



small. smart. seat pleasant.

UMD Smart Cities Initiative

Smart Cities Roundtable #8 – February 12th, 2020



More than Just Technology

The Seat Pleasant Smart City Transformation



About Seat Pleasant

About Seat Pleasant



POPULATION
4,721



SIZE
0.75 Square Miles



CENTRAL LOCATION
East of Washington, DC



ZIP CODE
20743





Our 7 Key Strategic Priorities

Key Strategic Priorities (2020-2024)

The following critical strategies will be pursued by the City of Seat Pleasant over the next 4 years:

1

Improve Financial Sustainability

2

Expand Smart City Services that Lead to Inclusiveness and Constituent Engagement

3

Develop Environmental and Sustainable Green Plan

4

Attract, Support and Retain Anchor Institutions

5

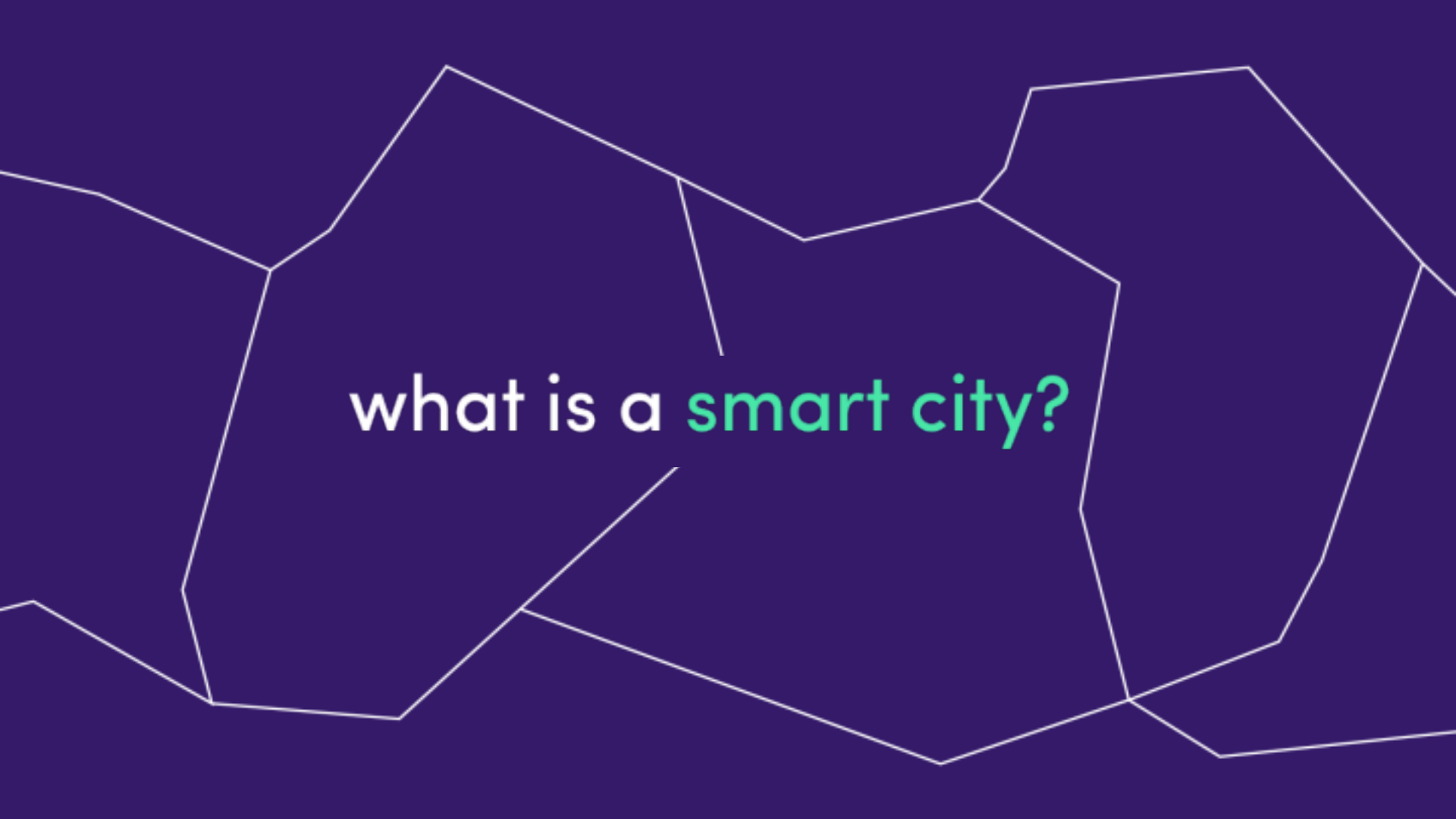
Enhance Smart Community Policing that Decreases all Crime Levels

6

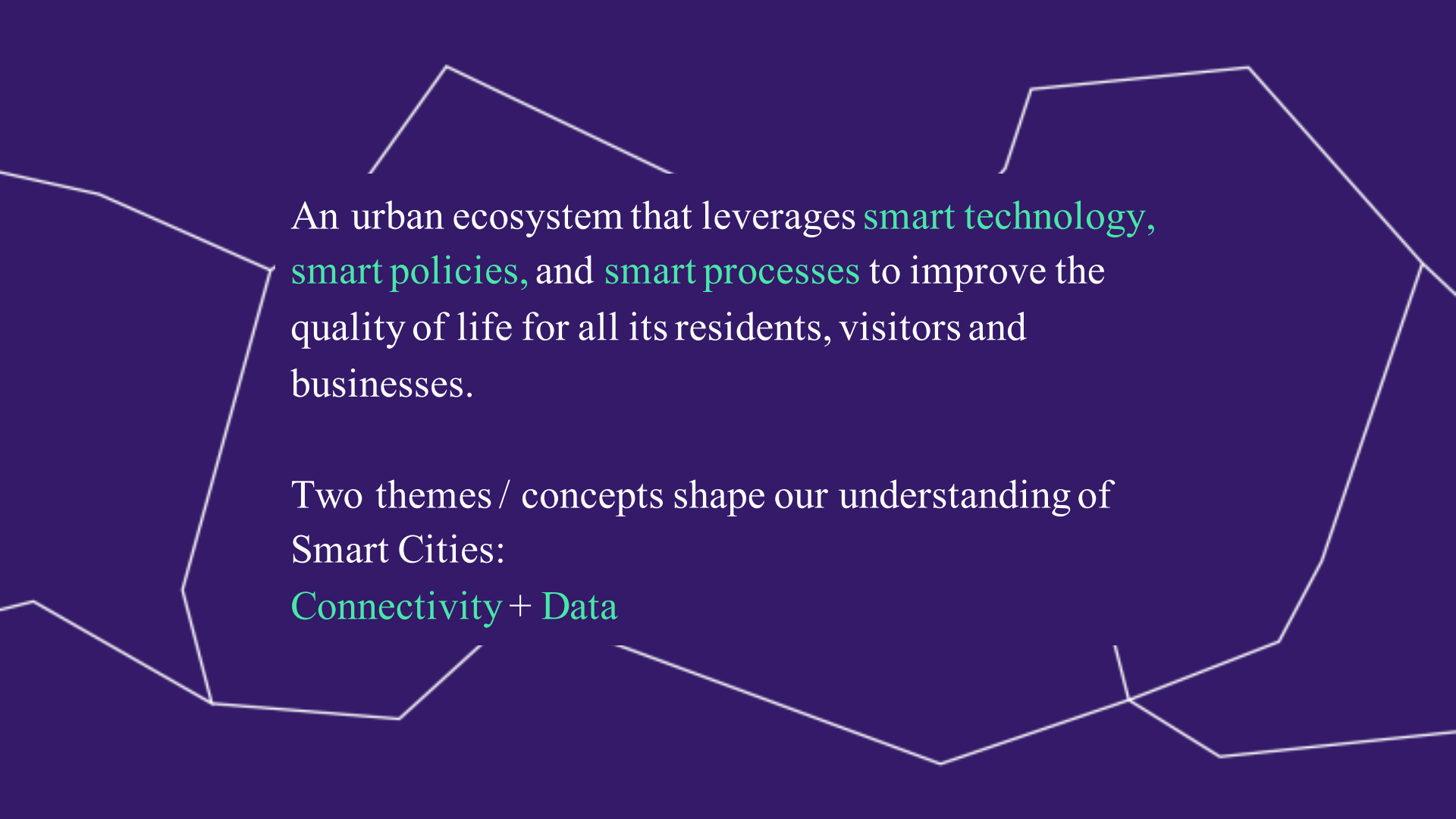
Develop and Promote Workforce Training Opportunities for Residents

7

Promote Health Awareness and Access to Healthy Food Options and Cultural and Leisure Activities

The background is a solid purple color. Overlaid on this are several thin, white, irregular lines that form a complex, abstract pattern. These lines create a series of interconnected, angular shapes that resemble a stylized map or a network of paths. The lines vary in length and orientation, creating a sense of movement and structure.

what is a smart city?



An urban ecosystem that leverages **smart technology**, **smart policies**, and **smart processes** to improve the quality of life for all its residents, visitors and businesses.

Two themes / concepts shape our understanding of Smart Cities:

Connectivity + Data

Shared Services Hub (n.)

where data and information is shared across departments and agencies; the most important piece of Smart City technology.



The Smart City Process

beginning the smart city process

identify needs
and desired
outcomes



examine
strengths and
weaknesses



identify growth
opportunities and
threats to progress

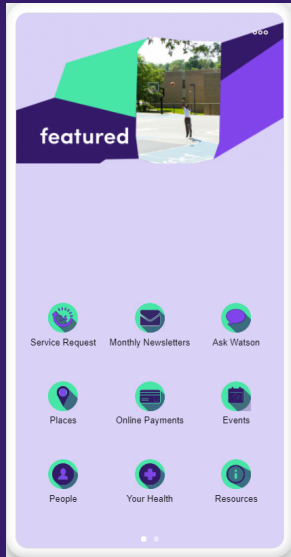
the smart city process





Key Smart City Initiatives

The “MySeatPleasant” App



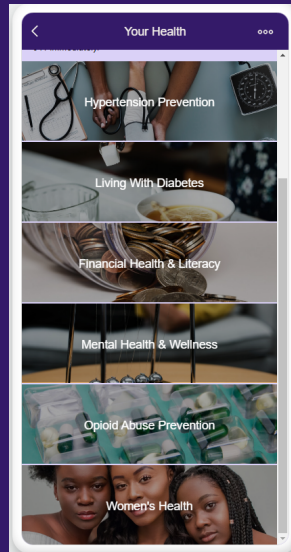
Chat With Watson

Seat Pleasant's Virtual Agent, powered by Watson Artificial Intelligence

Our virtual agent may be able to provide answers to questions on services offered by the City of Seat Pleasant, A Smart City of Excellence.

Seat Pleasant's Ask Watson

Type a Message

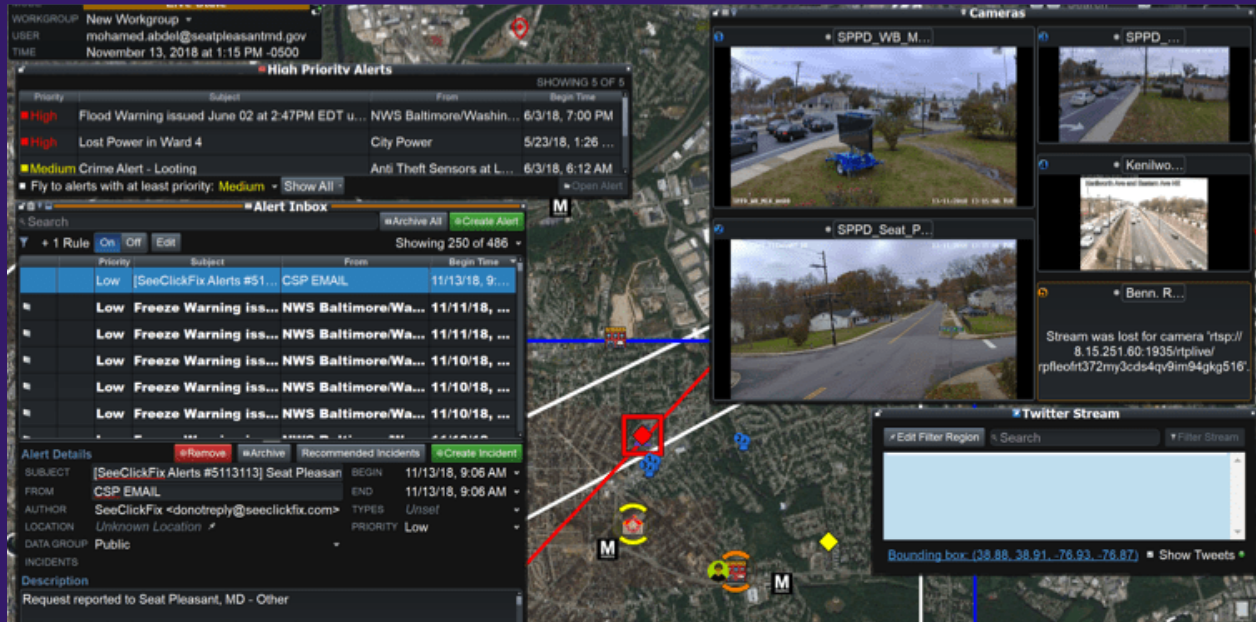


Citizen Centric approach lead to implementation of the “MySeatPleasant” App

- *Convenience:* ability to easily request services, access to information (i.e. “one-stop shop”)
- *Relevance:* the app includes information that is pertinent to the uniqueness of the community (i.e. health section shares information on conditions that are prevalent in the community)
- *Accountability & Transparency:* Cost of all service requests is calculated and shared with the citizen

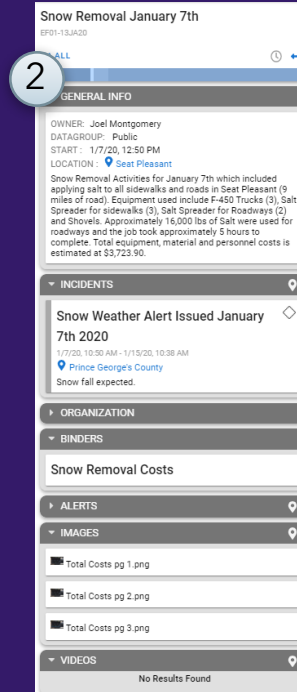
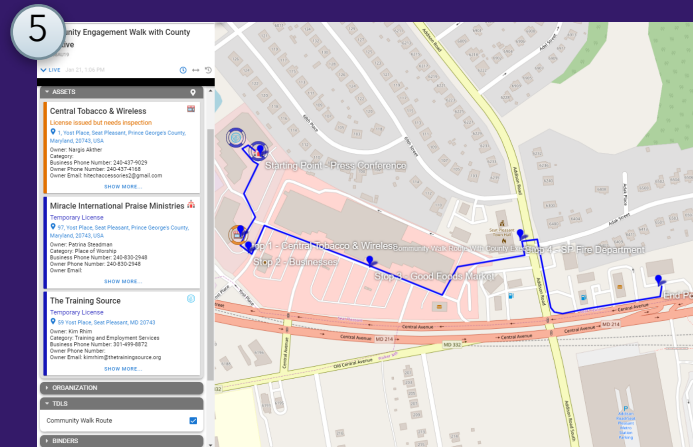
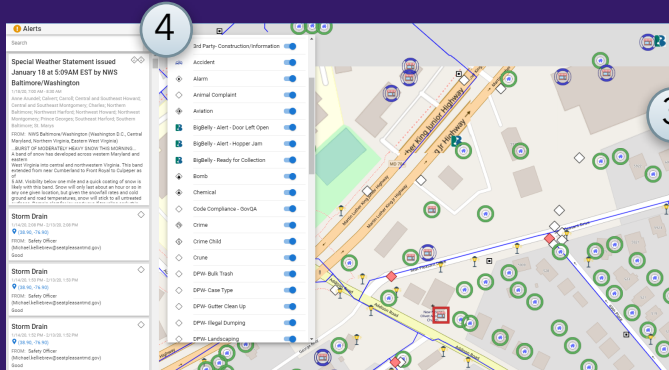
Command & Control Center

- Cross Agency Collaboration and Coordination of Operations using the *Seat Pleasant Command and Control Center*
- All operational data from across all departments is aggregated in a single view of the city/operations



Command & Control Center, cont.

1 2 3 4 5
Workflows & SOPs, Operational Costs, GIS, Data Aggregator, Event Planning



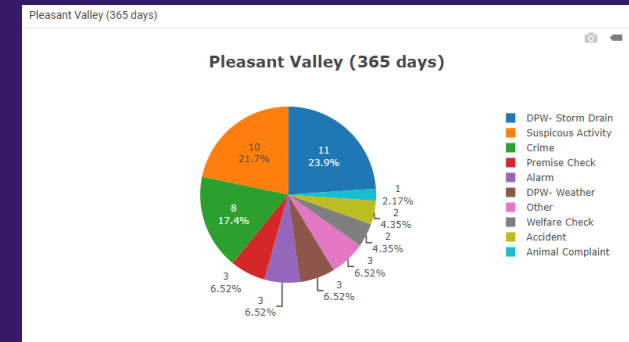
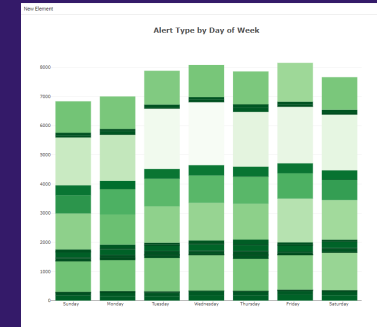
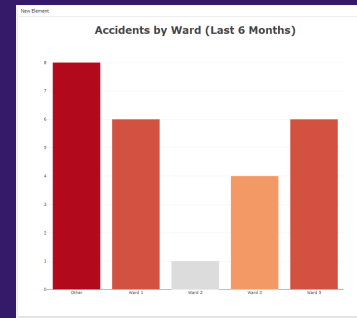
Data Driven Decision Making

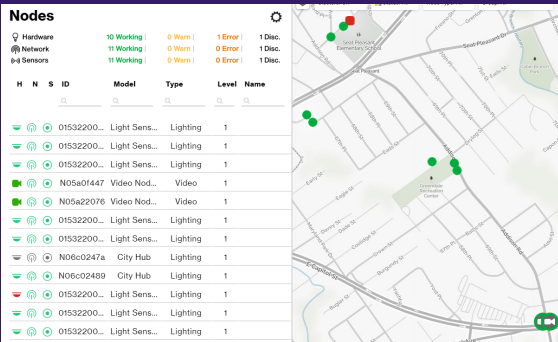
High level data dashboards help executives and city leaders stay on top of city operations

The data informs where and how we take action to resolve challenges

Hotspot analysis using Police data in order to inform policing routes and schedules

Quantified true cost of blight using data from disparate sources

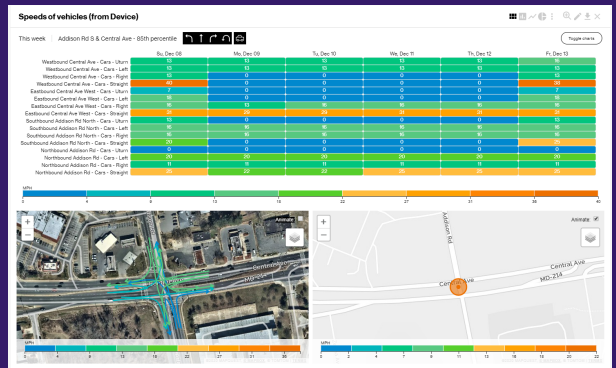
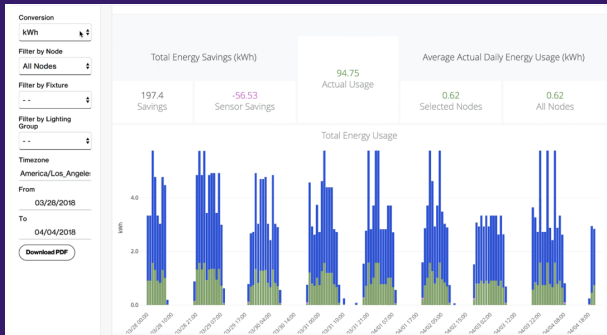




Street Light Use Cases

A Smart City's Most Valuable Real Estate Asset:
Light Poles

- Energy Efficiency with LEDs
- Programmable scheduling
- Traffic Safety
- Understanding Vehicle, Pedestrian, and Cyclist behavior
- Public Safety
- Video Analytics inform PD of Loitering, suspicious activity, etc.
- Illegal Dumping



Intelligent Traffic Safety Use Cases

Report 1: Movement count of Vehicles

Definition: The report provides volume of vehicles, in number, correlated with turn movements and traffic phase data

Additional Filter Options:
Reports can be filtered by travel direction (Northbound, Southbound etc..) and vehicle mode (truck, bike, cars, motorcycle) down to 5 minute interval.

Potential Use Case:
Improve safety of the pedestrians by analyzing the volume of vehicles that turn right on red at a given intersection(s).

Report 2: Speed of Vehicles

Definition: The report provides the speed of vehicles, in Miles per Hour (MPH), which are traveling through an intersection, at a defined speed percentile, during green light phase of the traffic signal.

Additional Filter Options:
Reports can be run at various percentile with 85% being the default.

Potential Use case: A city needs the data to determine speed of the natural flow of traffic. Using the 85% percentile speed of vehicle report, speed limit is adjusted.

Report 3: Speed monitoring

Definition: Provides volume of vehicles, in numbers, that are exceeding a configurable speed threshold in Miles Per Hour (MPH) through an intersection.

Additional Filter Options: A user can adjust speed limit threshold for the report.

Potential Use Case:
Evaluate need for enforcements at intersections where high volume of vehicles are travelling at elevated speeds.

Report 4: Pedestrian movements in crosswalks

Definition: Provides the volume of pedestrian, in numbers, crossing an Intersection.

Additional Filter Options: The report may be correlated with the traffic phases for crosswalk (if available).

Potential Use Case:
Determine volume of pedestrians during rush hour at intersections close to mass transit centers.

Report 5: Pedestrians crossing outside crosswalks

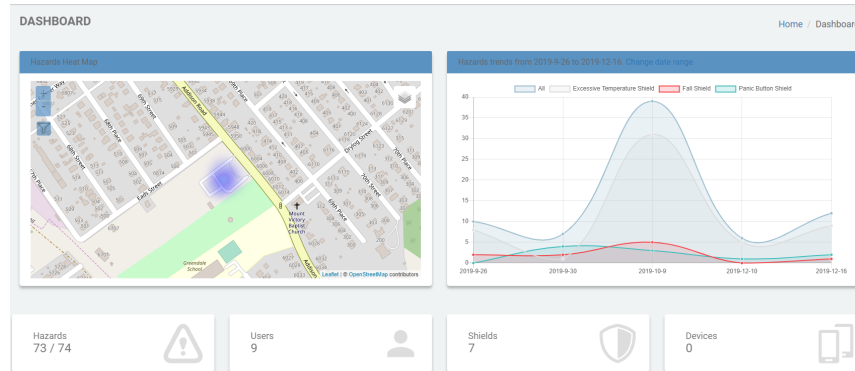
Definition: Volume of pedestrians, in numbers, crossing outside of designated crosswalks at an intersection (within field of view of camera).

Additional Filter Option:
This report can be correlated with traffic phase signal (if available).

Potential Use Case:
Improve pedestrian safety by assessing the flow of pedestrians at an intersection and analyze crossing patterns throughout the day/week.

Aging in Place + Worker Safety

- COSP has a 21% senior citizen population, thus Aging in Place becomes a priority
- In addition, many of our DPW employees are older people + they're exposed to potentially dangerous situations everyday
- Hazard Heat Map + Trends + Live map
- Shields
 - Panic Button
 - Fall Shield
 - Excessive Temp
 - Excessive Heart Rate
 - Man Down
 - No Go Zone



Lessons Learned

- Having a clear VISION, an internal CHAMPION, and PUBLIC ENGAGEMENT are key to success
- Understand dynamics of your city/organization and plan accordingly
- Processes – applying technology without first addressing underlying process issues will result in failure
- Develop data privacy policies
- Smart City transformation is an iterative process
- Think about adoption and capacity early on
- Establish partnerships and leverage resources



Partners

building partnerships to define the future of small smart cities



What next?

Become part of
the smart
transformation.

Connect with a city official to learn more
about our partnerships.

www.smallsmartcity.org