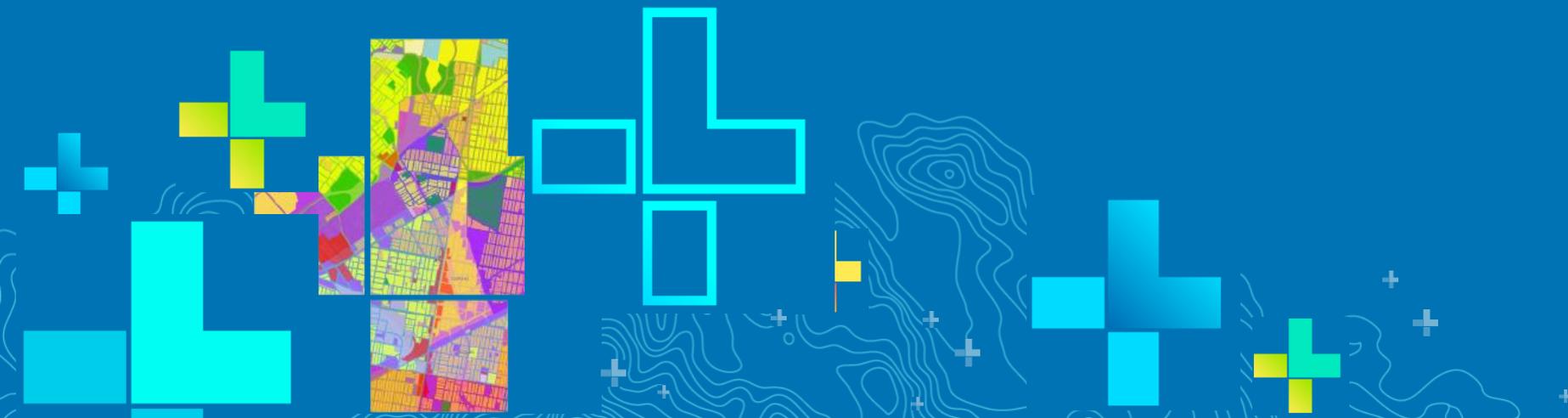


The Data Driven Policy Maker

Aligning GIS activities with Your Executive's Initiatives

Pat Cummins, Esri



It Starts With Identifying Priorities...

Sustainable Community

Mobility
Resiliency
Smart Planning
Asset Management

A Well Run Community

Real-Time Awareness
Data-Driven Decision Making

A Prosperous Community

Economic Development
Affordable Housing
Destination Branding
Tourism

A Safe Community

Vision Zero
Low Crime Rate
Situational Awareness
Effective Disaster Response

Healthy Community

Opioid Abuse
Access to Care
Homelessness & Housing



Priorities Lead to Government Policy Issues

....Translate to GIS Solutions

- **Grow the Economy & Jobs**
 - (prioritize investments, where are jobs, workers, transit, opportunity zones ...)
- **Safe and Resilient Communities**
 - (disaster preparedness, situational awareness in EOC...)
- **Modern Efficient Infrastructure**
 - (real-time traffic monitoring, connected roads, intermodal connections...)
- **Evolve Education and Workforce Development**
 - (education attainment, technical training, code academies, skills gap...)
- **Improve Environment**
 - (habitat conservation, water quality, green infrastructure ...)
- **Encourage Innovation & Modernize Service Delivery**
 - (broadband coverage, on-line apps, citizen engagement)
- **Smart Communities**
 - (energy efficient, walkable, data rich and accessible ...)



What Governors are Hearing on Data



Elevate the role of your chief data officers - Deloitte

Data is the natural resource of the 21st century - IBM

Governors Expecting More from Data and Technology



New Council on Opioid Overprescribing in N.H. to Rely on Data Analysis

"This data will allow us to not just make policy on a hunch, but really look at the data, in terms of understanding both the geographic trends you might see, the trends you might see not just with individual providers but individual situations."

NHPR January 11, 20

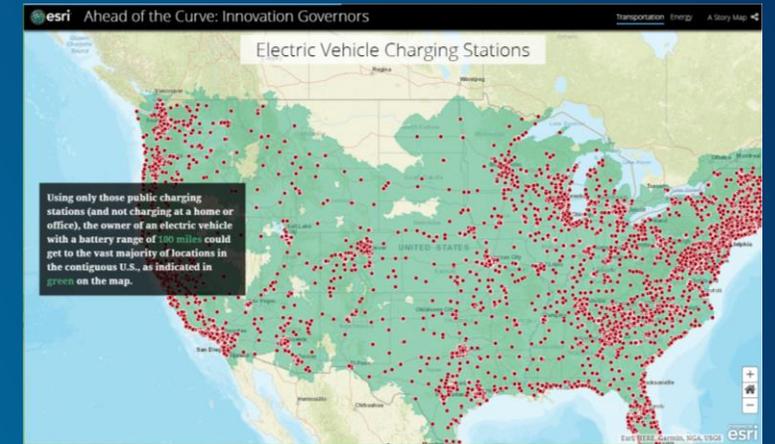


What does it Mean to the Policy Makers Team?

GIS Aids Policy Makers in Many Ways

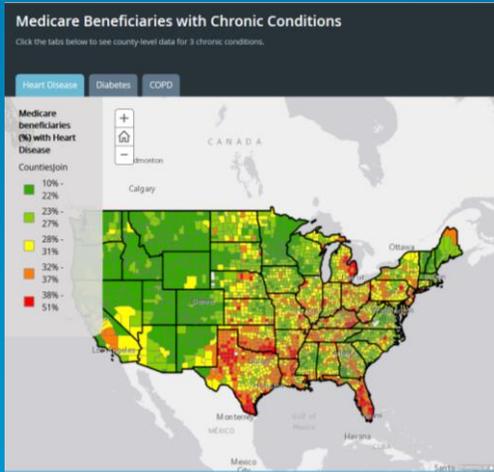
Common Patterns:

- Analyze Policy Impacts
- Improve Communications
- Engage citizens
- Understand Constituent Sentiment
- Inspire Innovation / deliver transparency

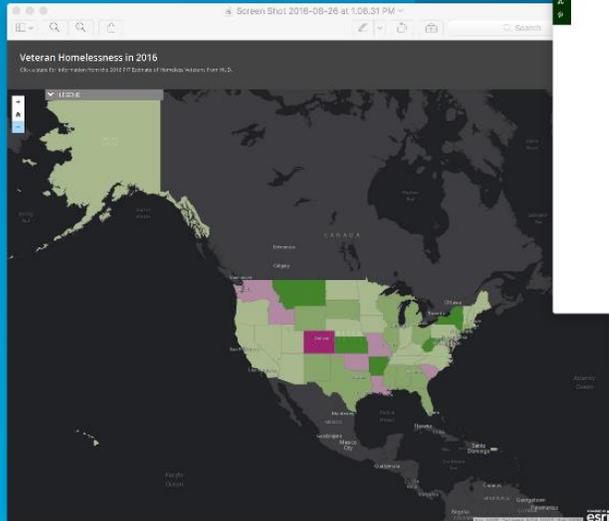


Analyze Policy Impacts Congress uses GIS ...

Analyze and Visualize Data
Understand Policy Impacts



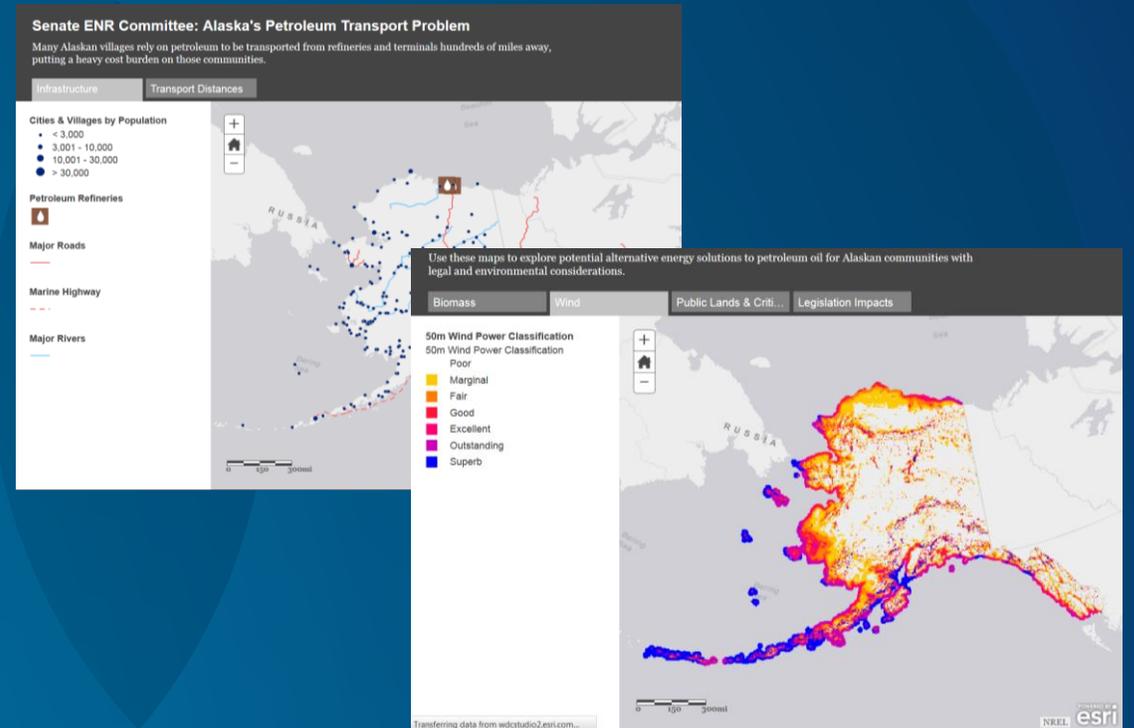
Healthcare



Veteran Homelessness



Federal Lands footprint



Senate ENR – Understanding Energy Challenges in Alaska

Analyze Policy Impacts Governors use GIS ...

Analyzing and visualize Data

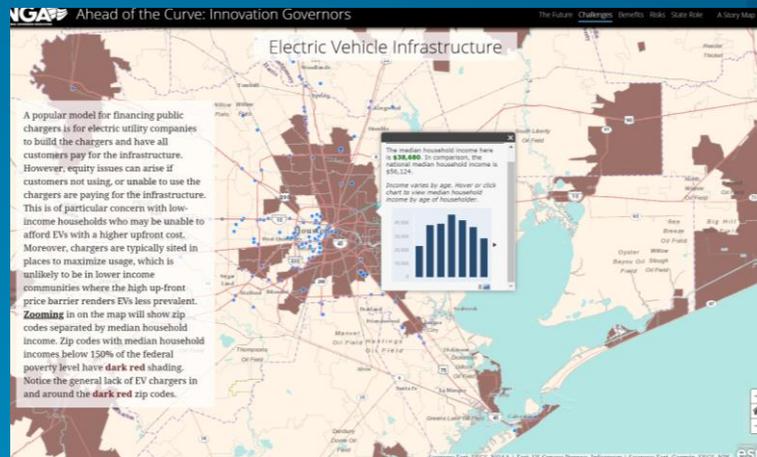
Understand Policy Impacts



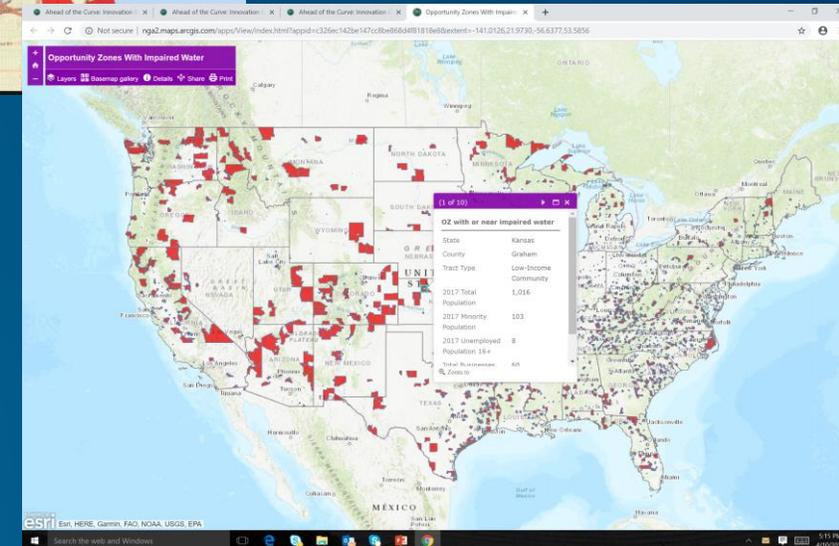
16,000 public charging stations



Opportunity Zones with No Electric Vehicle Charging Stations

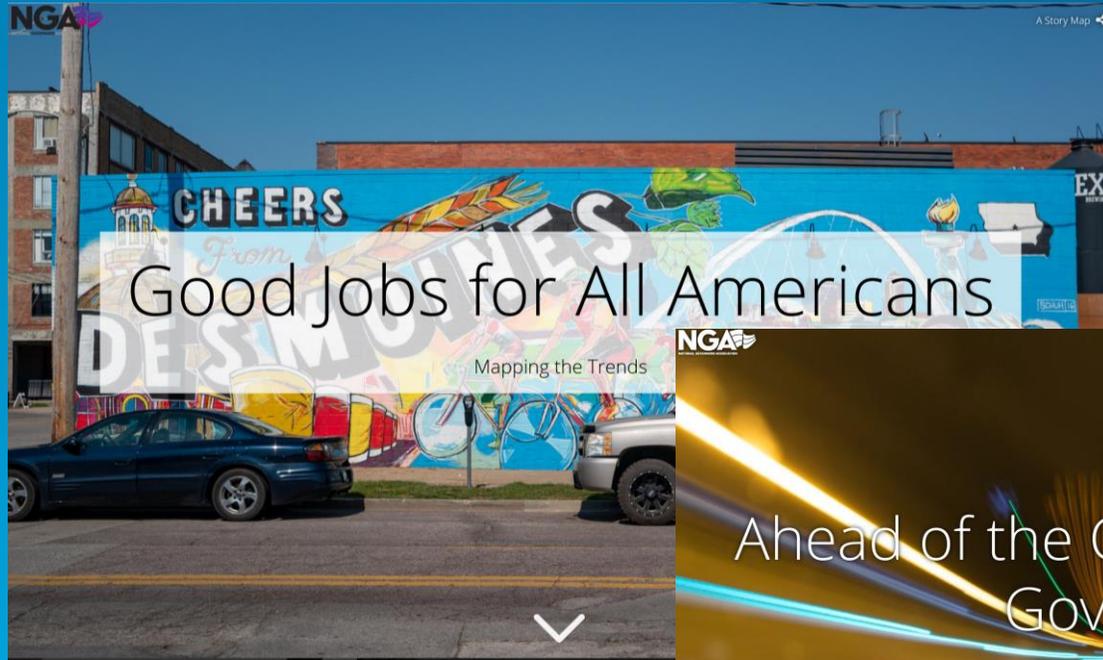


Zipcodes with 150% of poverty – median income by age chart



Opportunity Zones with/ near Impaired Waters

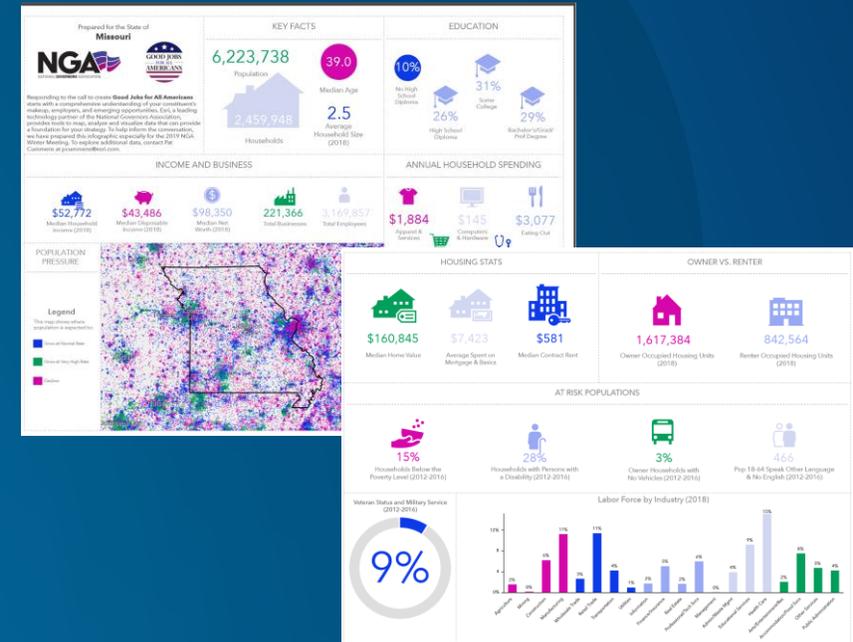
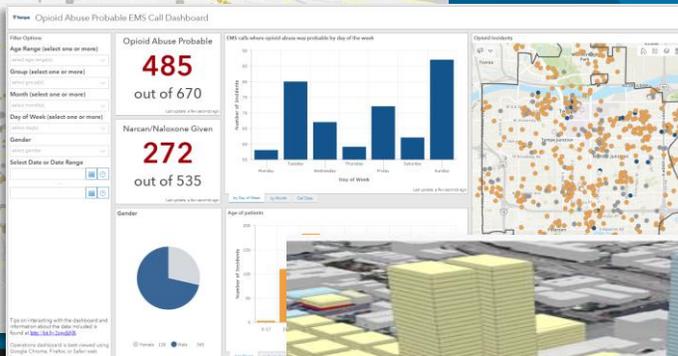
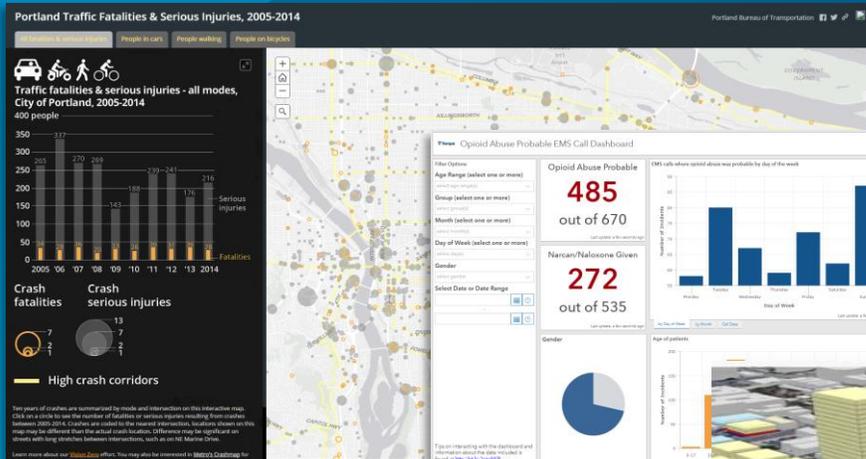
Improve Communications.... StoryMaps Inform & Engage Effectively



National Governors Association Initiatives

Improve Communications... Consumable, Compelling Facts....

The Value of Geospatial data is not always delivered in a map form



Dynamic Dashboards

Infographics

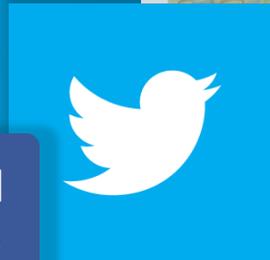
Powerful Real-Time Data, Visualizations & Analytics

Engage Citizens Connect & Promote Constituent Services

- Embed maps or galleries on websites and press releases
 - Town Hall and Listening Tours
 - Information
 - drug drop-off locations
- Share maps through briefings and social media



Murkowski



Reed



Takano

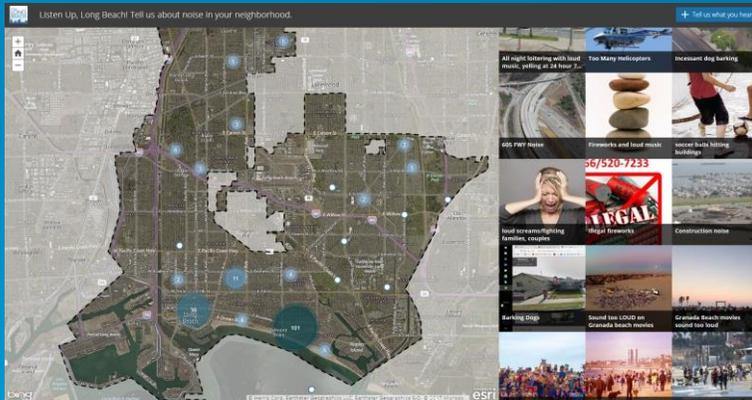
Barletta



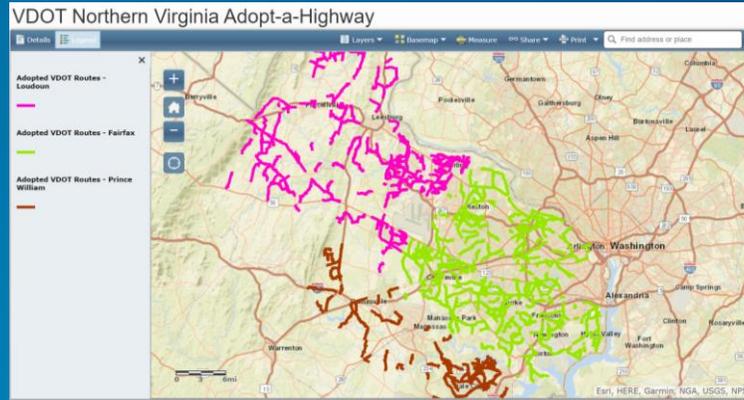
Senator Risch

Engage Citizens... tap into Crowdsourcing.

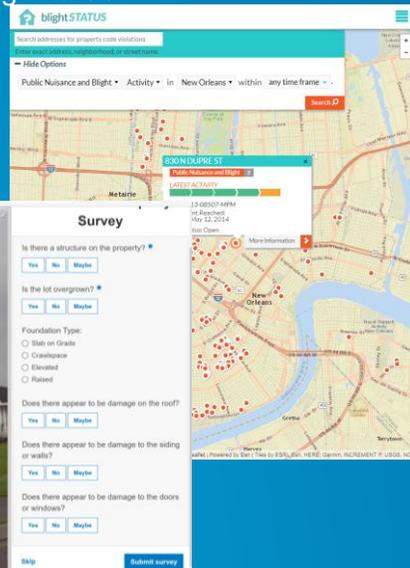
Finding things for people to rally behind for quick wins.



City of Long Beach, CA – Crowdsourcing Noise Complaints

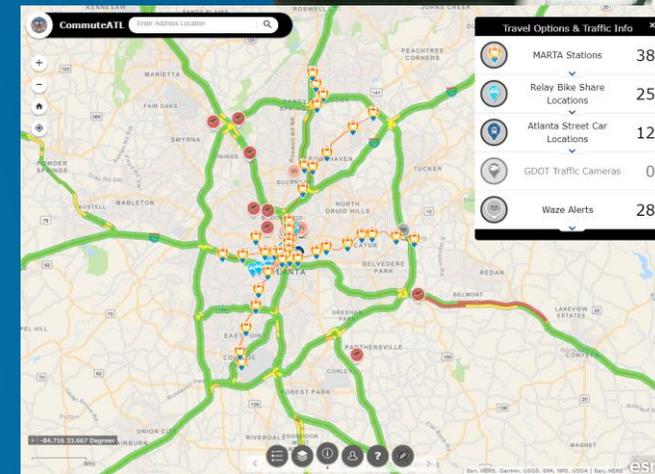


Adopt a Hwy, VA



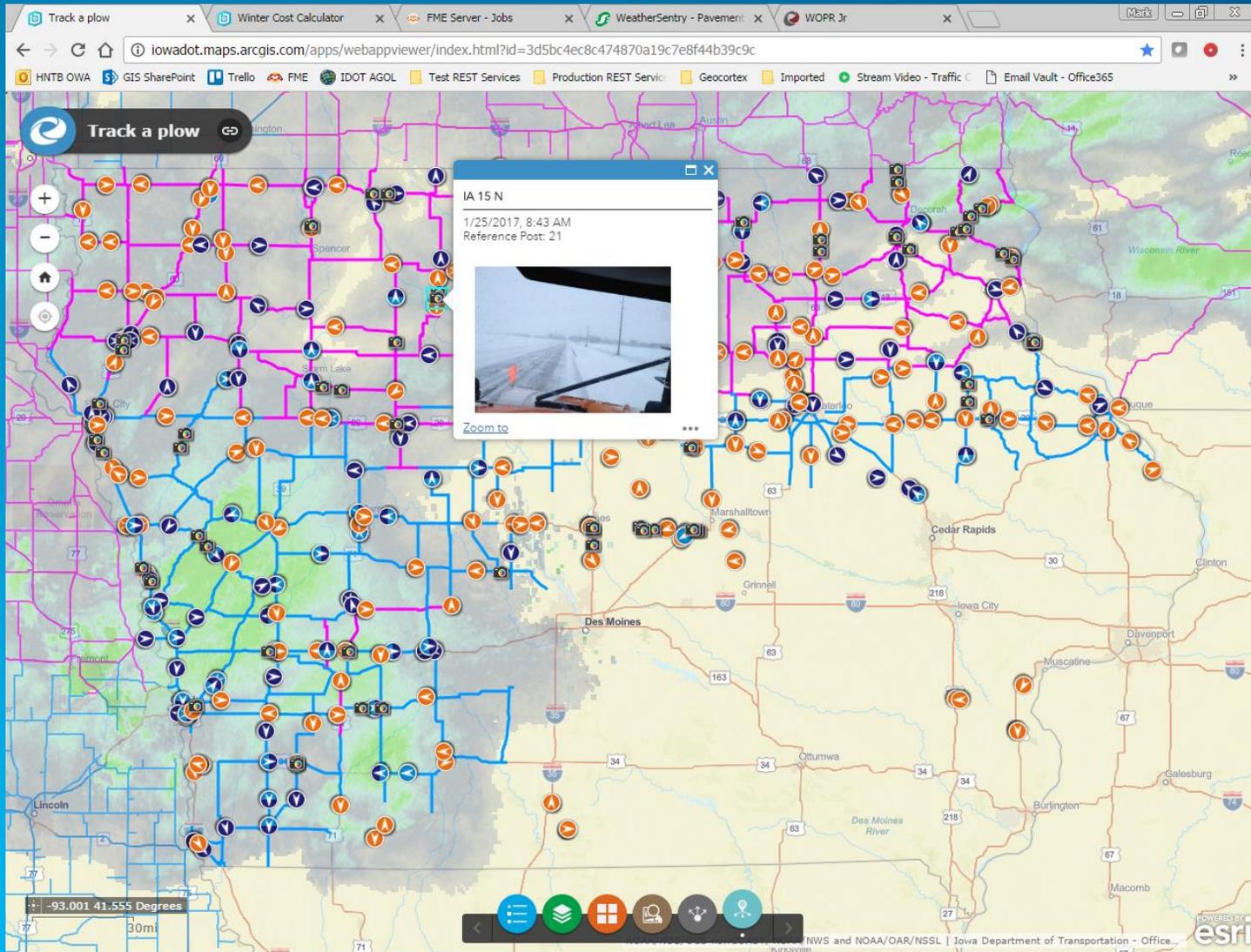
City of New Orleans, LA – Blight Survey

CommuteATL –
Crowdsourced
Traffic App fed by
Waze following I-85
Bridge Collapse



Iowa DOT – Track A Plow

.....Layering Live Data Feeds for Real-Time Awareness



Begin with the basics:

- Weather
- Road conditions
- Traffic Cameras

Add new sources:

- Plow locations
- Plow dash cam photos

Iowa DOT – Getting the word out – sharing data services

storm TRACK 7 Doppler Radar RAIN MIX SNOW
Sun 9:36 AM

Spencer Mason City Decorah New Hampton Elkader Milwaukee
Fort Dodge Waterloo Dubuque Rockford Chicago
Tama Cedar Rapids Iowa City Washington Ottumwa

KWWL Storm Track 7 @KWWLStormTrack7 · 19s
Roads improving in central IA as the snow ends. Mostly covered roads still in eastern IA. Photos from IA DOT plows.

storm TRACK 7 KWWL

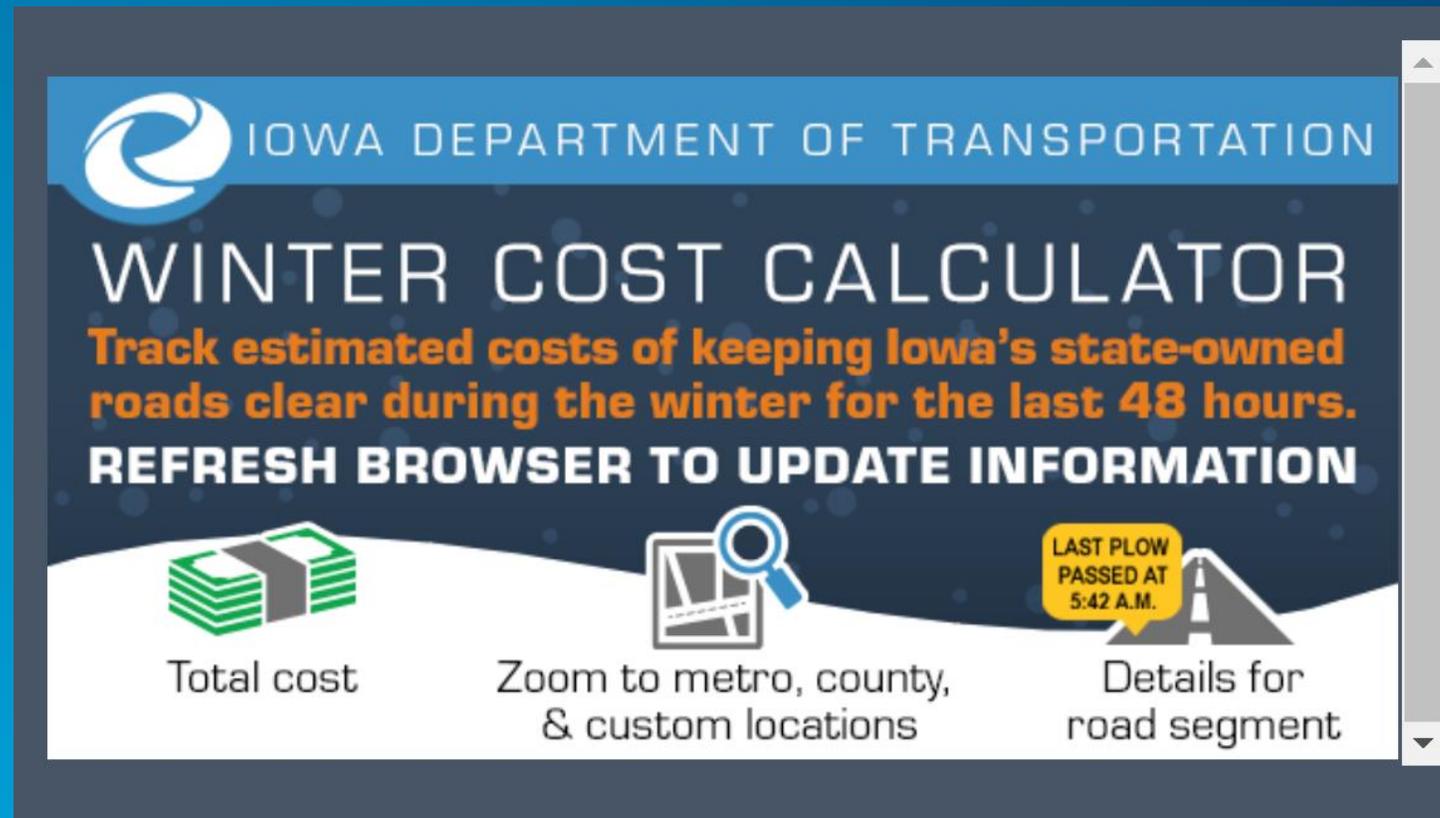
IA 25 - Guthrie Center @iowadot

Monday Dec 14, 2015 8:40 AM

KWWL @KWWL · 1m
We have rain, western part of storm has snow. Wet, heavy, big flake snow. #drivecarefully #kwwlwx #iawx

.....twitter, feeding media channels, citizen self service

Iowa DOT - What else can we do with this data?



The screenshot shows a web application interface for the Iowa Department of Transportation's Winter Cost Calculator. At the top, the Iowa DOT logo and name are displayed. Below this, the title "WINTER COST CALCULATOR" is prominently featured. A key feature is highlighted in orange text: "Track estimated costs of keeping Iowa's state-owned roads clear during the winter for the last 48 hours." A white button with the text "REFRESH BROWSER TO UPDATE INFORMATION" is positioned below the orange text. The interface is divided into three main sections, each with an icon and a label: 1. "Total cost" with a stack of money icon. 2. "Zoom to metro, county, & custom locations" with a map and magnifying glass icon. 3. "Details for road segment" with a road icon and a yellow callout box that reads "LAST PLOW PASSED AT 5:42 A.M." The background of the calculator interface is dark blue with a white horizon line.

IOWA DEPARTMENT OF TRANSPORTATION

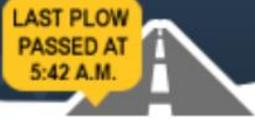
WINTER COST CALCULATOR

Track estimated costs of keeping Iowa's state-owned roads clear during the winter for the last 48 hours.

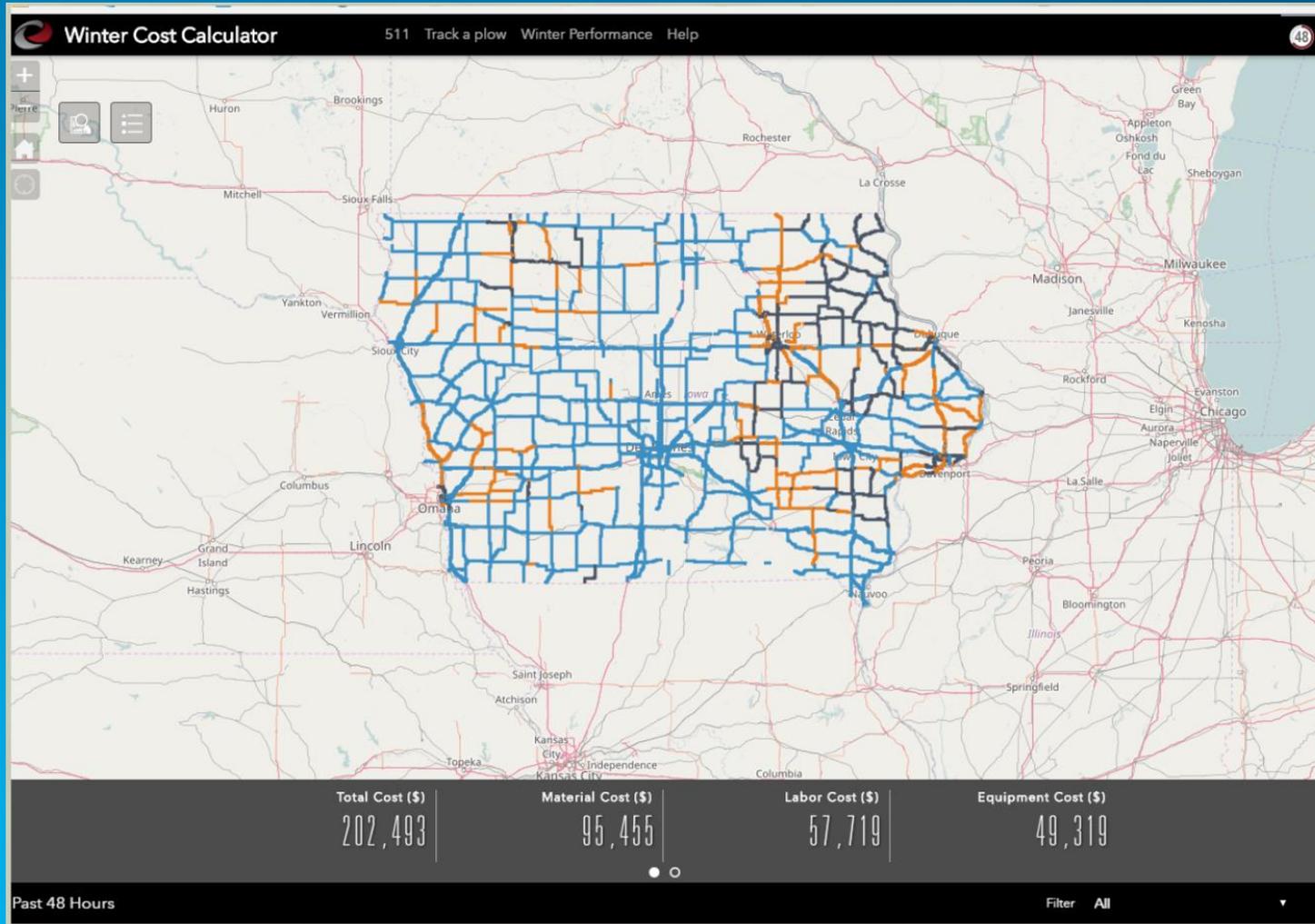
REFRESH BROWSER TO UPDATE INFORMATION

 Total cost

 Zoom to metro, county, & custom locations

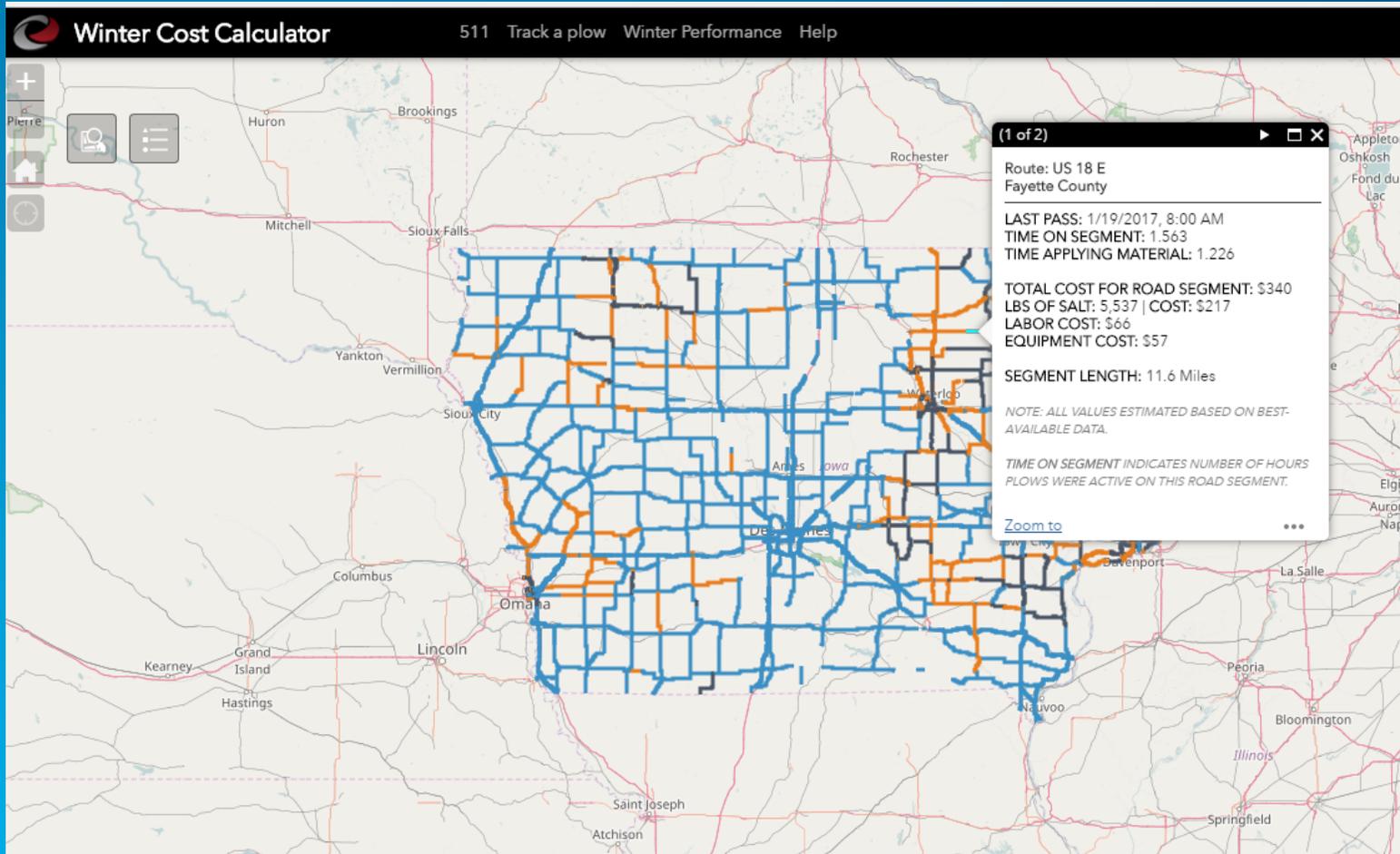
 LAST PLOW PASSED AT 5:42 A.M.
Details for road segment

Winter Cost Calculator



Same data different audience: Support Internal operations & inform public of cost of storms

Winter Cost Calculator



Road segment details:

- Time of last pass,
- Action taken,
- Costs

Iowa DOT – Internal applications – Winter Operations Portal & Reporting

WINTER OPERATIONS PORTAL & REPORTING

Search... Sign out

WOPR Tools Navigation DOT Tools Identify/Query Measure Markup

Statewide Response By District Storm Response By Cost Center Storm Response By District Active Trucks By District Active Trucks By Cost Center Initial View Google Street View Identify Print Export

WOPR Reports Truck Locator Basic Tools

Identify Results (14)

I want to...

- I-35 NB @ Ames-OH
298 TRAFFIC DEATHS THIS YEAR BE A REBEL NOT A CLONE PUT DOWN THE PHONE
- I-35 SB @ Ames Abe-OH
298 TRAFFIC DEATHS THIS YEAR [pt50o0]TEXTING & DRIVING LEADS TO THE DARK SIDE
- I-35 NB @ US 30-OH
298 TRAFFIC DEATHS THIS YEAR [pt50o0]TEXTING & DRIVING LEADS TO THE DARK SIDE
- AM - US30 @ Mile Post 152 (19)
US 30 @ Mile Post 152 (AMPTV19) 12/14/2015 08:13:21

Displaying 1 - 14 (Total: 14)

Page 1 of 1

205.221.97.105/snapshots/AMTV19.jpg

Esri HERE | Iowa Department of Transportation - Office of ...

Begin with the basics:

- Weather
- Road conditions
- Traffic Cameras

Add new sources:

- Plow locations
- Plow dash cam photos

Manage operations

- Digital Signs

Iowa Open Data Access

IOWADOT OPEN DATA

Find [] My Data Sign In

IOWA DOT OPEN DATA

MANAGING IOWA'S TRANSPORTATION INFRASTRUCTURE

Search for data []

Welcome to the Iowa Department of Transportation's public platform for exploring and downloading open data. The Iowa DOT is committed to providing the traveling public, lawmakers and partners with easy to understand information that demonstrates how we are managing the state's transportation infrastructure. We are working hard to maximize the performance of our existing structures, minimize costs and improve the public's experience when traveling in Iowa. We are continuously developing new tools to help our stakeholders clearly see how we are performing.

Open Data | Featured Apps | GIS Webdata | Interactive Maps | Training | AGOL User Guide

EXPLORE DATA CATEGORIES

- OPERATIONS**
View real-time data from our snowplow fleet, ITS devices (cameras and message signs), 511 events, surface/pavement, and more. Data in this category is updated at least once per day.
- CRASH**
Explore city and county crashes, intersection listings, and vehicle/person crash data.
- BOUNDARY AND REFERENCE**
View right of way data, LRS routes, district boundaries, and more.
- CLASSIFICATIONS**
Includes data that is broken down and displayed by specific classifications such as right of way and rest areas, and data maintained inside the Roadway Asset Management System (RAMS).
- IMPROVEMENT**
- INVENTORY**
- AVIATION**
- TRANSIT**

<http://data.iowadot.gov>

IOWA DOT DATA PORTAL

IOWADOT OPEN DATA

Find [] My Data Sign In

FEATURED APPLICATIONS

Apps provide simple access to information and tools for customers to better understand our datasets. Take a look at some of our applications to see examples of what you can create with our data.

- WINTER COST CALCULATOR**
How much money is spent to keep the roads clear?
- TRACK A PLOW**
Where are the snowplows and what are the road conditions?
- IOWA BRIDGES**
What are the conditions of Iowa's bridges?
- STATEWIDE PARK AND RIDE**
Where are Park and Ride lots located in Iowa?
- TRAFFIC VOLUME**
How much traffic travels on my road daily?
- FIVE-YEAR PROGRAM**
What projects are included in the Five-Year Program?
- INFRASTRUCTURE CONDITION EVALUATION**
Is Iowa's infrastructure meeting our needs?
- TURNING MOVEMENTS**
How are drivers moving through intersections?

EXPLORE MORE PUBLIC APPS | EXPLORE MORE IOWA DOT APPS

511 EVENTS 240 Events Source: CAS211 Team	CABLE BARRIERS IN IOWA 2,307 Miles Source: Cable Barriers	Live Traffic Cameras 433 Live Video Feeds Source: IATPA Cameras
--	--	--

FEATURED WINTER DATASETS

Sharing data through open services – spawn new applications

Data Driven Decisions... lead to better government

- Driven by open data and supplemented by crowdsourced data
- Acting on actionable intelligence in real-time
- Leveraging Maps, Dashboards and Infographics, Reports
- Encouraging Iterative policy making



Portland Traffic Fatalities & Serious Injuries, 2005-2014

