Smart Streetlights

Project Overview

The Smart Streetlights project began as a cost-savings effort for the City to replace high energy use streetlights with more efficient LED lights. It evolved into deployment of the world's largest smart city sensor platform. The platform provides a connected digital infrastructure, which will lead to new opportunities for the City to better serve residents and businesses through data-driven processes, tools, and capabilities.

What can the new streetlights do?

The new streetlights are remote control LEDs that can be programmed and managed from a central software platform. This allows the city to dim the streetlights during certain hours of the day when the full light level isn't required, specifically around dawn and dusk, resulting in further energy and cost savings.

How much is the City expecting in savings?

With 4,700 LED streetlights already installed the city is beginning to see monthly energy savings around $70,000. After the full deployment of 8,000 LED streetlights we expect savings of about $125,000 per month. This doesn't include additional expected savings associated with reduced maintenance, daily dimming, and switching to special streetlight energy rates with SDG&E.

What else is 'smart' about the new system?

Many smart streetlights installed in public spaces across the city are also equipped with CityIQ sensor nodes. The sensors generate processed data, or metadata, including pedestrian movement, vehicle movement, and parking activity, as well as standard environmental measures of temperature, pressure, and humidity. CityIQ sensor nodes are concentrated downtown. The full installation is scheduled to be complete by summer 2020.

How is metadata captured and transmitted?

The sensors generate anonymous metadata and connect to our technology partner GE's CityIQ cloud database hosted on Amazon Web Services. The data is secured as it moves from sensor node to gateway to the cloud. The metadata is made available on GE's cloud database and can be accessed by an API key. Anyone can access this key through the City's website.

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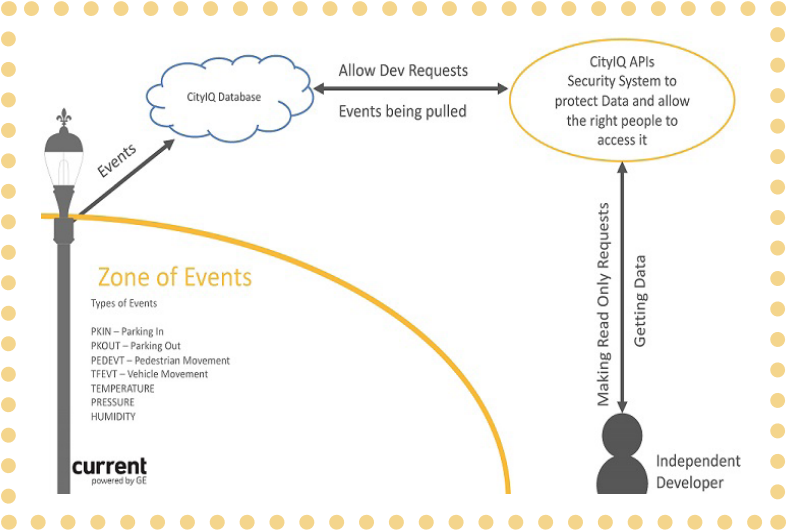

How is image and video data captured and transmitted?

Image and video data is captured and stored locally on the sensor and overwritten every five days. In certain cases, authorized San Diego Police Department staff can request access to sensor video data for a specified location within the five-day period. This data is transferred to their own software platform with additional security and chain of custody protocols. Such requests can only be made in relation to investigations of serious crimes.

How long is the data stored?

The metadata in the data warehouse is retained for seven years.

How do I access the public data warehouse?

The instructions for using the API keys can be found on the Smart City webpage: sandiego.gov/sustainability/energy-and-water-efficiency/programs-projects/smart-city

What privacy policies are in place regarding the type of data?

While this project is a tremendous technological benefit to the city and our citizens, we recognize and value the importance of privacy. Raw video and image data are not accessible to general city staff or any members of the public. Additionally, the system is not equipped with license plate reader technology, facial recognition, or pan-tilt-zoom capabilities. Private property information is not visible to any users.

City policy restricting use of sensor data:
sandiego.gov/sites/default/files/streetlight_data_department_instruction_-_d1_020619_revision.pdf

San Diego Police Department policy governing use of video for serious crime investigation:
sandiego.gov/police/about/procedures (Policy 333 under Investigations)

Information on the City's Open Data Policy:
sandiego.gov/dataandanalytics

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