

From awareness to action: how Citizen Science can change the game

The cases of Making Sense and ETAIN

Ideas for Change pillars:

01.

Involve citizens in the decision-making process, building citizen-data driven systems

02.

Democratize knowledge by crafting positive impact stories and narratives

03.

Anticipate desired futures and co-create business models that can be sustainable and exciting for all

04.

Contribute to building new tourism realities by detecting good practices and helping them scale up

The team

We are a research and consulting company.

Through the study of data governance, citizen science, and ecosystem analysis, we have driven inclusive projects grounded in open data.

We enable citizen participation in research, promote open knowledge, and prioritise equity, diversity, and inclusion, while conducting both qualitative and quantitative analyses to advance scientific and social progress.



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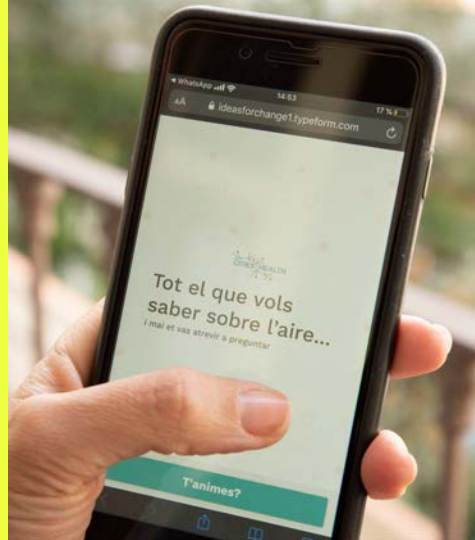
MAUD
Research and Consultant

Citizen Science and Innovation

BUT, WHAT IS CITIZEN SCIENCE?

“What if the most important data about our world didn’t come from labs or governments—but from you and me?”

Citizen science is when the public voluntarily helps conduct scientific research. It is scientific research conducted with participation from the general public.



OUR APPROACH TO CITIZEN SCIENCE

We promote participatory projects and strategies in which citizens play a leading role in the production of data and scientific evidence to advance their own agenda and improve, in a collaborative and informed manner, the environment and life in the city.



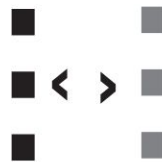
CITIZENS AS DATA GENERATORS:

3 APPROACHES



AUGMENTS

existing data set



CONTRASTS

official data set



CREATES

new data set



Part successful stories

The case of Making Sense



Making Sense

Advances and experiments
in participatory sensing



Iaac



Right to produce data to act on
urban problems

MAKING SENSE

CITIZEN AWARENESS

Can citizens contribute to detect and solve
noise pollution problems in their
neighbourhood?

Plaça del Sol in Barcelona is a square that has historically suffered from the noise produced by night use of the place. Working with a group of neighbours we deployed 25 sensors to investigate how high relative to the norm the noise levels are around the plaza, and what can be done to improve the situation.



LE / PISO ELEVADO



2 sensores por casa en cada uno de los lados de la plaza
(un sensor en exterior y otro en interior) = 8. Distribuir -
8x3=24 sensores





PLAÇA DEL SOL

10 Kits connectats d'un total de 29 (35 %)

Sentilo Noise
T241001
de pral2a

Última publicació fa 1 minut

Sentilo Noise
T240705
de pral2a

Última publicació fa 1 minut

1.6 firmware
de vico

Última publicació fa 9 dies, la bateria estava totalment carregada

17 EXT
de maria

Última publicació fa 1 minut, la bateria està totalment carregada

17 INT
de maria

Última publicació fa 3 mesos, la bateria estava totalment carregada

Blauet-IN
de JoanE

Última publicació en 1 minut, la bateria està totalment carregada

Blauet-OUT
de JoanE

Última publicació fa 5 dies, la bateria estava al 90%

standreu01
BADALONA
de standreu1

Última publicació fa 2 mesos, la bateria estava al 73%

vidal91
de VidalLlansana

Última publicació fa 22 segons, la bateria està al 39%

vidal2
de VidalLlansana

Última publicació fa 1 minut, la bateria està al 53%

vidal10
de VidalLlansana

Última publicació fa 2 dies, la bateria estava descarregada

vidal77
de VidalLlansana

Última publicació fa 2 dies, la bateria estava descarregada

nostalgiabarcelona
INT
de nostalgiabarcelona

Última publicació fa 13 dies, la bateria

nostalgiabarcelona
EXT
de nostalgiabarcelona

Última publicació fa 3

Martips12
de 090305

Última publicació fa

Martips11
de 090305

Última publicació fa 9

MireiaEXT
de mibato

Última publicació fa 2

MireiaINT
de mibato

Última publicació en 41 segons, la bateria

The case of ETAIN



ETAIN is an EU-funded project aimed at assessing the impact of radiofrequency electromagnetic fields (RF-EMF) from both a human and planetary perspective while also exploring and proposing options to reduce exposure.

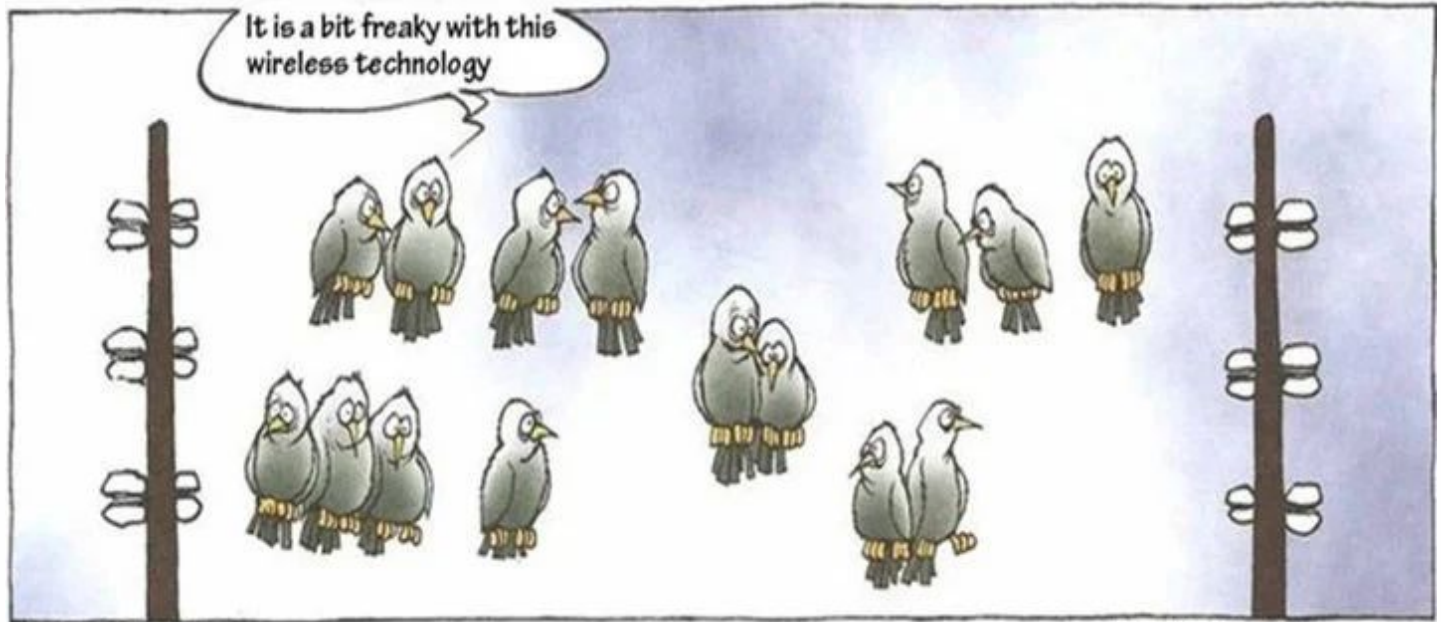
The project focuses on fostering interaction with citizens and stakeholders to better understand exposure levels and potential associated risks.



Make the invisible visible



It is a bit freaky with this wireless technology



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Who is ETAIN?



CITIZEN SCIENCE APPROACH



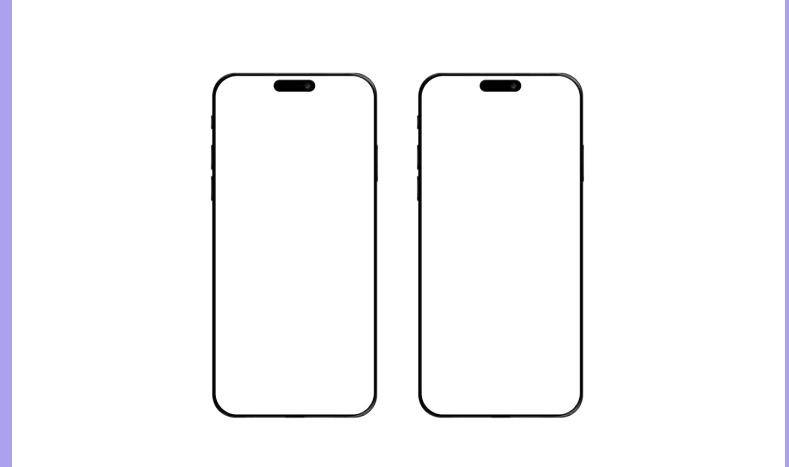
APP INTERFACE:

Let's draw together

¿What else

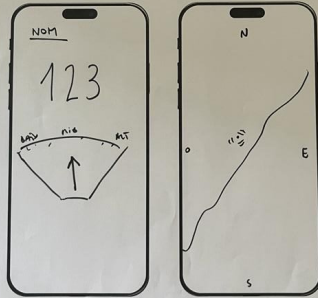
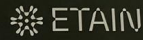
In the apps created so far:

- Exposure number in real time
- Ways to interpret the measure
- ...
- ...





¿Qué interfaz te gustaría usar?



Anotaciones:

Mostrar visible

Anotaciones:

Mapa
Gráfico sobre con los valores
en el último día

¿Qué interfaz te gustaría usar?



Anotaciones:

NIVEL D'EXPOSICIÓN A
LES RADIACTIONS EM
(BAIXA, MITJANA, ALTA),
ASPECTES NORMATIVA
PUNTA NÚMERO (LÍNEA)
I NORMATIVA AND LA
NORMATIVA. EL CADA OG
COLOR (VERD, GROC I ROIG/
/VERMELL) → INDICA CMO
D'EXPOSICIÓN!

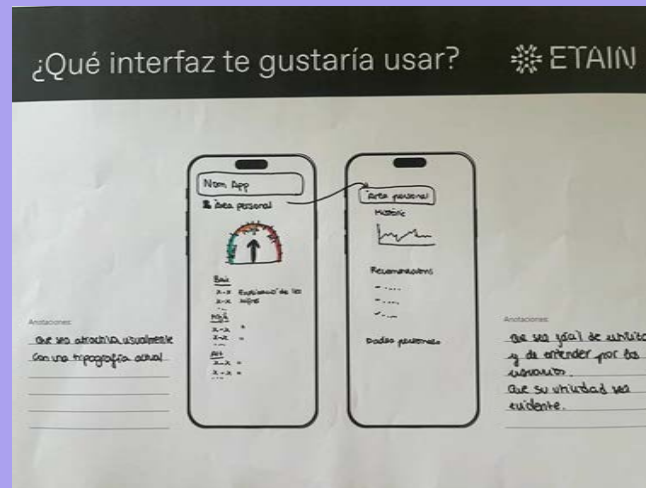
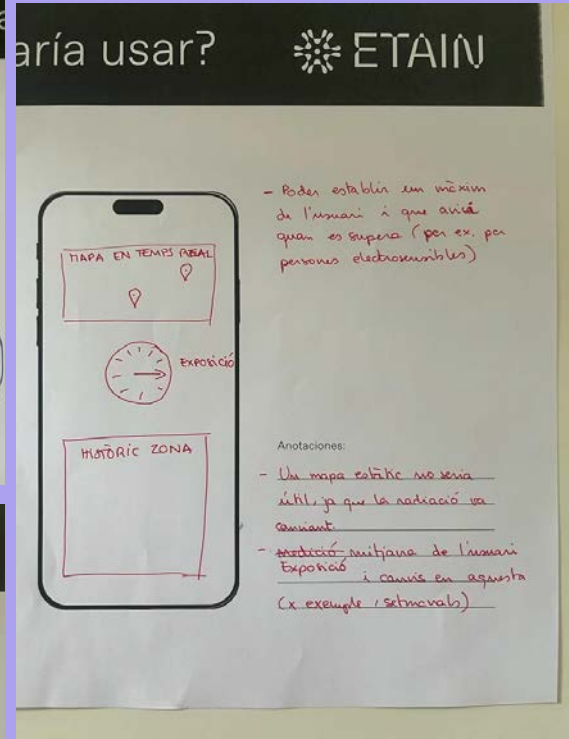
Anotaciones:

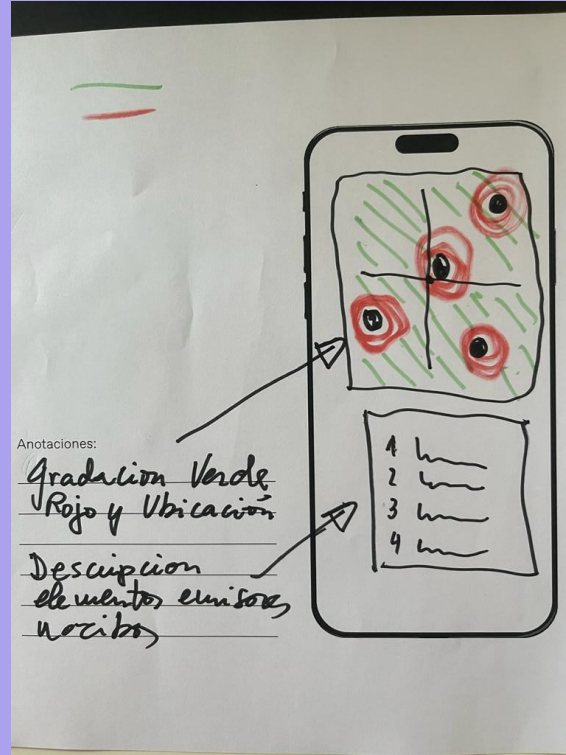
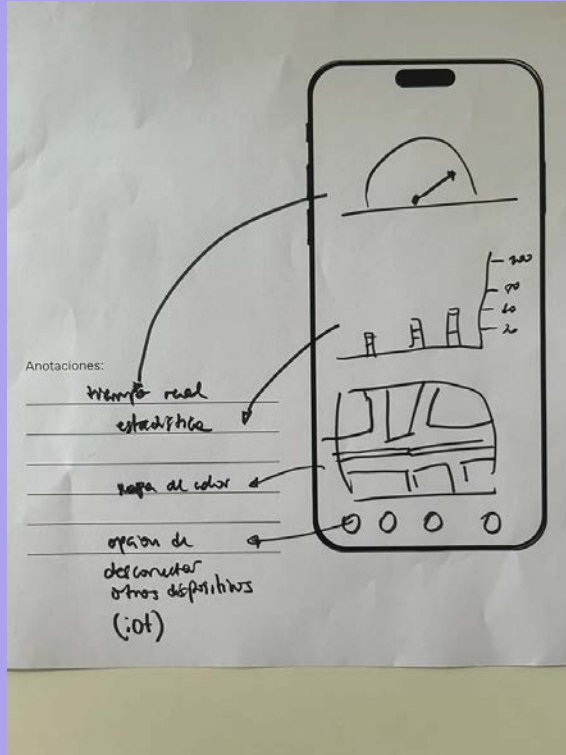
MAPA D'EXPOSICIÓN DE
LA ZONA. NO SÍ M'É
VISIBLE. PODRÍEM
INDEPENDIENT.

- Visible
- Simple: number + scale to interpret the measure
- Scale: colours (green, yellow, red) vs verbal + bar (low, medium, high)
- (Link to) visualize the exposure map on the phone
- Map focused on the area of the user (2x)
- Map to include the option to see trend of a given place/area (e.g. over the last day) (1x)



- Add the possibility to see historical information (8x), possibly interactive
- Include recommendations (8x)
- Option to set up and select specific places (2x), e.g.: my home, home of my parents, near me, workplace.
- (Link to) detailed explanation of the scale adopted (why low is low etc.)





- Option to distinguish by device (3x)
- Real time location of user within the map visible on the screen (1x)
- + others not to be considered :)



5G SCIENTIST APP

This application measures your exposure to radiofrequency electromagnetic fields in real-time. Once installed, you can check your immediate exposure or allow the app to continuously measure your exposure in the background. Additionally, while in use, it evaluates the strength of your mobile and Wi-Fi networks, providing insights on whether your connectivity is low, medium, or high, and how to interpret these results.

By downloading this app, you will not only gain insights into your exposure but also contribute to scientific research as a citizen scientist. Your measurements will be combined with those of other users to create a European exposure map. This will be a valuable tool, allowing users to check the exposure levels of the areas they move through daily.

If you want to learn even more about your exposure, you can use the app's data to interact with the Dose Calculator, also developed by ETAIN. This tool will help you better understand your behaviour in relation to RF-EMF technologies.

5G SCIENTIST APP - HOW DOES THE APP WORK?

Step 1:



ETAIN 5G Scientist

Fields at Work

Download the app

Step 2:



Your phone will request permission for ETAIN 5G Scientist to access specific information.

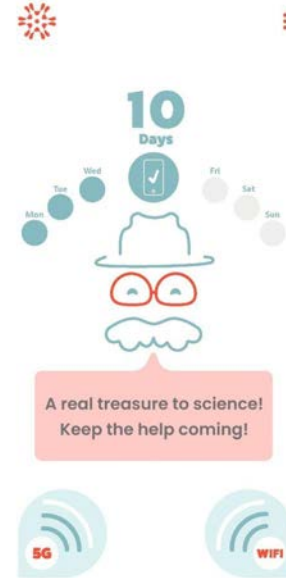
We will collect and process your location and local network signal strength to create exposure maps, even after you close the app.

Send notifications to prompt regular app usage for proper functionality.

We do not collect information that identifies you (such as your name, phone numbers, or other identifiable information), so it is not possible to link the collected location data to you.

< Back • • • • • Next >

Step 3:



My exposure My contribution Map Learn

5G SCIENTIST APP - HOW DOES THE APP WORK?

Step 4:

Measuring > Radiation

Radiation

Mobile | Wifi



4.2% (2.1 V/m) ⓘ

Your radiation level is 4.2% of the guideline value, mobile connection.

You have a strong mobile connection, so using your phone here creates low additional radiation.

Estimate your daily radiation

Learn more

Step 5:



Measuring > Radiation > Usage

Estimate your usage radiation

On average, how much do you call holding your phone to your ear?



On average, how much do you use your phone screen while connected to a mobile network?



See the results



Radiation



Contribution



Map



Learn

Step 6:

Measuring > Radiation > Usage >

Result

Your mobile phone radiation

Your daily radiation level is
5430.3 mJ/kg per day. ⓘ

14.8% originates from your phone
85.2% originates from your mobile network

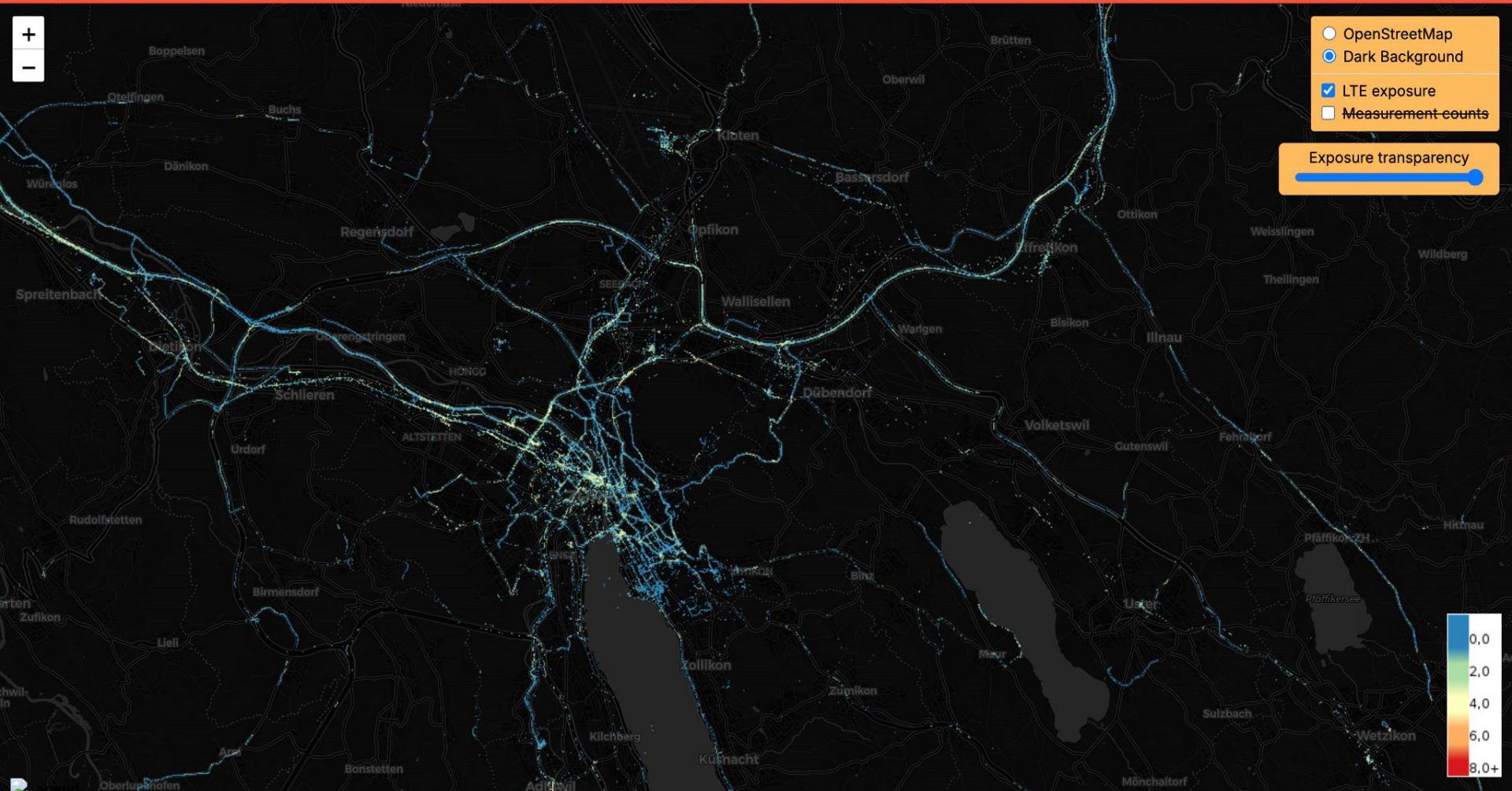
To compare:
The average daily radiation level in Europe is 252 mJ/kg per day.

This is only part of the story.

Calculate your total dose radiation

Back to overview

Learn more



- OpenStreetMap
- Dark Background
- LTE exposure
- Measurement counts

Exposure transparency

0.00 1.00



Interested?

[Download the app here](#)



[Check out the maps](#)



OTHER CITIZEN GENERATED DATA PROJECTS:



CitieS-Health

how our living environment affects our health?



FoodMapping

exploring food environments and habits.



WeCount

citizen science in mobility.



D-NOSES.EU

management of odor pollution.

Thanks!



ideasforchange.com