar, F. (2013)

Oil victims along the Belgian coast, starting from the 1950’s
(foto Jan Seys – vliz.be)

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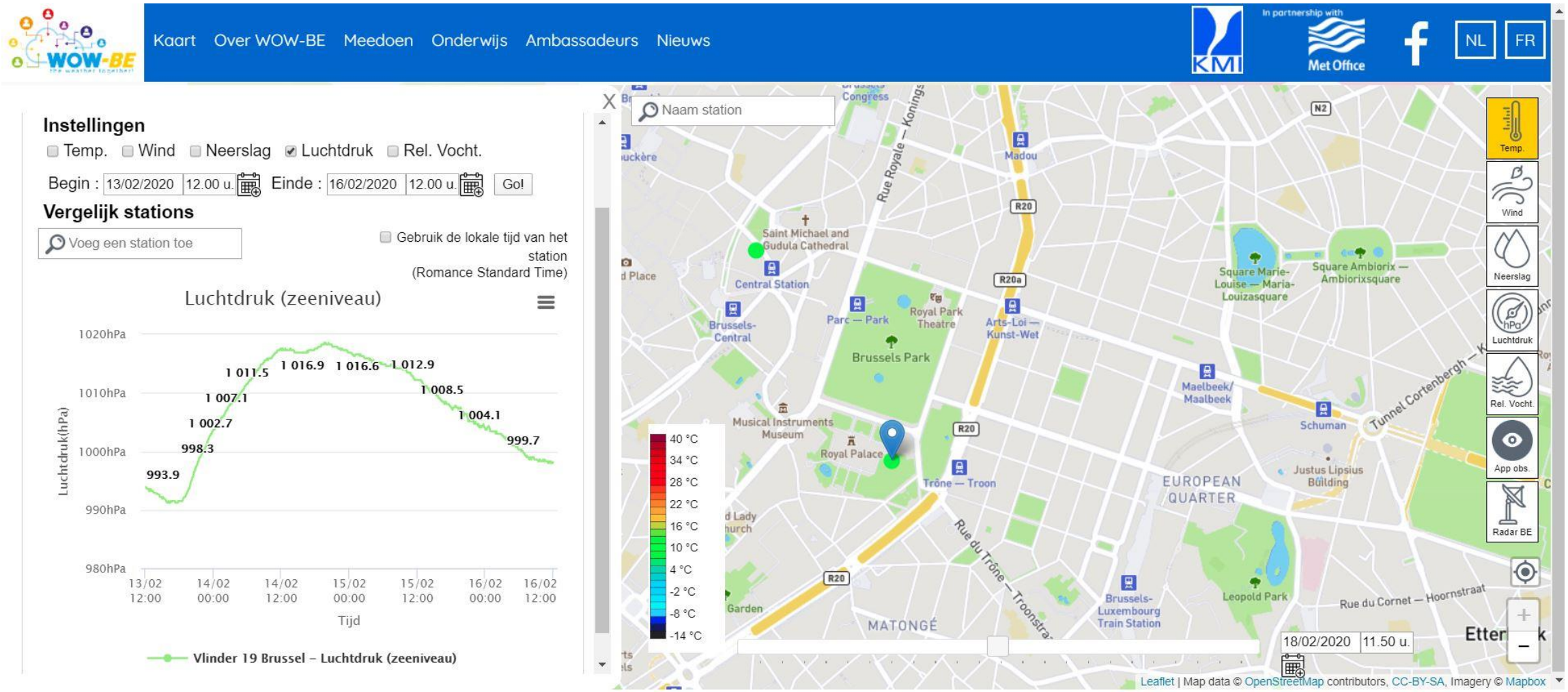
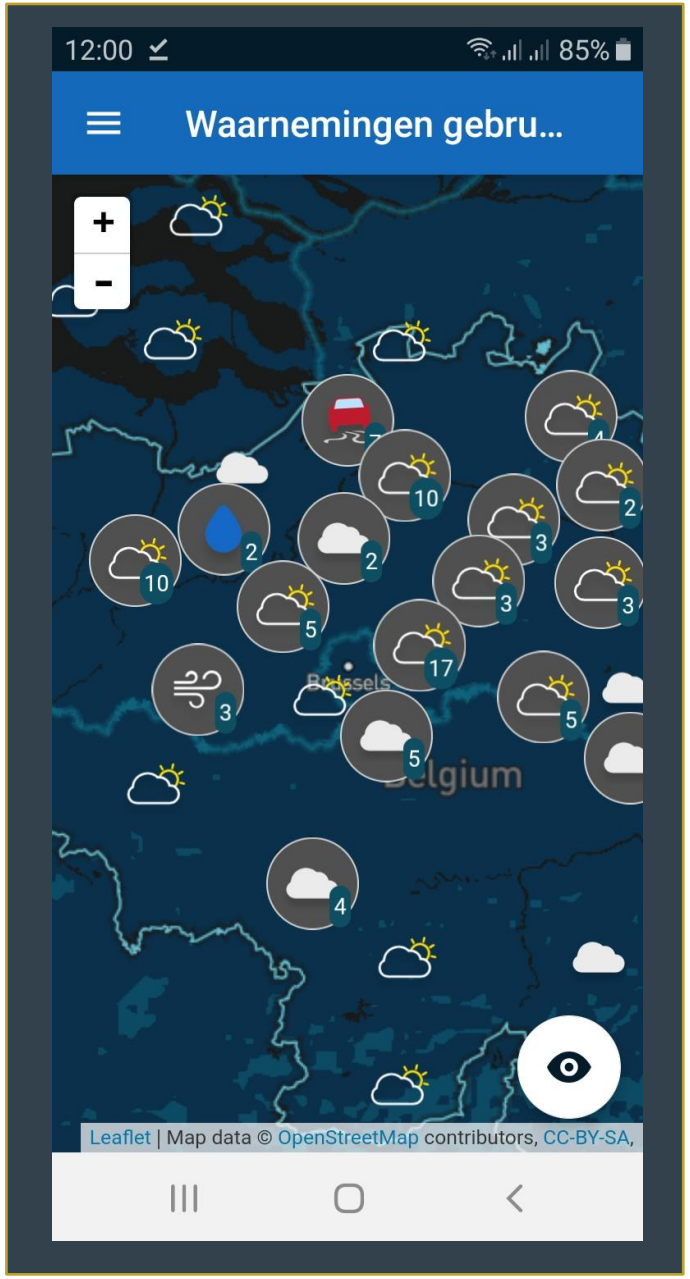
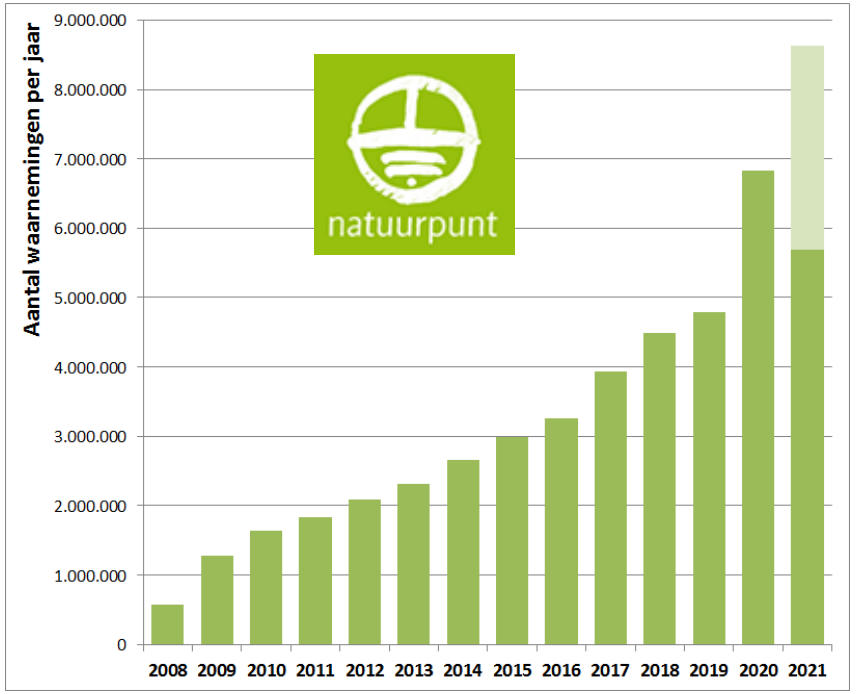

WOW-BE
Kaart
Over WOW-BE
Meedoen
Onderwijs
Ambassadeurs
Nieuws
KMI
In partnership with
Met Office
NL
FR
Instellingen
Temp.
Wind
Neerslag
Luchtdruk
Rel. Vocht.
Begin : 13/02/2020 12.00 u.
Einde : 16/02/2020 12.00 u.
Go!
Vergelijk stations
Voeg een station toe
Gebruik de lokale tijd van het station (Romance Standard Time)
Luchtdruk (zeeniveau)
1020hPa
1010hPa
1000hPa
990hPa
980hPa
Luchtdruk(hPa)
993.9
998.3
1 002.7
1 007.1
1 011.5
1 016.9
1 016.6
1 012.9
1 008.5
1 004.1
999.7
13/02 12:00
14/02 00:00
14/02 12:00
15/02 00:00
15/02 12:00
16/02 00:00
16/02 12:00
Tijd
Vlinder 19 Brussel – Luchtdruk (zeeniveau)
Naam station
Temp.
Wind
Neerslag
Luchtdruk
Rel. Vocht.
App obs.
Radar BE
40 °C
34 °C
28 °C
22 °C
16 °C
10 °C
4 °C
-2 °C
-8 °C
-14 °C
18/02/2020 11.50 u.
Leaflet | Map data © OpenStreetMap contributors, CC-BY-SA, Imagery © Mapbox

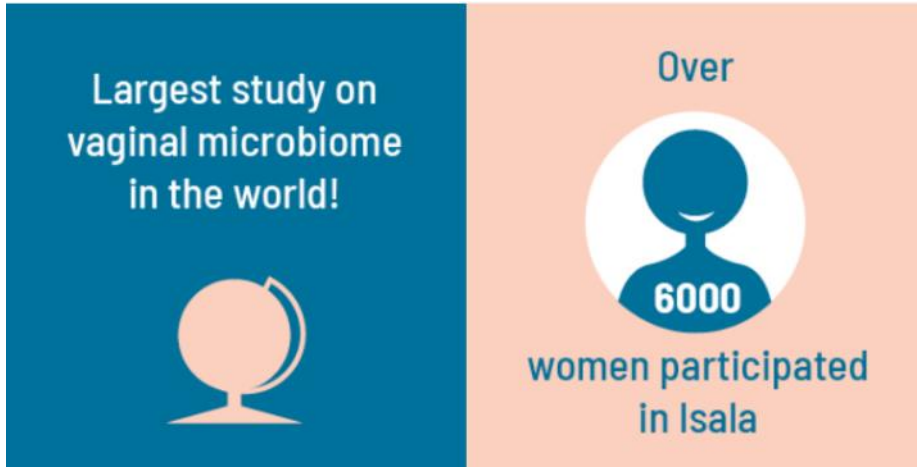


KMI weather app: available for android and IOS

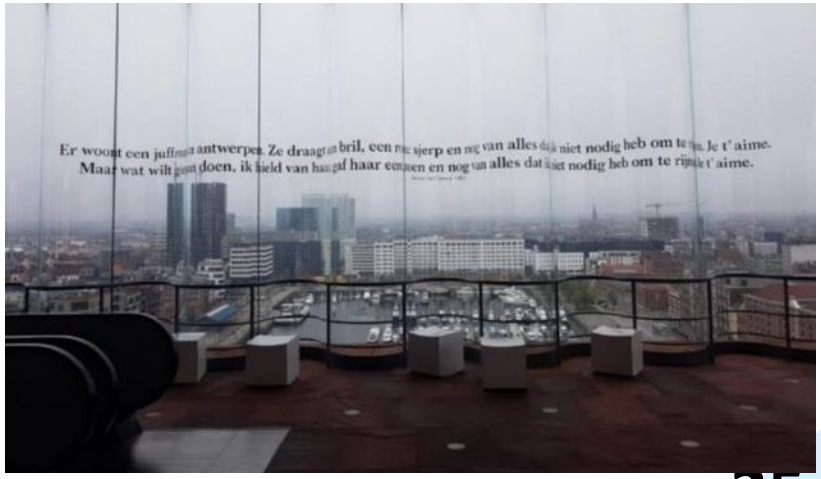
Large data sets



Waarnemingen.be – Natuurpunt: 60 million observations (2023)



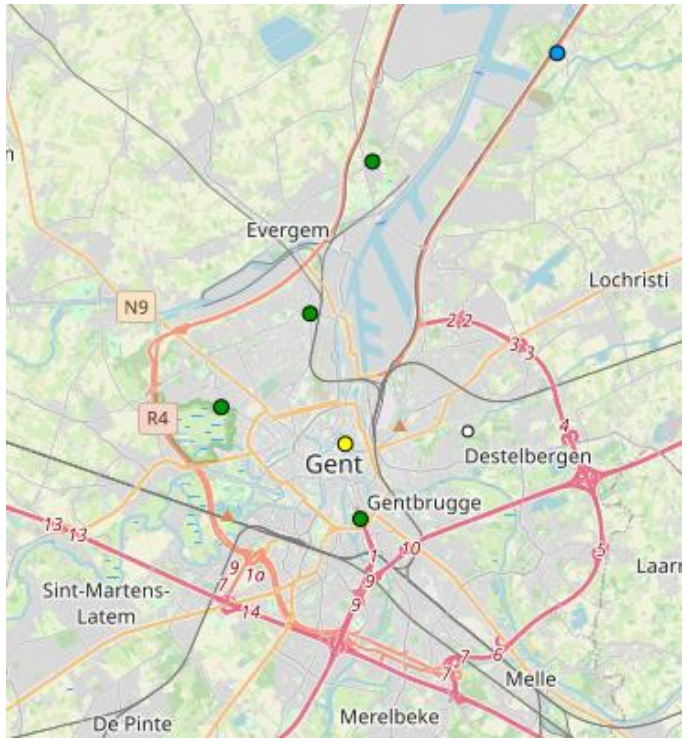
Isala.be – 6000 vaginal swabs crowdsourced and analysed



Straatpoezie.nl: 3325 poems

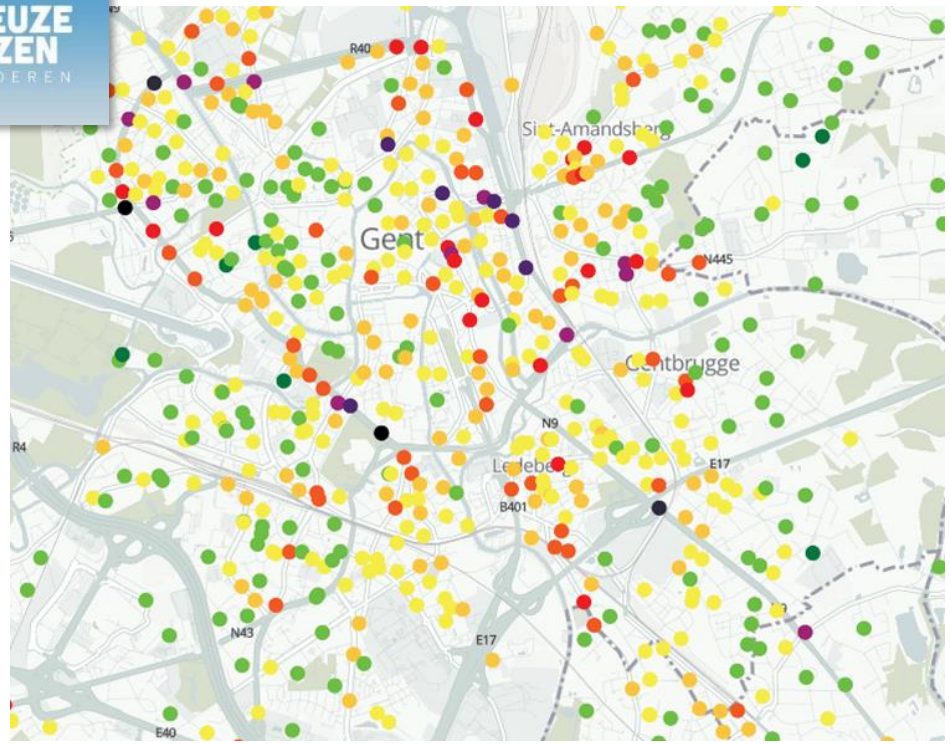
Increasing measuring density

56 High Quality data points



NO2 – annual average 2019 (ppmv) ©VMM

20,000 low(er) quality data points



NO2 – May 2018 (ppmv) ©CurieuzeNeuzen/DeStandaard

Allowing research in new/private locations

SPIDERSPOTTER
DISCOVER SPIDERS & THEIR WEBS

FLOWER POWER DE TUIN

LEUVEN.COOL

Soja in 1000 tuinen

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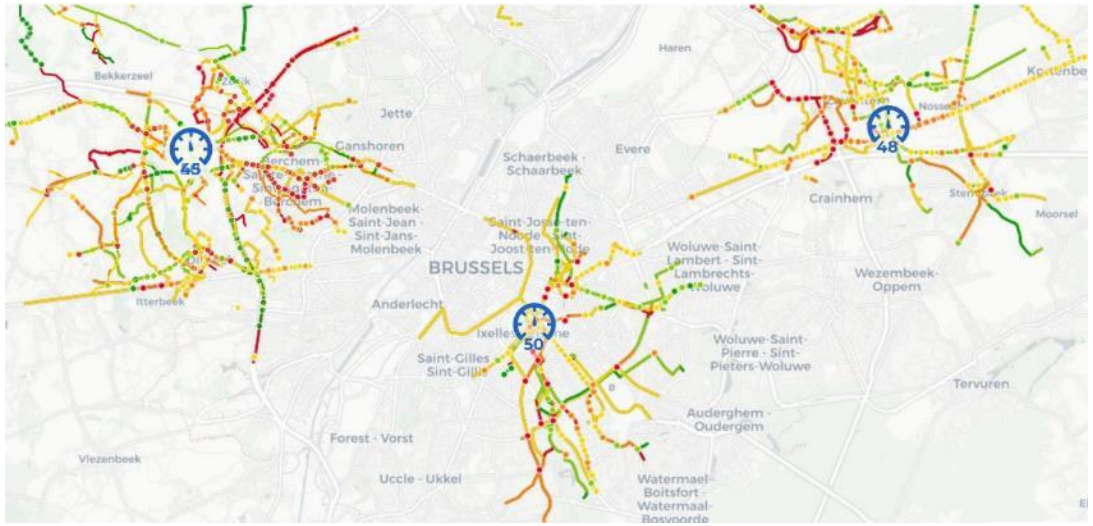
Mijn Tuinlab.be

Citizen perspectives

VLinDER
finding and setting up sensor locations with schools

Fietsbarometer (Bike barometer)
(Perceived) traffic safety of young cyclists



Age-friendly Neighbourhoods (Manchester, 2016)

Elderly Mancunians as local livability experts and interviewers

Vores historie

(Denmark, 2022)

Interviewing family members about lived history

Solefish diseases

(BE, 2018)

Fishermen search for skin diseases in their catch

Seawatch-B

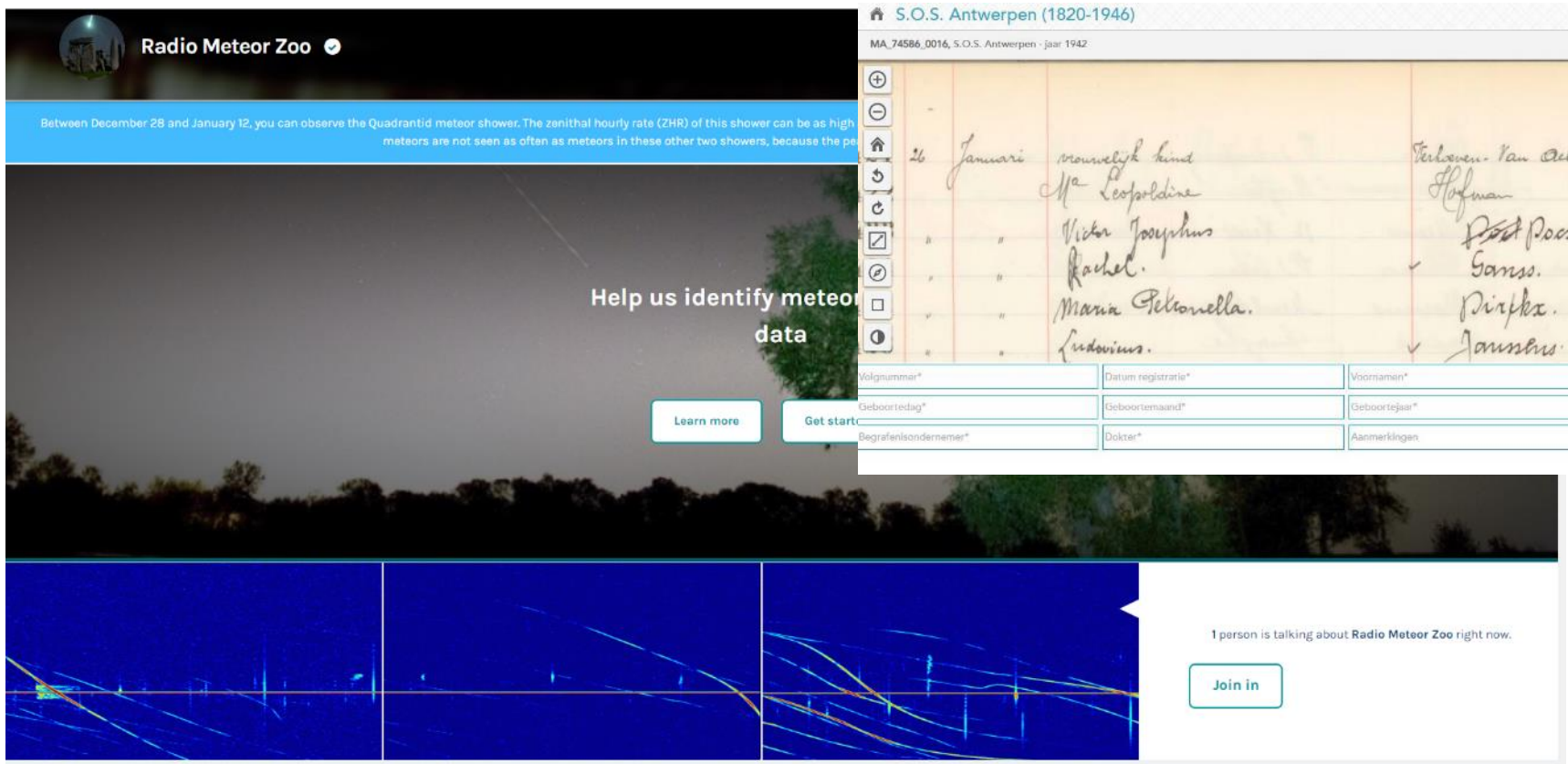
(BE, 2015 - now)

Citizens as researchers and ambassadors of ‘their’ beach

Burgerexpertise

Transcribe or annotate data

Historical documents: SOSAntwerpen.be

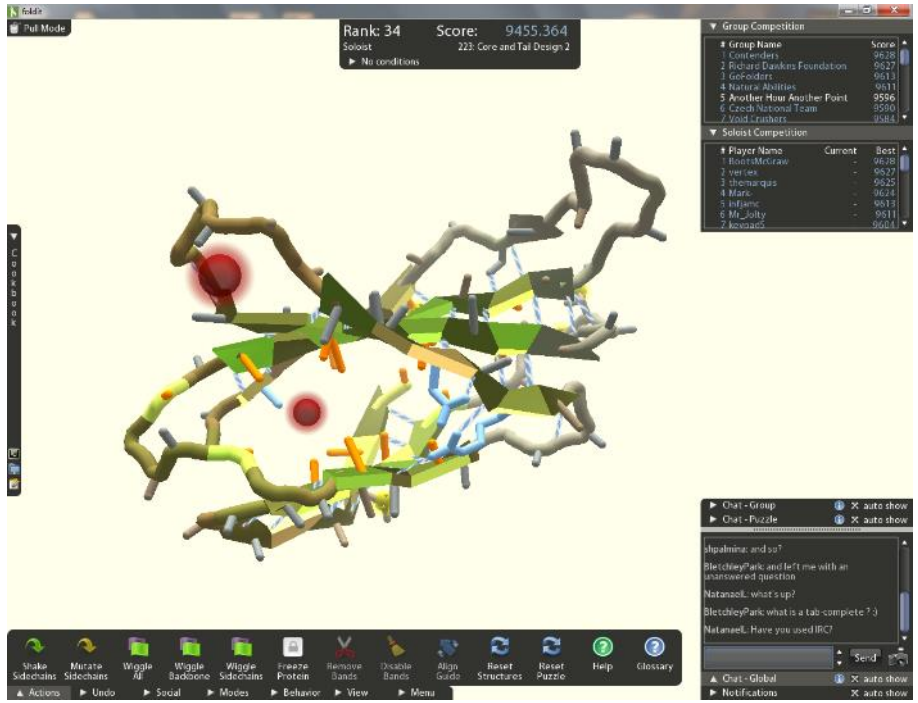


Training AI withAstronomical data:
Zooniverse – Radio Meteor Zoo

Gamification:

playing, competition and community

FoldIt



CS in big budget video games

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Citizen science and education

Addressing societal concerns

telraam.be

Joke Kenens, 2022.
https://doi.org/10.5334/cstp.402

Questions?

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Come talk to us!

With the support of:
Vlaamse overheid

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