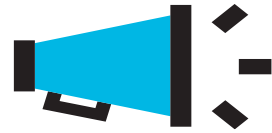


Scivil

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



Promoting citizen science



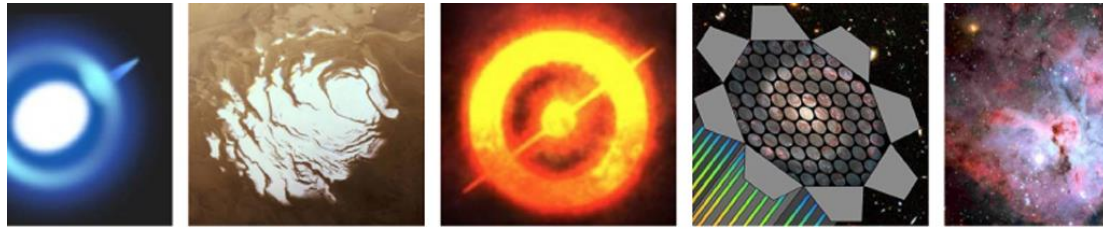
Find synergies and foster
collaboration opportunities



Advise and support projects



Research and experiment with
citizen science

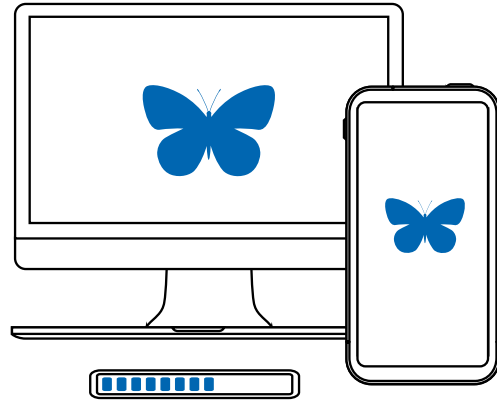


ZOONIVERSE



Luftdaten.info / Sensor.Community



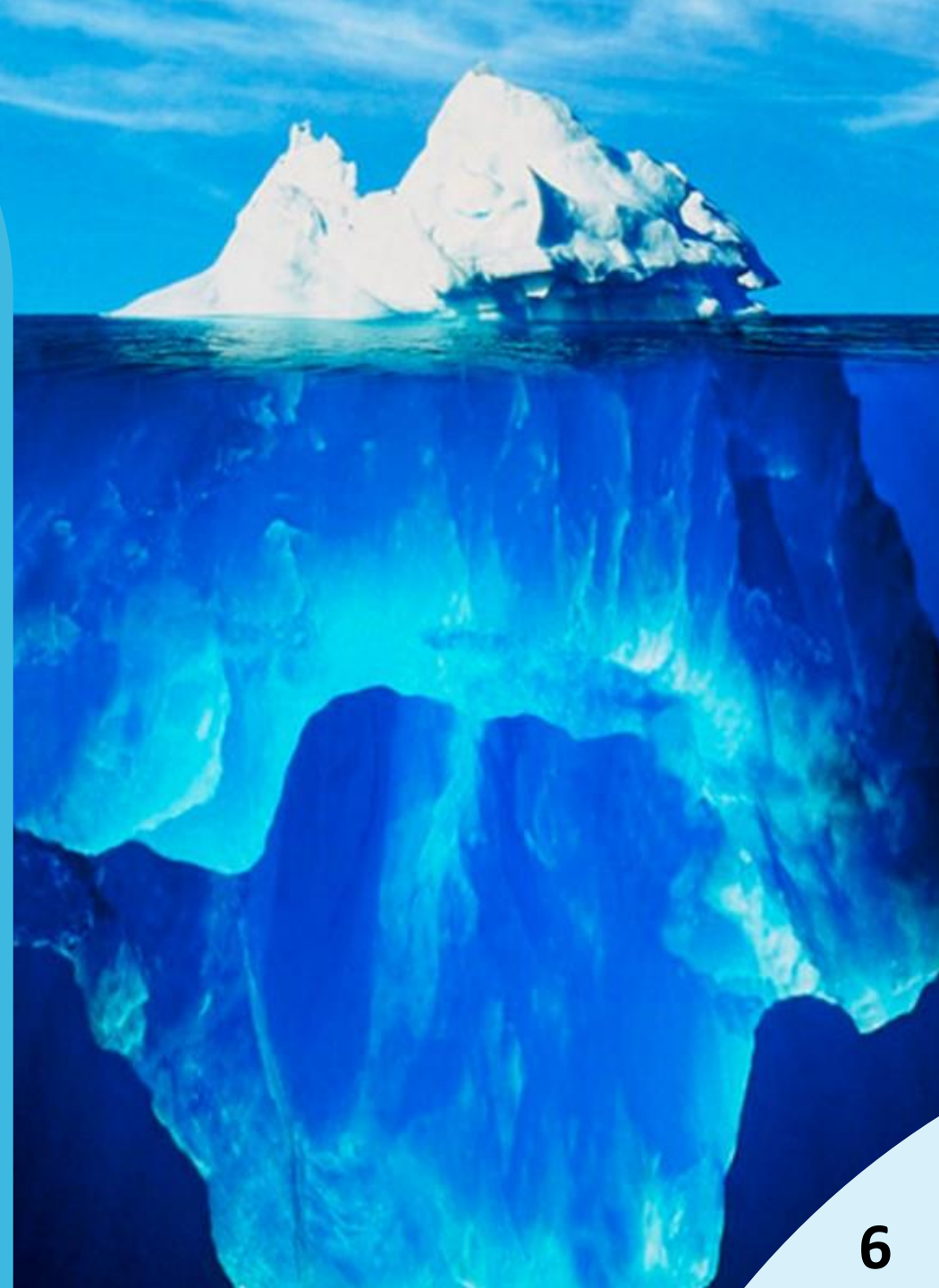



 **Waarnemingen.be**

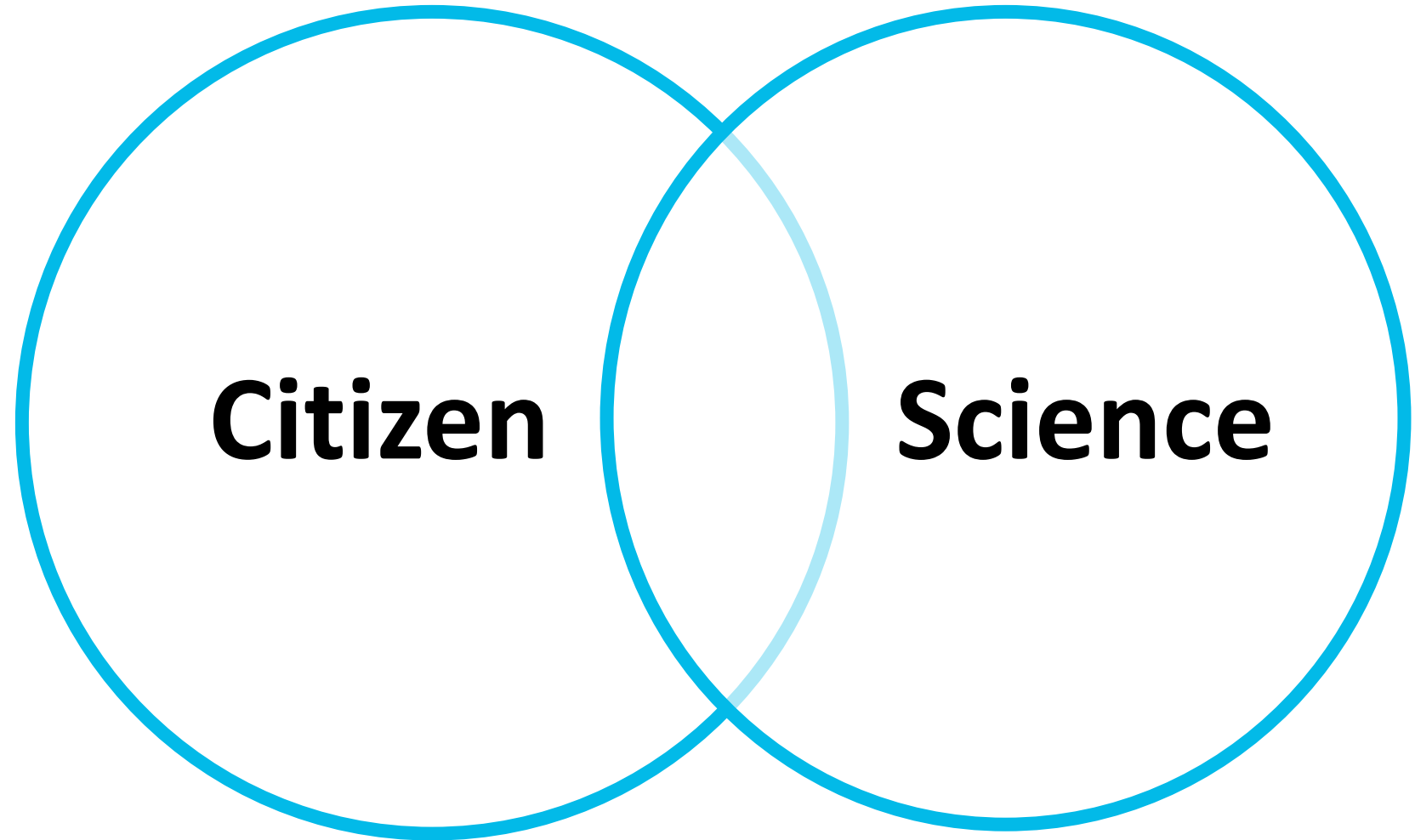


Air quality
Mobility
Biodiversity
Water quality
Noise pollution
Archaeology
Astronomy
History
Health
Arts
Sociology
Wellbeing
Bio engineering
...

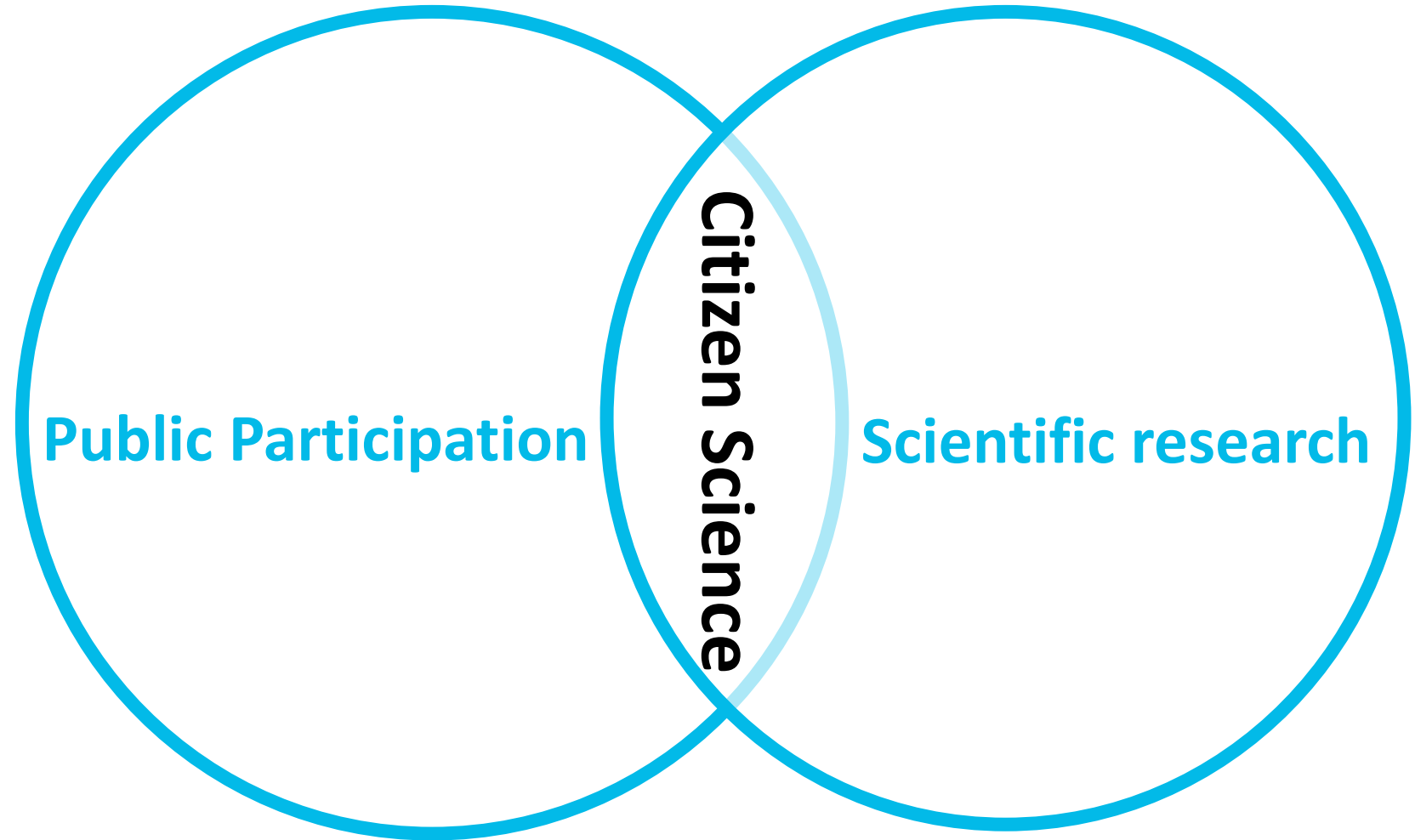
Sensors
Measurements
Counting
Observations
Photography
Analysis
Annotation
Transcription
Interpretation
Story telling
Interviewing
Communication
Research question
Method design
...



What?



What?



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



Who?
Why?
How?

Who?



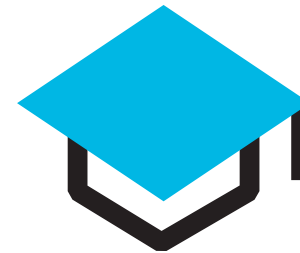
**(professional)
Researchers**



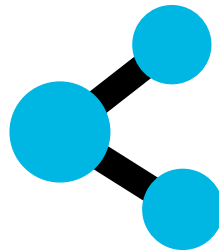
Government



Citizens



Educators



Companies



NGO's

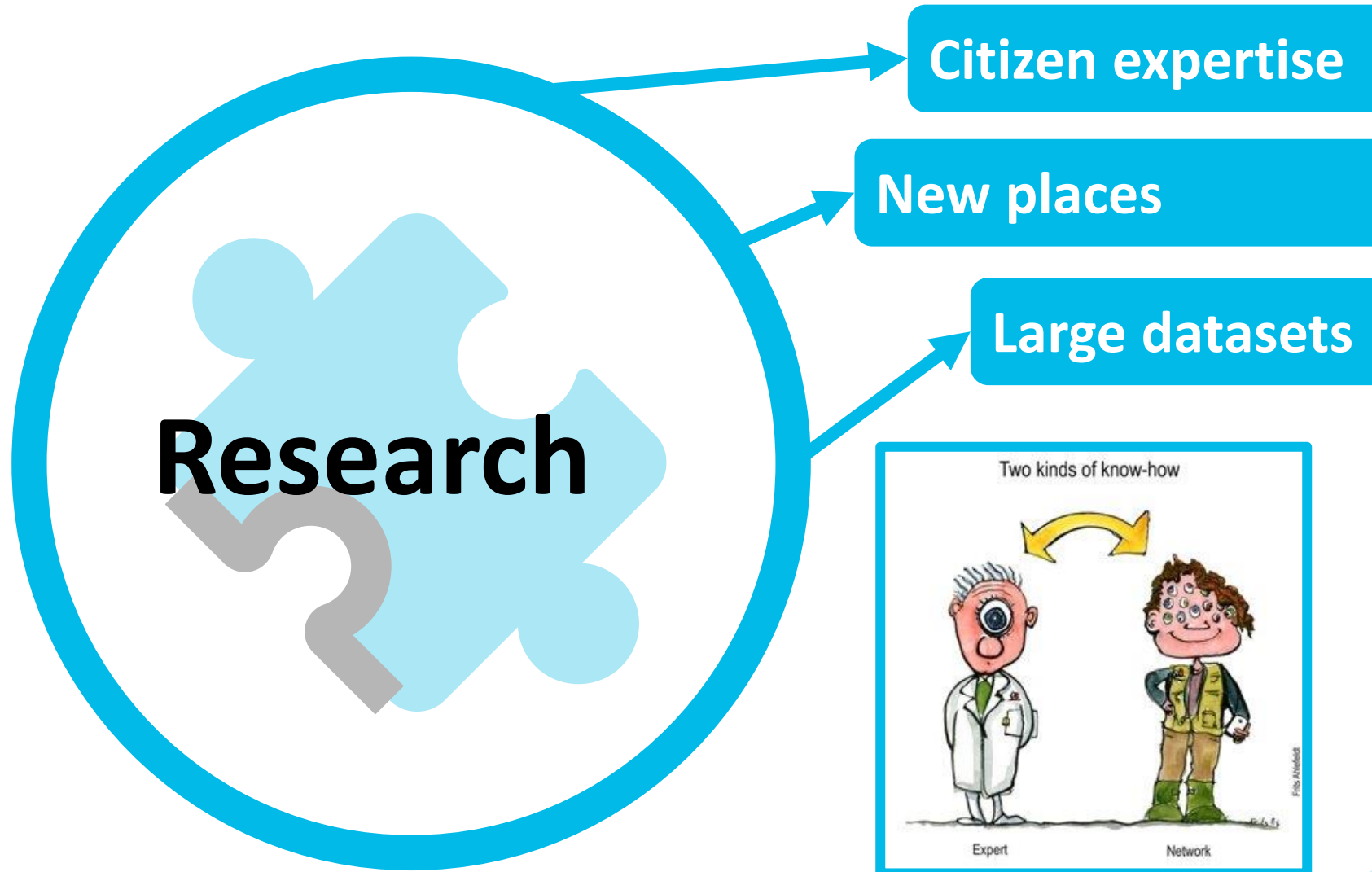
Diverse perspectives

Who?

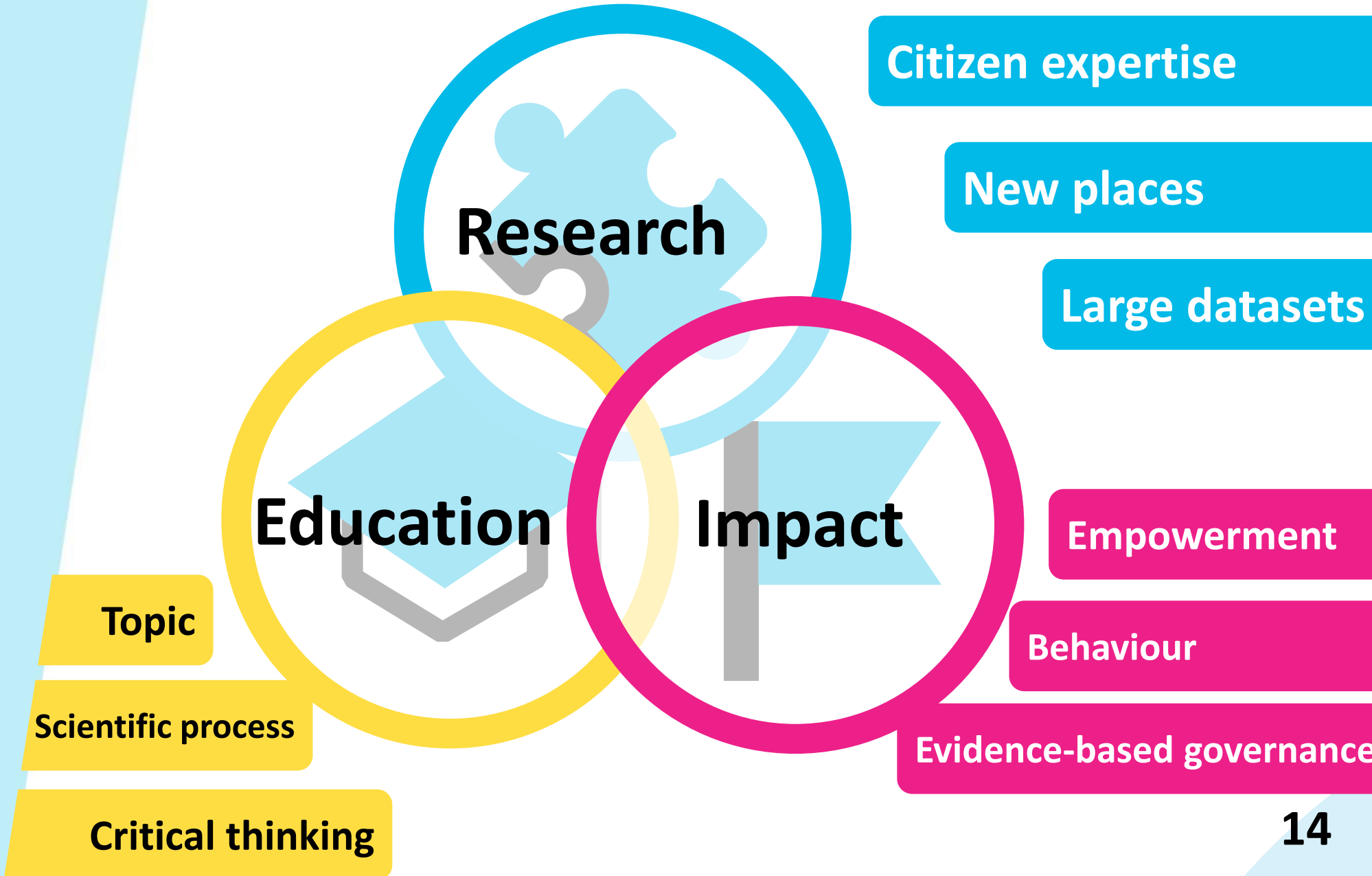


Scivil

Why?



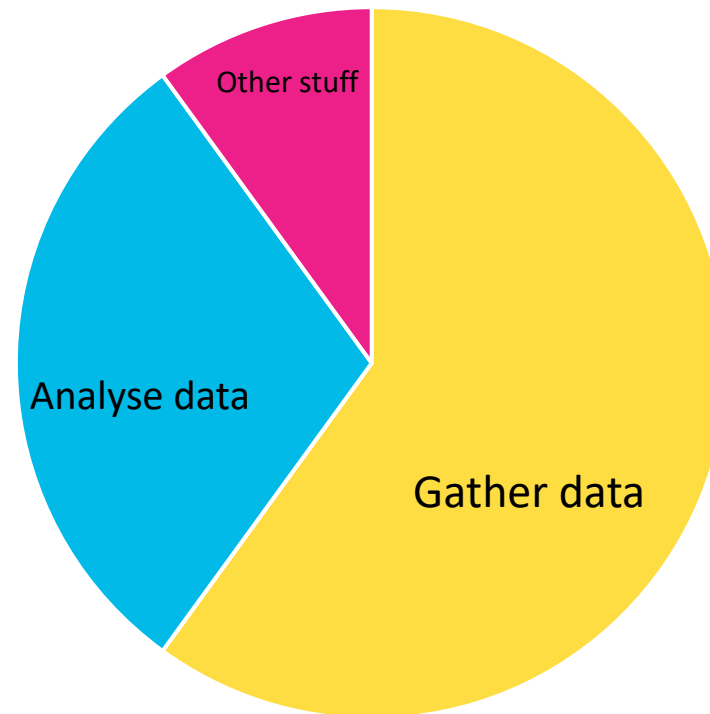
Why?



How?

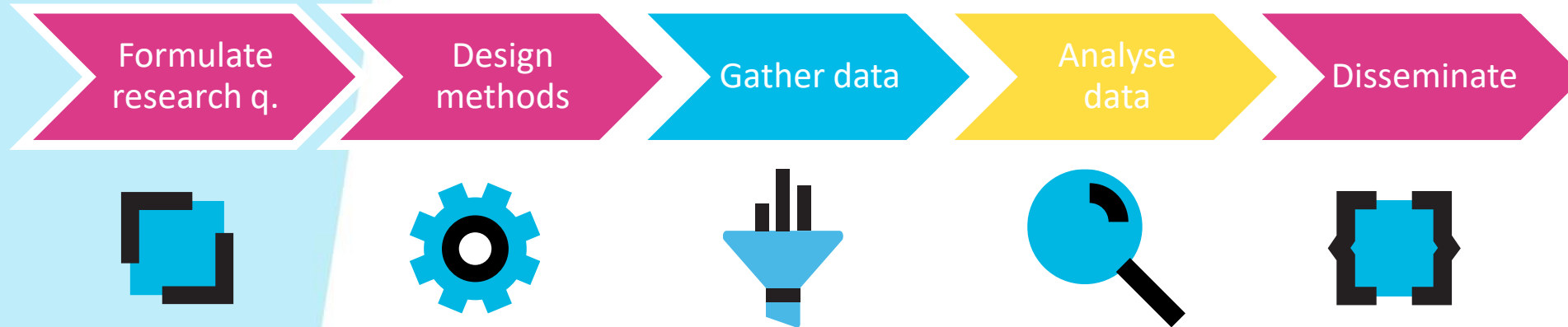
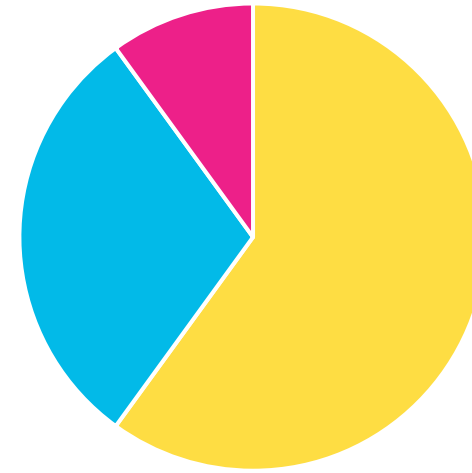
What do citizen scientists do?

(chart by no means based on empirical data)

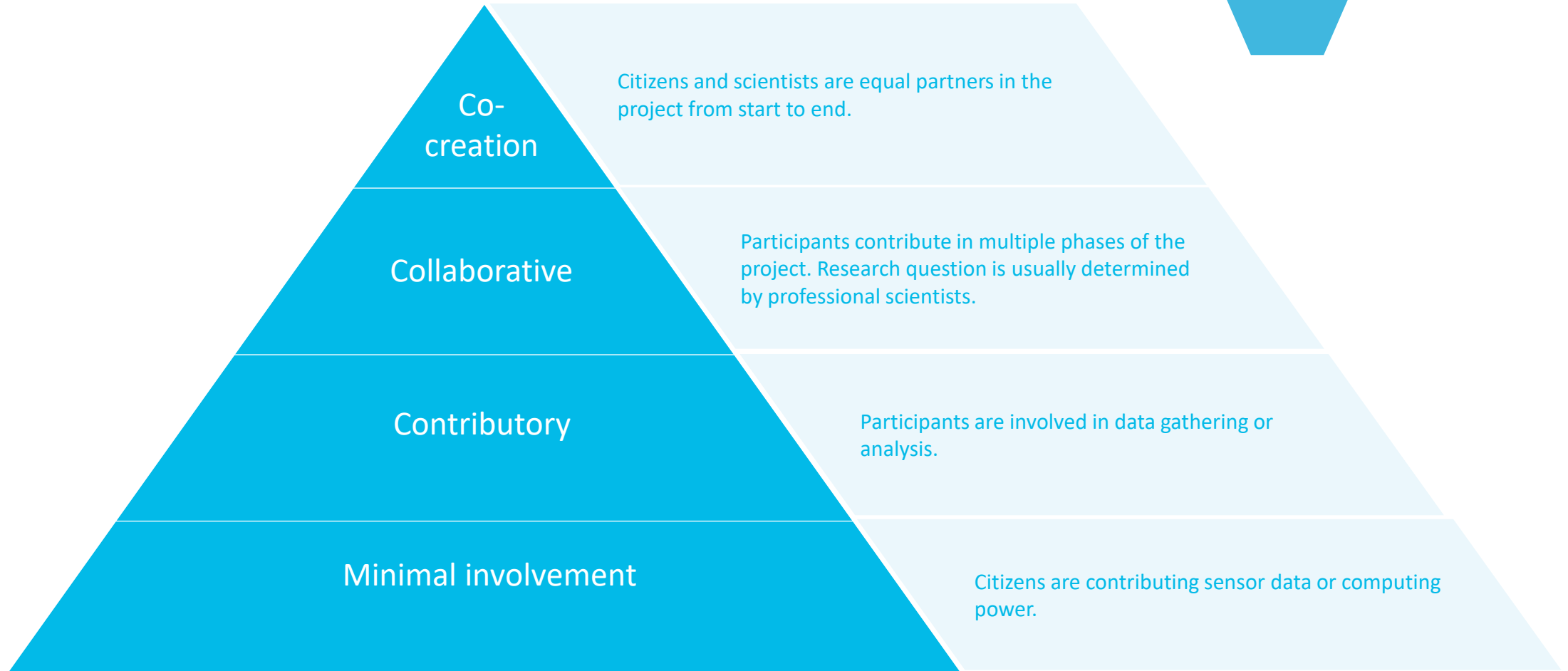


■ Gather data ■ Analyse data ■ Other stuff

How?



Participation pyramid





Participation slider

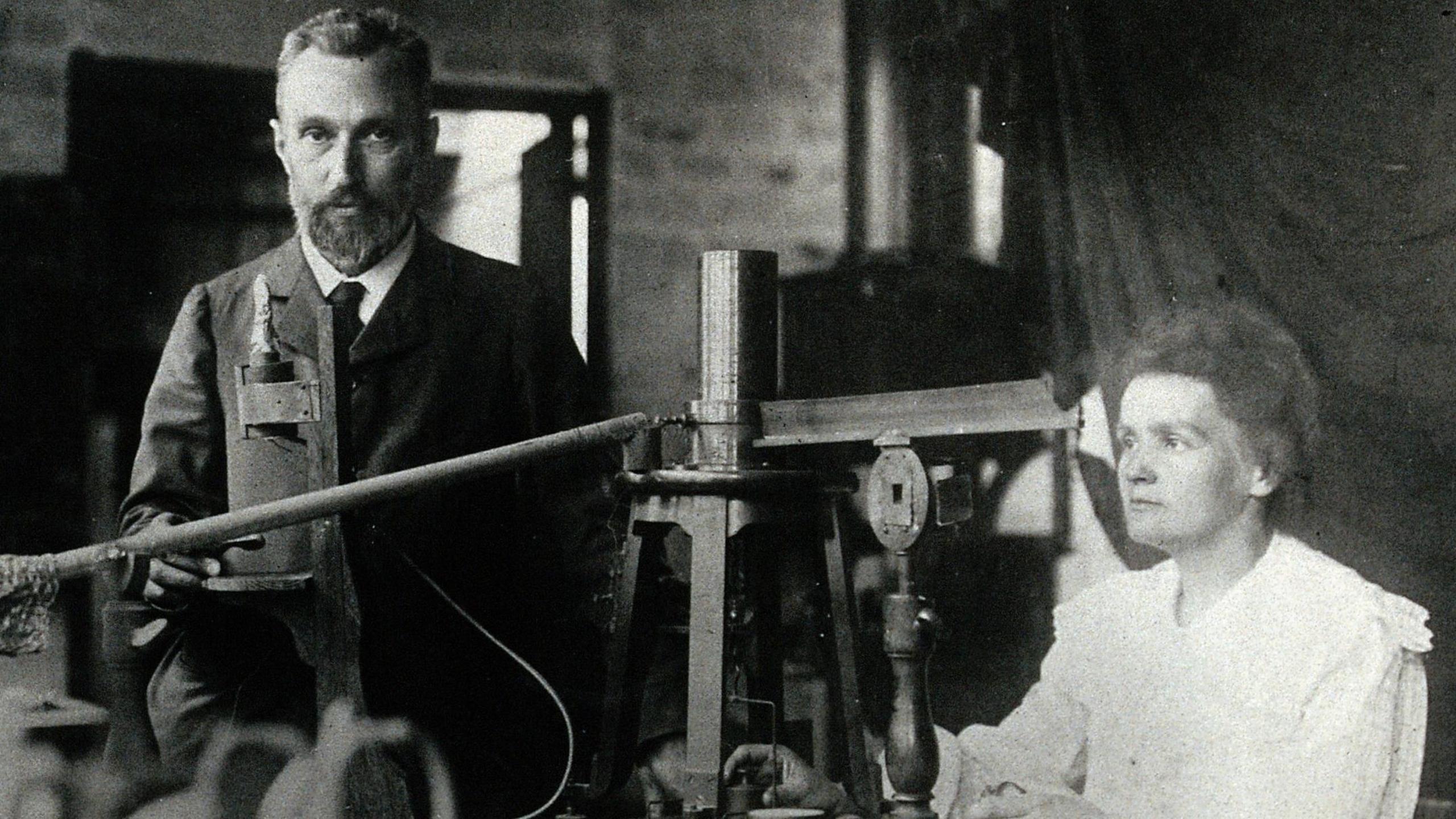


Many citizen scientists
Crowdsourcing

Few citizen scientists
Cocreation

Examples of citizen science





Meteorologische Beobachtungen von 1828.
des physikalischen Vereins in Frankfurt a. M.

| Jahr | Barometer + 10° R. (Par. Duodecimalmaß) | | | | Thermometer frei im Schatten nach R. | | | | Therm. graph | Barom. höhen. | Wasser d. R. | Wind | Witterung | | Ausgezeib. Meteore. |
|------|--|-----------|-----------|-----------|---|--------|--------|--------|-----------------|------------------|-----------------|------|-------------|--------------|------------------------|
| | 9. | 12. | 3. | 10. | 9. | 12. | 3. | 10. | | | | | Tag | Nacht | |
| 5. | 27. 9. 27. 8. 9 | 27. 8. 9 | 27. 8. 8 | 27. 8. 5 | - 0. 2 | + 1. 8 | + 1. 8 | + 0. 2 | - 15 | 64 | 5. 9 | 50 | bed. W. | bed. | |
| 6. | 27. 5. 3 | 27. 7. 9 | 27. 8. 0 | 27. 10. 2 | - 0. 5 | + 0. 2 | - 0. 1 | - 0. 8 | - 1. 0 | 63 | 6. 1 | 0 | bed. | bed. | |
| 7. | 28. 1. 2 | 28. 1. 4 | 28. 1. 5 | 28. 1. 6 | - 3. 0 | - 3. 2 | - 2. 8 | - 5. 8 | - 3. 5 | 57 | 6. 5 | 0 | bed. | bed. | |
| 8. | 28. 1. 0 | 28. 0. 7 | 27. 11. 6 | 27. 11. 6 | - 6. 0 | - 3. 8 | - 3. 0 | - 2. 8 | - 7. 0 | 56 | 7. 1 | NO | bed. | bed. | |
| 9. | 27. 11. 5 | 27. 10. 9 | 27. 10. 3 | 27. 10. 4 | - 3. 4 | - 2. 8 | - 2. 7 | - 5. 6 | - 5. 2 | 55 | 8. 2 | 0 | bed. | bed. | |
| 10. | 27. 10. 4 | 27. 10. 2 | 27. 10. 2 | 27. 10. 1 | - 5. 0 | - 4. 2 | - 3. 0 | - 1. 0 | - 7. 1 | 63 | 4. 4 | 0 | bed. | bed. | |
| 11. | 27. 8. 4 | 27. 2. 9 | 27. 7. 9 | 27. 8. 4 | + 2. 7 | + 3. 5 | + 4. 3 | + 0. 8 | + 0. 2 | 67 | 5. 8 | SW | bed. | bed. | |
| Σ. | - 73. 1 | - 72. 1 | - 71. 2 | - 72. 8 | - 16. 0 | - 8. 8 | - 5. 5 | - 9. 0 | - 25. 1 | 420 | 39. 0 | | Wolkenhasen | Sonnenflecke | |
| MD. | 27. 10. 4 | 27. 10. 3 | 27. 10. 1 | 27. 10. 4 | - 2. 2 | - 1. 3 | - 0. 8 | - 4. 2 | - 3. 6 | 60 | 5. 6 | 0 | bed. | bed. | |

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)



Instellingen

Temp.
 Wind
 Neerslag
 Luchtdruk
 Rel. Vocht.

Begin : 13/02/2020 12.00 u.
 Einde : 16/02/2020 12.00 u.

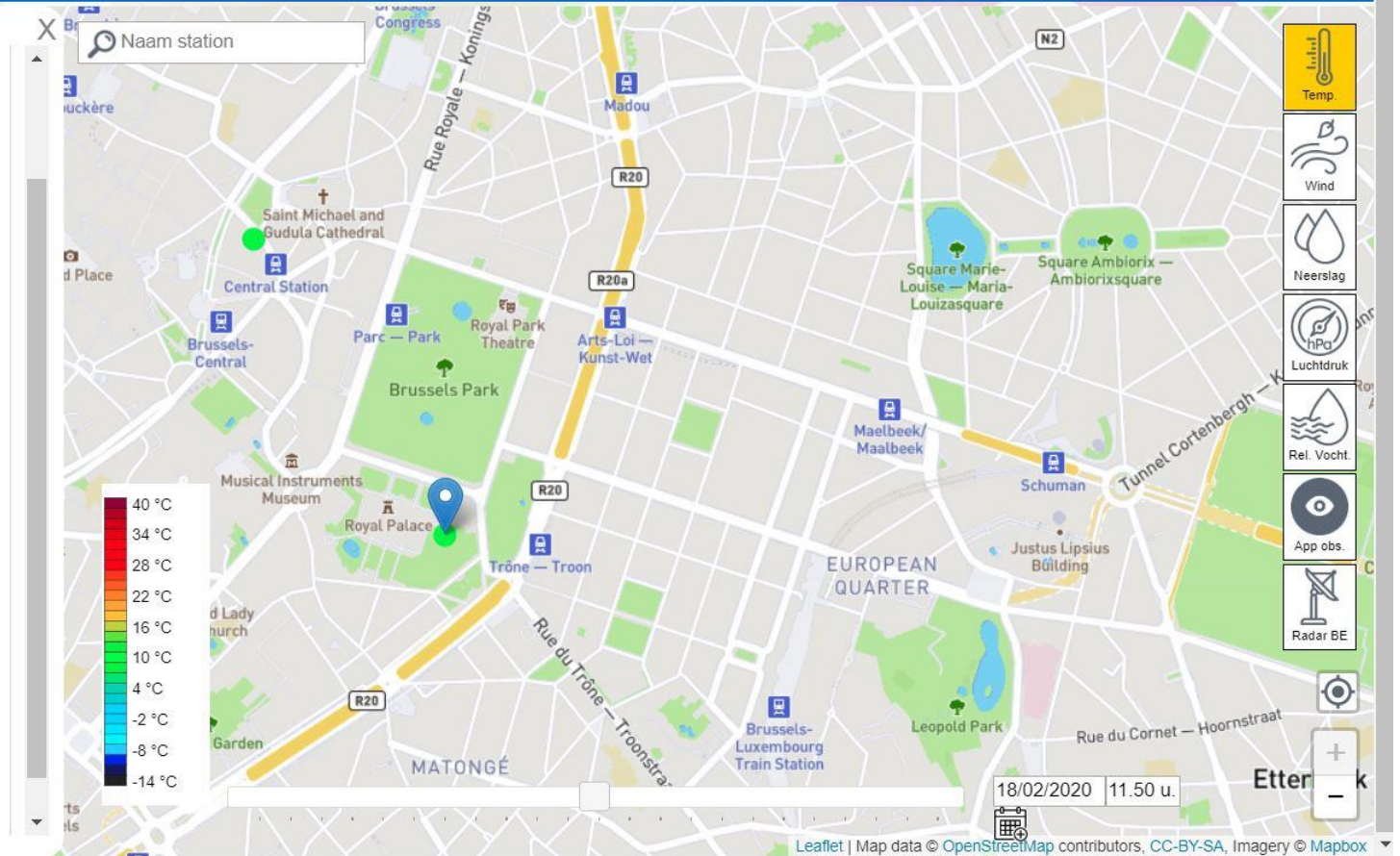
Vergelijk stations

Gebruik de lokale tijd van het station
 (Romance Standard Time)

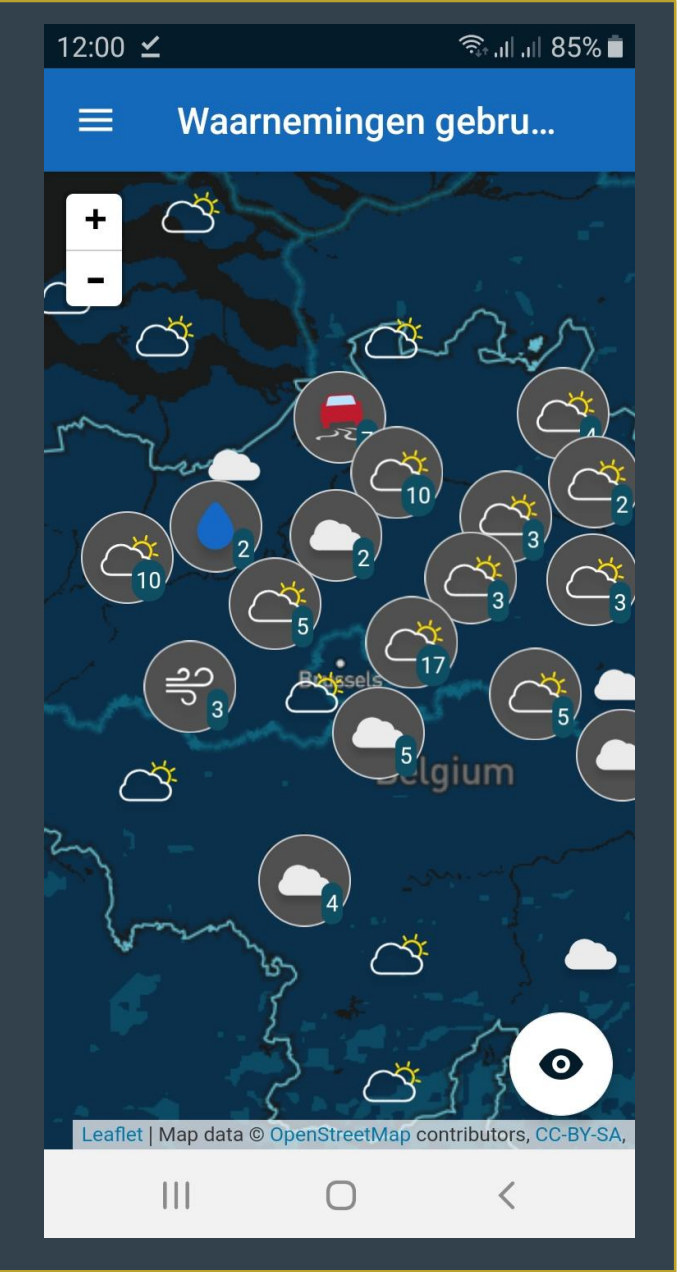
Luchtdruk (zeeniveau)



Vlinder 19 Brussel – Luchtdruk (zeeniveau)



- Temp
- Wind
- Neerslag
- Luchtdruk
- Rel. Vocht
- App obs.
- Radar BE




KMI weather app: available for android and IOS

Large data sets

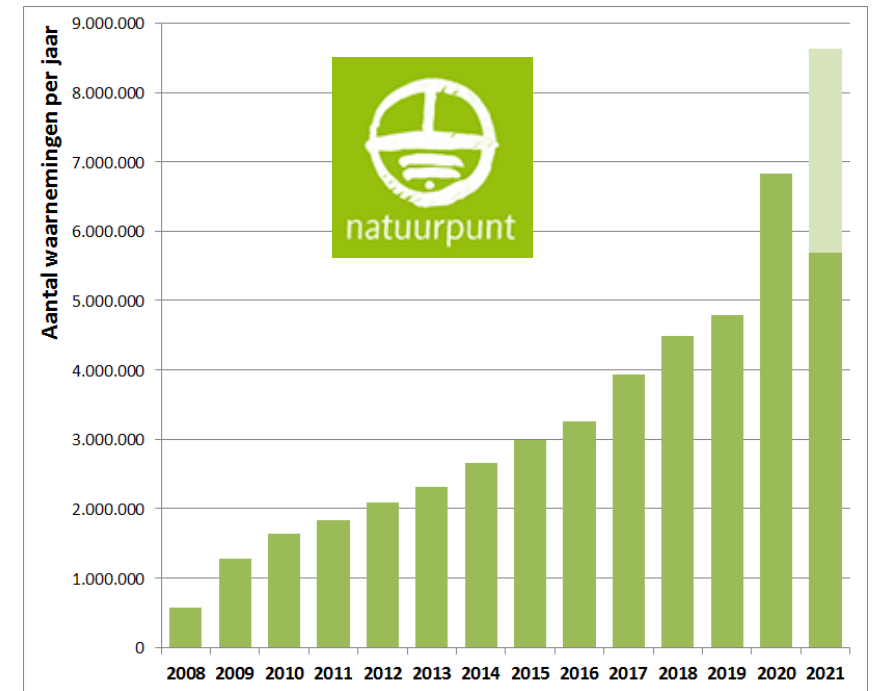


Largest study on vaginal microbiome in the world!



Over 6000 women participated in Isala

Isala.be – 6000 vaginal swabs crowdsourced and analysed



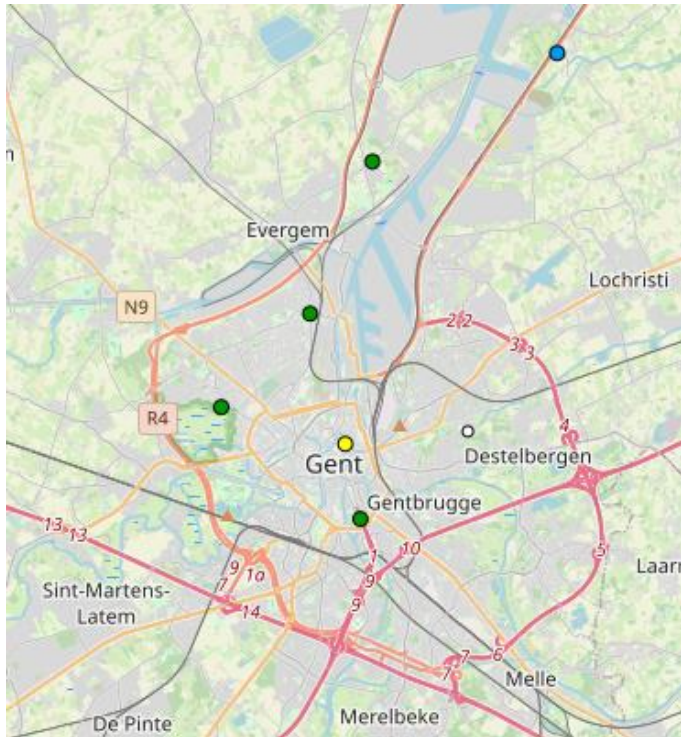
Waarnemingen.be – Natuurpunt: 60 million observations (2023)



Stratpoezie.nl: 3325 poems

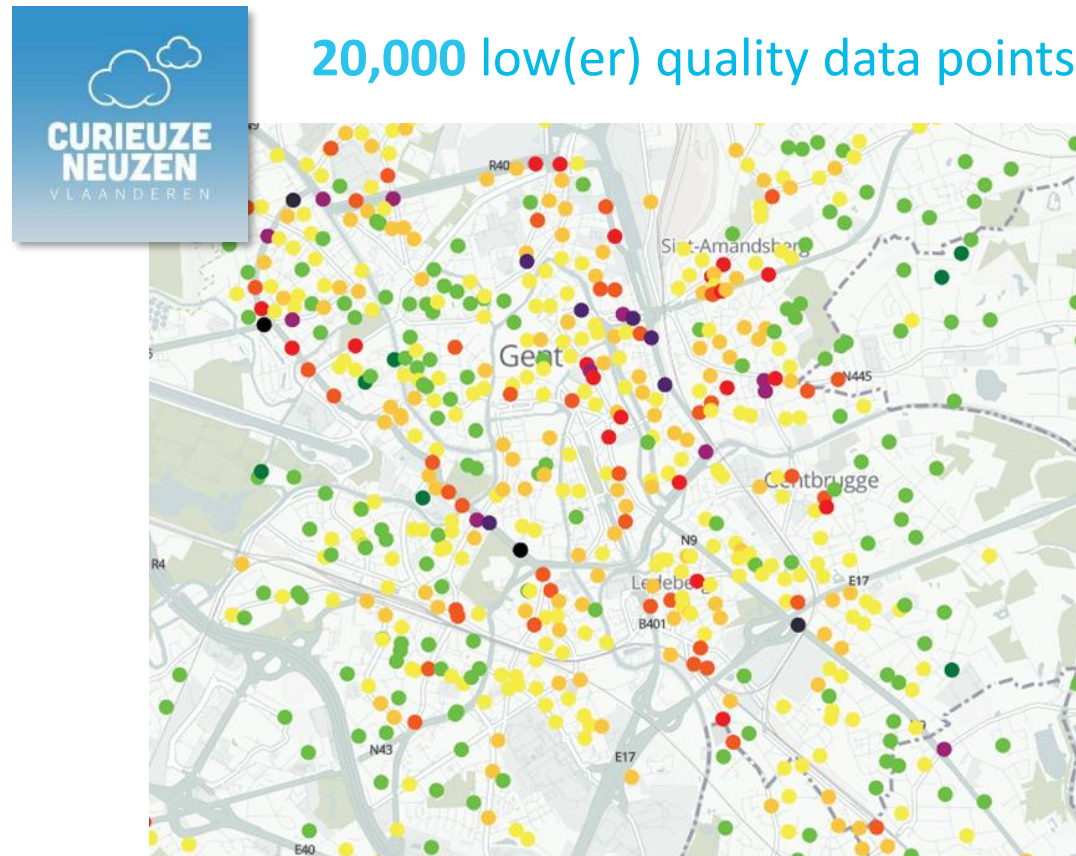
Increasing measuring density

56 High Quality data points



NO2 – annual average 2019 (ppmv) ©VMM

20,000 low(er) quality data points



NO2 – May 2018 (ppmv) ©CurieuzeNeuzen/DeStandaard



Square meter



SCivil

Mijn
Tuinlab.be

Allowing research in new/private locations



SPIDERSPOTTER
DISCOVER SPIDERS & THEIR WEBS

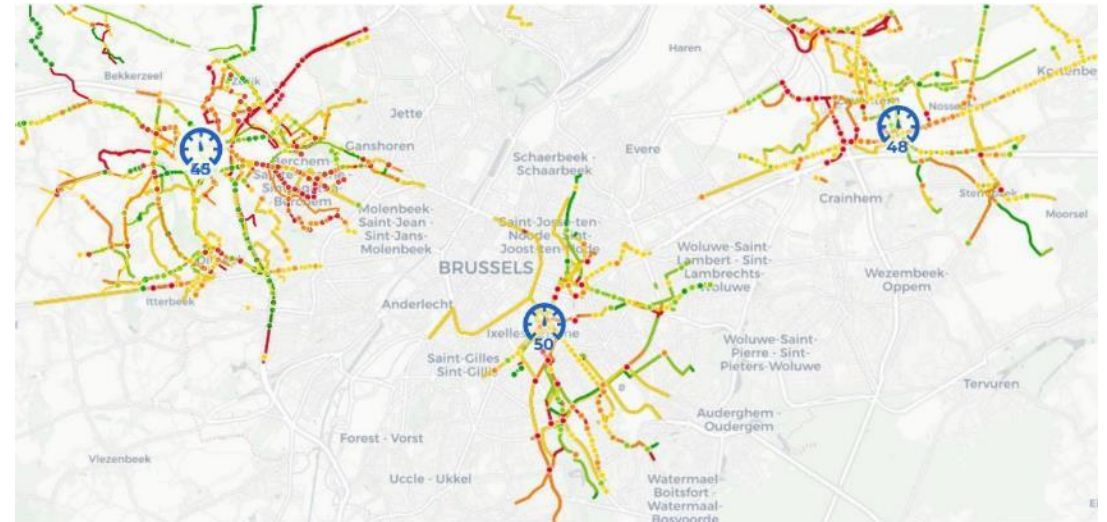


Citizen perspectives



VLinDER
finding and setting up sensor
locations with schools

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

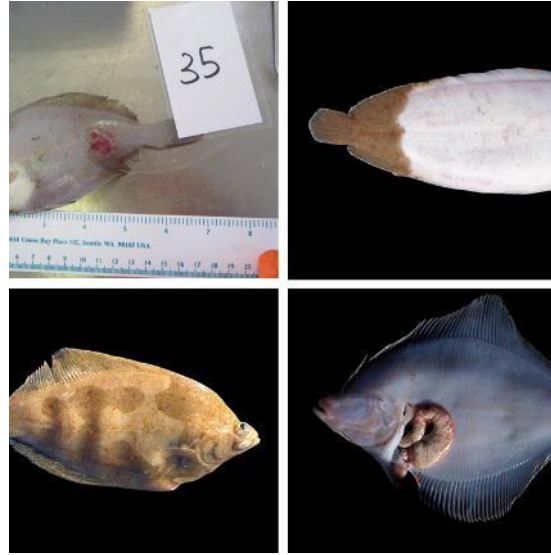


**Age-friendly
Neighbourhoods
(Manchester, 2016)**
Elderly Mancunians as
local livability experts
and interviewers





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

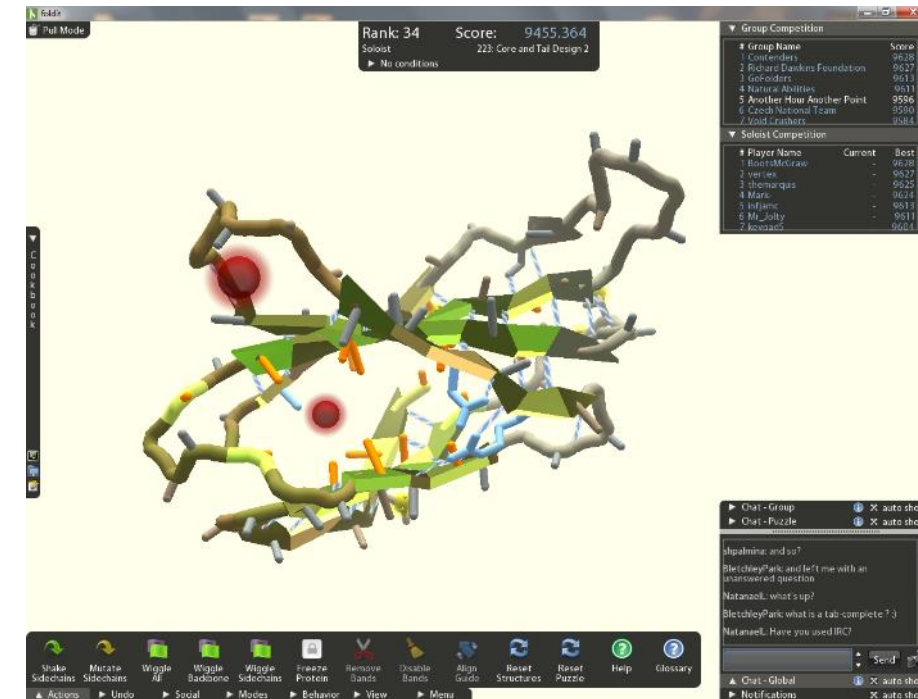
Transcribe or annotate data

Historical documents: SOSAntwerpen.be

The image shows a composite screenshot of a website. On the left, the 'Radio Meteor Zoo' logo is visible, along with a blue banner that reads: 'Between December 28 and January 12, you can observe the Quadrantid meteor shower. The zenithal hourly rate (ZHR) of this shower can be as high as 100. However, these meteors are not seen as often as meteors in these other two showers, because the peak is very short.' Below this is a dark image of a meteor streak with the text 'Help us identify meteor data' and buttons for 'Learn more' and 'Get started'. On the right, a historical document viewer for 'S.O.S. Antwerpen (1820-1946)' is shown, displaying a handwritten record from 1942. The record is a table with columns for date, name, and other details. Below the document is a form with fields for 'Volgnummer*', 'Datum registratie*', 'Voornamen*', 'Familiennaam*', 'Datum overlijden*', 'Geboortedag*', 'Geboortemaand*', 'Geboortejaar*', 'Doodoorzaak*', 'Begraafplaats*', 'Begraafsondernemer*', 'Dokter*', 'Aanmerkingen', and 'Toelichting'. At the bottom right, a white box contains the text '1 person is talking about Radio Meteor Zoo right now.' and a 'Join in' button.

| Volgnummer* | Datum registratie* | Voornamen* | Familiennaam* | Datum overlijden* |
|-------------|--------------------|----------------------------------|-----------------------------|------------------------|
| 26 | Januari | vrouwelijk kind Ma Leopoldine | Verloven. Van Oel Hofman | 24 Januari doofgeboren |
| " | " | Victor Josephus Rachel. | 23 Post Poox. | 6 12 67 31 7. 75. |
| " | " | Maria Peltonella. | 23 Ganss. | 4 5 62. |
| " | " | Indonius. | 23 Dirkx. | 2 11. 78. |
| " | " | | 24 Janssens. | 4. 8. 72. |

Training AI with Astronomical data:
Zooniverse – Radio Meteor Zoo



Gamification:
playing, competition and
community

CS in big budget video games





Citizen science and education

Bugs 2 the Rescue

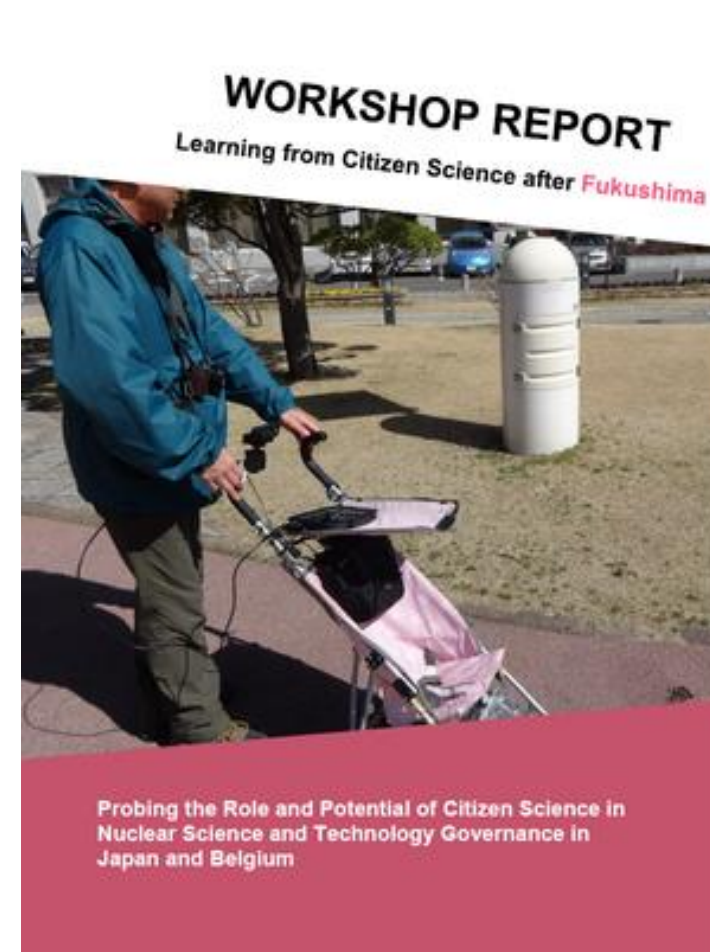


Addressing societal concerns



 Telraam

telraam.be



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

Questions?

Scivil
Citizen Science
Vlaanderen

Come talk to us!

With the support of:



Vlaamse
overheid



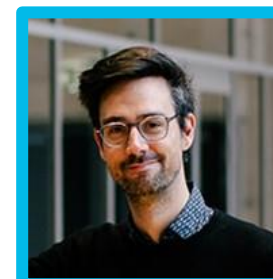
Annelies
Coordinator



Sanne
Communication
advisor



Charlotte
Citizen science
advisor



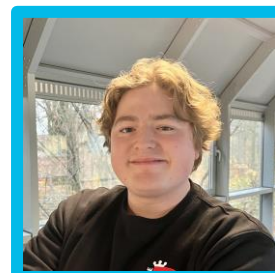
Jef
Citizen science
advisor



Karen
Amai! Project
coordinator



Sven
Amai!
Communication
advisor



Isaak
Amai! Educational
advisor