

# | 6G SNS Brokerage Event

Dr. Guillermo García Barrios  
Project Manager  
[guillermo.garcia@fivecomm.eu](mailto:guillermo.garcia@fivecomm.eu)

01/02/2025

# About Us

- SME based in Valencia (Spain)
  - We develop and integrate 5G solutions for verticals.
  - We enable 5G B2B market opportunities answering real industry needs.

**“ 5G IoT for a more sustainable world ”**

- Projects:

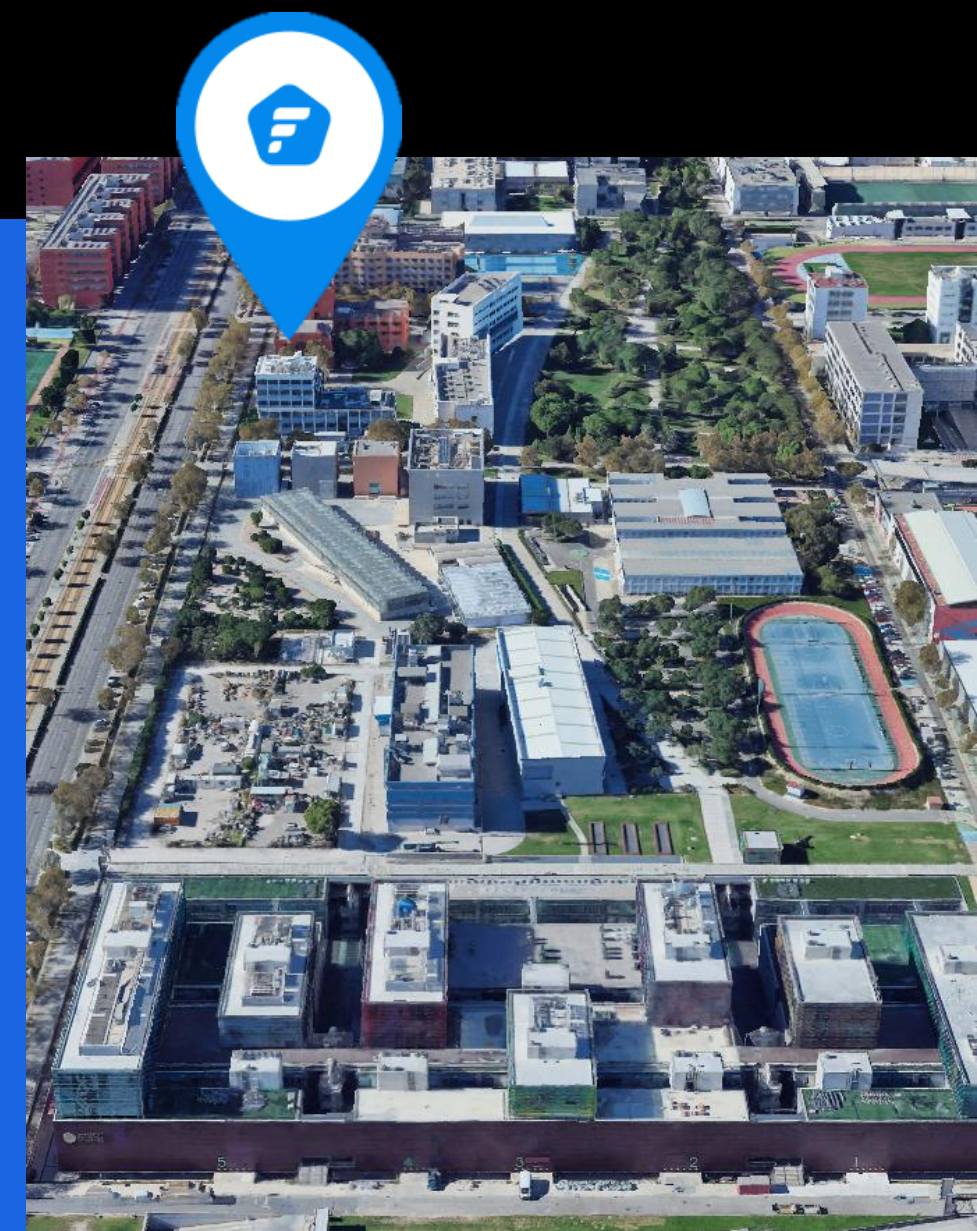
## 5G / B5G (EU)



## NG-IoT

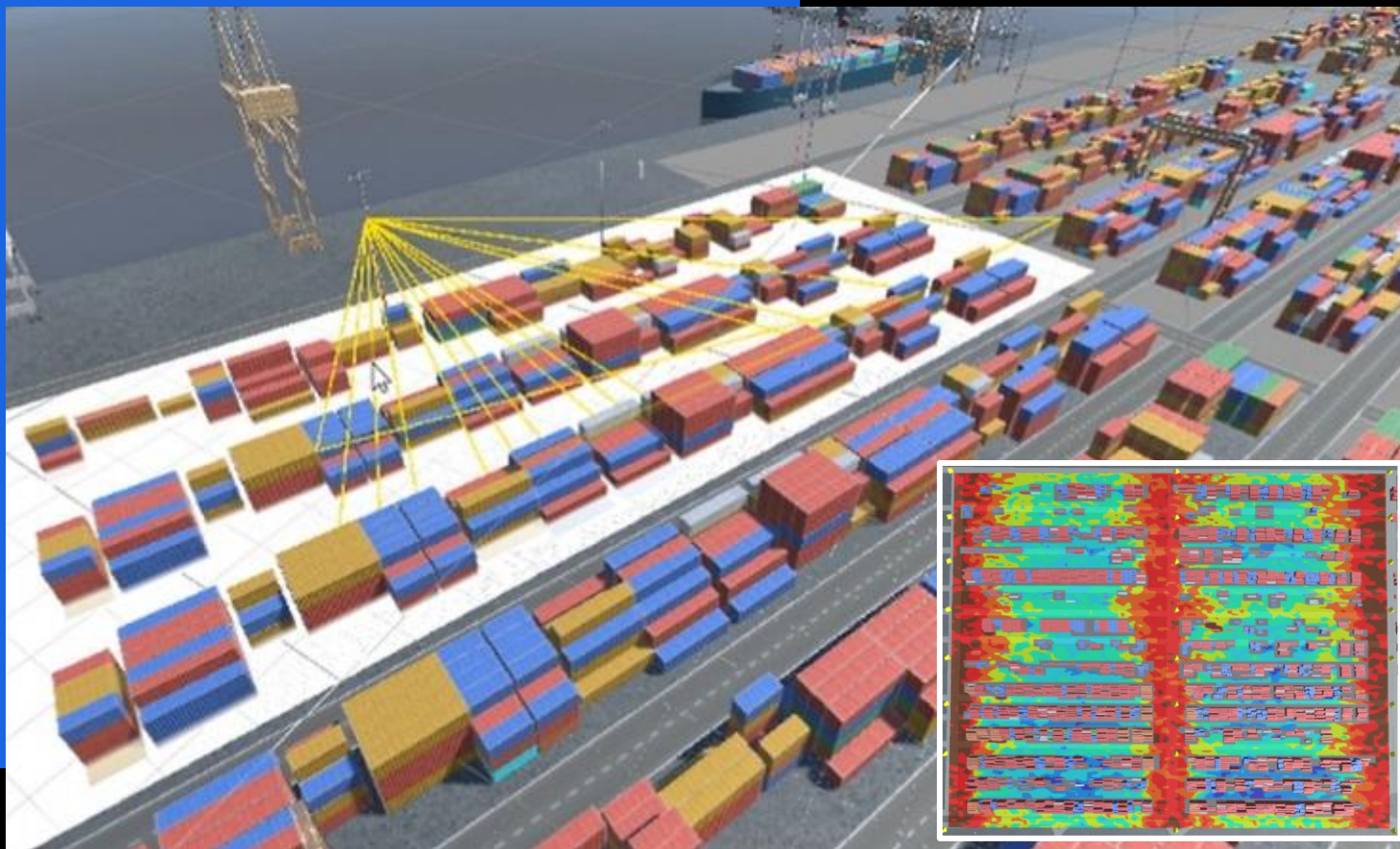


## R&D 6G



# Network Planner

- 3D tool based on **Unity** to capture the changes in a planned area in **real-time**.
- **Digital twin** with a 3D model used to perform detailed **ray tracing** channel modelling.
- Coverage studies in several scenarios.
- Application to **6G** scenarios (e.g., cell-free).



3D model



Detailed  
scenario



Radio  
parameters

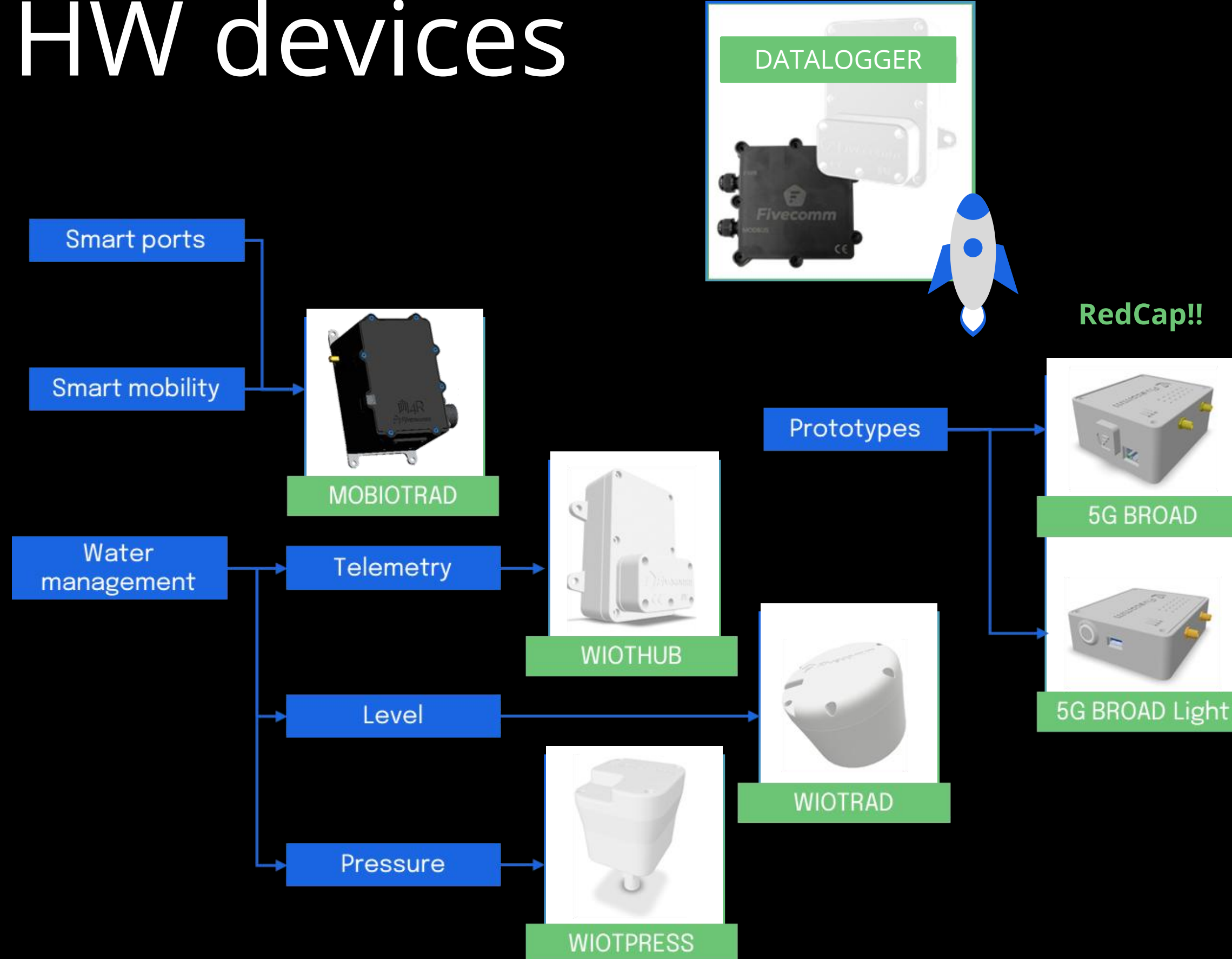


Service level



Dynamic  
routes

# HW devices



# 6G Research TOPICS

- *Integrated Sensing and Communication (ISAC)*  
→ Focused on V2X.
- ML/RL application to **cell-free massive MIMO**.
- **Energy efficiency** studies on devices.

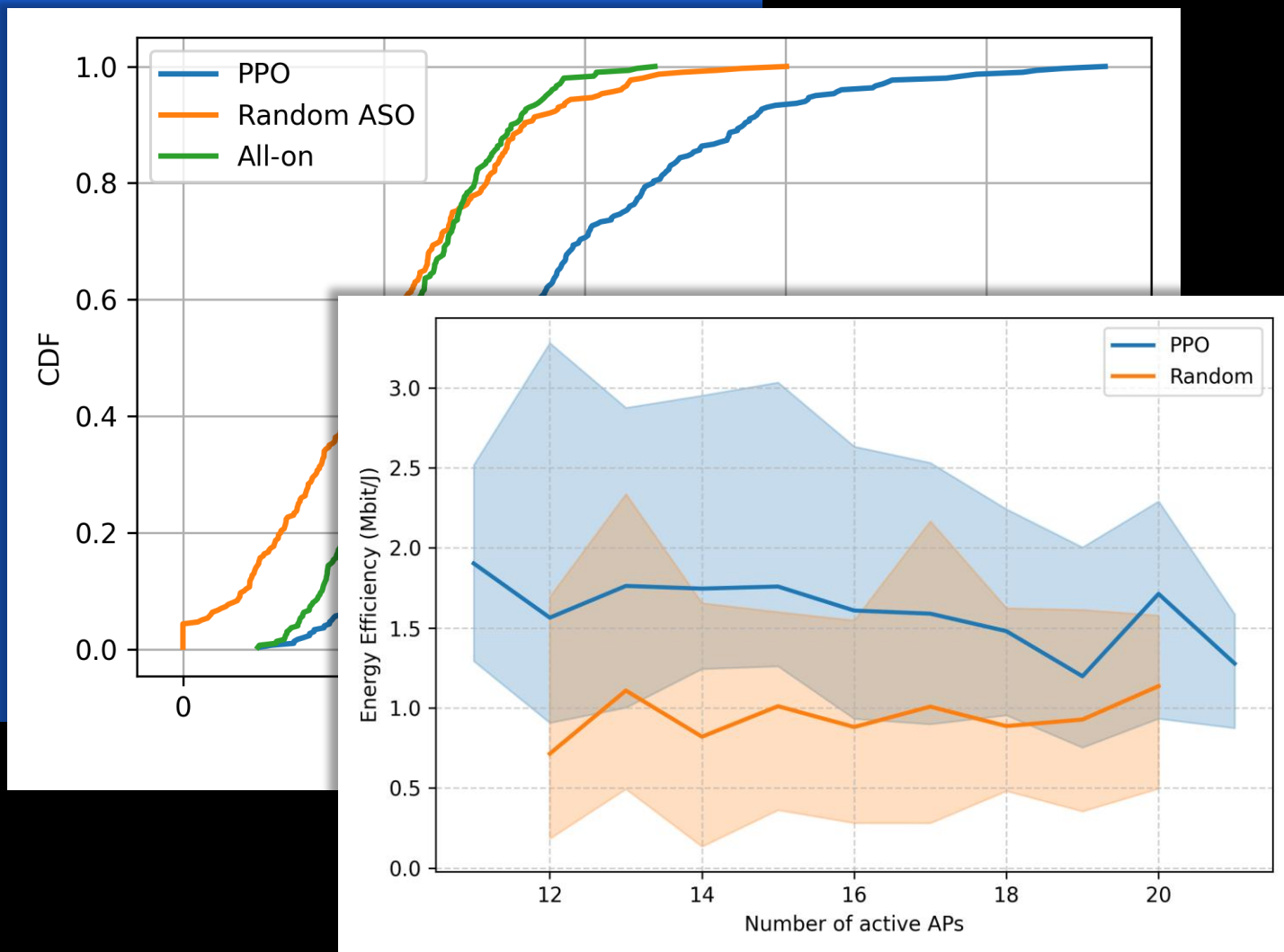
Approached via:

Simulations

Analysis

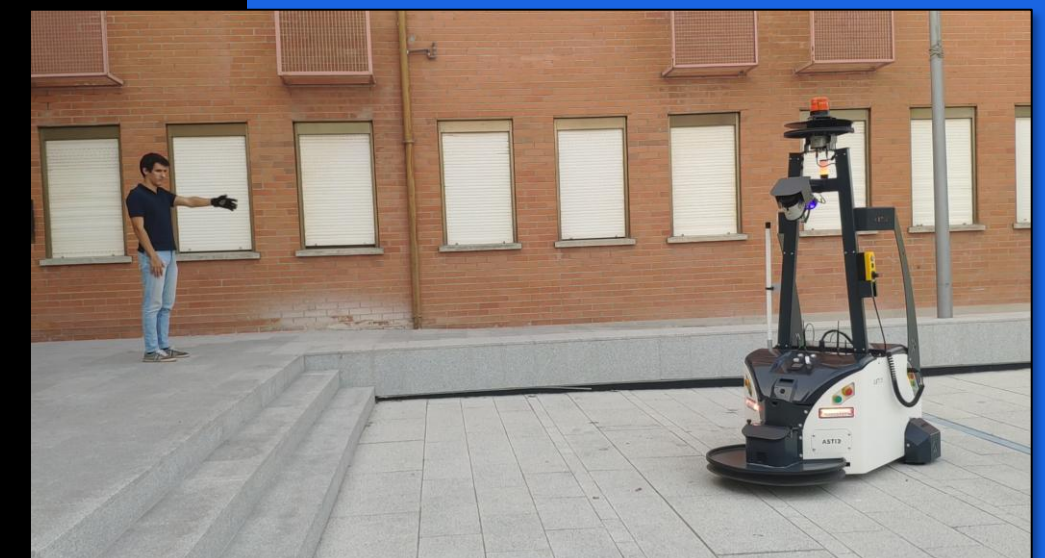
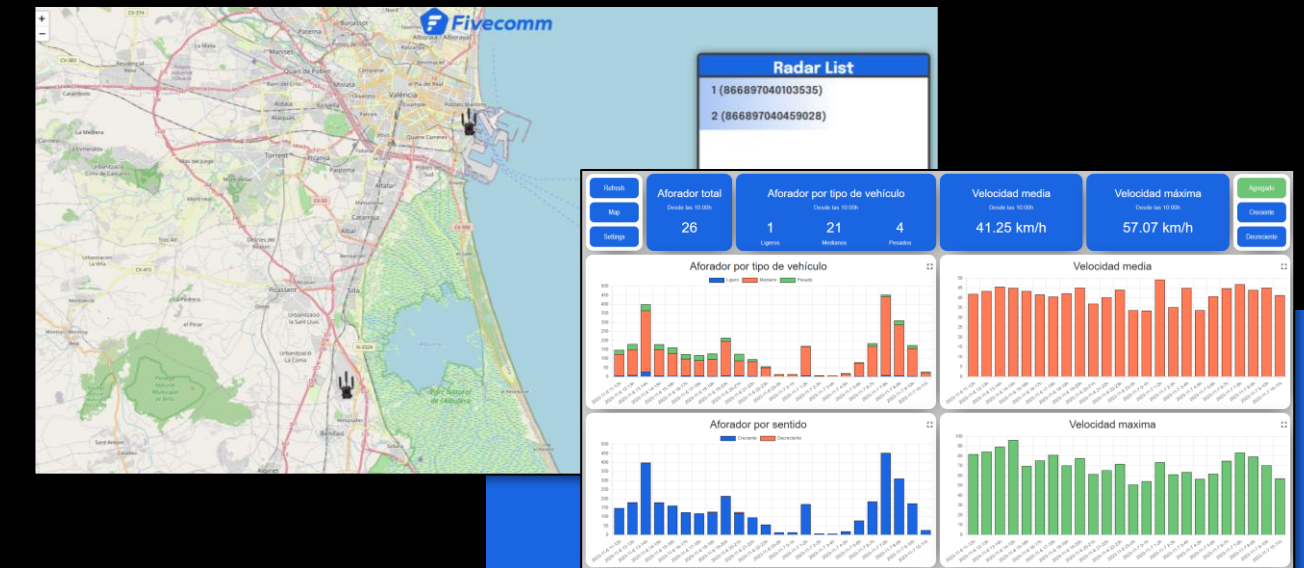
Prototypes

Trials



# SW development

- IoT platforms that integrate and manage our devices
- Network Applications end-to-end integration: use cases



# Contributions



## Stream B

Datasets for AI Models & AlaaS

- Real network data from operational 5G devices deployed in water infrastructures
- Synthetic datasets generated through network planning & simulation tools
- AI-ready datasets enabling AI-native 6G networks
- AlaaS for verticals (water utilities, critical infrastructure operators)

## Stream C

SNS Experimental Infrastructure

- 5G-ready devices integrated into EU-wide testbeds
- Network planning & simulation for:
  - Experiment design
  - Scenario validation (coverage, capacity, resilience)
- Vertical-specific experimentation (water infrastructures)



## CSA – 6G Devices

*Fivecomm provides limited industrial input based on its experience in 5G devices for critical infrastructure and massive IoT.*

# | 6G SNS Brokerage Event

Dr. Guillermo García Barrios  
Project Manager  
[guillermo.garcia@fivecomm.eu](mailto:guillermo.garcia@fivecomm.eu)

01/02/2025