



# BEST OF #IMM2022

## IoT Sensornetzwerk für das OpenLandLAB

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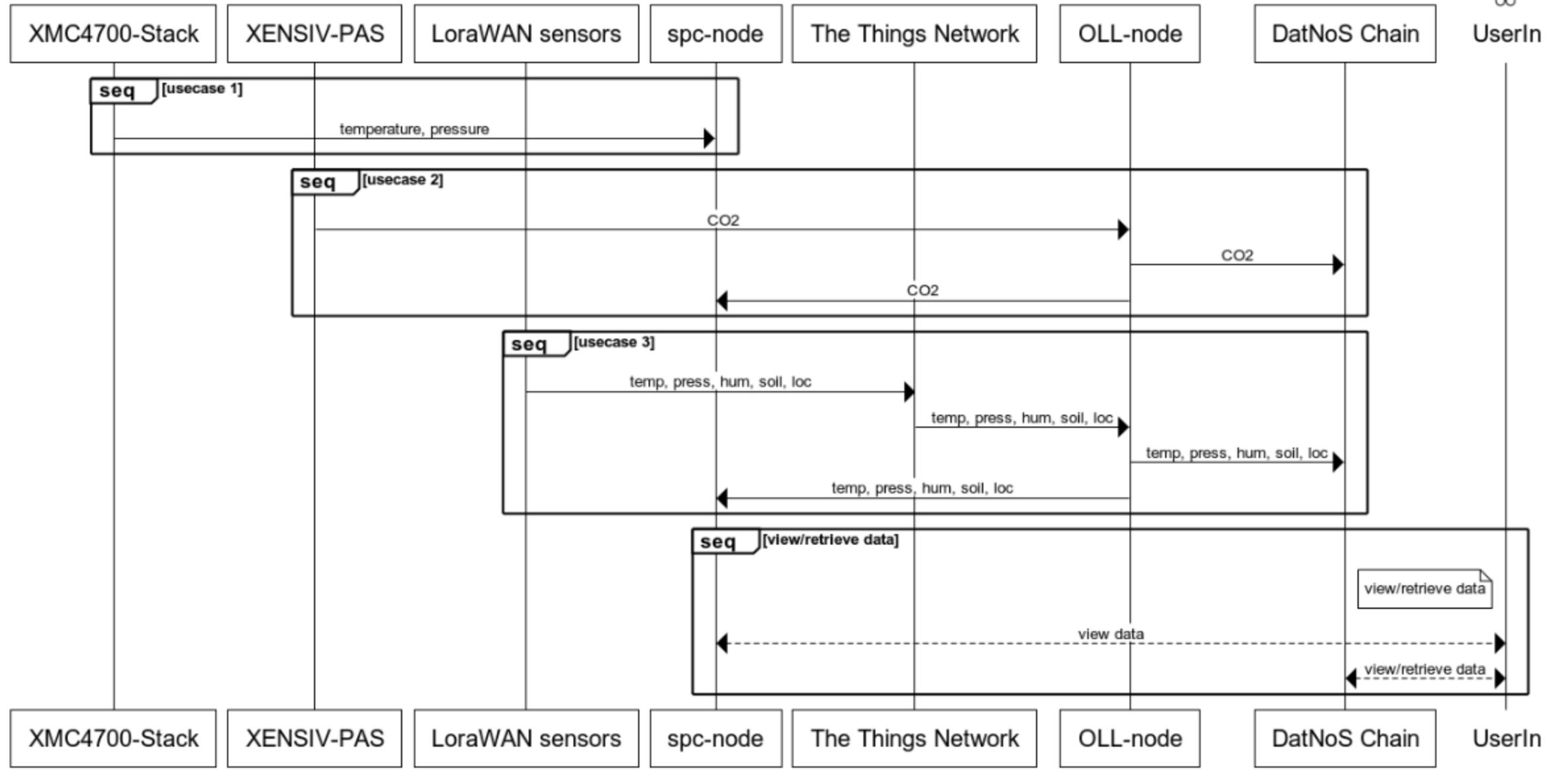
# Summary

- IoT Sensornetzwerk für das OpenLandLAB („Smart Farming“)
- Ablauf
  - Testen der einzelnen Komponenten im „Home-Lab“
  - Konzept Usecases
  - Aufbau Komponenten, Implementierung Usecases (incl. Programmierung)
  - Testen im „Home-Lab“
  - Feldtest im OpenLandLAB

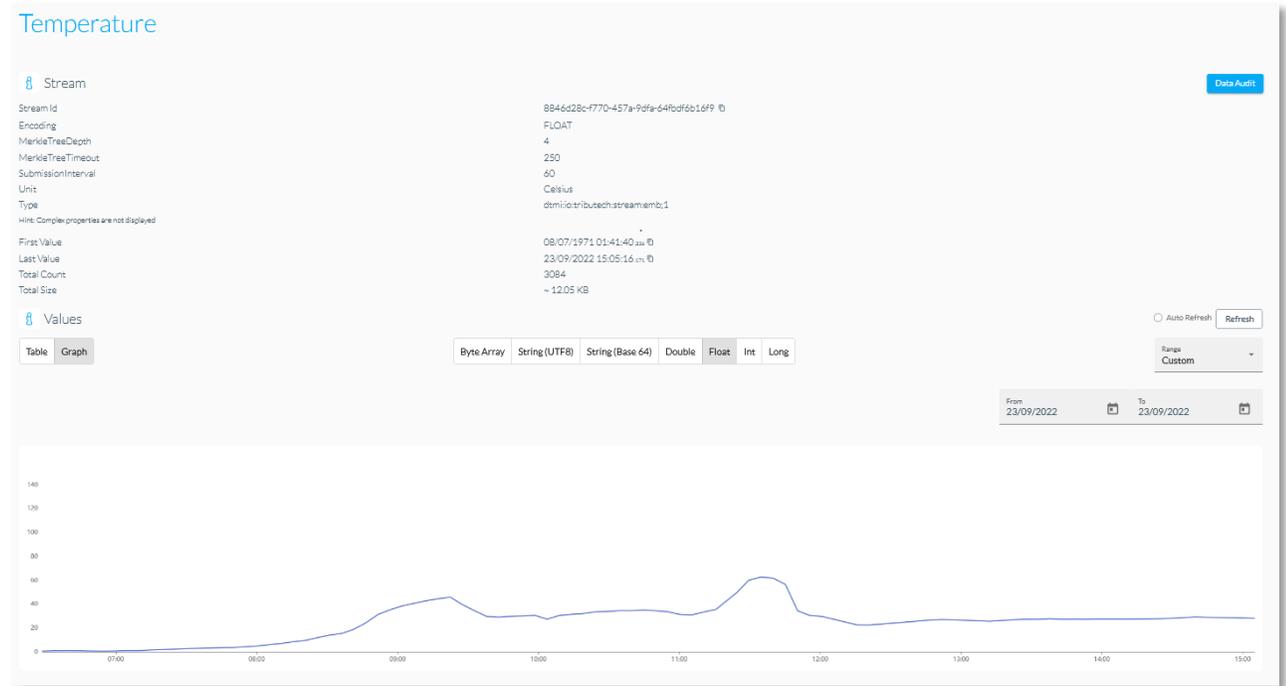
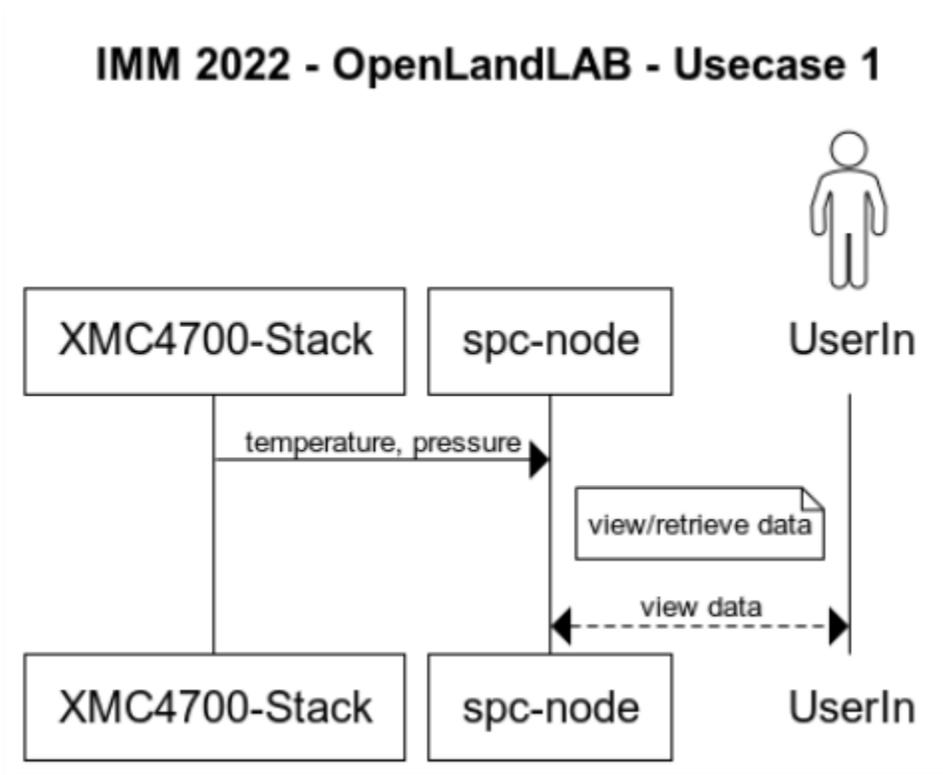
# Eingesetzte Komponenten

- „XMC4700 Relax Kit“: OEM Modul
  - Sensoren von Infineon (Temperatur, Luftdruck)
  - Kommunikationsmodul von tributech
- Connectivity (NB-IoT/LTE-M) von Magenta
- XENSIV-PAS CO2 Sensor (Infineon)
- „DataSpaceKit – spc-node“: Cloud Service von tributech
- Weitere Komponenten von uns
  - LoRaWAN (Sensoren, Gateway, TTN), DatNoS-Chain
  - OLL-Node: Empfangen, Vorverarbeiten und Weiterleiten von Daten

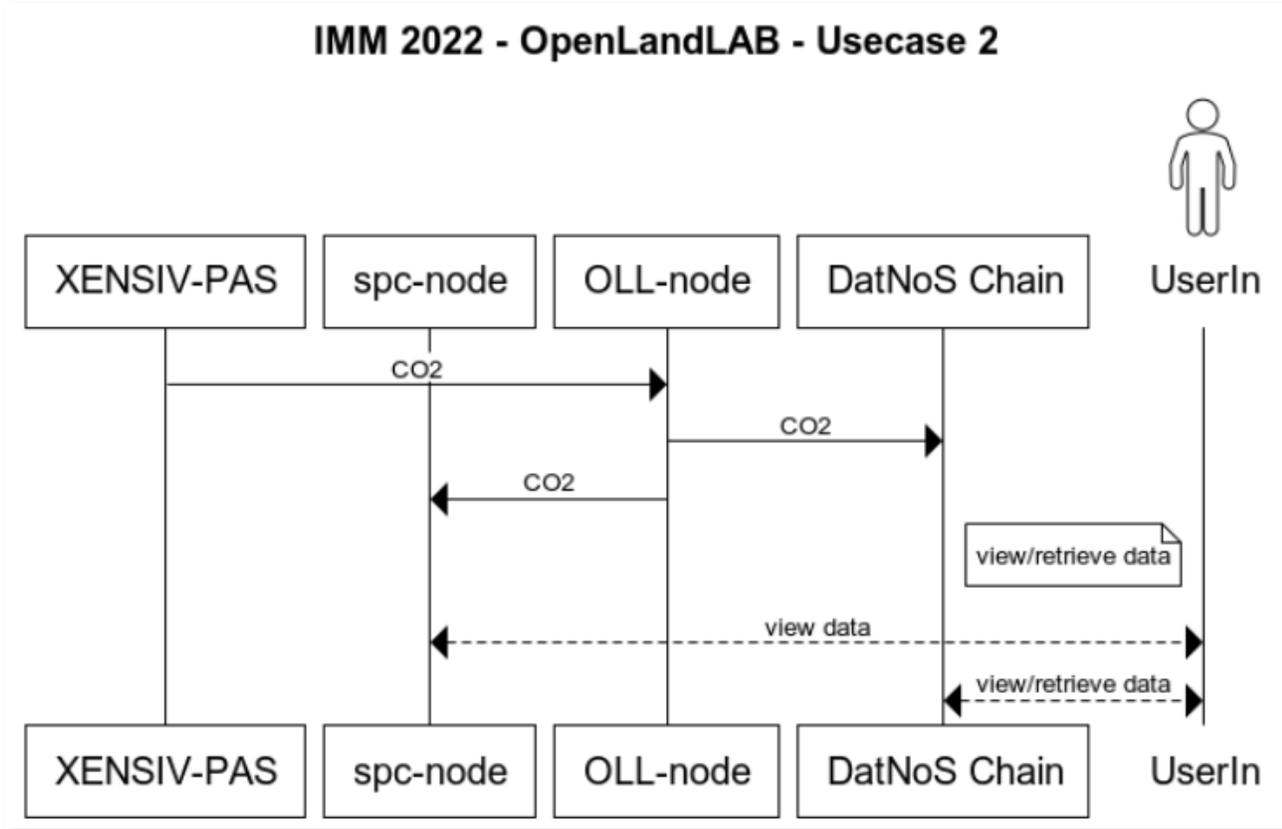
# IMM 2022 - OpenLandLAB - Overview



# Usecase 1: XMC4700 -> spc-node



# Usecase 2: XENSIV-PAS CO2 -> OLL-node



## [DatNoS - Data view - IMM2022 \(OpenLandLAB\)](#)

mode: display - export

### Select Key

[all] - rbk-test-lse01 - eui-a84041fb51857c44 - rbk-test-tracker - eui-e8e1e100010b4a46 - rbk-test-tabs - eui-e8e1e10001090fba - cb\_emulator - emu - rbk-test-node - rbk-ttn-node1 - pas\_co2 - pas\_co2\_001

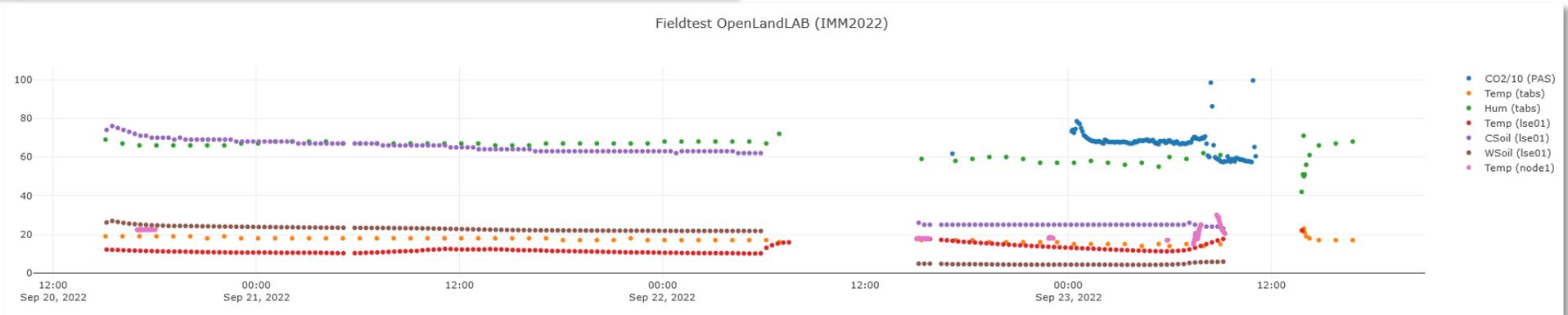
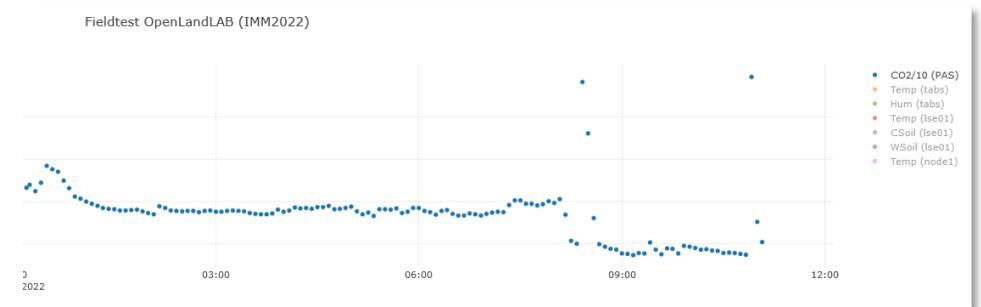
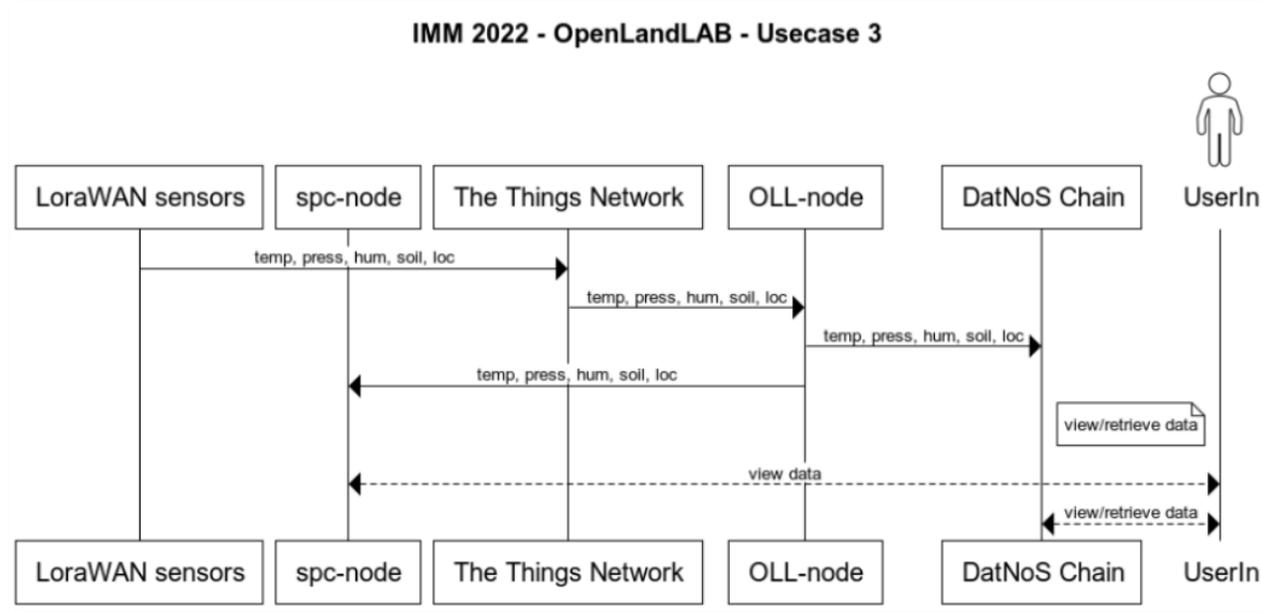
Key: pas\_co2\_001

10 of 134 items

first - prev - next - last

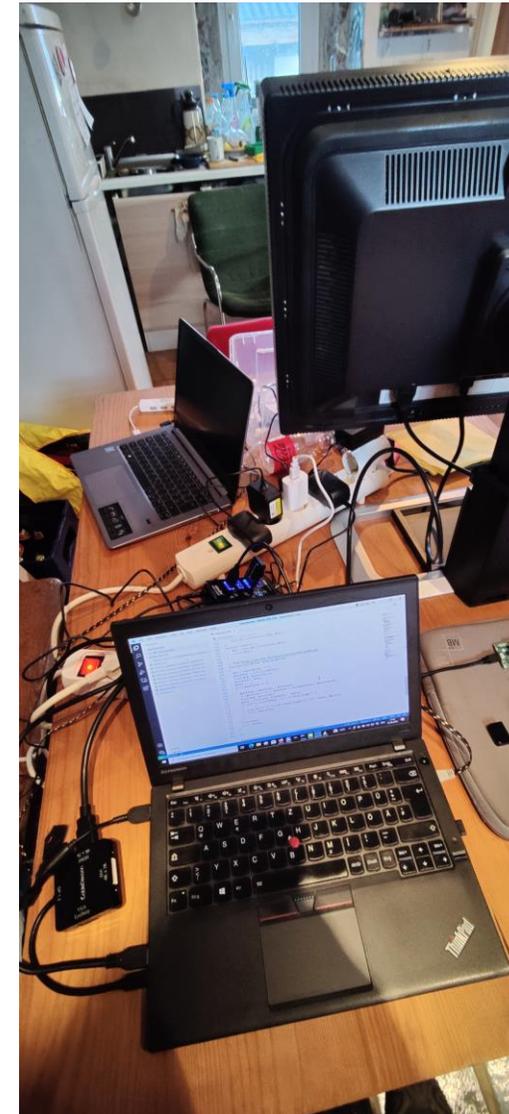
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<b>Blockhash</b>	00b7cb0c185d8526862c6dc7ccd31e057f0fb4da4b3e5f7c9bc6f609fd941ed8

# Usecase 3: LoRaWAN Sensoren -> OLL-node

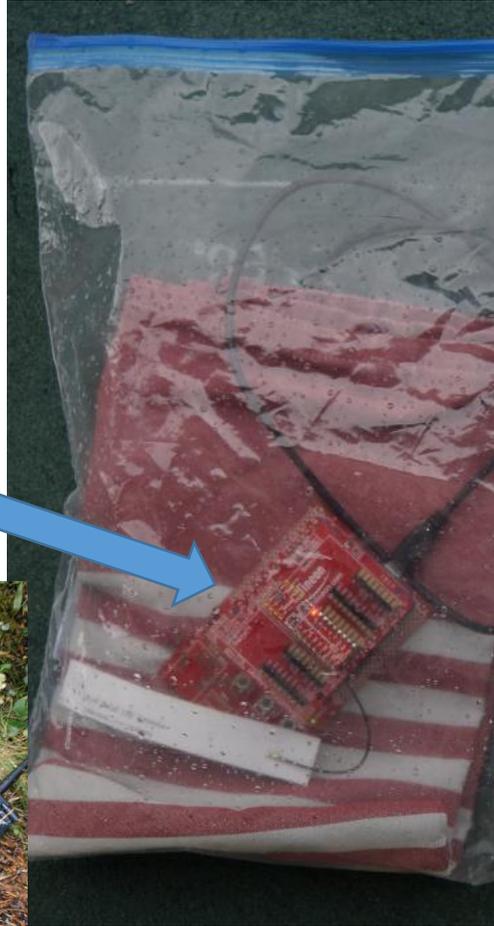


# Feldtest OpenLandLAB

Kirchfidisch/Südbgld. - <https://www.openlandlab.org/>



# Feldtest OpenLandLAB



# Learnings

- Stack – XMC4700
  - Hardware problemlos, weitere Sensoren „trickreich“
  - Connectivity LTE-M problemlos („black-box“)
- Software support (Entwicklungsumgebung DAVE und Beispielcode, Libraries)
  - Funktioniert, aber ausbaufähig, Input an Infineon
- spc-node
  - GUI problemlos
  - API calls (auth/read/write) – problemlos
  - D.h. Dritt-Systeme gut anzubinden
- LoraWAN – just works ;-)
- Feldtest – wie erwartet

# Mehr Infos & Links

<https://rbk5.com/imm2022>