

Scope



MADRID
Coordinación General de la Alcaldía



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Devices vs Services

- Street lights
- Meters: Water, Electricity, Gas
- Irrigation: pressure and weather
- Green areas and parks
- Fountains: pressure, quality
- Environmental sensors: noise, air, pollen, radiation
- Occupation of urban space
- Intensity and duration of the occupation
- Counter for people, bicycles, scooters...
- Buildings:
 - ❖ Heat-cool
 - ❖ Occupation and access
 - ❖ Air quality and noise
 - ❖ Lighting
- Urban furniture and bins
- Installations and facilities:
 - ❖ Level and intensity of use
- Dynamic information panels depending on variables
- App for gamification: UserCentriCities
- StreetShow: people interact with the devices



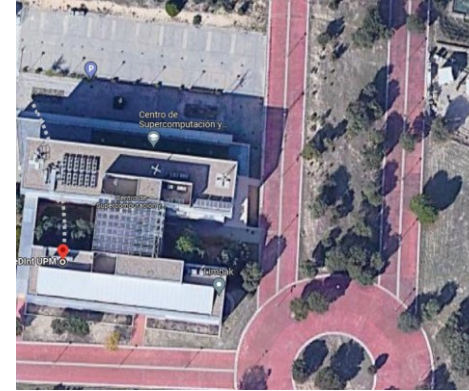
Phase 0: Lab



UPM_Cedint IoT Lab IoT Lab city of Madrid

- **Multi-service teams:**
 - Municipal areas
 - Contracted companies
 - Device manufacturers
- **Workshops, events and conferences**

Phase I: Controlled environment



UPM_Cedint Campus

- **Installation:**
 - Impact measurement
 - Integration
 - Evaluation
- **Scheduled visits:**
 - Madrid IoT Labshow

Phase II: Real environment



Park + municipal building

- **Gamification area**
 - Information panels
 - Gamification app
 - IoT area
- **Workshop schedule:**
 - Madrid IoT Streetshow
- **Itinerant facility**
- **Controlled roll out**

Devices with sensors and switches

Sensor: Measures variables
Switch: Process orders depending on variables
Technologies: AI, Edge computing, blockchain-ciber, VR



Partnership to build cities with interoperable IoT networks
Madrid ambassador city for open and interoperable IoT networks