

# WORKSHOP CONCEPT

*Radio frequency (RF) energy is an electromagnetic power. It can be measured in watts, in decibel-milliwatts, and it is produced whenever something transmits: a radio station, an antenna, a Wi-Fi router, a phone searching for a network, a Bluetooth device checking whether its partner is nearby. Most of the time we don't notice it because it does not announce itself but it is literally living in our rooms.*

*A lot of the infrastructure that shapes the attention economy is wireless and constantly communicating through RF. When these systems are active, they often correlate with app use, tracking/telemetry, data sync, notifications, and background "handshakes" between devices.*

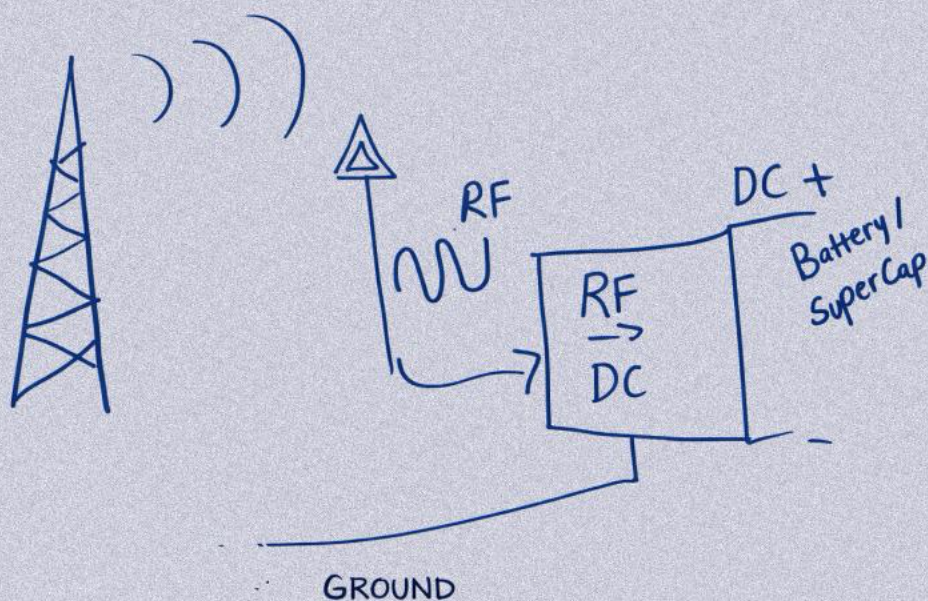
This workshop explores hidden wireless infrastructure through RF harvesting and ambient energy conversion. Participants will build a simple RF-to-DC circuit and use it to detect and accumulate small amounts of energy from the radio environment around us.

Instead of listening to signals as content, we approach them as limited material presence. What is already in the room? How dense is this invisible layer? How much can actually be gathered? Who maintains it, and why is constant connectivity taken for granted? When we extract energy from RF, are we reproducing the same logic?

Working with ambient energy shifts the focus from expansion to what is already available. Energy becomes local, unstable, and limited -- something to work with rather than take for granted. The workshop combines critical discussion with hands-on making and collective testing of the signal landscape in and around the venue.

I'M TRANSMITTING,  
I'M COLLECTING

# RF-HARVESTING CIRCUIT



## 2 HOURS WORKSHOP

Collective hands-on part: max 3 small groups (2–4 people each).

- Learn and build an RF-harvesting tool (ambient power module) to convert radio frequencies into usable electrical power.
- Use it to locate radio-frequency activity in the space around us, indoors or outside.
- Test how different everyday transmitters shape the signal landscape.
- Harvest tiny amounts of ambient RF energy, store it, and
- Use it to power a small device or light an LED.

## MATERIALS PER GROUP

- 1x breadboard
- jumper wires
- 4x Schottky diodes
- 2x capacitors
- 1x multimeter
- 1x low-power device (calculator or LED clock)
  - antenna, ground copper wires

**!!! No soldering,  
no power socket  
needed !!!**

**Total budget per group: ~€8**