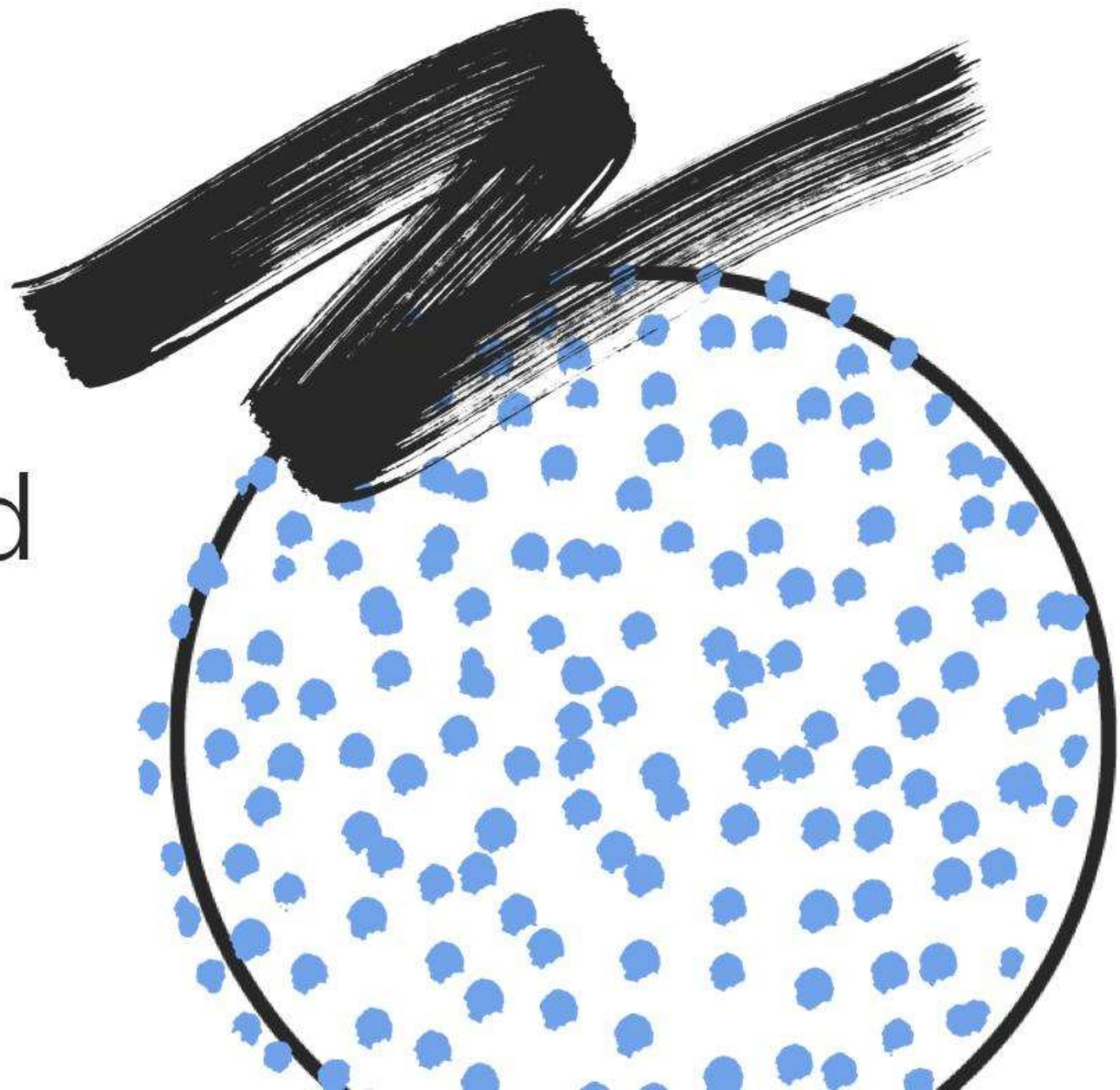


The People's IoT

Welcome!

Techfestival.

Where humans and
technology meet



Who am I?

I am Sebastian

I do
Networks,
Free &
Open Source Software,
Solar Energy,
IoT



IT University of Copenhagen, pitlab.itu.dk

Network Startup Resource Center (NSRC), nsrc.org

I am here because

I have questions.

And you?

We are not our data.

But our data tell

almost everything

about us.

A “smart” city

depending on data

can be controlled by

controlling its data.

How do we relate to
our ('things') data?

What data?

Where? Who?



Data

I am interested in



plants urban
gardens

temperatures



temperatures





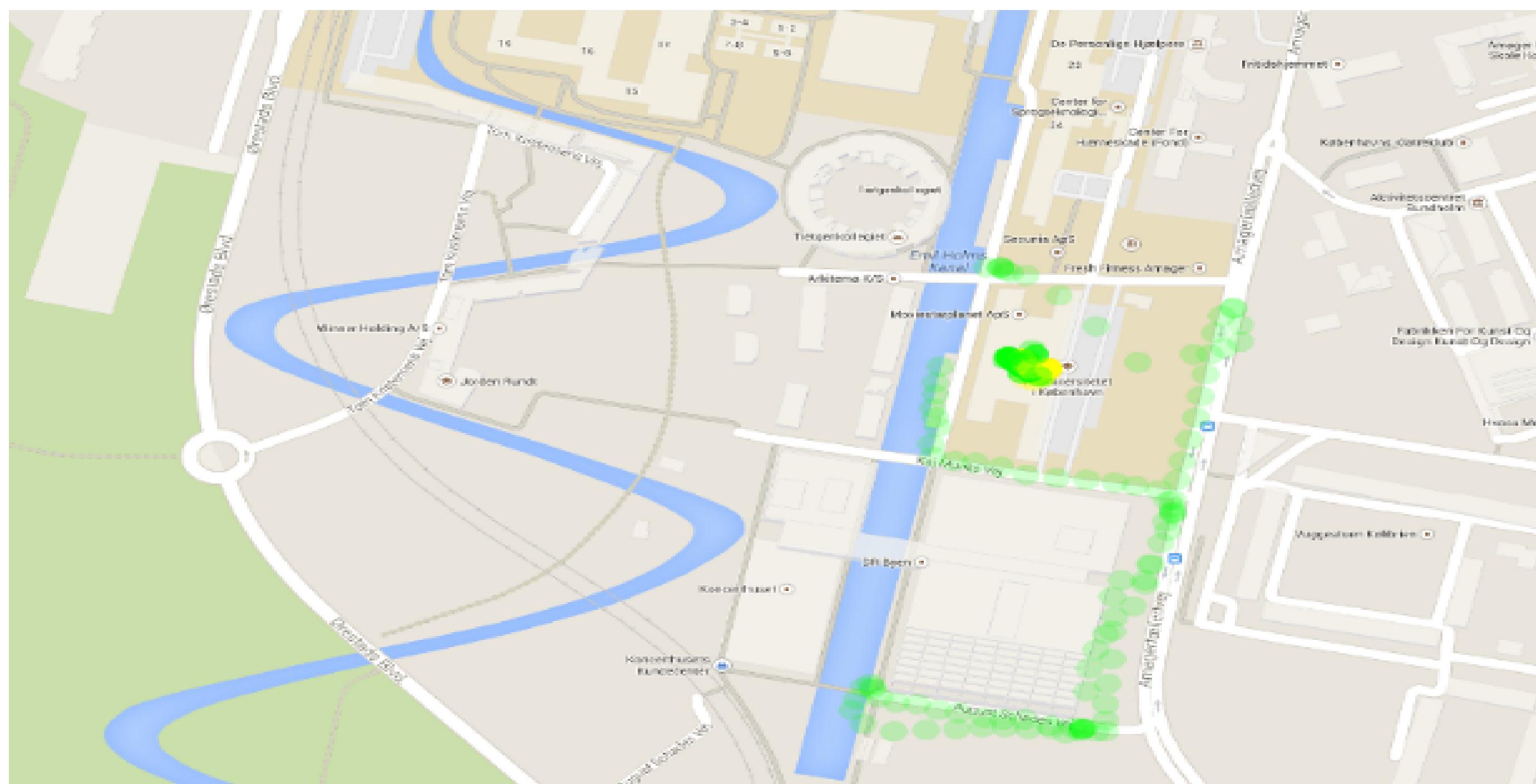
(close)

Erklärung einblenden

#Sensors 2



IoT / ITU - bAIR.dk



 Saving screenshot...

GRAPH

MAP

438

Air Qual. - RI
TGS 2600

A

437

Page 1

439

Sound Level - dB

Phone Microphone

Avg
52

Peak
96

25

Air humidity - RI RHT03

A

34

Page

43

98

**CO Gas - RI
TGS2442**

Avg

97



Stop Recording

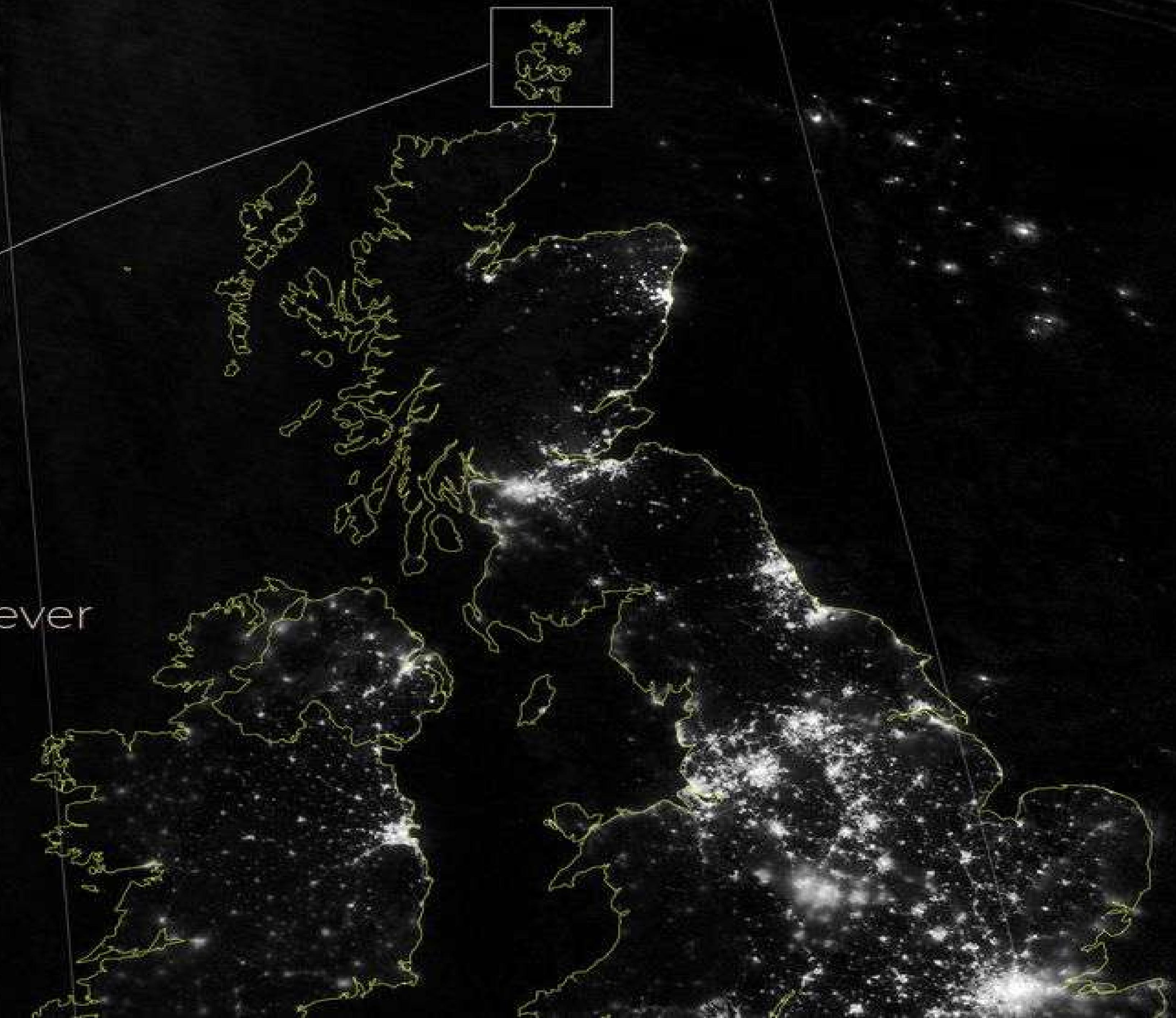


Make Note

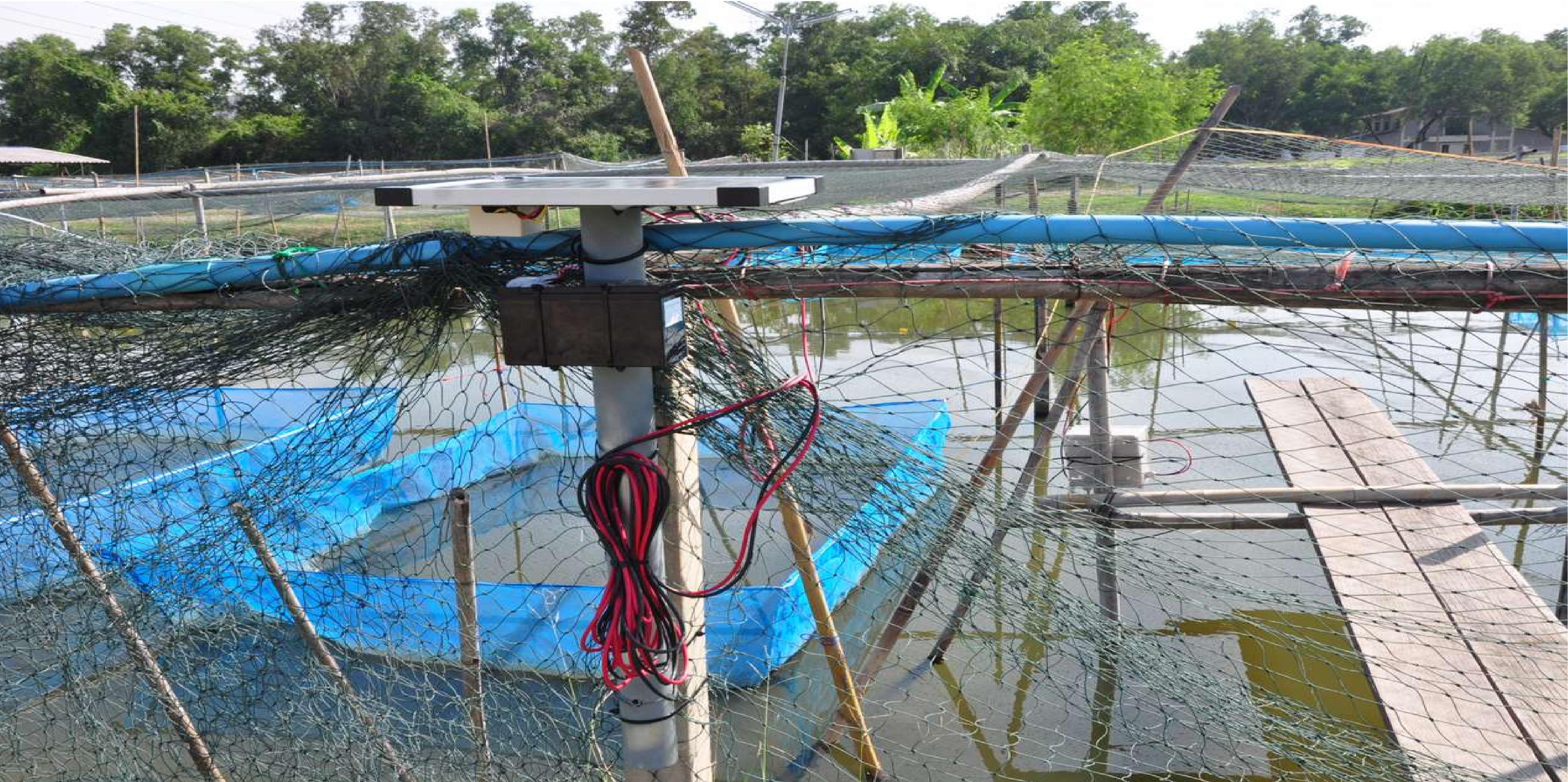
water

Orkney

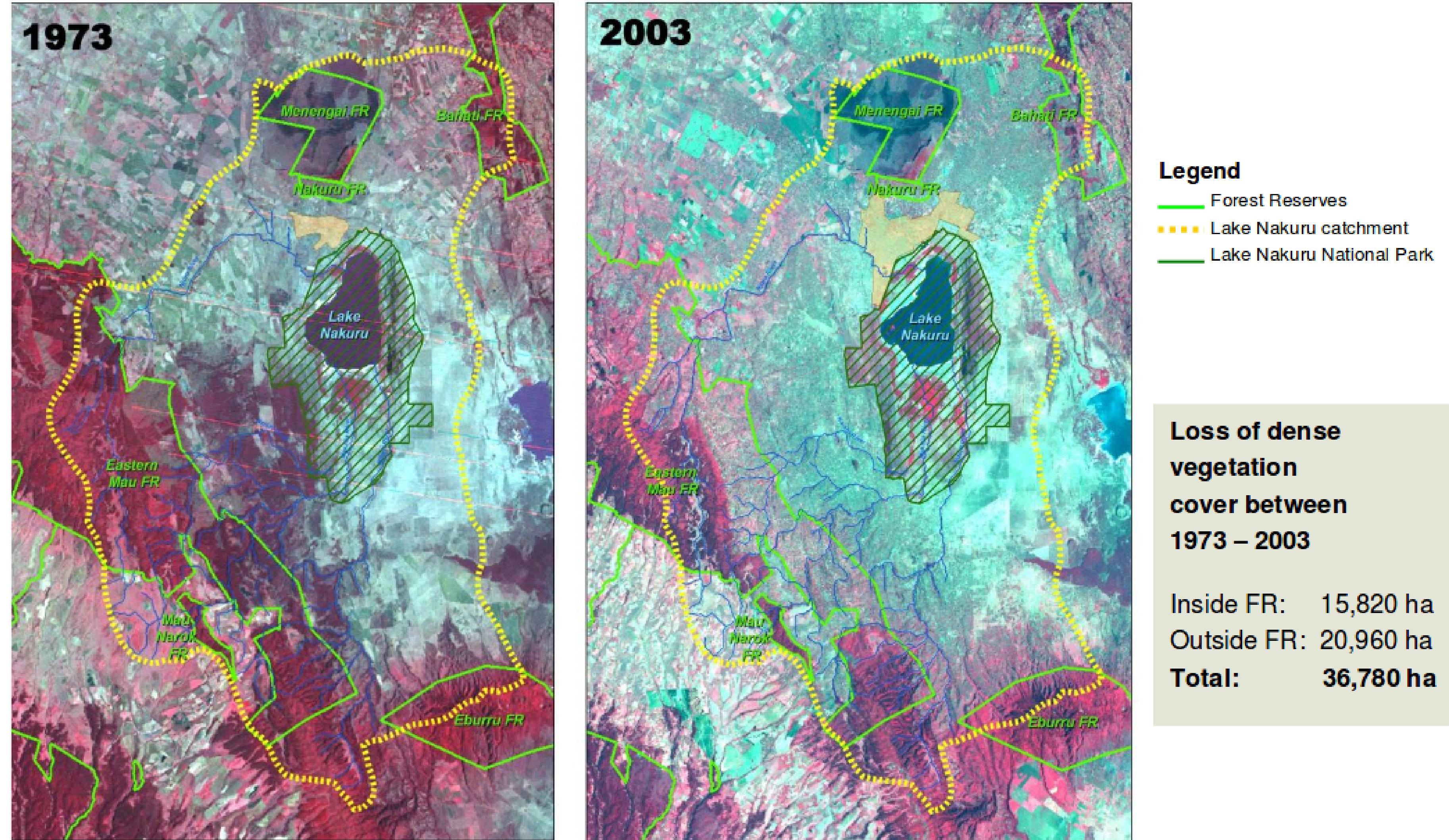
"Here, at the edge,
infrastructure... is never
taken for granted."



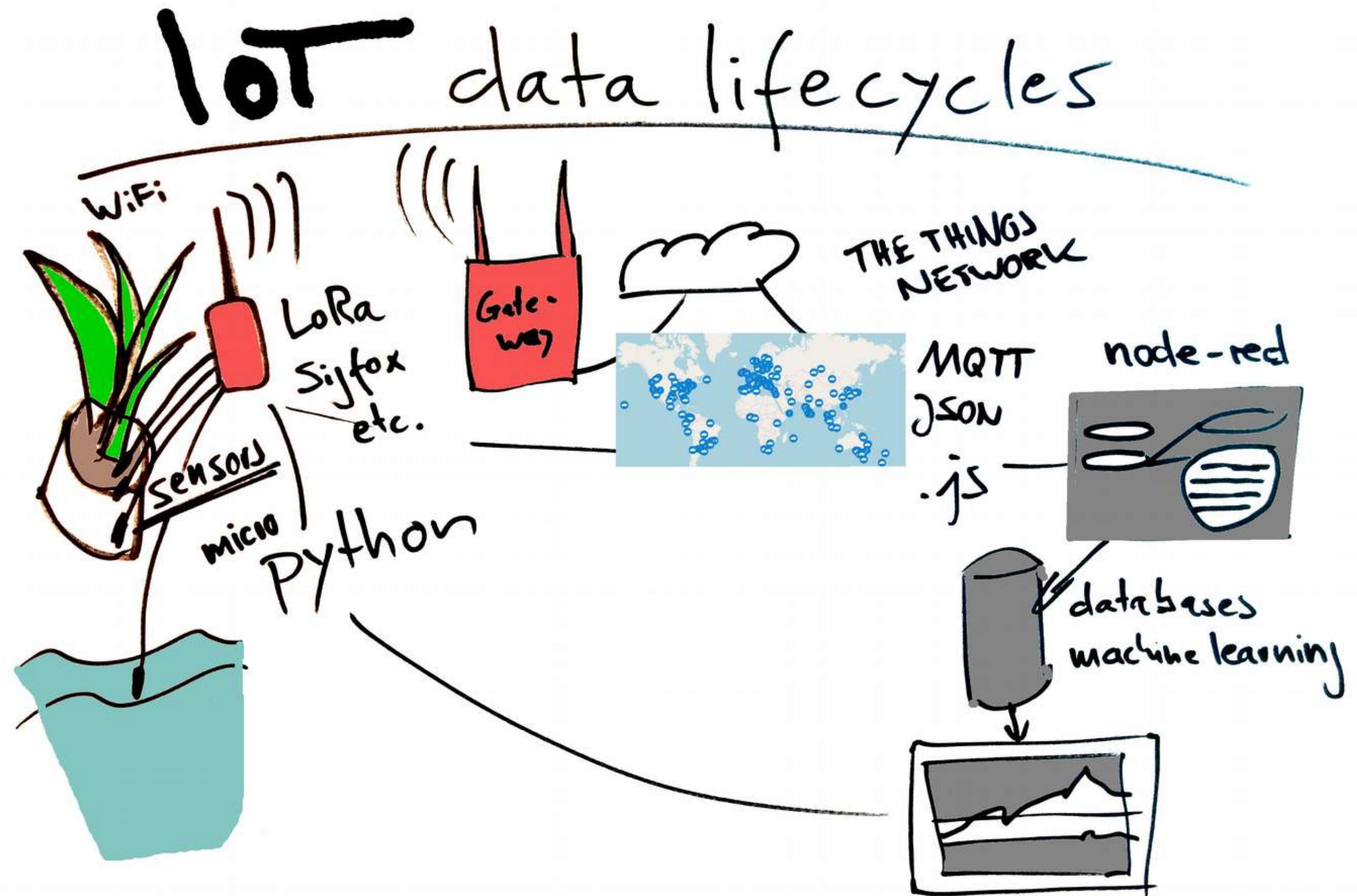
fish farm in thailand



Water at Lake Nakuru, Kenya



IoT in teaching



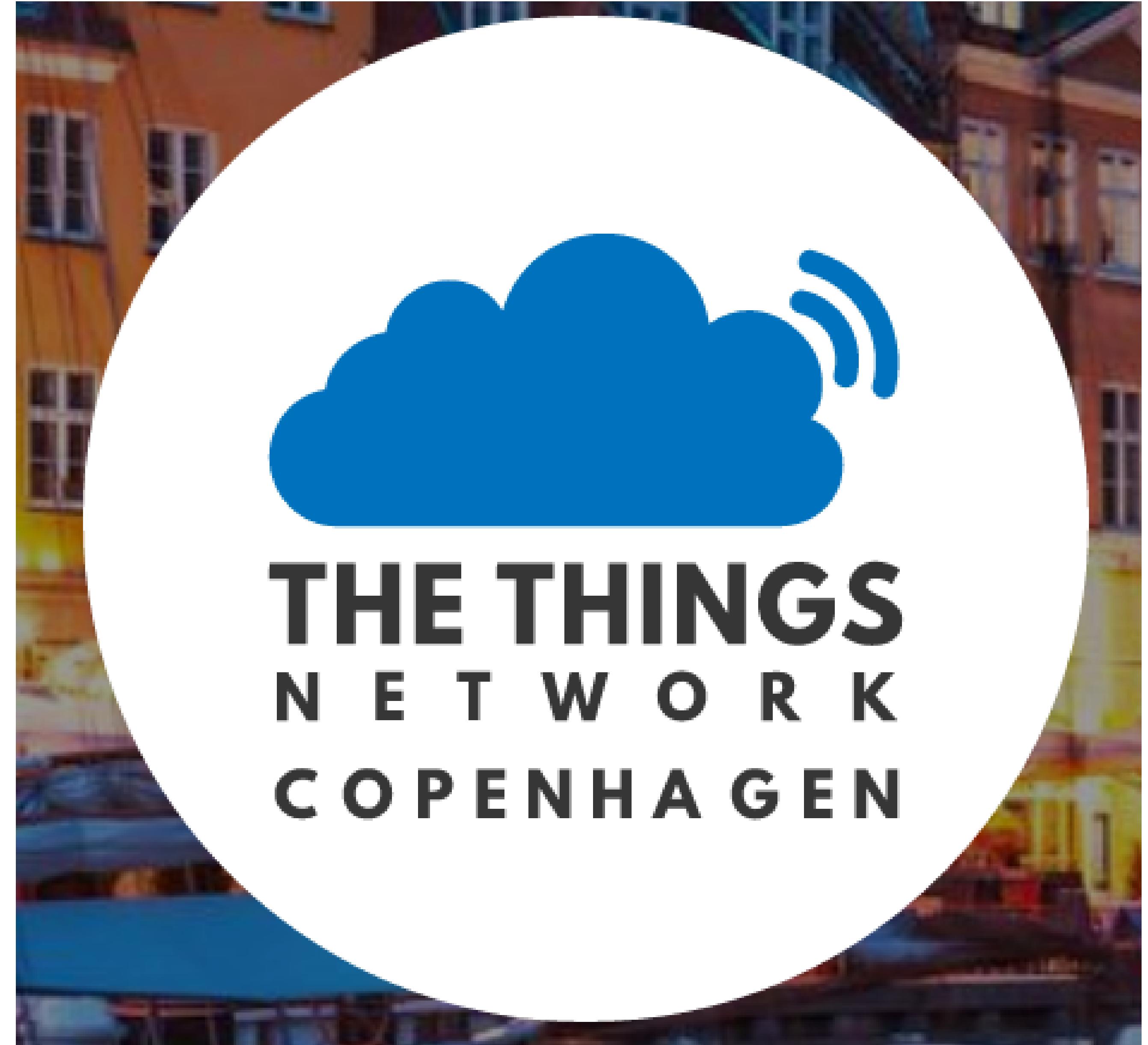
**Where does
our data go?**

“Everything that carries **power**
will be connected to **Internet**
eventually.

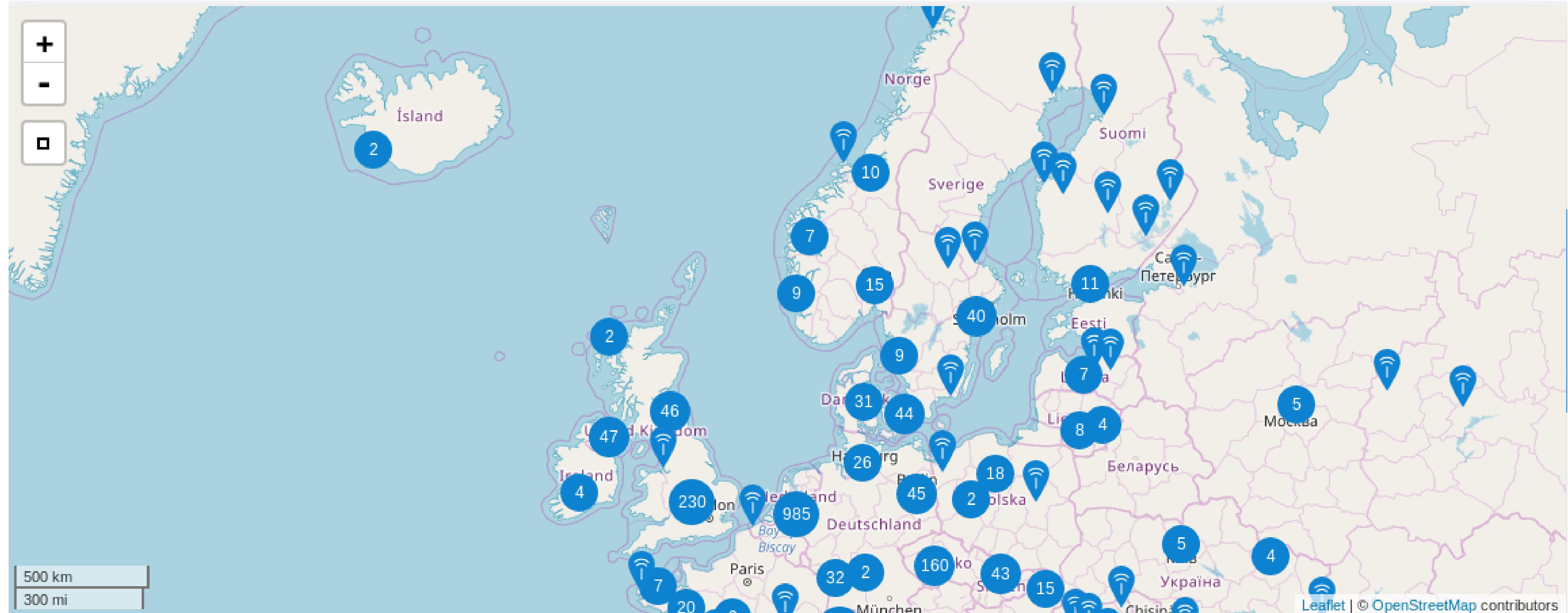
Controlling the network that makes this
possible means **controlling the world**.
We believe that this power should not be
restricted to a few people, companies or
nations. Instead this should be
distributed over as many **people** as
possible without the possibility to be
taken away by anyone.”

The Things Network Manifesto

The Things Network



The Things Network



The Things Network

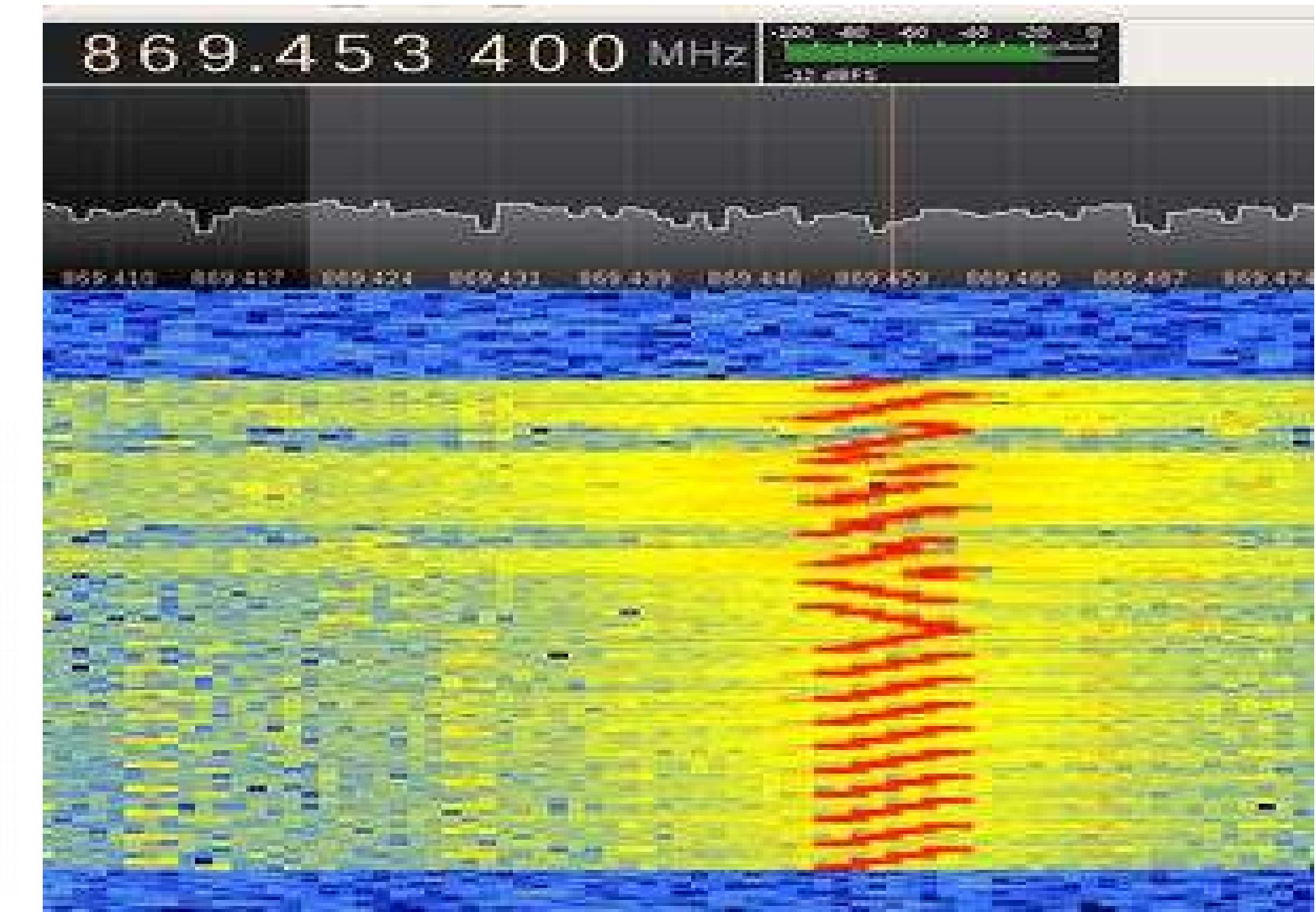
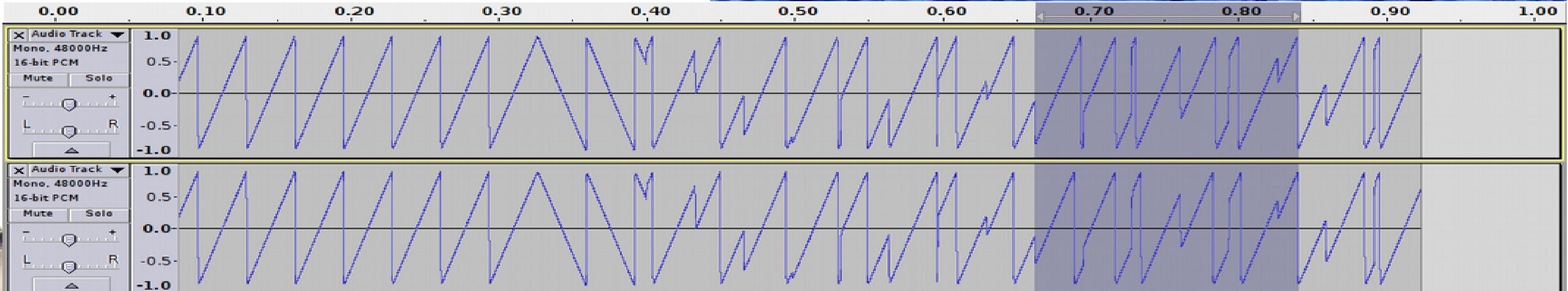


Just a little bit of tech talk ...

LoRa & LoRaWAN in unlicensed

frequency bands

(868 MHz)



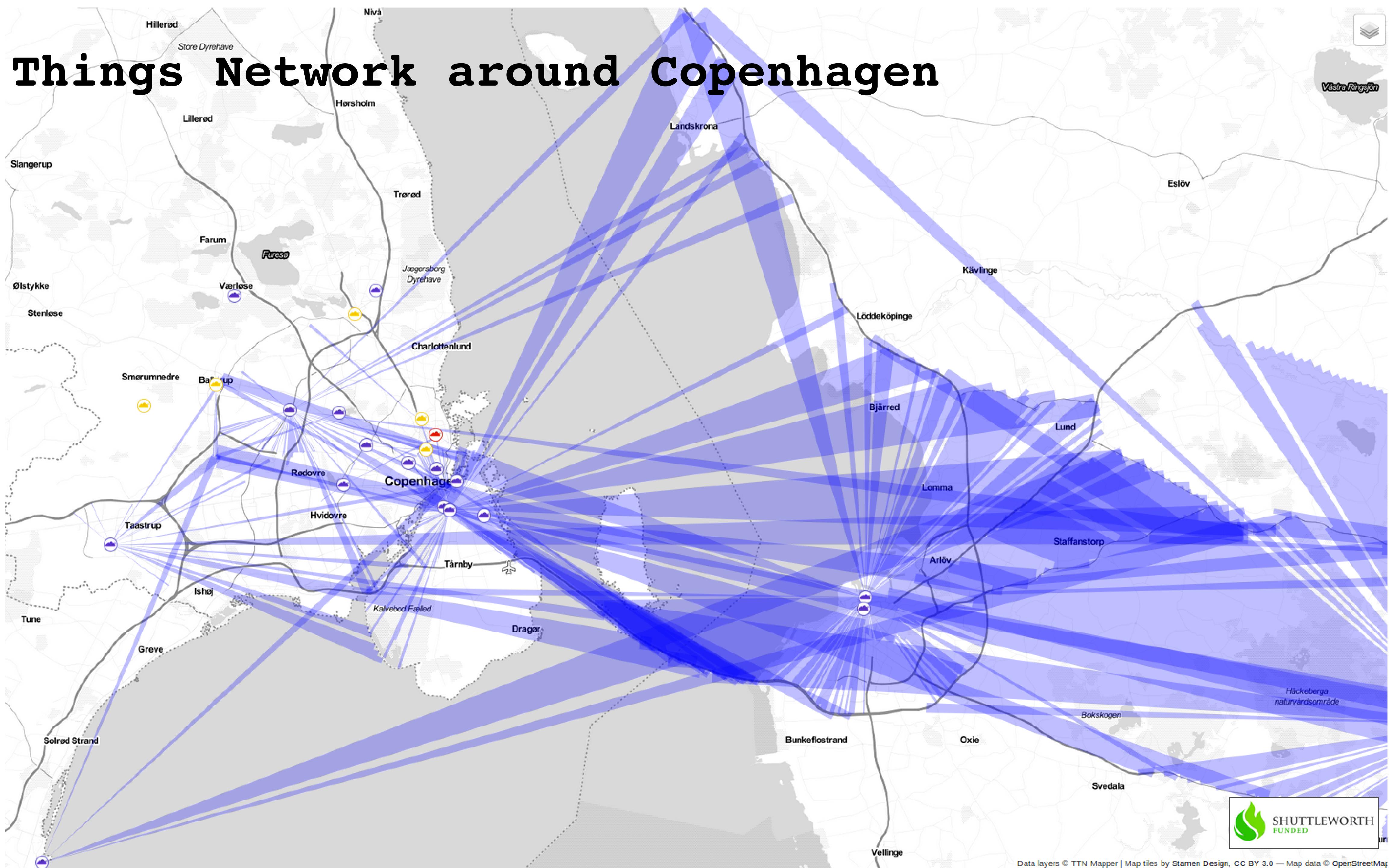
The Things Network

Low power, long range – some 10 or 100 kms

Terrestrial world record currently: 700 km



The Things Network around Copenhagen



There are others -

Other approaches, standards,



NB-LTE



nwave

LTE-M



IEEE 802.11ah



EC-GSM



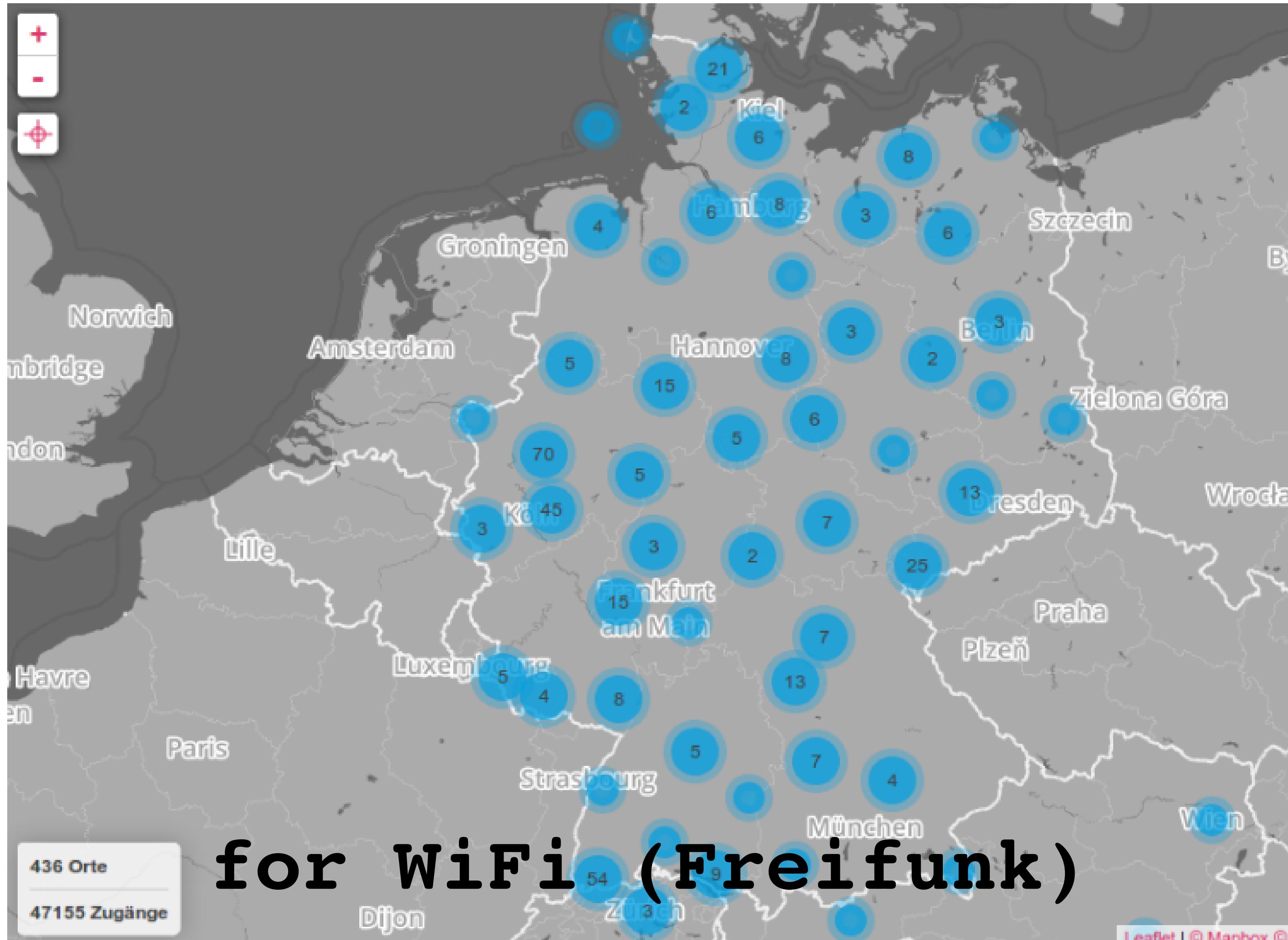
and within LoRa,

Other companies, providers, etc

**It is possible for us/you
to do this.**

Some examples, offline:

And we have done it before,



Back to my questions:

1/ Do we need/want this?

If not, then what else?

2/ If so, how do we organize this?

3/ On what scale do we collect data?

City? Quarter? Neighbourhood? House?

4/ What do we need to make this happen?

5/ Care .. Trust .. what about these?

Techfestival. Evening program

...and now

Join us at the outdoor Festival area!

16:00 PROGRAM STARTS

20 - 21 KEYNOTE TALKS