Meazon Smart Polis streetlighting

INTRODUCTION

In today's world, a bulk amount of electricity is consumed in street lighting, since it accounts for nearly 40% of a city's total energy costs. Undeniably, street lighting is at the forefront of the digital transformation and has become the entry point for smart city technologies adoption globally.

While local governments and utility providers are seeking new ways to decrease energy usage and costs, MEAZON, serving its commitment towards energy efficiency and sustainability, launched an end-to-end street light management solution, called Smart Polis.

> Smart Polis combines Meazon's light controllers, which are based on Meazon's DOE awarded energy submetering technology, with a cloud based, flexible, scalable and cost-efficient smart city services platform.
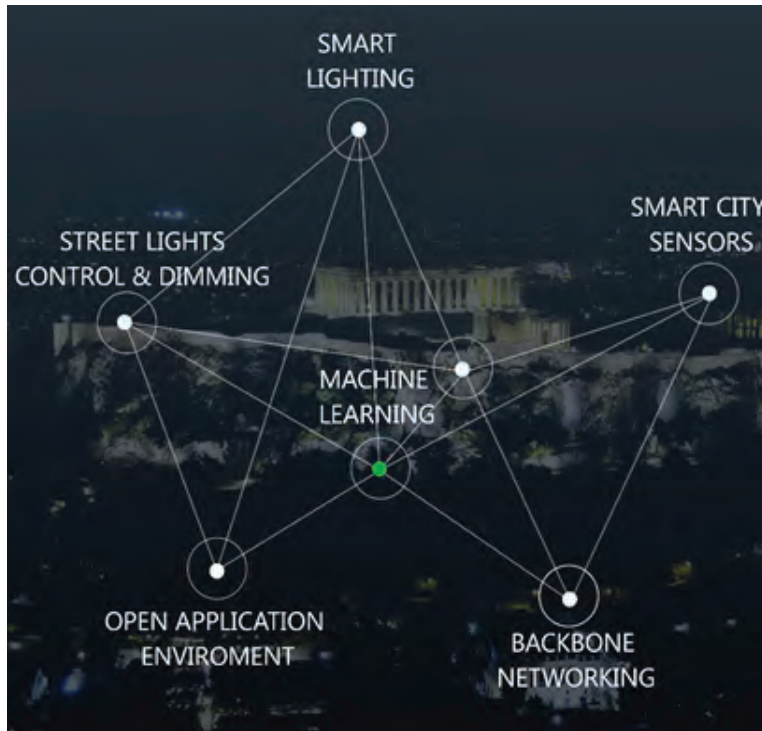
WHAT WE DO

Smart Polis provides real time measurement of street lighting energy variables and enables the optimized switching & dimming of the streetlights according to various external conditions such as weather and real illumination or scheduling according to each day's sunrise and sunset times, with a logic that can reside either on a cloud or on a controller level. It is a reliable remote street lighting management system that ensures that the right amount of light is provided where and when needed, keeping energy costs, data communications costs and maintenance costs low.

Meazon Smart Polis is a streetlight remote management system that enables automatic central & distributed lights management, dimming, control and real-time feedback of any malfunction or change along the grid. Through these operations and with LED lamps we can reduce the energy costs with up to 80%++.
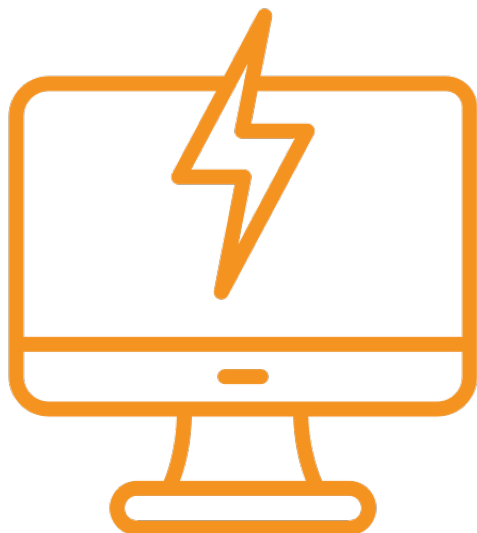
'' Let us help you upgrade your city. Let's be partners to create an efficient, intelligent, and sustainable city with high quality of living standards.''

Using Meazon Smart Polis Hub connected streetlights controllers, we create a backbone network over a city's street lighting infrastructure over local Zigbee clusters that connect different types of sensors that measure pollution, weather conditions, parking lot availability, garbage collection etc.

... then, using NB-IoT or LTE Cat M1 the data of each small cluster are communicated back to the cloud. This way we capitalize on existing IoT connectivity infrastructure coming from the mobile operators' networks, providing top quality of service (QoS) and low total cost of ownership (TCO). No excuses anymore for using proprietary, without quality of service (QoS) and expensive to operate and maintain smart city IoT networks.

COMPONENTS

01 Meazon Controllers
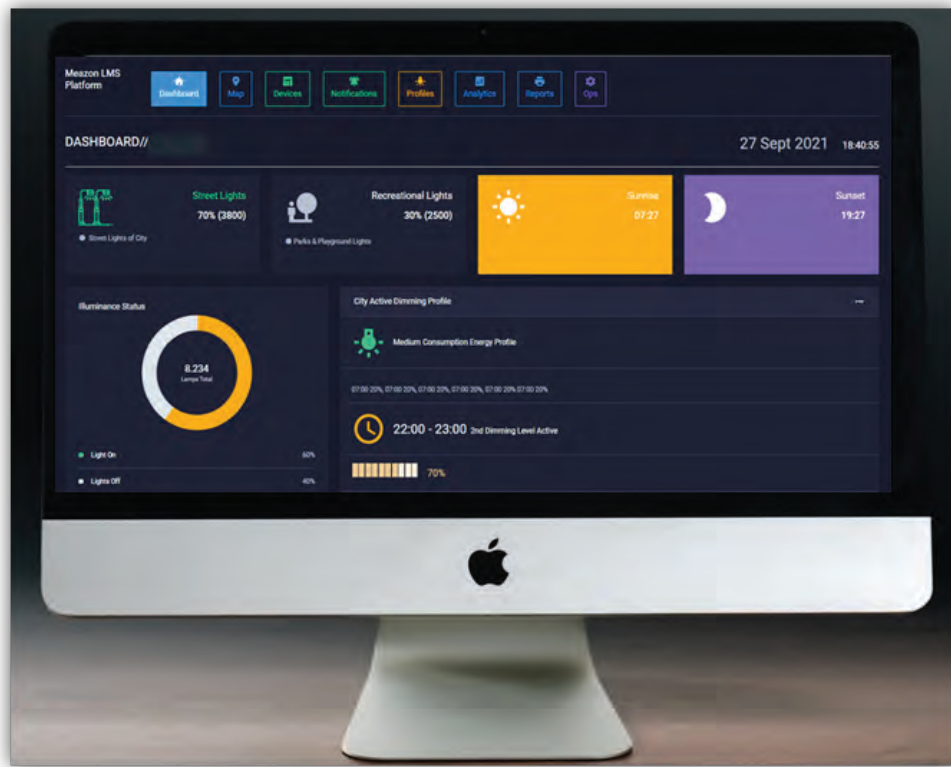
02 Smart Polis Platform

MEAZON CONTROLLERS

1 Wireless technologies: Zigbee to connect different types of sensors, NB-IoT or LTE Cat M1 to communicate the data to the cloud.

2 Measures controls & stores local time schedules & measured data.

3 Ambient light sensor & RTC, Accelerometer & Temperature sensors.

4 Plug 'n play functionality even when not connected to Smart Polis platform.

5 Collects and presents sensor data in Meazon Dashboard

SMART POLIS SERVICES PLATFORM

Meazon Smart Polis services platform serves as the foundation for other smart city applications, while vastly improving energy & operational efficiencies.
It has the capacity to collect and analyze data, and with the help of sensor-based real time info can turn on/off or dim the light levels when motion is detected or after a predefined period or following the output of an algorithm residing in the cloud or even on the controller level. Through LED lamps, dimming and smart scheduling, we can reduce the energy costs with up to 80%++.

FEATURES

- View all luminaires on map

- Create different energy profiles for different days and different groups of luminaires

- Real time and remote dimming & control

- Scenario scheduling and live remote control of each luminaire or groups of luminaires

- Enable individual remote management of streetlights

- Autonomous operation based on predefined schedules, profiles and adaptive lighting

- Real time data & notifications if a problem occurs

- Display and store data in one place

- Reports and live maintenance

Energy savings & improved sustainability Using automated intelligent dimming and scheduling of luminaires, we can add up to 30% to energy savings. Cost-savings from energy reduction through smart street lighting can help cities save money for the community

Futureproof With Smart Polis we save money for our clients and transform existing lighting infrastructure into an intelligent backbone smart city network, connecting future smart city application sensors on an existing and cost-efficient grid.

Real Time Alerts Smart Polis provides real-time notifications of any change occurring along the grid. The tools for real-time malfunction monitoring and maintenance optimization, increase lighting service satisfaction and can further cut operational costs.

Affordable Investment / fast and easy installation Smart Polis Hub adapts to luminosity and does not require any investment in communications infrastructure, wireline or wireless. Its plug 'n play luminaire fitting saves installation costs.

End-to-end solution Although our IoT connectivity infrastructure is interoperable with 3-party sensors, using Meazon meters and sensors under Smart Polis services platform, offers our customers more features and reduced operations and maintenance costs.

**Environment protection/
Reduce city carbon footprint**
Smart Polis drastically reduces city's energy consumption and C02 emissions. Meazon Smart Polis can integrate to other smart city services, like environmental monitoring, noise monitoring, measuring air quality, pollution, or traffic.

Scalable, reliable & cost efficient No need to install it over the entire city at once. Smart Polis can start small and grow big to cover the whole city in a modular manner. Networking costs are predictable based on NB-IoT or LTE cat M connectivity monthly services fees combined with best of breed quality of service (QoS) provided by the mobile operators

ABOUT MEAZON

We make the energy data acquisition easy & cost efficient and provide it as a service in an open data format

The transformation of traditional commoditized energy markets to advanced services markets is dependent on capturing data at high reporting intervals and managing loads in real-time.

The need for cyber-physical devices with build-in intelligence, scalability, end2end security, ultra-low bandwidth requirements, and cloud-based real-time management is of paramount importance.

Meazon technology is the only technology that provides a convincing answer to this problem and combines ideally cloud services with embedded device software and device hardware in a uniform end-to-end architecture.