# How Green is our Campus?

Heraklion Local Hub

# Energy meters in our Campus

- 32 energy consumption meters
  - ~2 years of data
  - Aggregated in InfluxDB
  - 1 general energy meter per department (Computer Science, Biology, Chemistry, Physics, Medicine)
  - Dedicated meters for:
    - AC units
    - Datacenter
    - General Purpose (lights, power sockets)

# Solar Energy Park

- 100 KW is already online (~2years)
- Produces  ~300 KWh daily
- 5 inverters send data to InfluxDB

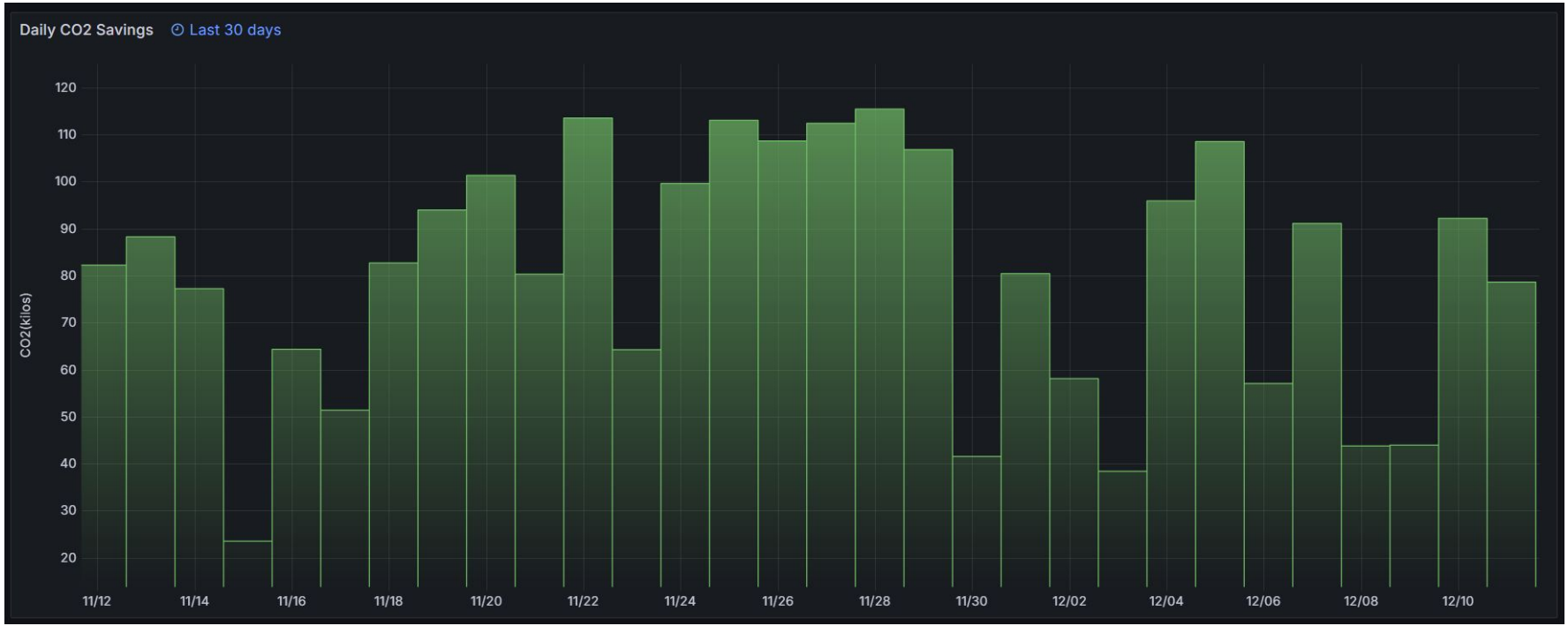
# Our Idea!

- Raise awareness about the campus's green status
- Analyze historical data (consumption/production across seasons)
- Identify areas of highest energy consumption
- Detect anomalies/shutdowns
- Curate the data

We used Grafana to visualize the data!

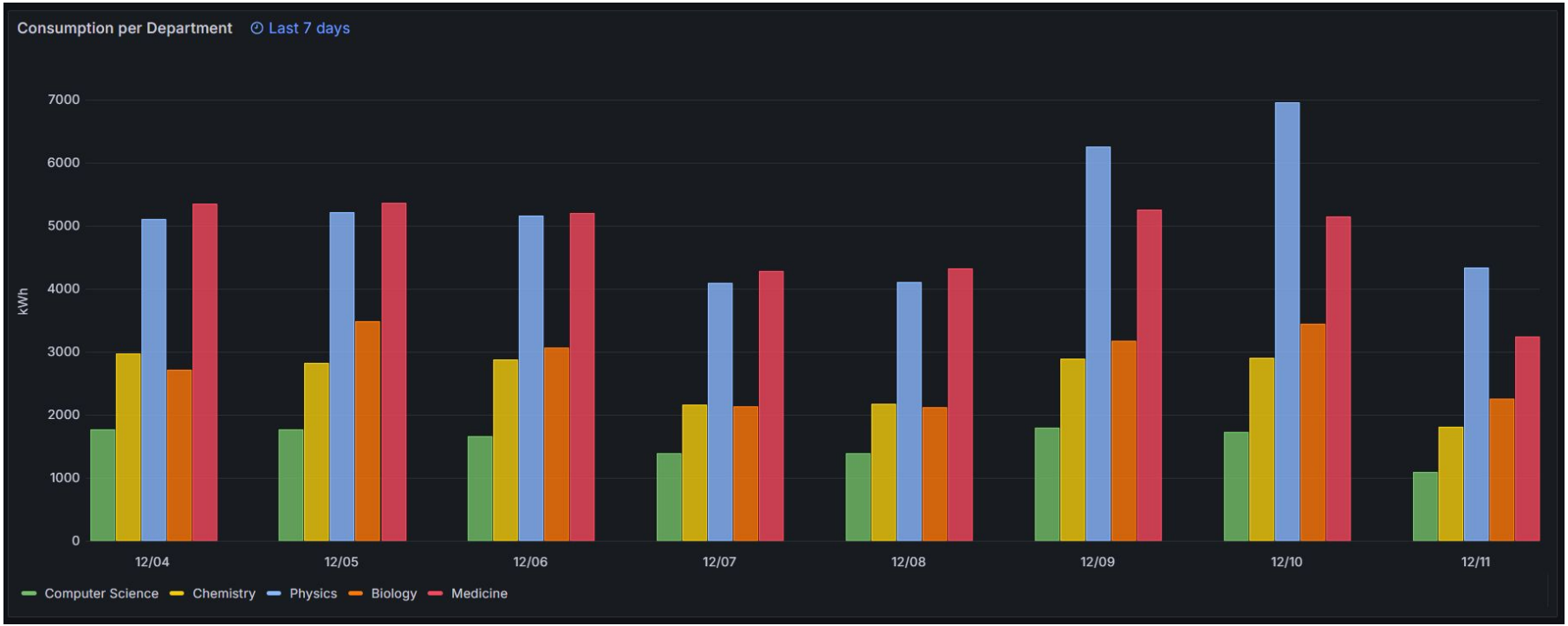
# Energy Production vs Consumption

# Daily CO2 Savings



# CS Department Monthly Consumption

# Daily Consumption per Department



# Future Work

- Expand renewable energy capacity by adding **250** kW of solar panels.
- Install approximately **140** additional energy consumption sensors for improved monitoring.
- Explore opportunities to reduce energy consumption using IoT devices:

- For example, deploy window sensors to automatically disable AC units when windows are open.

# Thank you!!

The Heraklion Local Hub Team:

- Antonis Chatzivasiliou
- Aris Zagakos
- Christina Papachristoudi
- Pavlos Grigoriadis