



Portland as a Smart City & Innovation Hub



January 21, 2019
5:30pm-7pm

Our objectives for tonight

- Provide an update on smart cities and innovation hub efforts
- Share smart cities movement successes
- Discuss what's next for Portland as a smart city



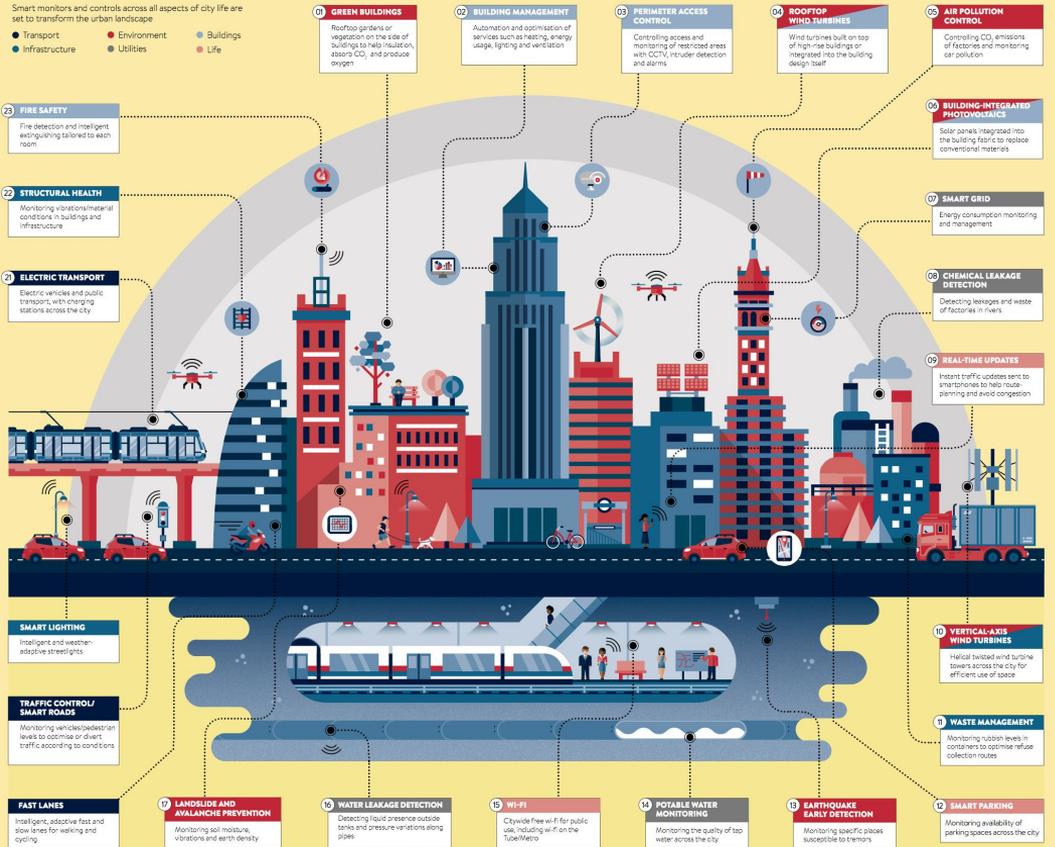
What is a Smart City?

Smart Cities use connected technology and data to:

- improve the efficiency of city service delivery;
- enhance quality of life for all; and
- increase equity and prosperity for residents and businesses.

"What is a smart city?" by Digi.City

SMART SOLUTIONS FOR SMART CITIES



Portland's Opportunity to Be a Smart & Innovative City

**Purchase Lights
from Utility
Company**
No more rental
costs



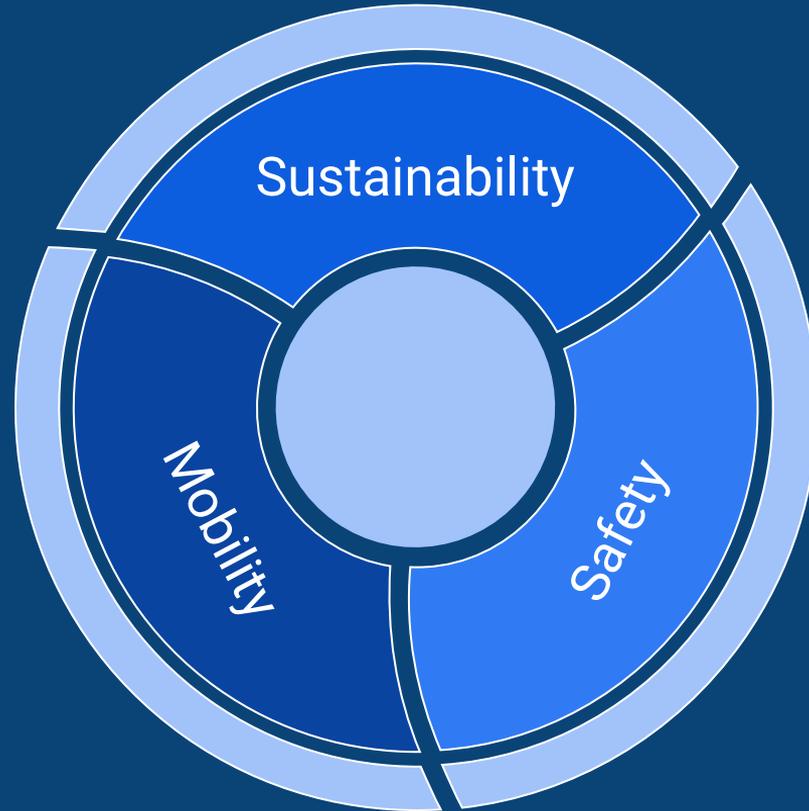
Convert to LED
Save on
maintenance and
energy costs



**Save \$1 Million a
Year**
Use savings for
smart cities work



Focus of Portland's Smart Cities Efforts



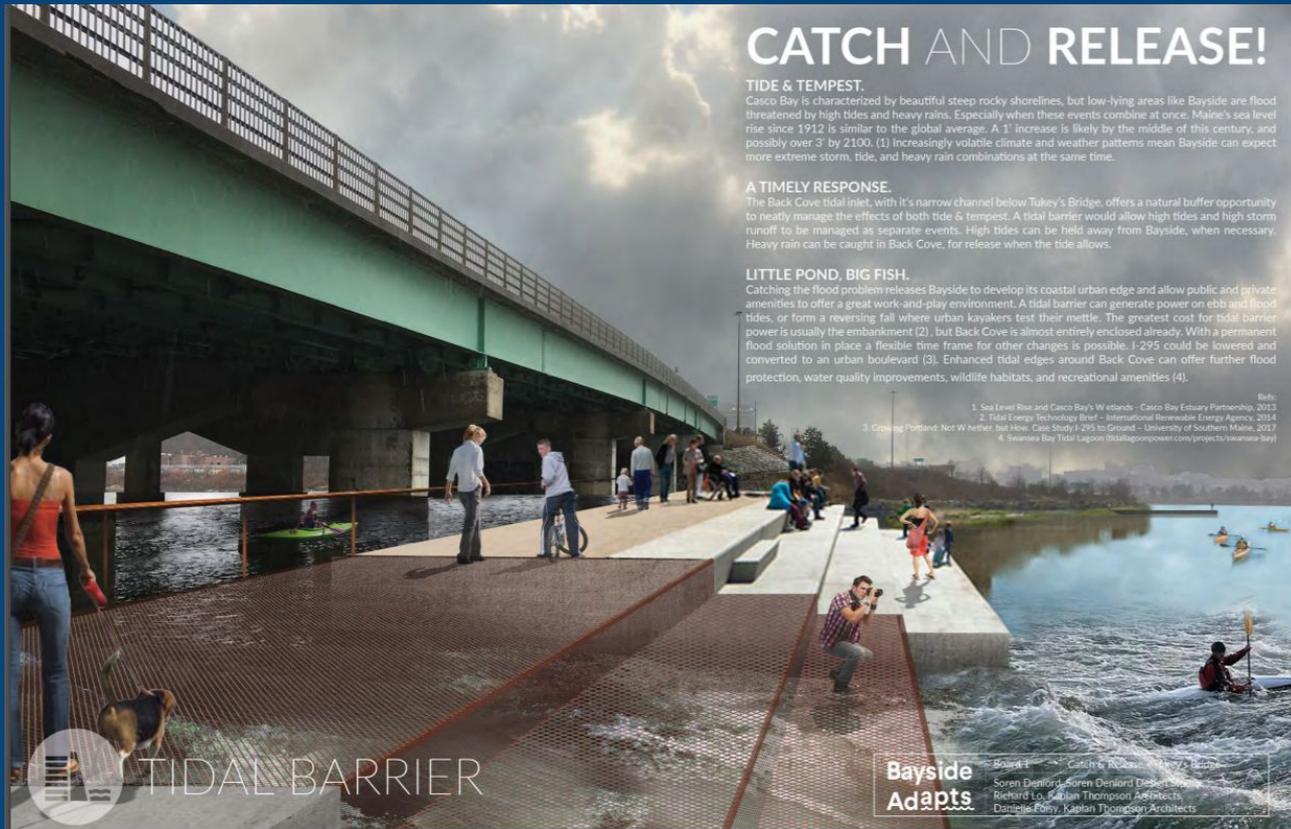
What We've Accomplished So Far!

One Climate Future

- Joint climate action and adaptation planning with South Portland
- Focusing on:
 - Buildings and energy use
 - Transportation and land use
 - Waste reduction
 - Climate resilience



Bayside Adapts Resilience Planning



- Asked the public and the design community to imagine a climate resilient Bayside in 2100
- Analyzed gaps in knowledge of infrastructure as a foundation for future planning

LED Streetlight Conversion and Lighting Control Platform

- Converted/retrofitted 5,200 cobraheads and 1,800 decorative lights around City
- Improved lighting levels and promote safety in neighborhoods
- Installed lighting controls to get insight into health and operations of the lights

Before



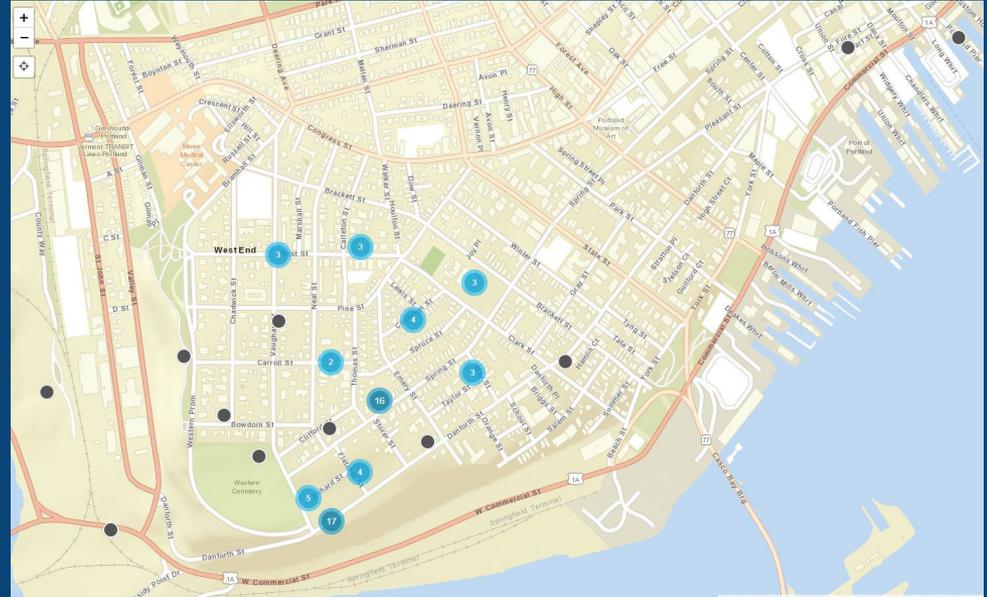
After



Air Quality Monitoring

- Worked with Maine DEP to get two air quality monitoring units on the waterfront
- Collecting 24-hours of data on 6-day cycles
- Currently establishing a baseline

Air Quality Reports from SeeClickFix



Preparing for Solar Investments

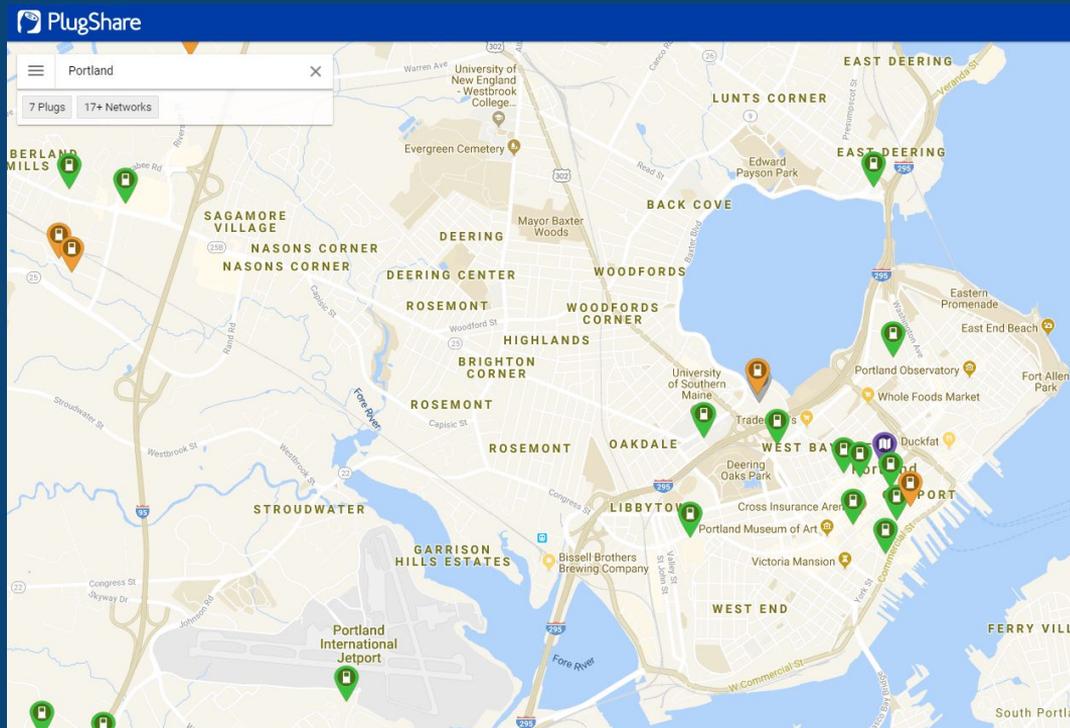
- Solar arrays installed:
 - Ocean Ave -- 1 MW
 - Jetport -- 475 kW
 - Riverside GC -- 28 kW
- Solar Consortium
 - Pooled load with other large energy users in Maine to solicit developers
 - City committed up to 75% of annual electrical demand (24,000 MW/h)
 - Made possible by new solar legislation in 2019



Electric Vehicle Charging Stations

- Received support from Efficiency Maine for 5 new EV charger locations:
 - Back Cove
 - City Hall
 - High St. & Spring St.
 - Payson Park
 - Jetport
- Planning for installation

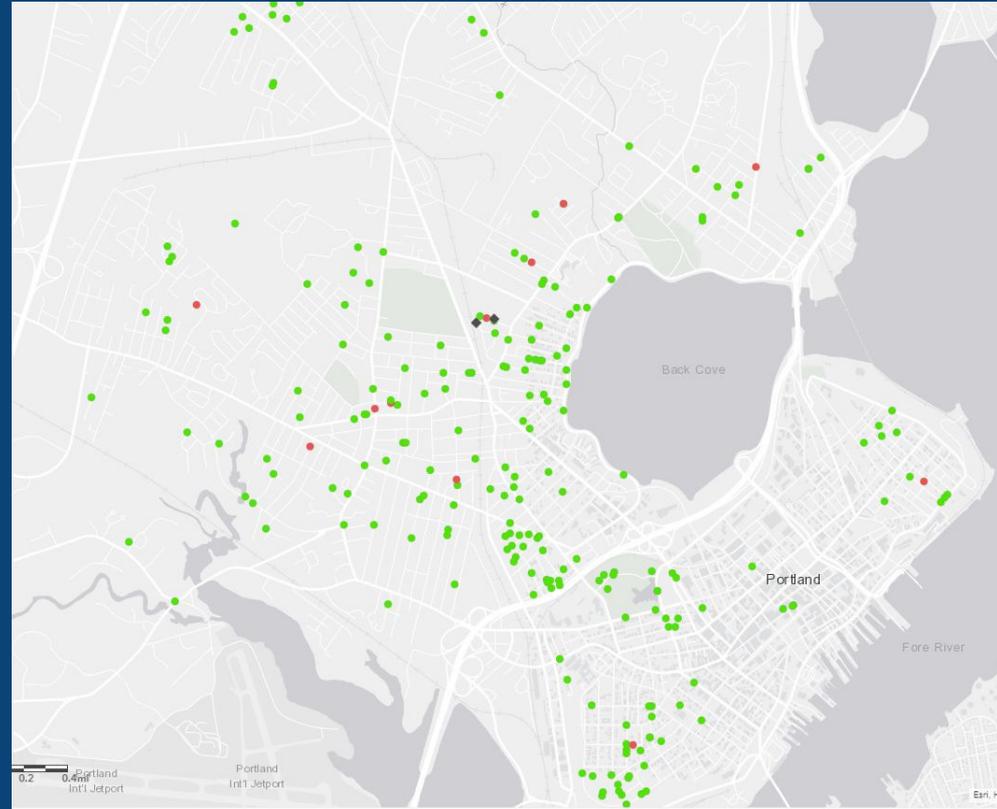
Current EV Charging Locations



Nor'easter Response Preparation

- Proactively prepared for downed trees and potential flooding during first nor'easter of the season
- Deployed resources to meet needs more quickly
- Ensured all staff members were working from the same information
- Map publicly shared to inform community of work and response

Damaged Tree Reports from 10/17/19 Event



Updating Traffic Infrastructure

- Making sure our infrastructure (traffic signals, controls, etc.) is able to support smart cities technologies
- Moving from copper wire to fiber in some cases
- Focusing on key corridors and areas with the oldest infrastructure



Adaptive Traffic Signals

- Installed real-time traffic monitoring equipment at key corridors
 - Forest Ave.
 - Washington Ave.
 - Franklin St.
- Reduced wait times at lights and vehicle emissions
- Increased ease of transit through these corridors



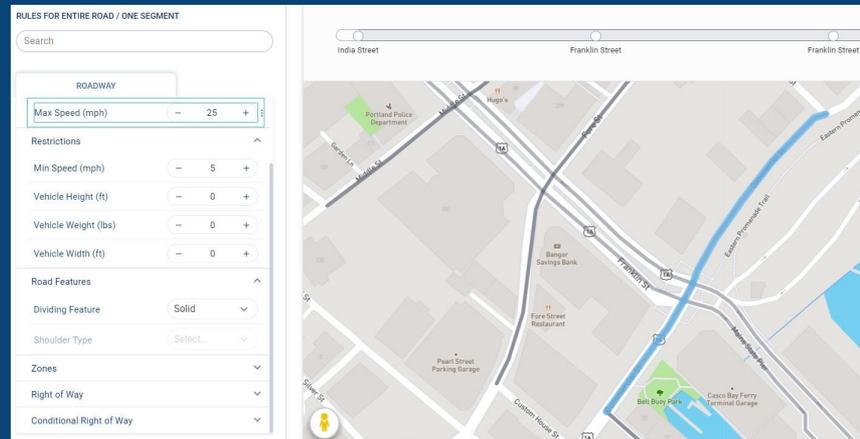
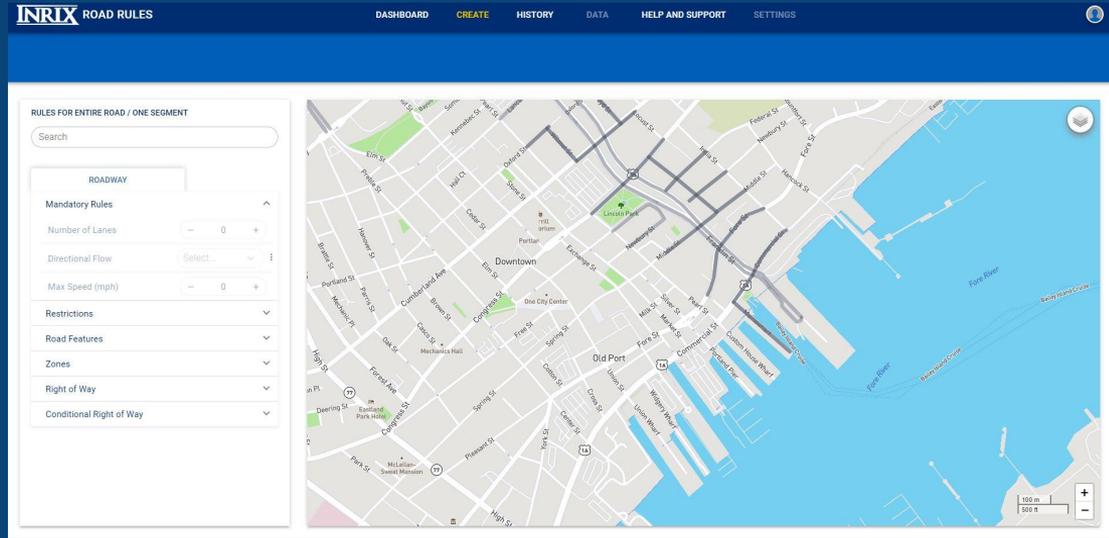
Multimodal Detection

- Exploring multimodal (vehicle, bike, pedestrian) detection to get a better understanding of how users are moving through intersections
- Will enable better decision making about safety in intersections and more insight into how our intersections are affected by traffic congestion, tourism, special events, etc.



Mapping Traffic Assets

- Recording location and attributes of signs, curbs, traffic signals, street lights, sidewalks, streets, etc.
- Will enable better management of the public right of way and provide insight to connected and autonomous vehicles





Preparing for Autonomous Vehicles

- Working with Maine DOT to create smart and safe rules to enable AVs to pilot in Maine
- Preparing internally for an AV shuttle pilot in 2020
 - Interviewing other municipalities on their AV experiences
 - Speaking with industry experts
 - Drafting an RFQ for an AV partner



Please join the City of Portland for an

AUTONOMOUS VEHICLE PUBLIC FORUM

Hear from regional and national experts!

September 27, 2018

5pm - 7pm

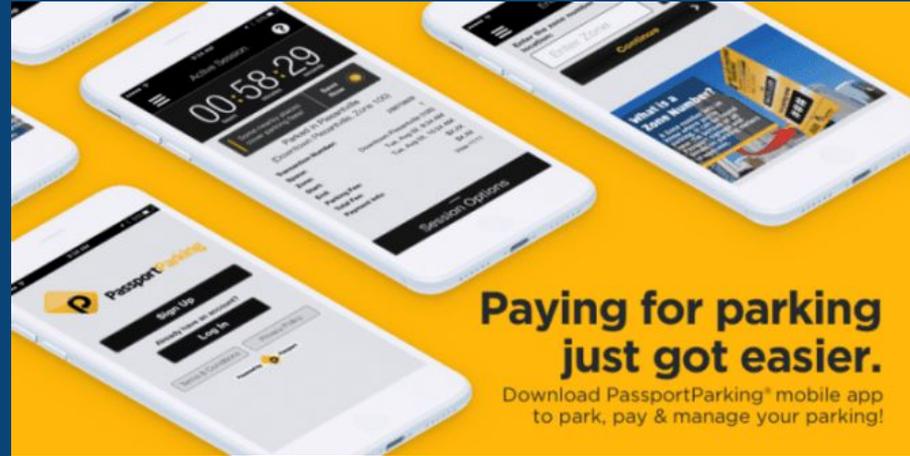
East End Community School, 195 North Street

The City announced in July that we are one of seven cities to pilot Inrix AV Road Rules, a platform that lays the foundation for mapping the city in order to communicate with operators for safe and effective deployment of Highly Automated Vehicles (HAV). The City is hoping to bring an HAV shuttle operator to Portland to help improve traffic flow on two of our most congested corridors. We'll have five national and regional experts on hand to answer questions. City Manager Jon Jennings will moderate.



Parking Payment Application

- Pay quickly and securely with your phone
- Get alerts when your parking session is about to end
- No need to worry about how much time is left on the meter, add time to your parking session directly from your phone



Small Places, Big Ideas Cohort

- Participating in Engaging Local Government Leaders' innovation cohort with other small municipalities
- Focusing on piloting solutions for broader and deeper community engagement
- Building relationships with other small municipalities and cohort mentors from around the country



Other Civic Engagement Tools

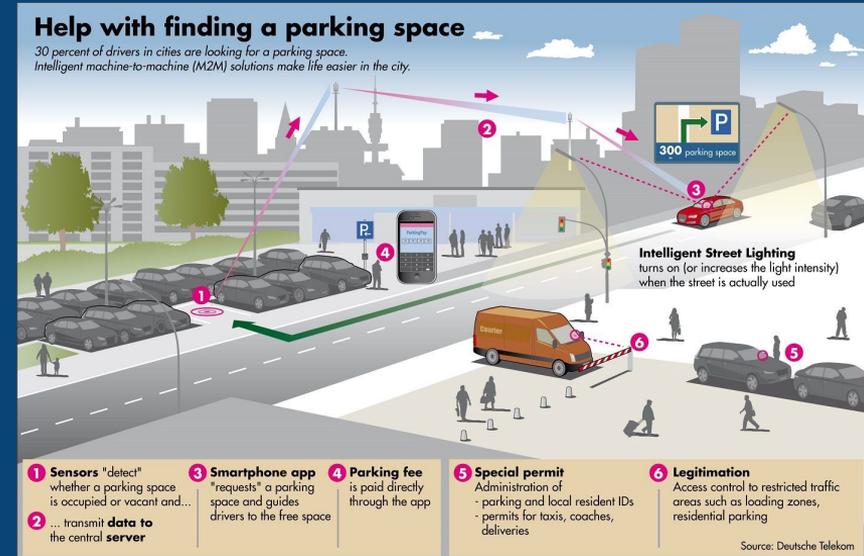
- Stay Connected - City news and alerts via email and text message
- Piloting CivicPlus' new civic engagement tool CivilSpace for City's 5-year HUD plan
- Half way through implementation of 311 phone service to complement SeeClickFix



What Other Municipalities Are Doing

Parking Optimization

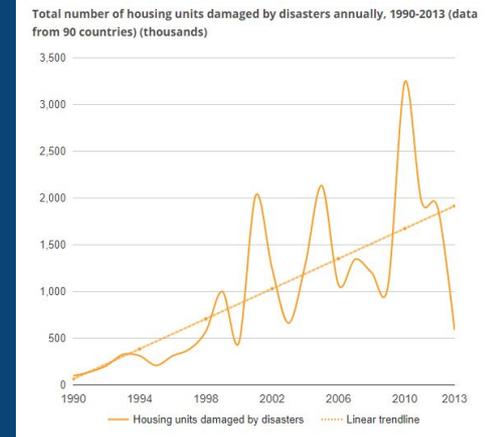
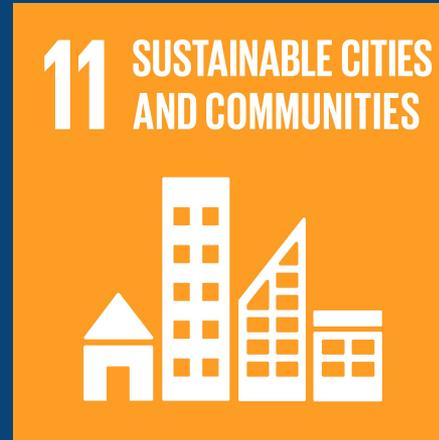
- Optimized parking in busy areas means less time drivers spend search for parking, reducing carbon emissions and cutting traffic congestion
- Know where parking is located and that parking is available
- Price depending on demand
- City projects:
 - San Mateo, San Carlos, and Anaheim, CA
 - Scottsdale, AZ
 - Denver and Fort Collins, CO



Climate Action and Adaptation Implementation

- Beginning to implement climate action plans
- Setting bold goals around reducing greenhouse gas emissions and transitioning to clean energy
- Focusing on buildings and transportation
- City projects:
 - Boston, MA
 - Seattle, WA
 - Los Angeles, CA
 - New York, NY
 - Denver, CO
 - Orlando, FL
 - New Orleans, LA
 - Austin, TX

C40 Participants



Better Community Engagement & Effective Communications

- Governments want to hear from more voices and ensure they're meeting the needs of the community
- Tools for increased engagement and communications:
 - 311, ChatBot
 - Community survey
 - Civic engagement platforms
 - Podcasts
- City projects:
 - Fort Lauderdale and Miami, FL
 - Gilbert, AZ
 - Kansas City, MO



What's Next For Portland?