Quickstart - DE4L Sensing App
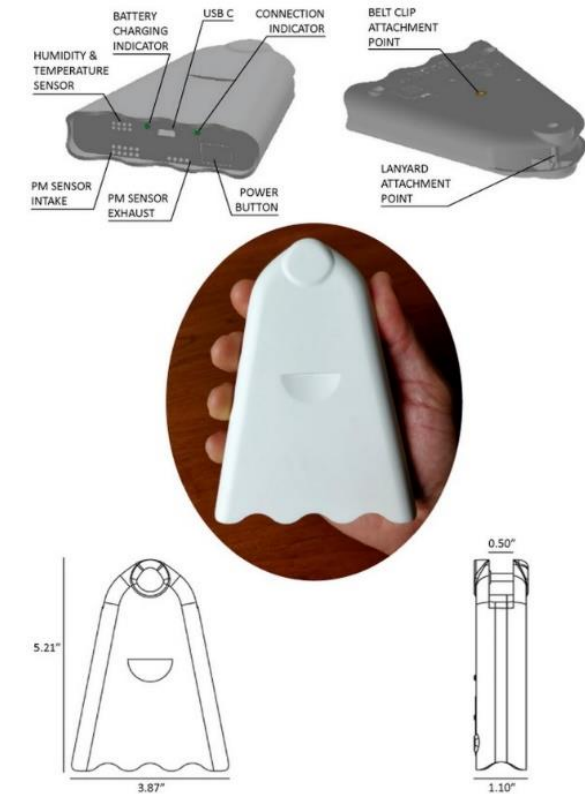
diGuRaL Sensing App

▶ Google Play Store

▶ TODO LINK + QR CODE AND SCREENSHOT
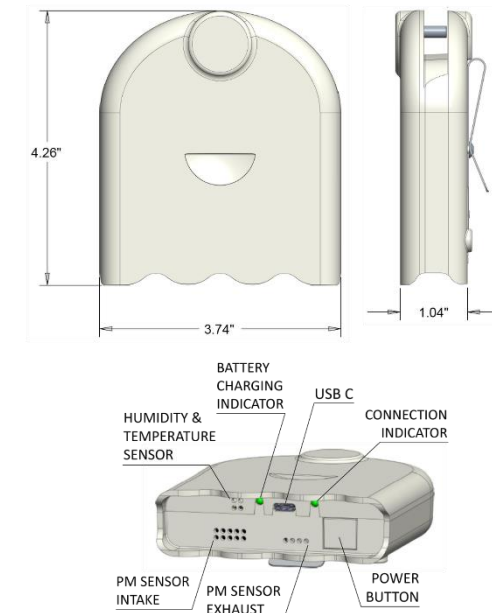
AirBeam 2

▶ https://www.habitatmap.org/airbeam

▶ Bluetooth Classic

▶ PM1, PM2.5, PM10

AirBeam 3

▶ https://www.habitatmap.org/airbeam

▶ Bluetooth LE

▶ PM1, PM2.5, PM10

Ruuvi Tag

▶ https://ruuvi.com/

▶ BLE Beacon

▶ Temperature, Humidity, Air Pressure

Temperature   Humidity

Air Pressure   Motion
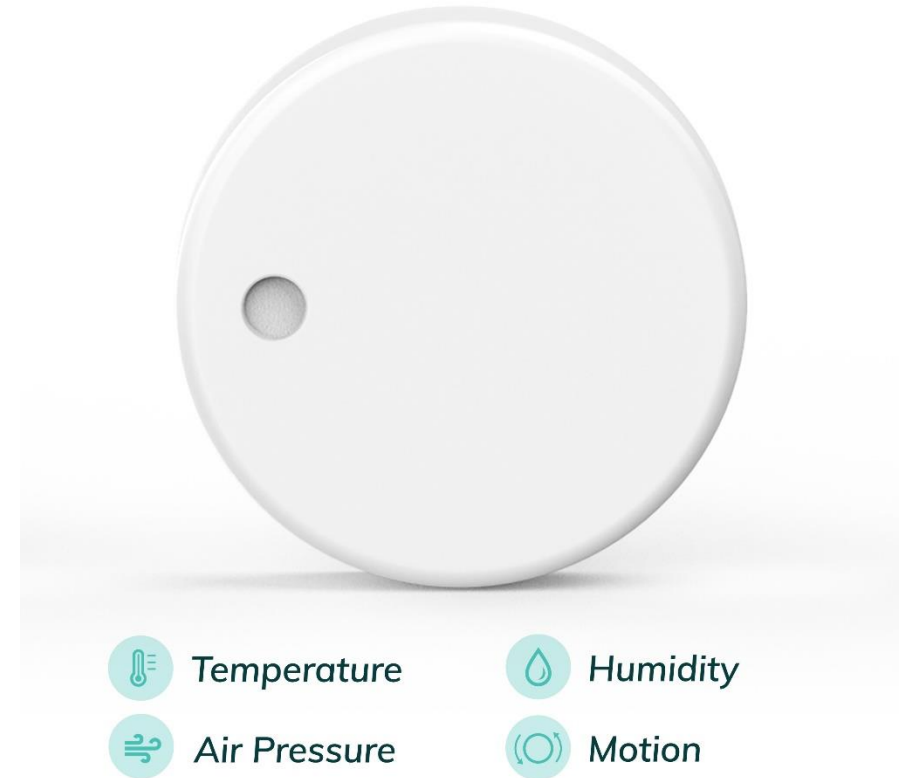
# App – Permissions – Location / Bluetooth

▶ **App uses location services and within a foreground service when active - no hidden location tracking**

   ▶ Select **"Allowed only while in use"** when asked for permission

▶ **App uses Bluetooth device discovery for sensor connection**

   ▶ Select **"Allow"** when asked for permission

▶ **App needs to display a notification, so tracking is possible while app is in background**

   ▶ Select "Allow" when asked for permission
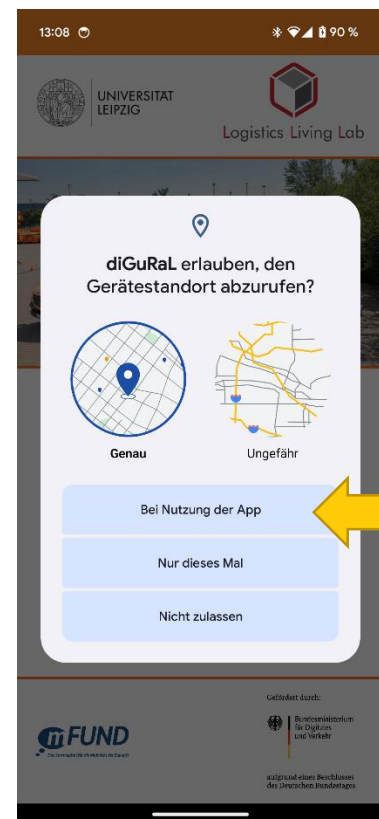
App – Link Sensor (only once)

- ▶ Link Sensor sensor with app

- ▶ Default scan is for BLE devices only

- ▶ Enable Legacy Scan to scan for BT classic devices. **Currently only needed for AirBeam2**
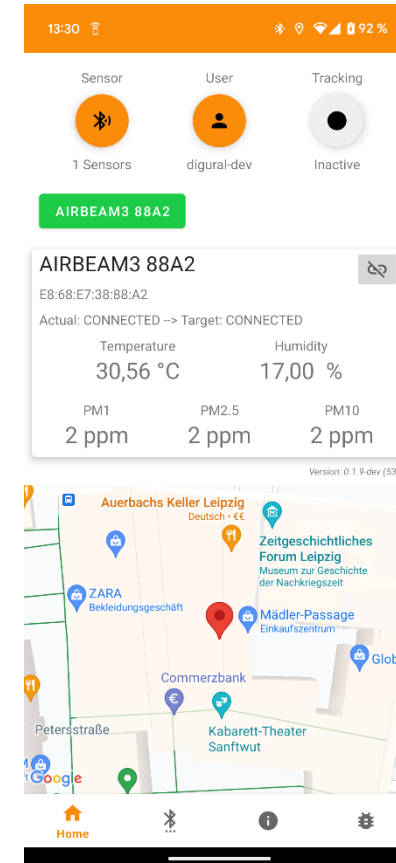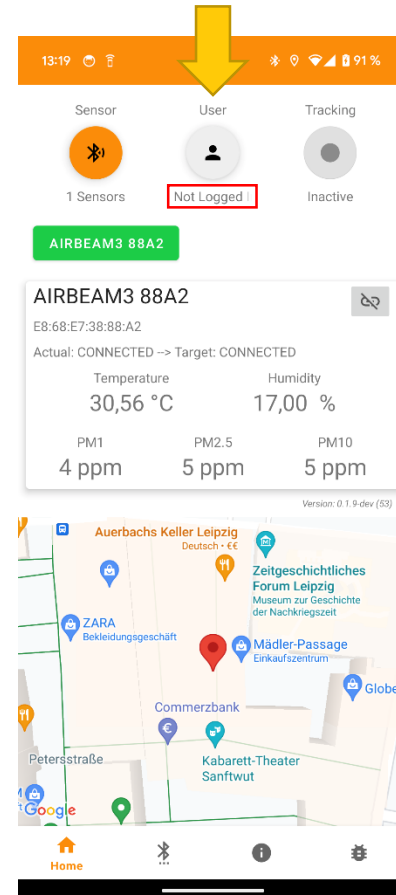
Option 1

Option 2
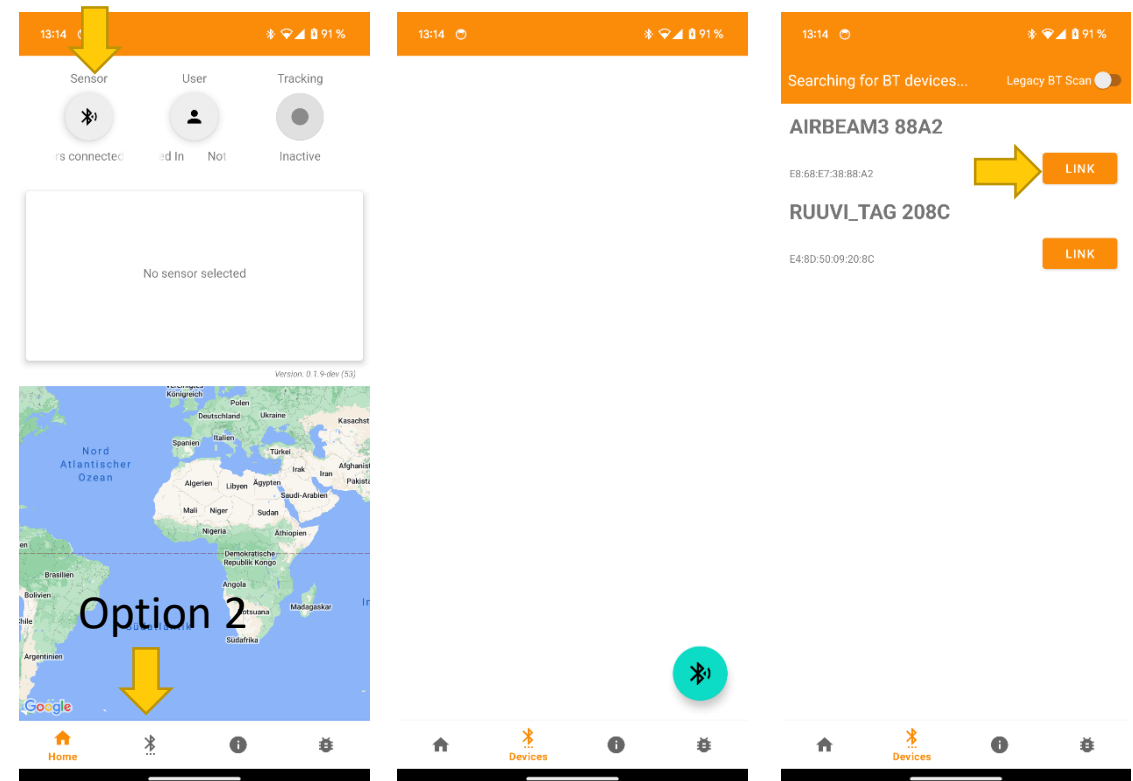
App – Connect Sensor

- ▶ Press „Connect" in „Devices" screen

- ▶ Connection process can last up to 60 seconds

- ▶ When the sensor is connected the first time, a pairing notification might be shown by Android

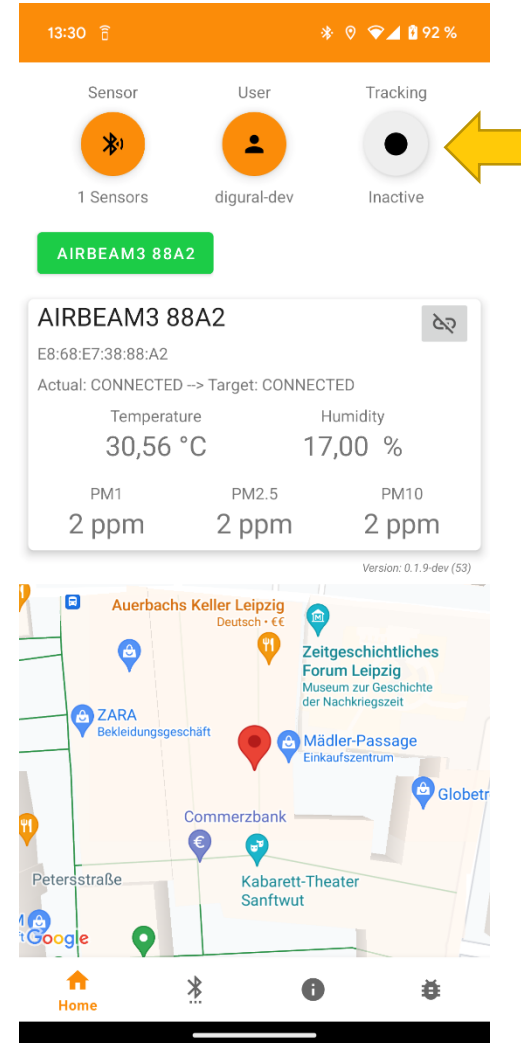- ▶ On success, the app automatically switches to the „Home" screen
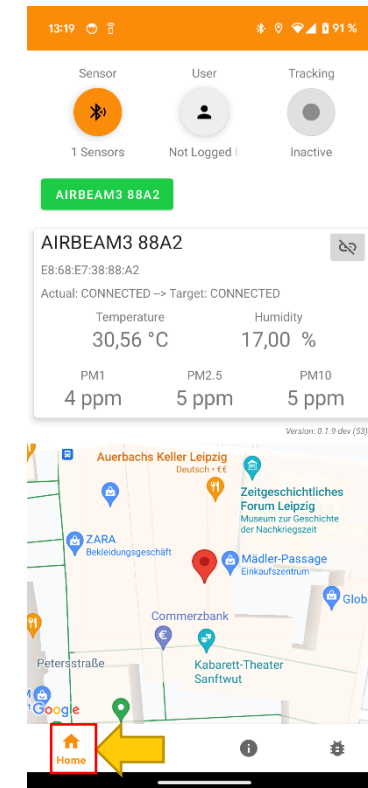
App – Login

▶ Use diGuRaL account to login

App – Start Tracking

▶ Tracking can only be started when at least one sensor is connected and a user logged in

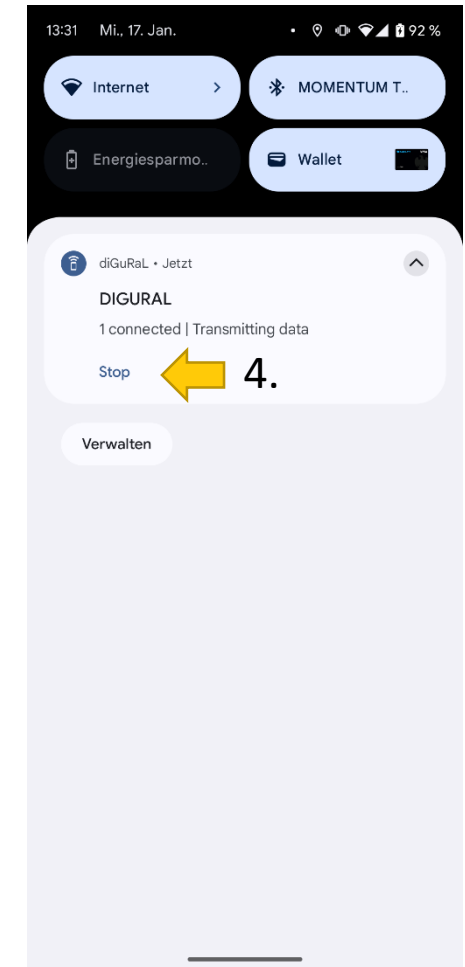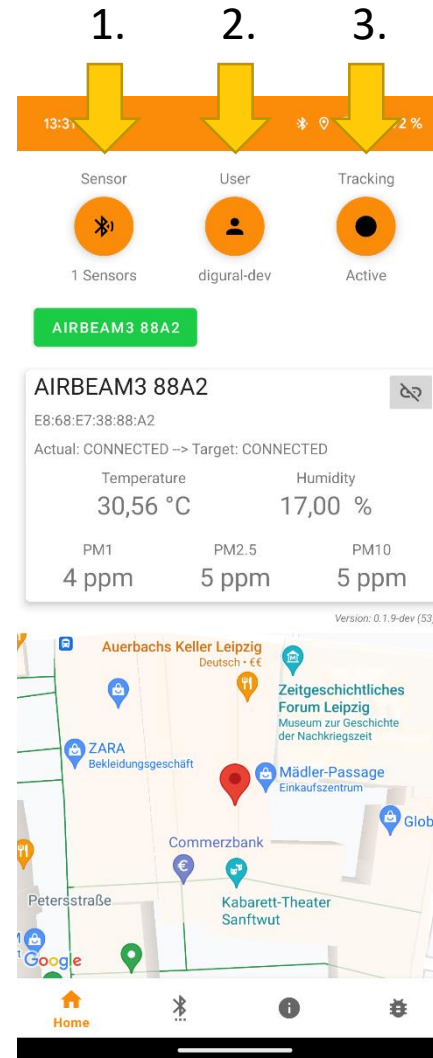# App – Start Tracking

- 1. Disconnect Sensor

  (Data transmission and tracking is stopped automatically)

- 2. Log out

  (Data transmission and tracking is stopped automatically)
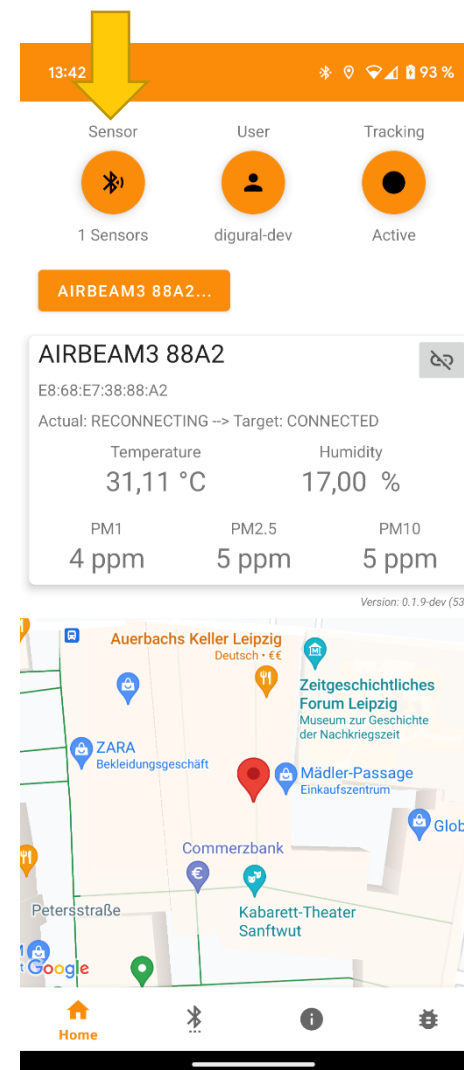
- 3. Stop Tracking

Notification in status bar

- 4. Stop Tracking and disconnect sensor

App – Features – Reconnect

- ▶ In case the connection to the sensor is lost unexpectedly, the app tries to reconnect

- ▶ To cancel the reconnect trials, press the sensor „button"

Data transmission

► The app transmits data to an MQTT Endpoint in real-time

► Transmitted data includes sensor measurements, timestamp, location, username and the current app version.

Field	Value
⊙ **timestamp** string	2024-01-17T13:38:07.167+01:00
⊙ **appVersionCode** string	0.1.9
⊙ **username** string	▅▅▅▅▅
⊙ **trackingSessionId** string	c26cd053-e2b1-4df1-a09c-c909e7b7a4a2
⊙ **schemaVersion** string	0.1.0
⊙ **sensorId** string	E8:68:E7:38:88:A2
⊙ **deviceType** string	AIRBEAM3
⊙ **sensorType** string	HUMIDITY
⊙ **value** number	17
⊙ **sequenceNumber** number	5744
⊙ **raw** string	17;AirBeam3;e868e73888a0;AirBeam3-RH;Humidity;RH;percent;%;0;25;50;75;100
⊙ **applicationId** string	8aa7095c-c393-4150-abc1-5e06c8ae3c81
⊙ **location** Object	⊙ **lat** number 51.3393654 / ⊙ **lon** number 12.3754283
⊙ **gpsAccuracy** number	14.253
⊙ **altitudeInMeters** number	160.1999969482422
⊙ **bearingInDegrees** number	335.76236
⊙ **speedInMetersPerSecond** number	0.16979447
⊙ **provider** string	fused