SUNDRAX electronics

Smart Pole

Comfortable environment for sustainable smart cities

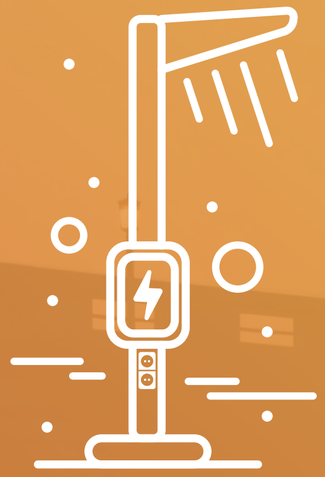
Goals

Create comfortable and safe environment for citizens. Establish direct connection with municipal and emergency services.

Effective cooperation

Citizen – Environment – Government (Municipality)

Eco and Meteo Monitoring



Charging and Energy Consumption Metering

Public Address System

Why lighting poles?

Some of the reasons why we think lighting poles are the best option:

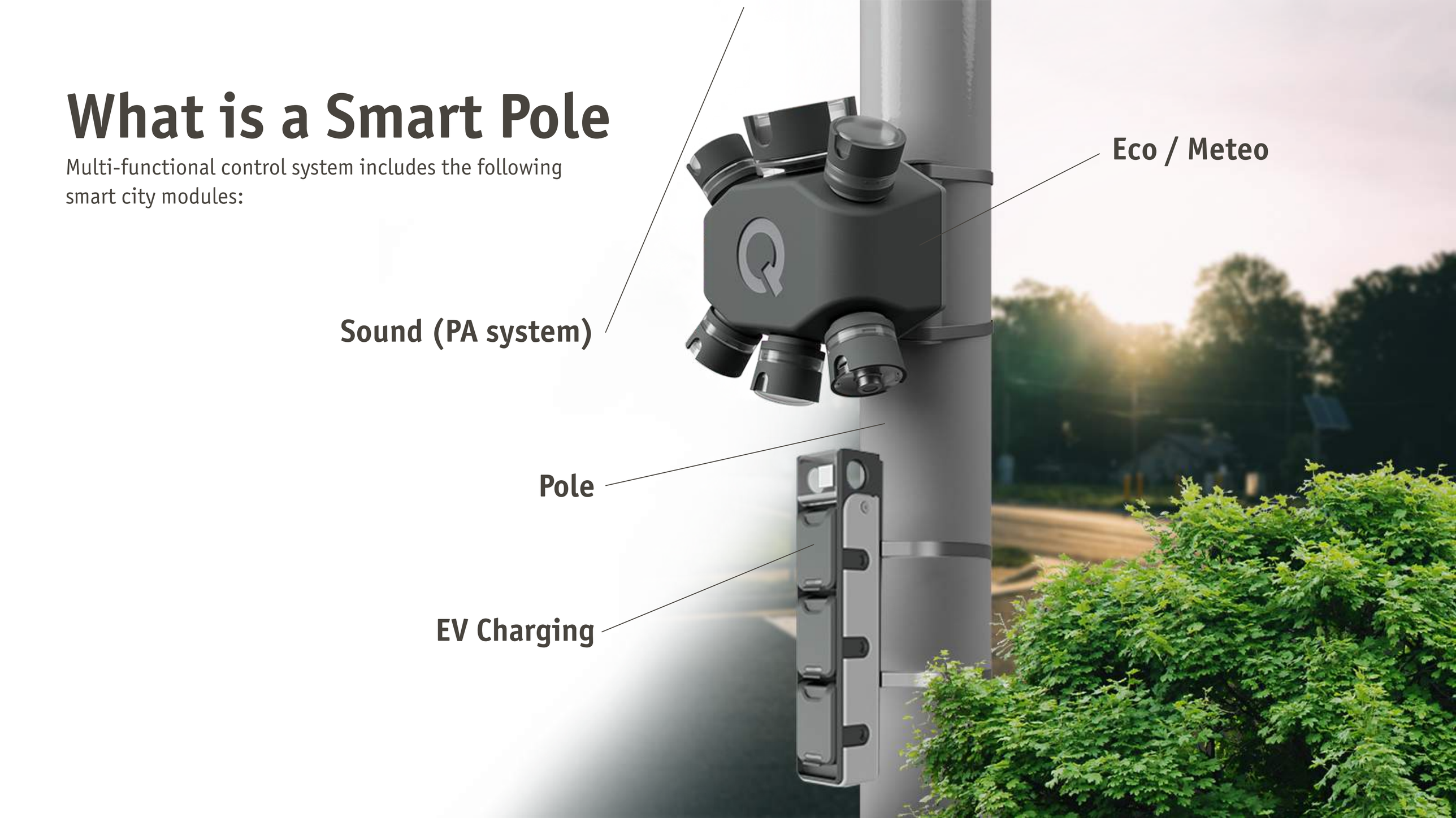
They are everywhere around the city

Popularity of intelligent control systems for street lighting increases every year These intelligent systems imply that lighting poles are powered 24/7

LED lighting decreased overall consumption and unlocked extra power resources

What is a Smart Pole

Multi-functional control system includes the following smart city modules:



Mounting Options

Smart Pole
with embedded sensors

Installation at existing
lighting poles

Technologies Behind Smart Pole

GPS

System time synchronization
All data packets synchronized by time

Zhaga standard

Compatible to most of modern lighting control systems

Fully compatible with DALI

Plug & play connection for “hot swap”

DALI 2.0

New version of globally recognized standard

Virtually impossible to be affected by interference

Fully compatible with lighting control systems of different vendors

Eco and Meteo Monitoring

What is measured

Air quality, status and trends of key air pollutants

Temperature, humidity and other weather data

Why it is important

Instant emergency alerts

Citizen awareness increased

Lack of smart city compatible compact eco monitoring stations in the market

Lack of smart city compatible small-size eco and meteo sensors in the market

Sensors Onboard and Advantages

Weather Monitoring

Temperature, Humidity and Pressure Sensor

Wind Speed and Direction Sensor

Precipitation Sensor: Amount and Intensity

Eco Monitoring

Gas Sensor

Dust Sensor

Noise Sensor

Radiation Sensor

Flood Sensor

UV Sensor

Advantages

Standardized open interface DALI 2.0

Standardized Zhaga connection interface

Compact size

Sensor “Hot swap” functionality (plug & play)

Affordable pricing for wide use

Charging System

Integration of charging system into a Smart Pole provides infrastructure for comfortable use of electrical vehicles and city-wide power consumption measurement:

- Wide network of safeguard electrical vehicle charging stations with power consumption metering
- Wide network of safeguard electrical power sources for municipal service providers
- Power consumption metering for connected extra equipment: CCTV, cellular base stations, vending machines etc.

Modules and Advantages

Modules Onboard:

Charging Module

Electrical Socket Module

Advantages

Standardized open interface DALI 2.0

Compact size to be installed into hollow light poles

Ultra-fast electronic short circuit protection

Ultra-fast electronic leak protection

Embedded electronic meter

Live status indication interface

Public Address System

Integrate public address system into the city ervice network to increase speed of public addressing in case of emergency situations. Receive guaranteed operability when connected with street lighting system. Serve city holidays and city-wide campaigns.

Advantages

Standardized open interface DALI 2.0

Compact size to be installed into hollow light poles

Compatible to outdoor PA horn speakers of different vendors

Smart City Software

Smart Poles by Sundrax are connected to QULON Software, highly intelligent smart city platform that integrates all city objects and services under a single digital interface.

QULON contains a registry of all city objects, gets live status of their availability, provides live remote control, logs and analyzes collected data. It provides extended reporting functionality based on collected data and data of third-party providers.

QULON Software is based on modular architecture which helps to maintain different levels of admin access and connect additional software components when it is necessary.