Engaging the Crowd

Nick Land

nland@esri.com

GIS Is Getting Smarter

Integrating and Leveraging Many Innovations

Web

Cloud

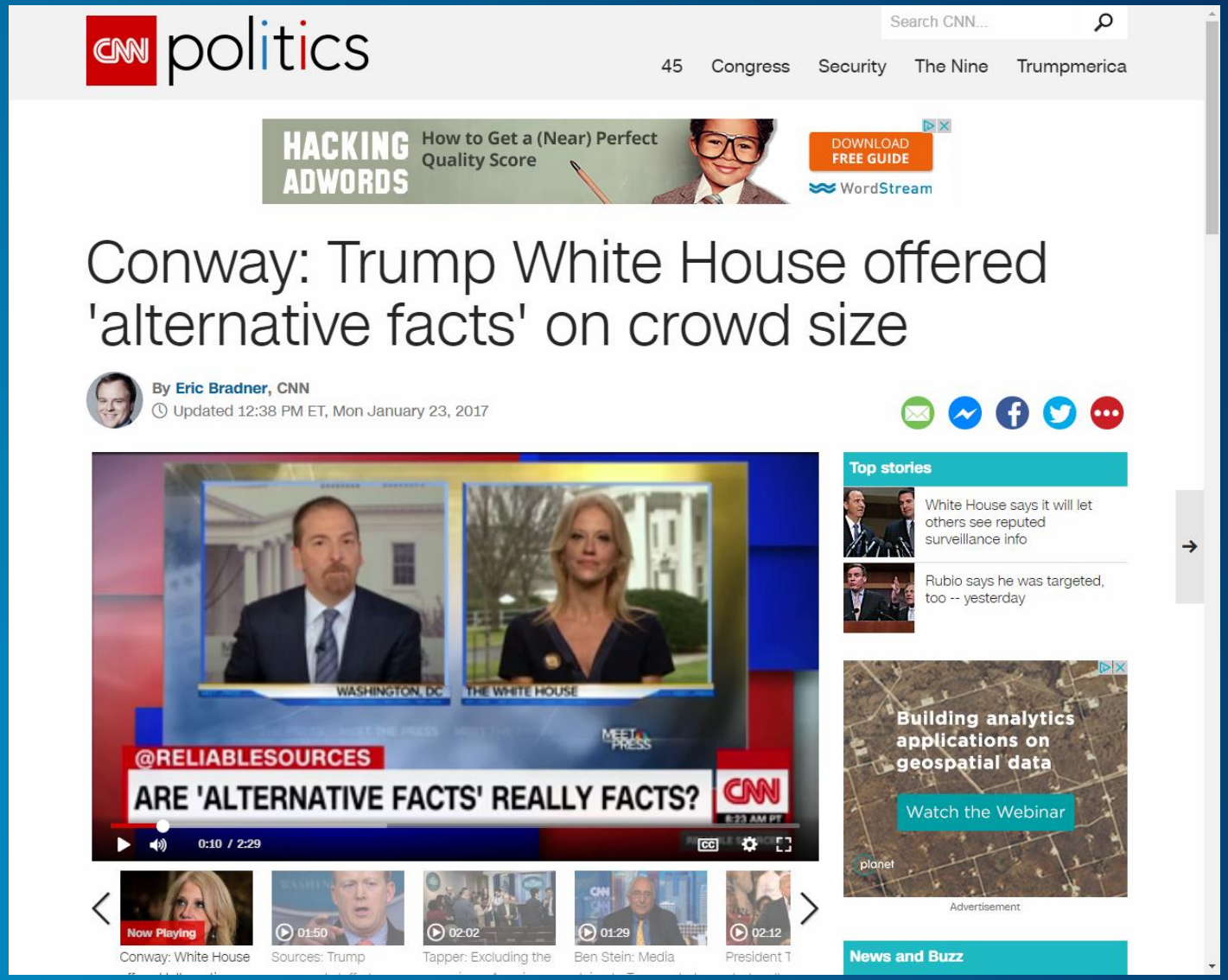
Distributed

Mobile

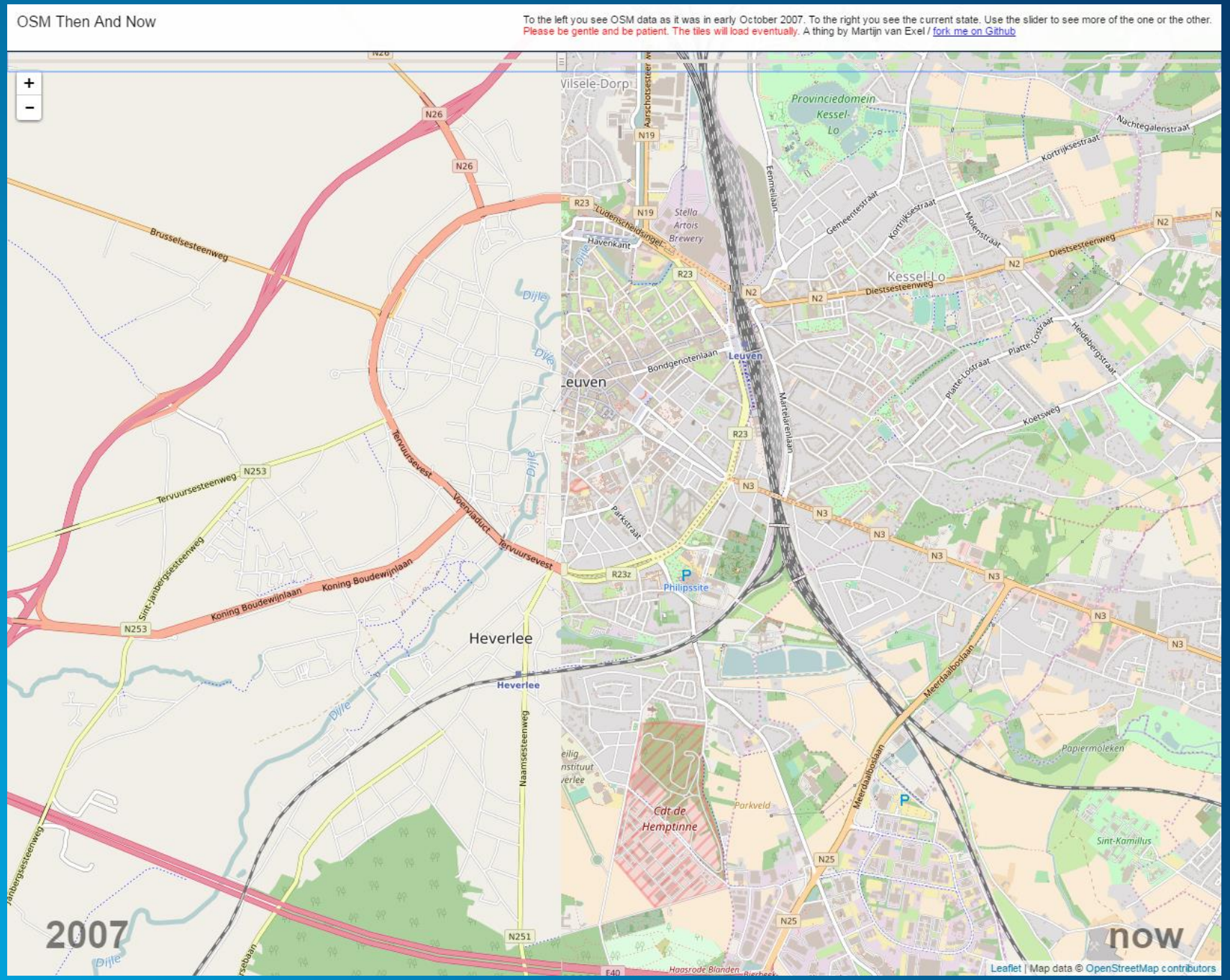
Helping Organizations Work Smarter

Challenges

- Provenance
- Objectivity
- Quality
- Privacy
- Reliable



Crowdsourcing & Geography


OSM Then And Now
To the left you see OSM data as it was in early October 2007. To the right you see the current state. Use the slider to see more of the one or the other.
Please be gentle and be patient. The tiles will load eventually. A thing by Martijn van Exel / fork me on Github
Heverlee
Leuven
Kessel-Lo
Provinciedomein Kessel-Lo
Stella Artois Brewery
Philipssite
Cdt de Hemptinne
Papiermoleken
Sint-Kamillus
Brusselsesteenweg
Tervuursesteenweg
Koning Boudewijnlaan
Tervuursevest
Voerviaduct
Naamsesteenweg
Diestsesteenweg
Meerdaalboslaan
Martelarenlaan
Bondgenotenlaan
Havenkant
Parkstraat
Parkveld
Nachtegalenstraat
Kortrijksestraat
Gemeentestraat
Molenstraat
Platte-Lostraat
Heidebergstraat
Koetsweg
Eenmeilaan
Ludenscheidsingel
Aarschotsesteenweg
Sint-Janbergsesteenweg
Haasrode Blanden
Dijle
N26
N19
R23
N2
N3
N253
N251
N25
R23z
E40
2007
now
Leaflet | Map data © OpenStreetMap contributors

OSM

Get the best route, every day, with real–time help from other drivers.

Waze is the world's largest community-based traffic and navigation app. Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute.

WAZE. OUTSMARTING TRAFFIC, TOGETHER.

GET IT ON Google Play Download on the App Store

Nothing can beat real people working together

Imagine millions of drivers out on the roads, working together towards a common goal: to outsmart traffic and get everyone the best route to work and back, every day.

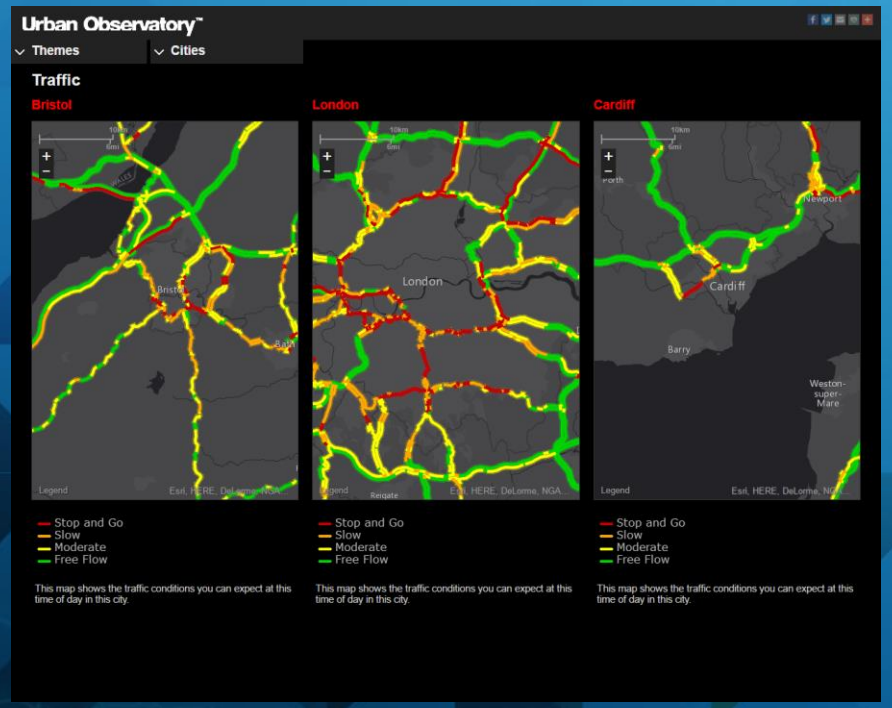
Traffic is more than just red lines on the map

Get alerted before you approach police, accidents, road hazards or traffic jams, all shared by other drivers in real-time. It's like a personal heads-up from a few million of your friends on the road.

Real-Time

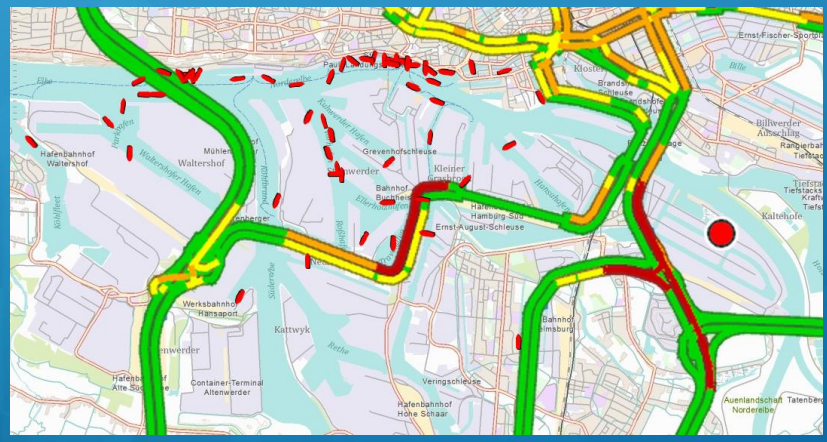
High-Velocity Monitoring and Alerting

Urban Observatory

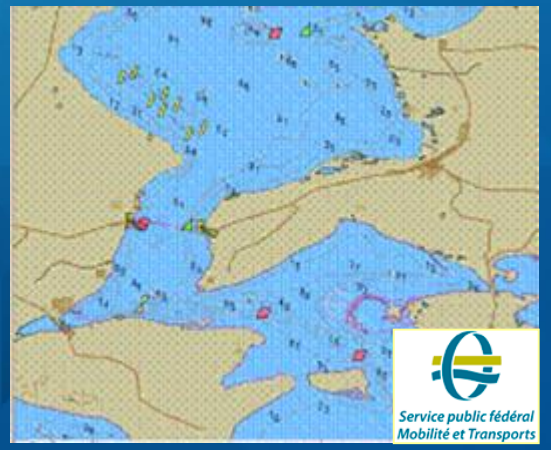


Train Tracking - Finland

Vessel Tracking - Hamburg



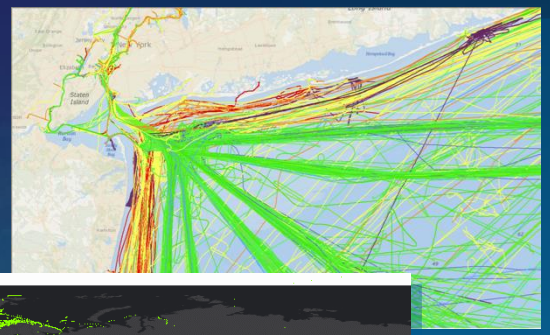
Vessel Tracking - Belgium



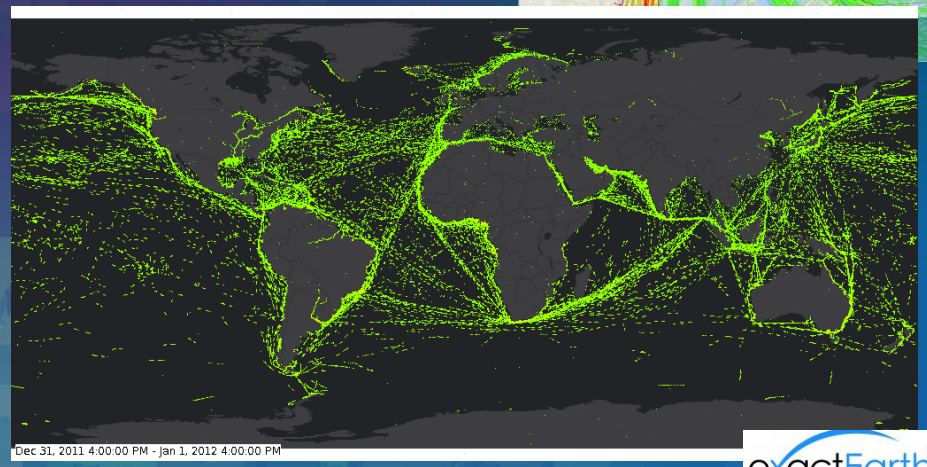
BIG Data

GIS Analysis and
Visualization of Massive Data

NYC Ship Tracks



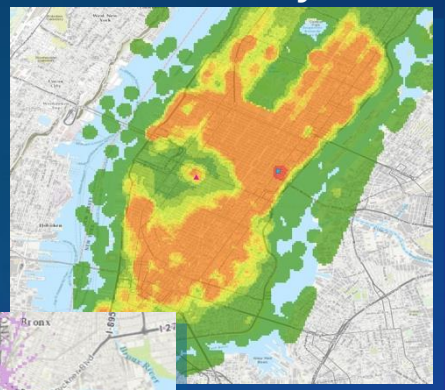
AIS Ship Movements



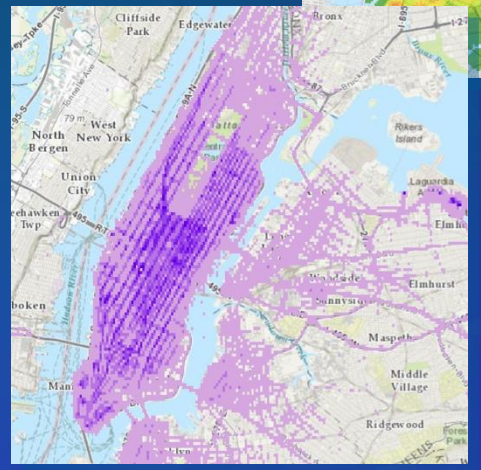
Includes material © 2015 exactEarth, Ltd. All Rights Reserved.

NYC Taxi Saturday Night

NYC Taxi Density



NYC Taxi 2013



FEMA

Follow FEMA:

Visit: FEMA.gov

FEMA GeoPlatform

Providing geospatial data and analytics in support of emergency management

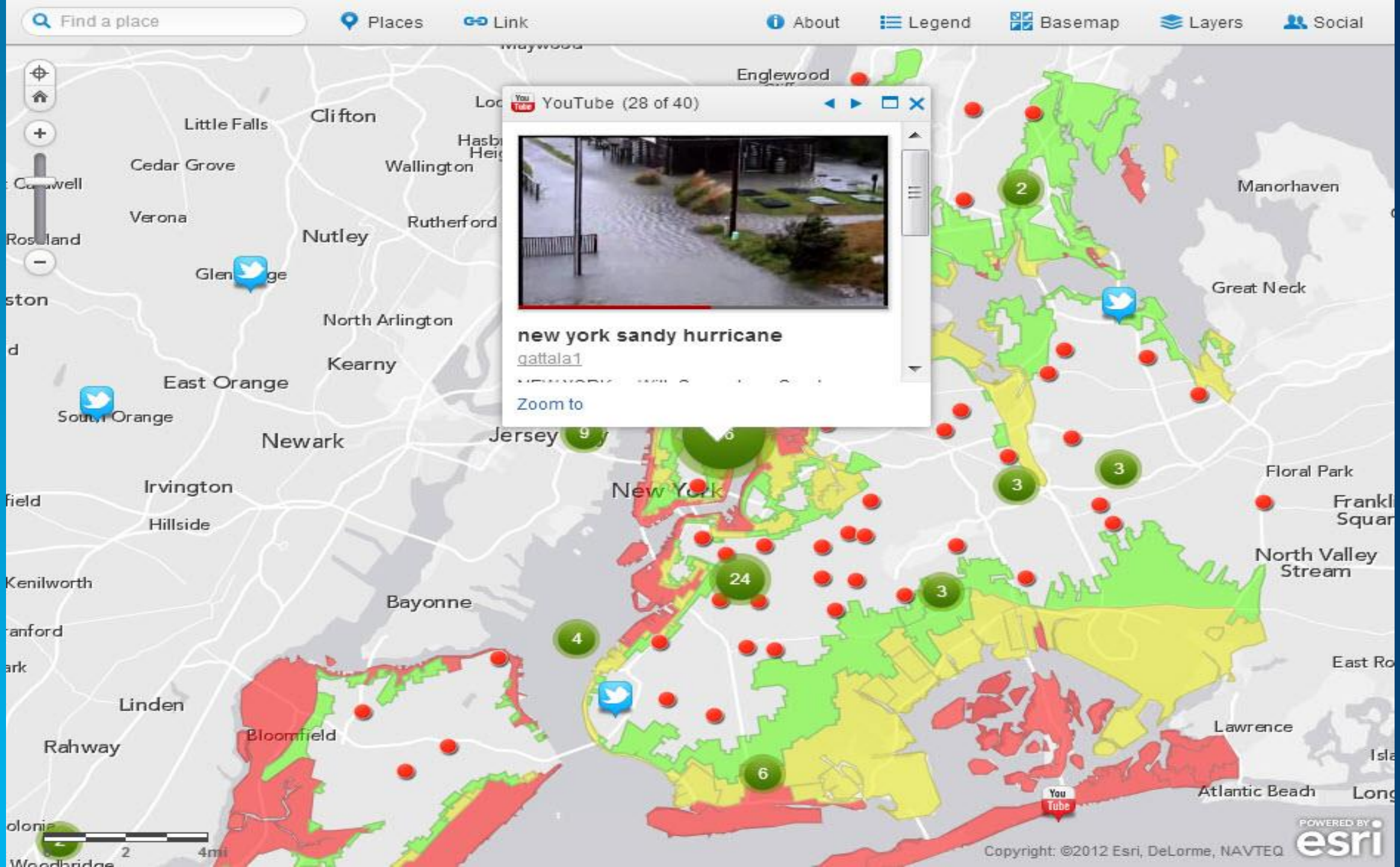
2013 Colorado Floods Situational Awareness

Tropical Storm Karen

FEMA's National Flood Hazard Layer

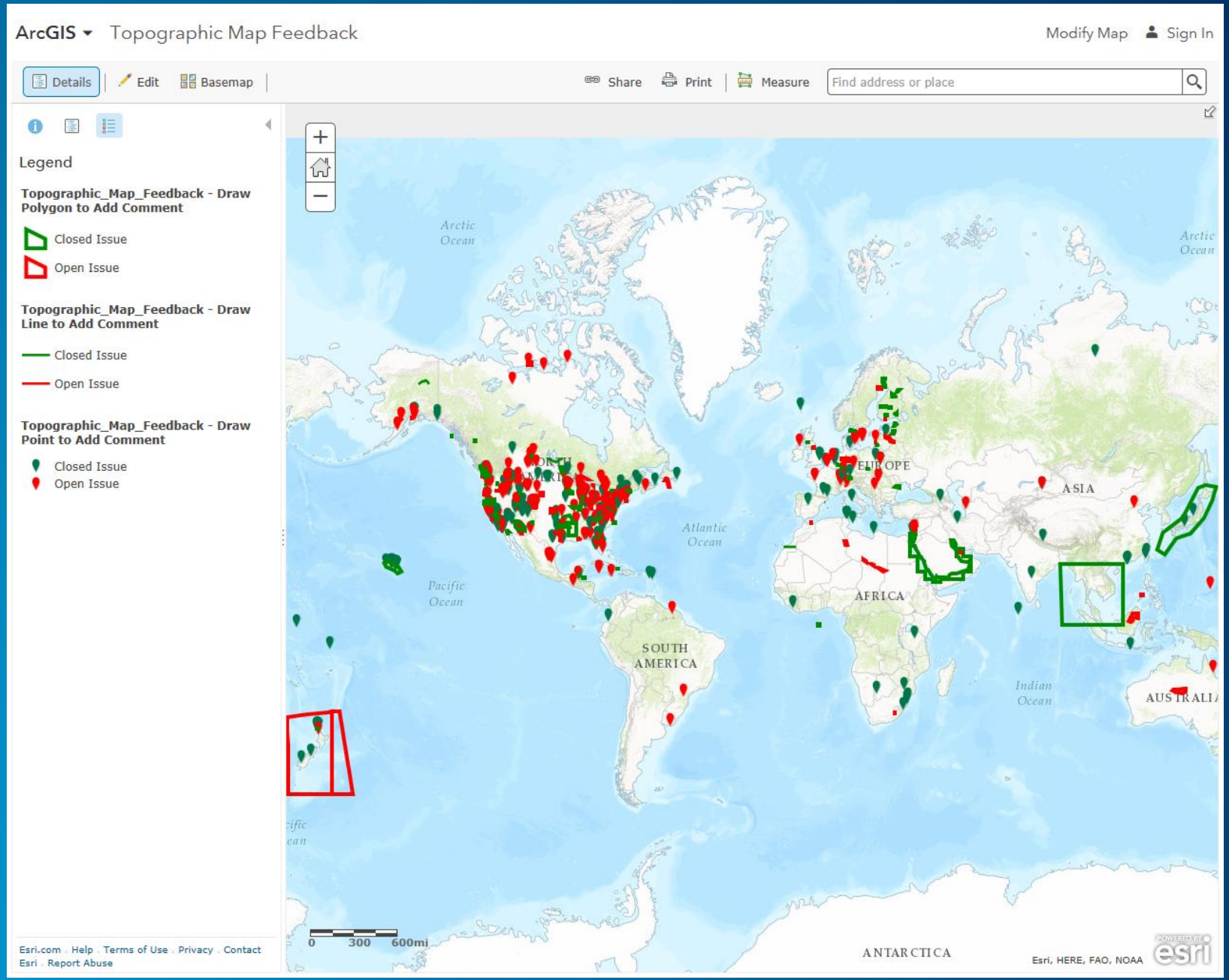
FEMA Oklahoma Tornadoes Situation Map

FEMA is a partner of the FGDC's National Geospatial Platform Visit: www.geoplatform.gov


Find a place
Places
Link
About
Legend
Basemap
Layers
Social
YouTube (28 of 40)
new york sandy hurricane
gattala1
Zoom to
Englewood
Little Falls
Clifton
Cedar Grove
Wallington
Verona
Nutley
Rutherford
North Arlington
Kearny
East Orange
South Orange
Newark
Jersey
New York
Irvington
Hillside
Kenilworth
Bayonne
Linden
Rahway
Bloomfield
Manorhaven
Great Neck
Floral Park
North Valley Stream
Lawrence
Atlantic Beach
2
3
3
3
24
4
6
2
4mi
Copyright: ©2012 Esri, DeLorme, NAVTEQ
POWERED BY esri

Solicited Crowdsourcing

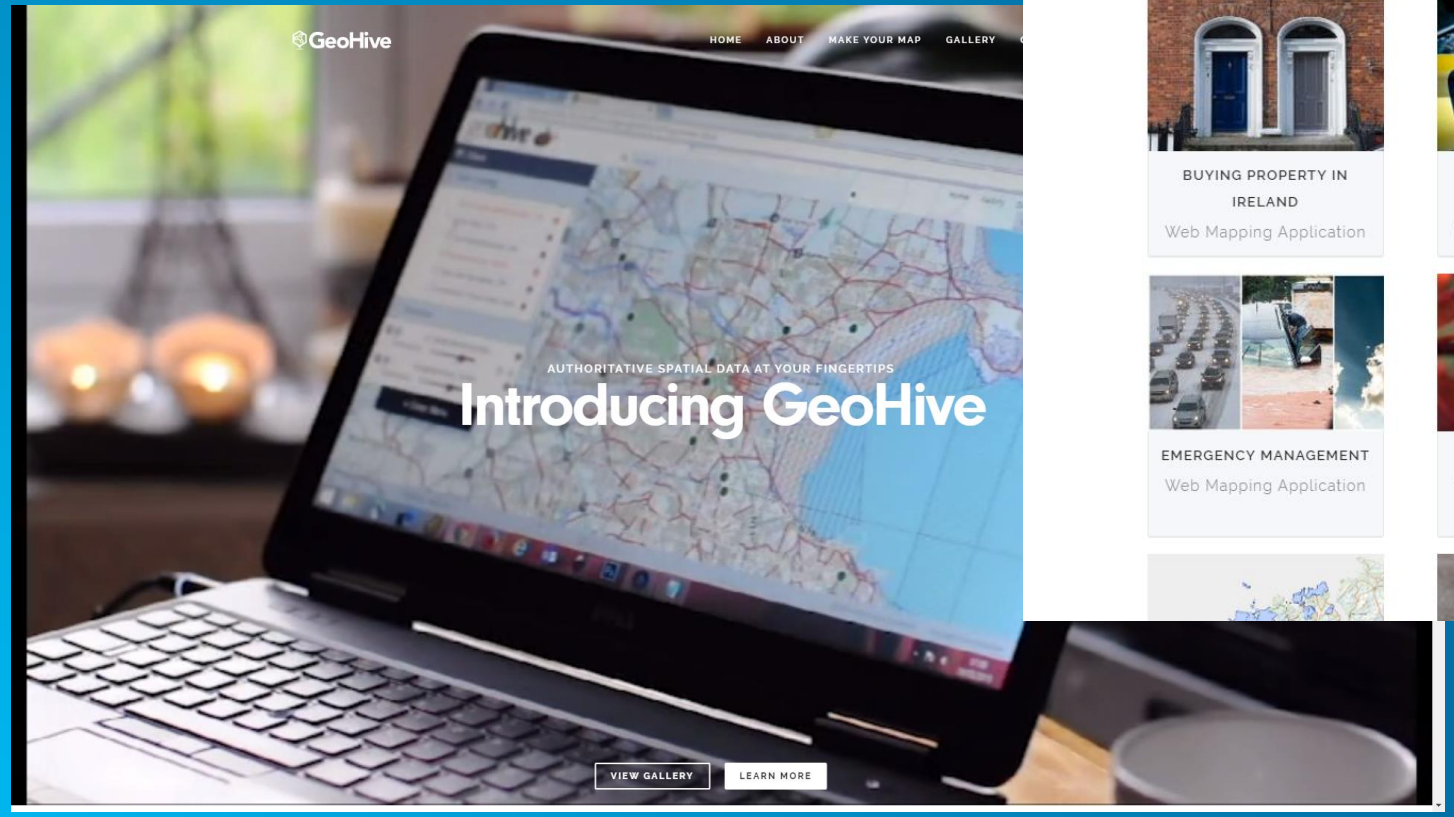
Community Base Map

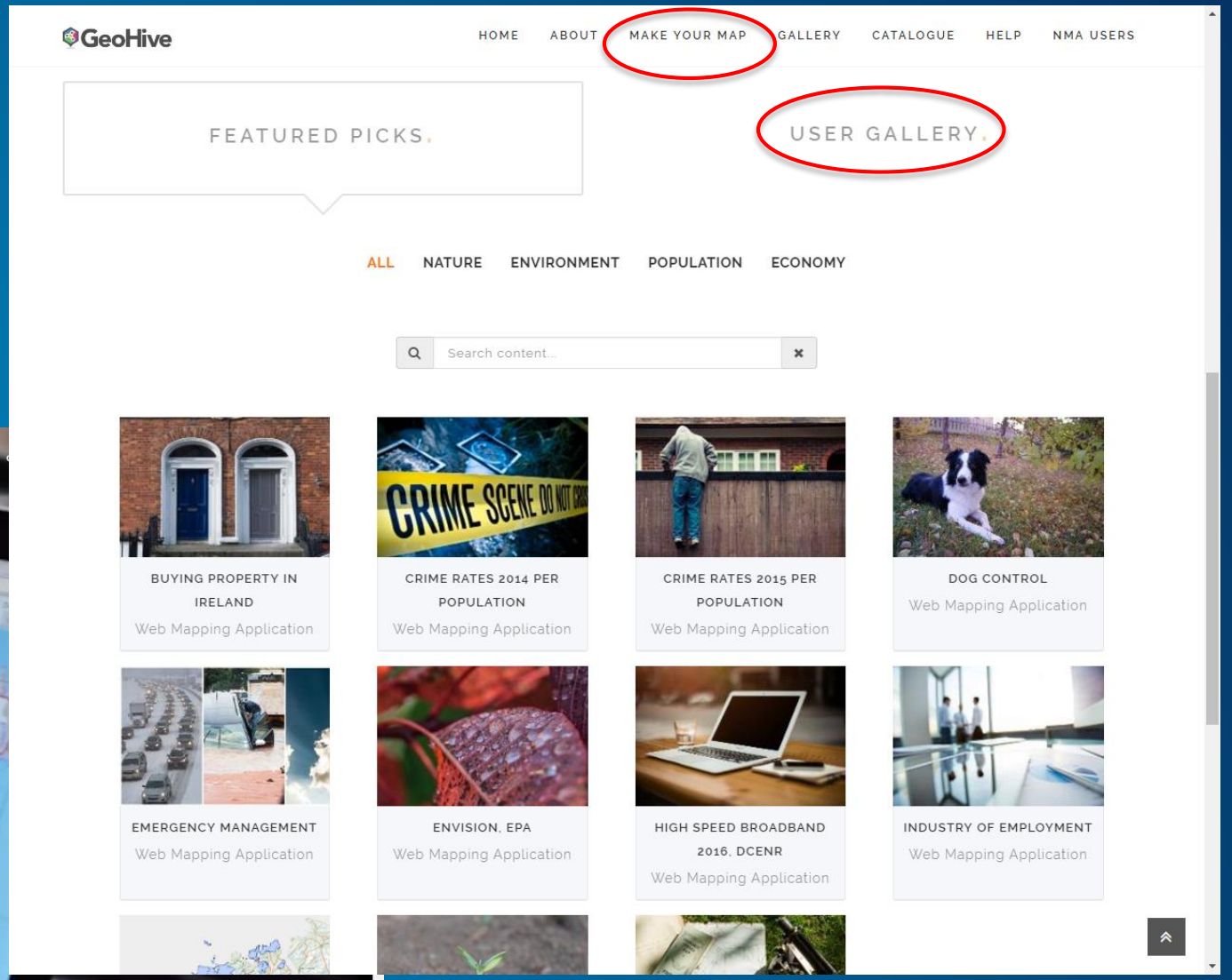


SDIs & Crowdsourcing

From Compliance to Use

- **Open Data**
- **Collaborative platform**

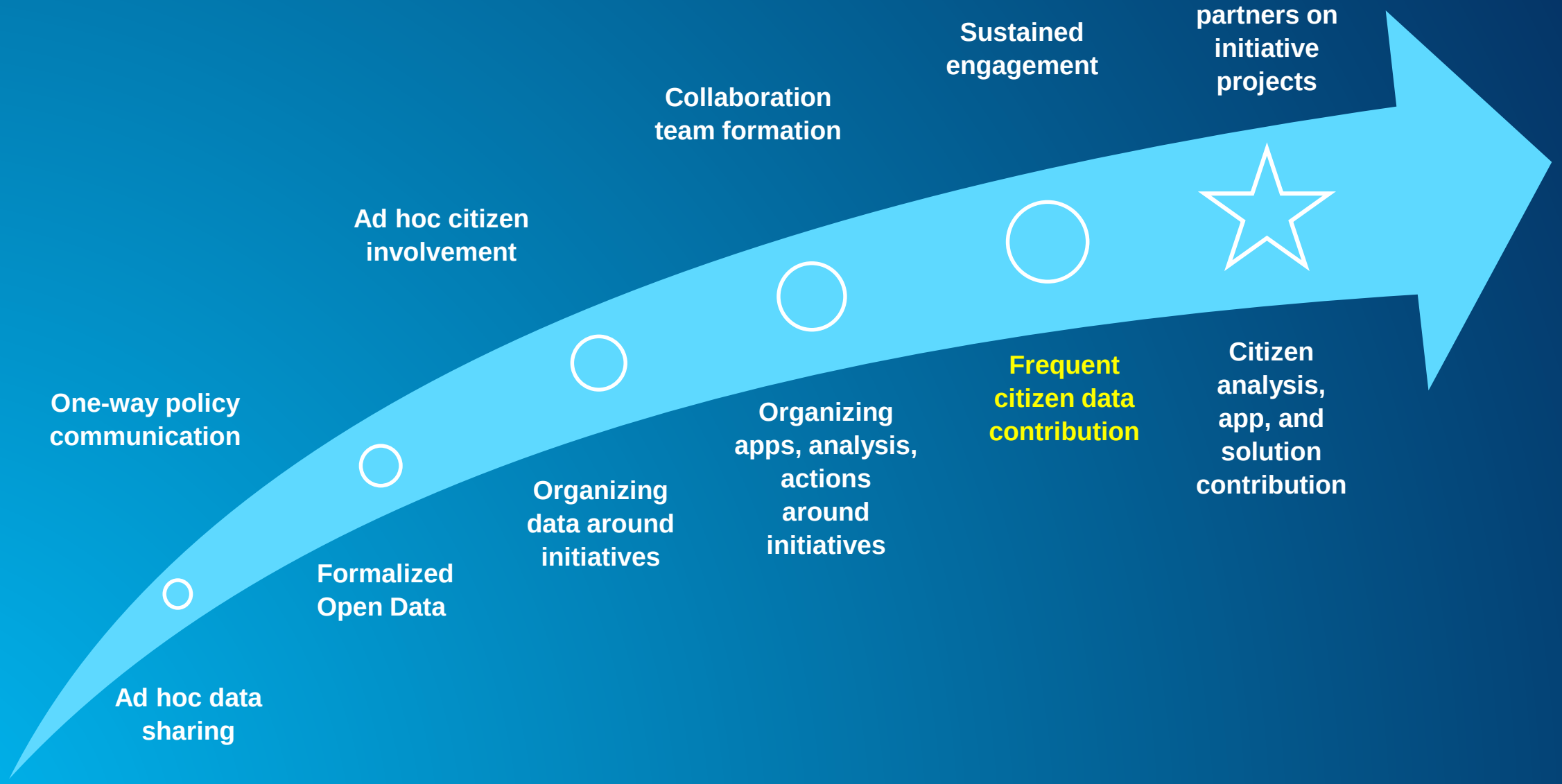




http://geohive.ie

Engagement Maturity Path – Today

Engagement Maturity Path



Leaders respond to challenges with “Smart” promises and aspirations

Safe

Healthy

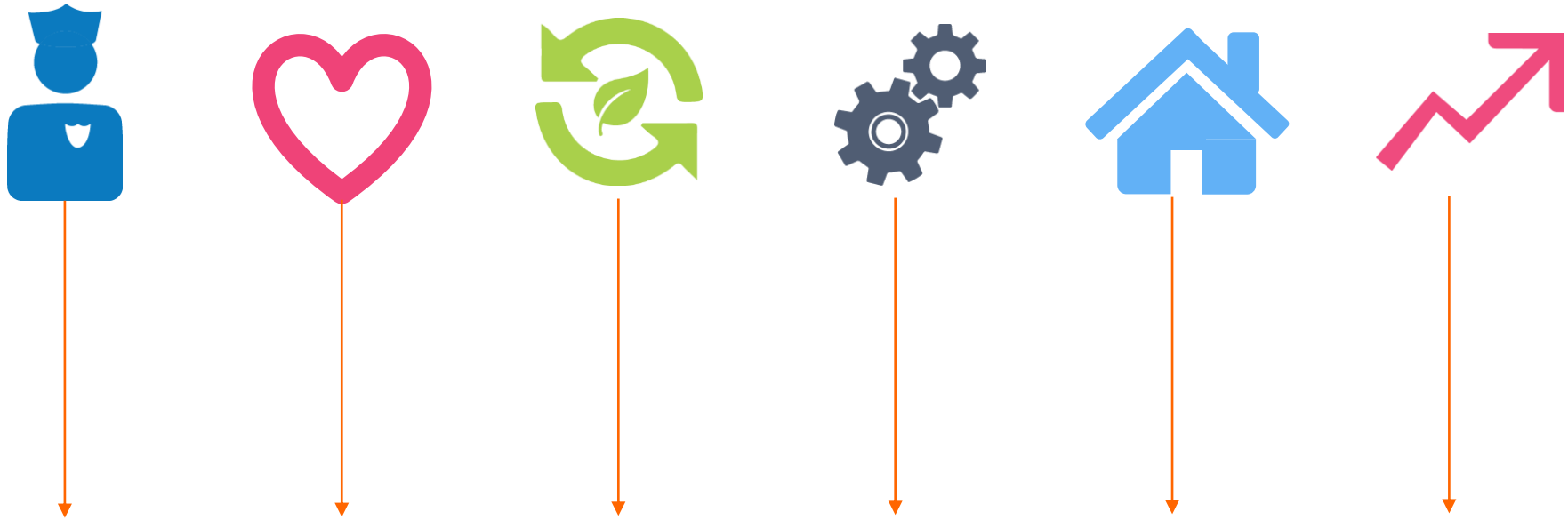
Sustainable

Well-run

Livable

Prosperous

Those aspirations get translated into actionable, real-world initiatives



Implement Performance Management

Reduce Traffic Congestion

Create More Affordable Housing

Reduce Homelessness

Increase Recreation Opportunities

Ensure Clean Drinking Water

Make Parking Easier

Create Job Availability

Improve Emergency Response Times

Use Less Energy

Encourage Startups

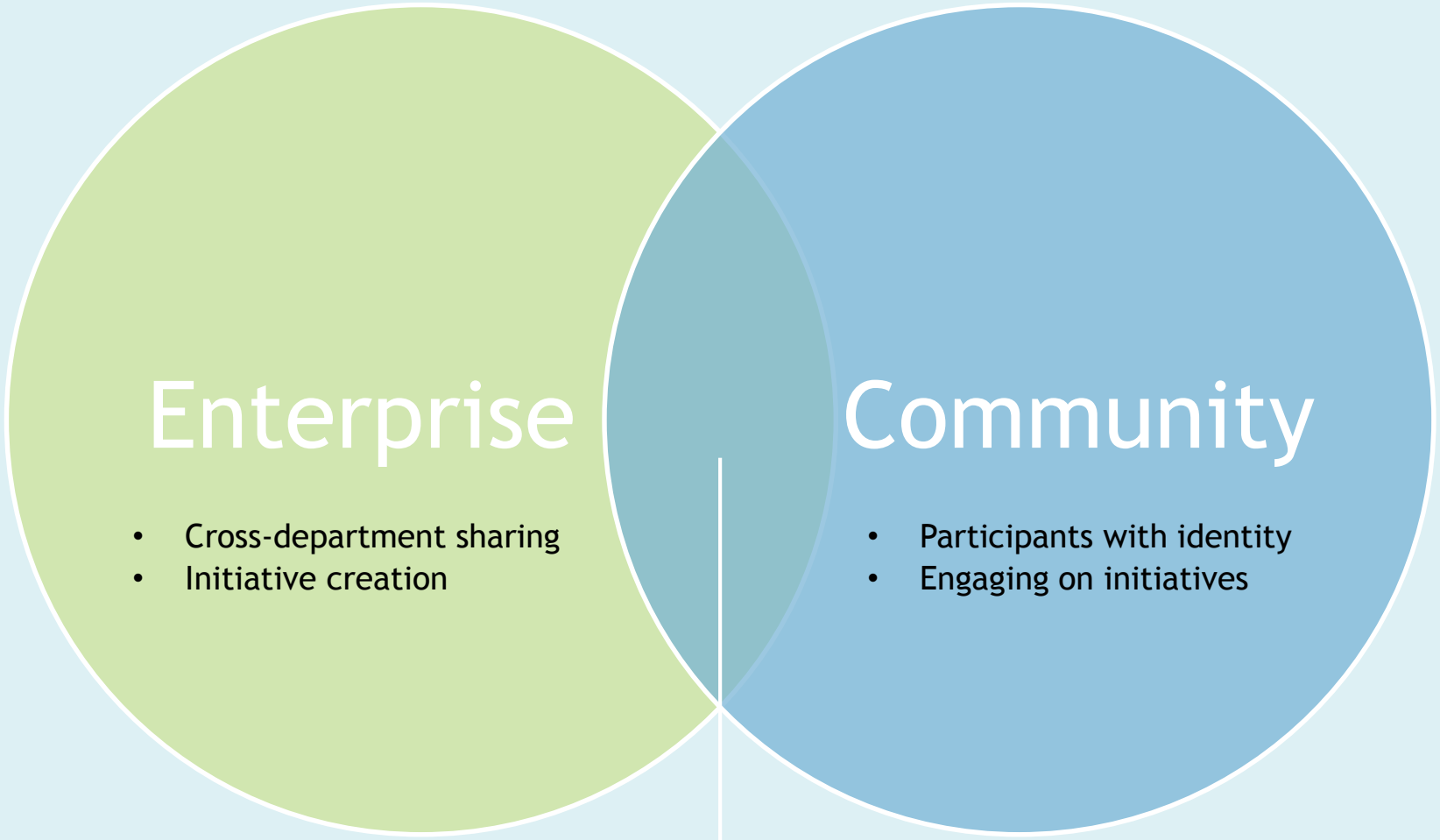
Improve Earthquake Preparedness

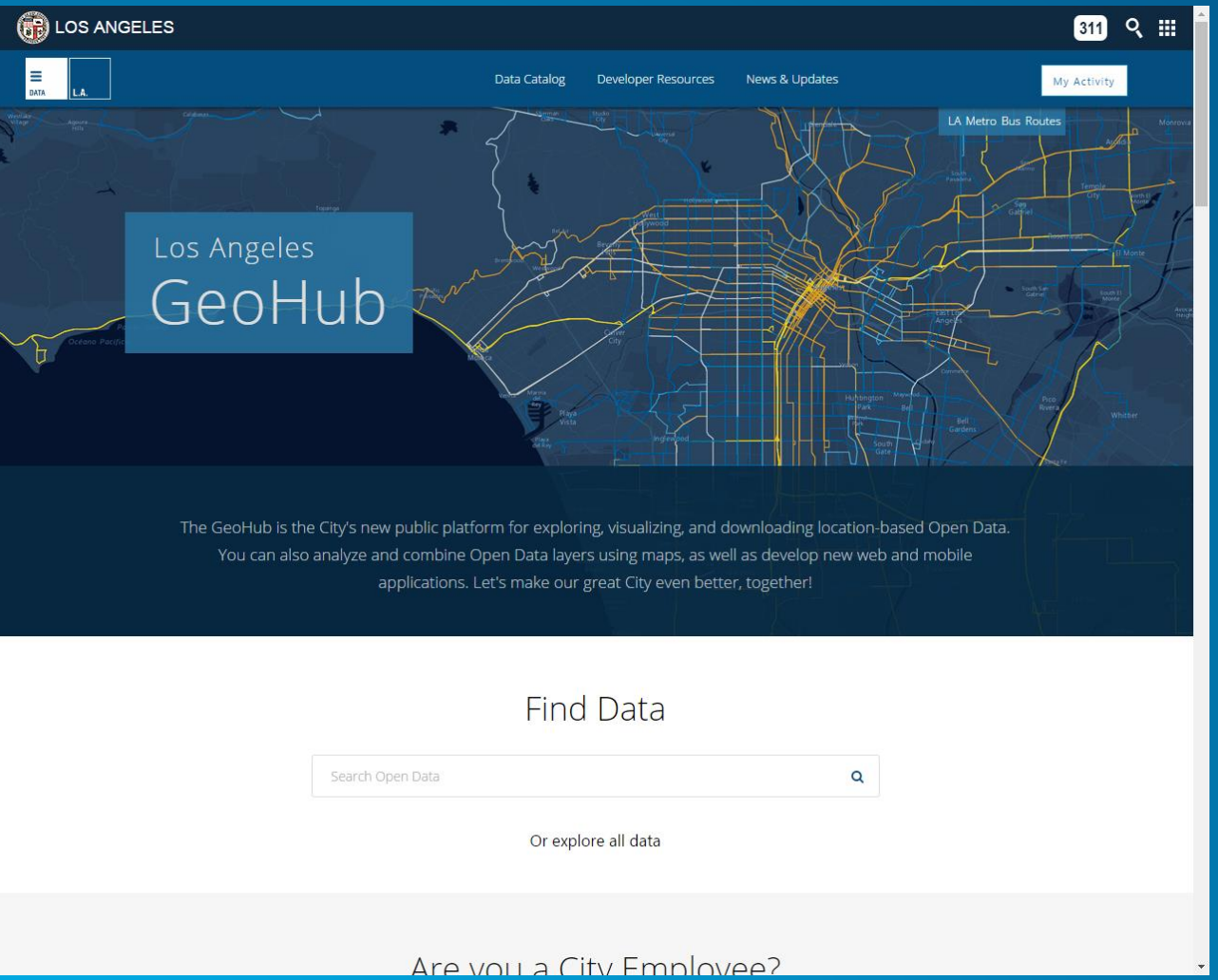
THE HUB

INNOVATION AND ENGAGEMENT

ENGAGEMENT
Transportation
Economic Development
Health
Community Development
Social Services
Utilites
Public Safety
Fire
Facilities
Engineering
EMS
Innovation
Land Management
NGOs
Community Leaders
Citizens
City Staff
Academia
Start-Ups

Partnership




LOS ANGELES
311
Data Catalog
Developer Resources
News & Updates
My Activity
LA Metro Bus Routes
Los Angeles
GeoHub
The GeoHub is the City's new public platform for exploring, visualizing, and downloading location-based Open Data. You can also analyze and combine Open Data layers using maps, as well as develop new web and mobile applications. Let's make our great City even better, together!
Find Data
Search Open Data
Or explore all data
Are you a City Employee?

LOS ANGELES
311
Unlock the City's Geodata
Anyone can use open data from the City of Los Angeles Innovation Hub at no cost. Download raw data and share your insights with your community or build new applications that serve specific users.
.537
Explore
Dig into the data.
Visualize & Analyze
Highlight spatial patterns and discover trends.
Build
Develop new apps using templates and API's.
Share
Embed analysis on your website.
Understanding Our City
Use Open Data with curated Community data to understand the City. See more examples here
Job Accessibility by Transit
Household Above & Below Poverty Line
Population Pressure
Demographic Atlas

Initiative Web Pages

Featured Initiative

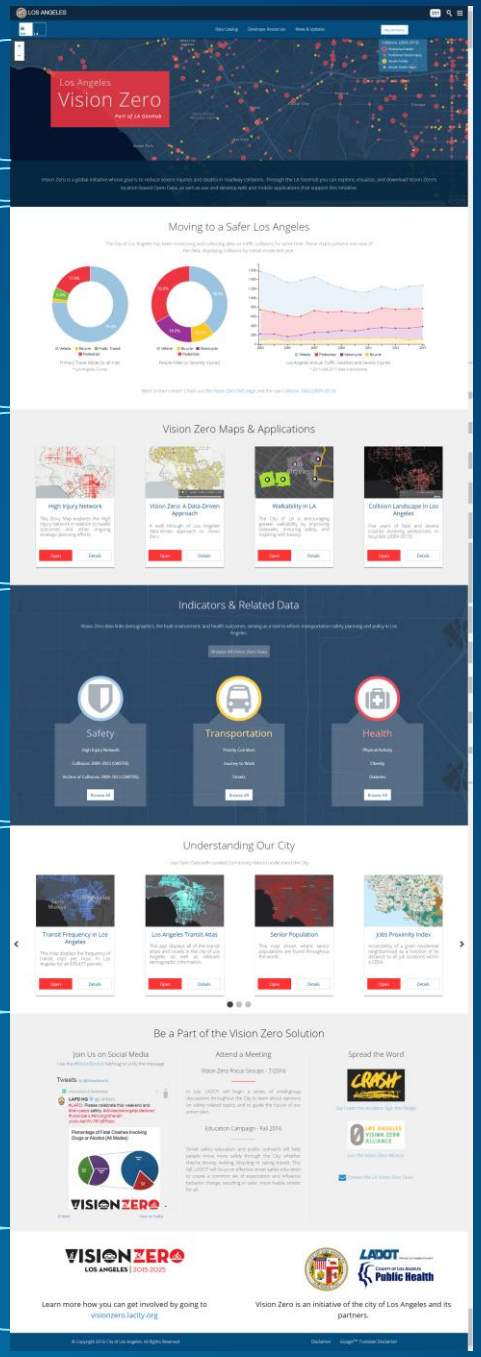
VISION ZERO
LOS ANGELES | 2015-2025

"Every year, more than 200 people are killed while trying to move around Los Angeles. Nearly half of the people who die on our streets are people walking and bicycling, and an alarming number of them are children and older adults. Our streets must be safer." – Mayor Eric Garcetti

See how the Los Angeles Vision Zero initiative is making our streets safer by putting data to work.

See Data in Action

Banner
Narrative
Performance
Apps
Data Catalog
Maps
Ways to Engage
Participating Agencies



Vision Zero Initiative page

Apps

Focused Applications

Field

- Collector
- Navigator
- Workforce
- Survey123
- Drone2Map

Office

- ArcGIS Earth
- Explorer
- Maps for Office
- Maps for SharePoint
- Operations Dashboard
- Maps for Adobe Creative Cloud
- Maps for Power BI
- CityEngine
- GeoPlanner
- Business Analyst

Community

- Story Maps
- Initiatives
- Open Data
- Photo Survey
- Quick Report
- Crowdsource Polling

Focused, Powerful, and Ready-to-Use

Configurable Apps for Crowdsourcing

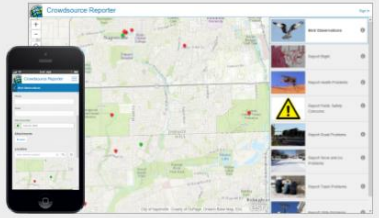
ArcGIS for Local Government GALLERY COMMUNITY DOCUMENTATION SEARCH esri

Crowdsource Reporter

Home | Get Started

Overview

Crowdsource Reporter is a configurable application template that allows users to submit problems or observations. The application has been optimized for smartphones but is responsively designed to be used on smartphones, tablets, and desktop computers.



The Crowdsource Reporter application presents one or more maps that can be used to report a problem or observation. Users can anonymously submit new reports, review existing reports, and comment and vote on reports or observations submitted by other users. They also can authenticate with their social media or ArcGIS credentials and track the status of problems or observations they have reported.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | VIEW APPLICATION

You may be interested in

ArcGIS for Local Government includes several related maps and apps that also can be configured in your organization:

- Crowdsource Manager
- Crowdsource Polling

Crowdsource Reporter is used in the following maps and apps that can be configured for your organization:

- Citizen Problem Reporter
- Mosquito Service Request
- Vision Zero

Requirements

Crowdsource Reporter requires specific technical experience and software.

Requirement	Description
Experience	▪ Authoring maps ▪ Configuring application templates in ArcGIS Online or Portal for ArcGIS
Software	▪ ArcGIS Online or Portal for ArcGIS subscription

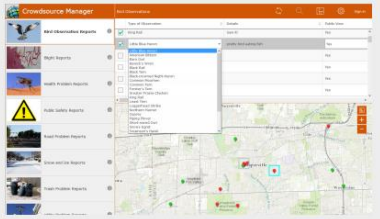
ArcGIS for Local Government GALLERY COMMUNITY DOCUMENTATION SEARCH esri

Crowdsource Manager

Home | Get Started

Overview

Crowdsource Manager, a companion configurable application template to data collection apps such as Crowdsource Reporter, allows users within an organization to review problems or observations submitted through the Reporter application. The application can be used on tablets and desktop computers.



The Crowdsource Manager application presents one or more maps that can be used to review problems or observations reported. Users authenticate with their ArcGIS credentials and look for patterns and clusters, review problem details, update status, and assign responsibility.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | VIEW APPLICATION

You may be interested in

ArcGIS for Local Government includes several related maps and apps that also can be configured in your organization:

- Crowdsource Reporter
- Crowdsource Polling

Crowdsource Manager is used in the following maps and apps that can be configured for your organization:

- Capital Project Tracking
- Citizen Problem Reporter
- Mosquito Service Request

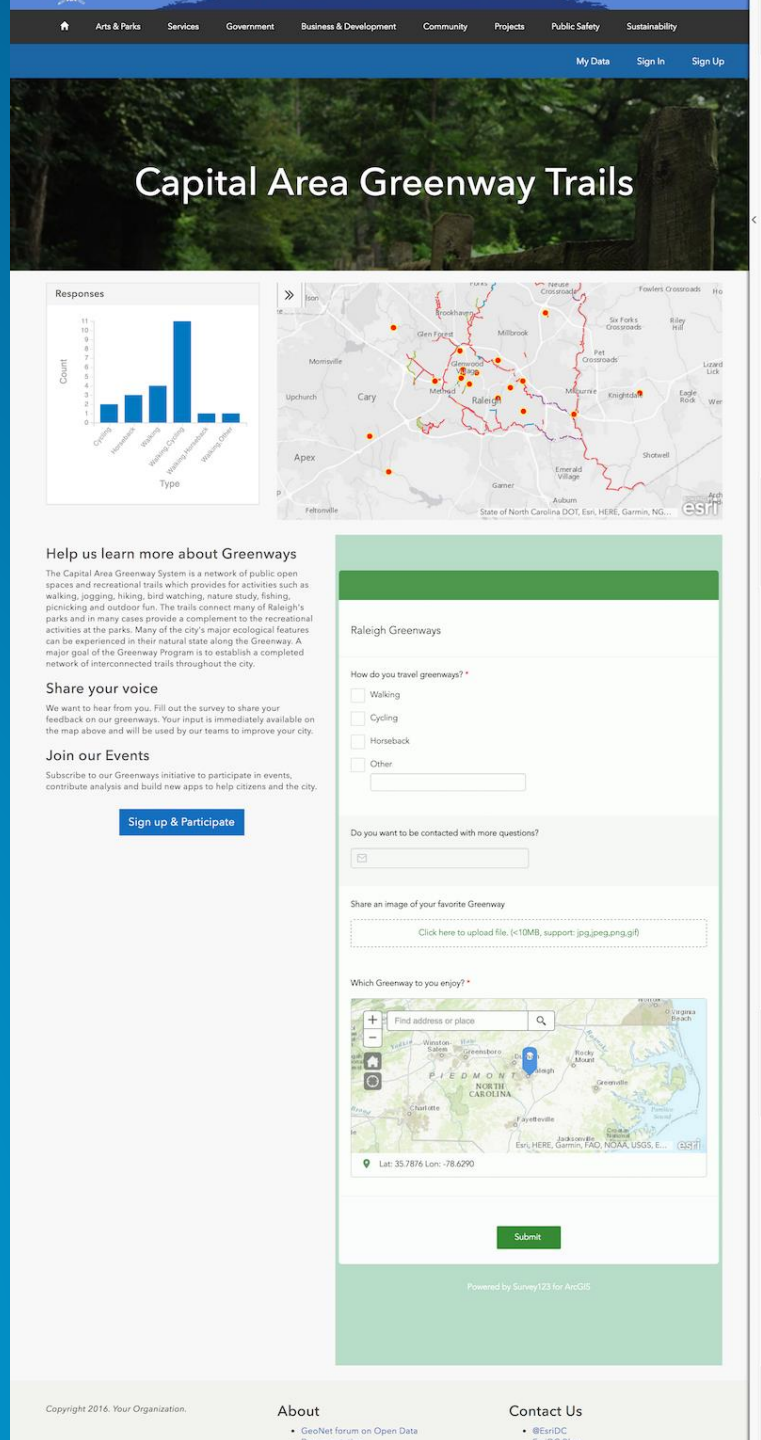
Requirements

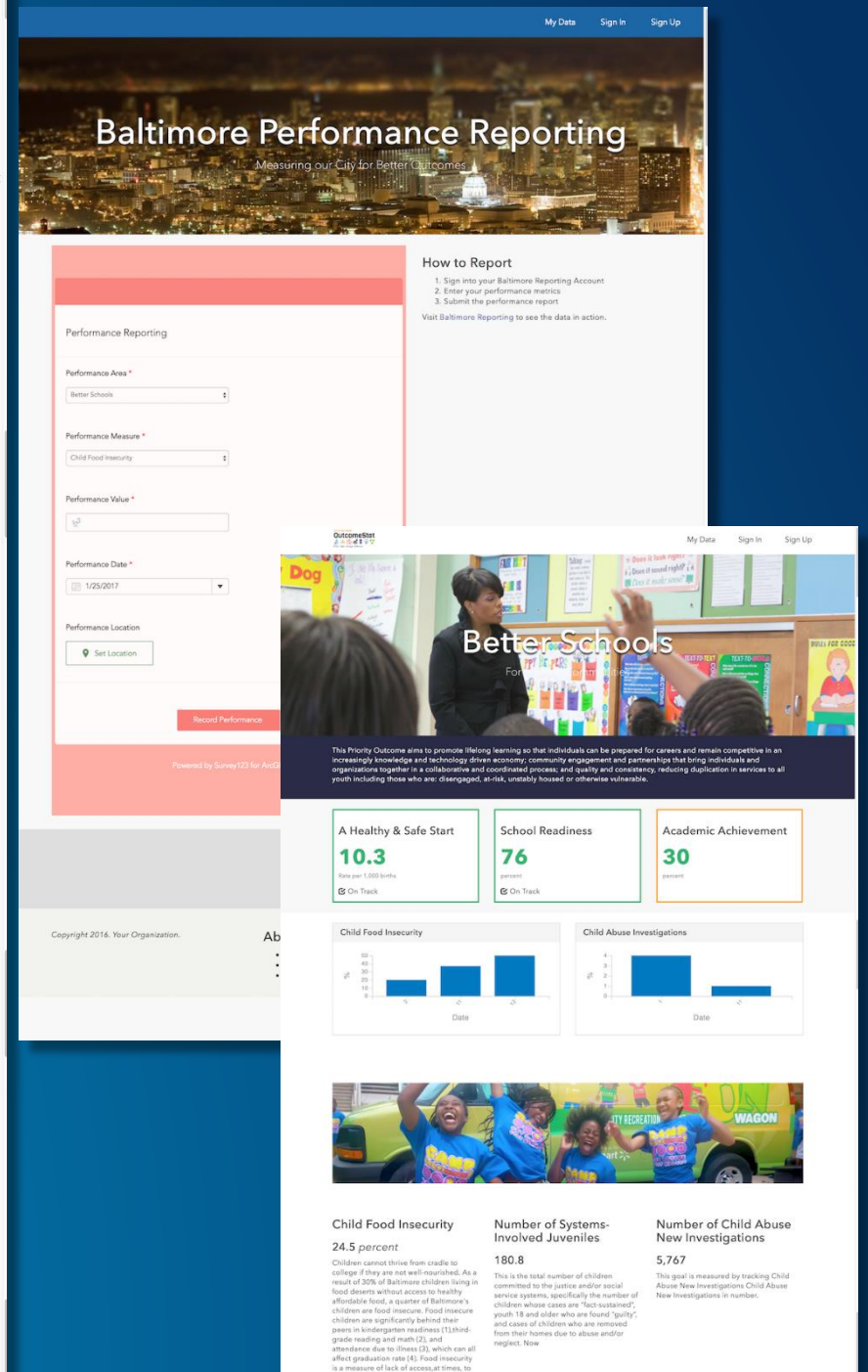
Crowdsource Manager requires specific technical experience and software.

Requirement	Description
Experience	▪ Authoring maps ▪ Configuring ArcGIS Online or Portal for ArcGIS configurable application templates
Software	▪ Portal for ArcGIS or ArcGIS Online subscription

Crowdsourcing: Surveys & Data Collection

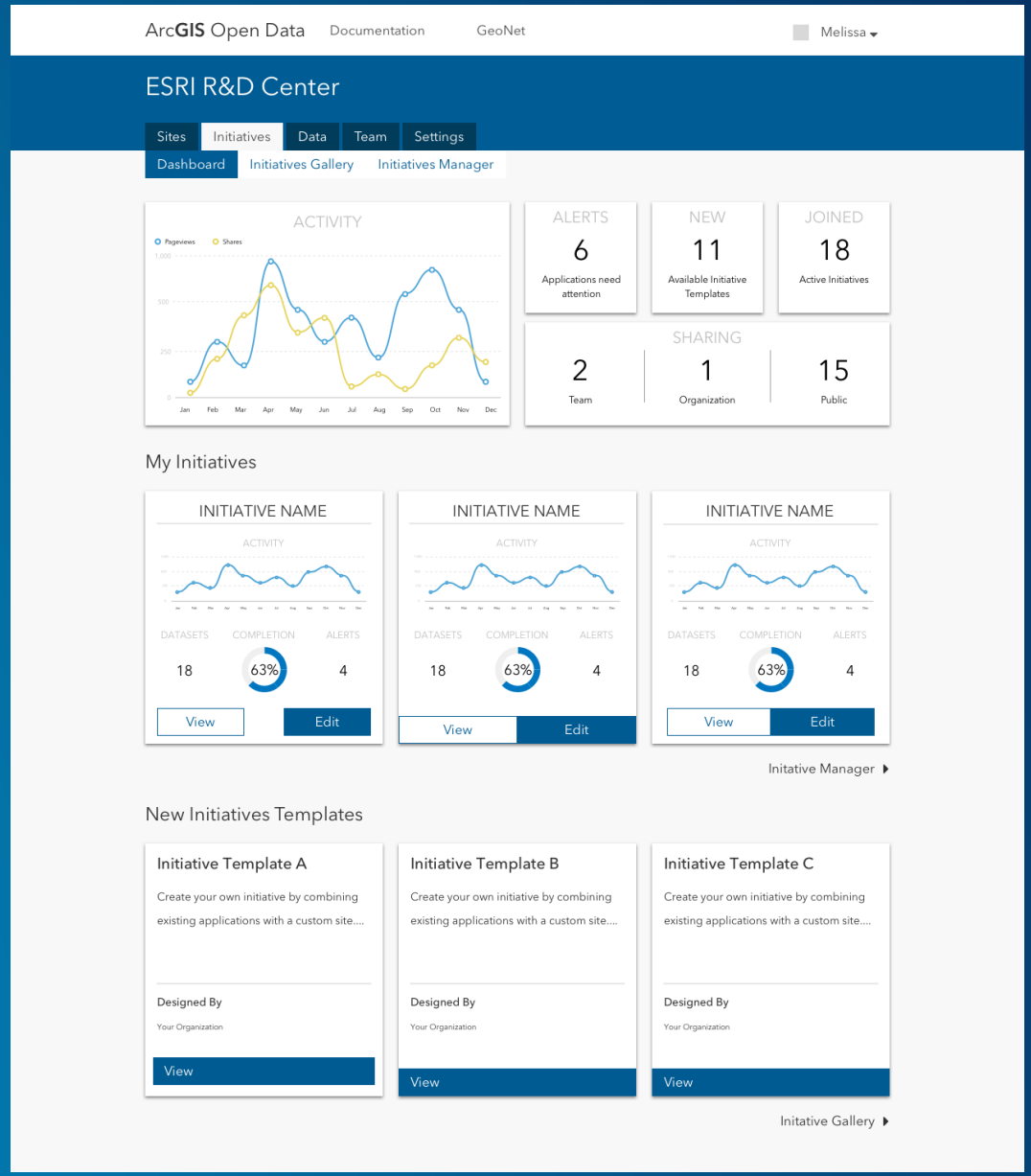
- Initiative-specific data gathering by the public community **with identity**
- **Provides trust in data collected**



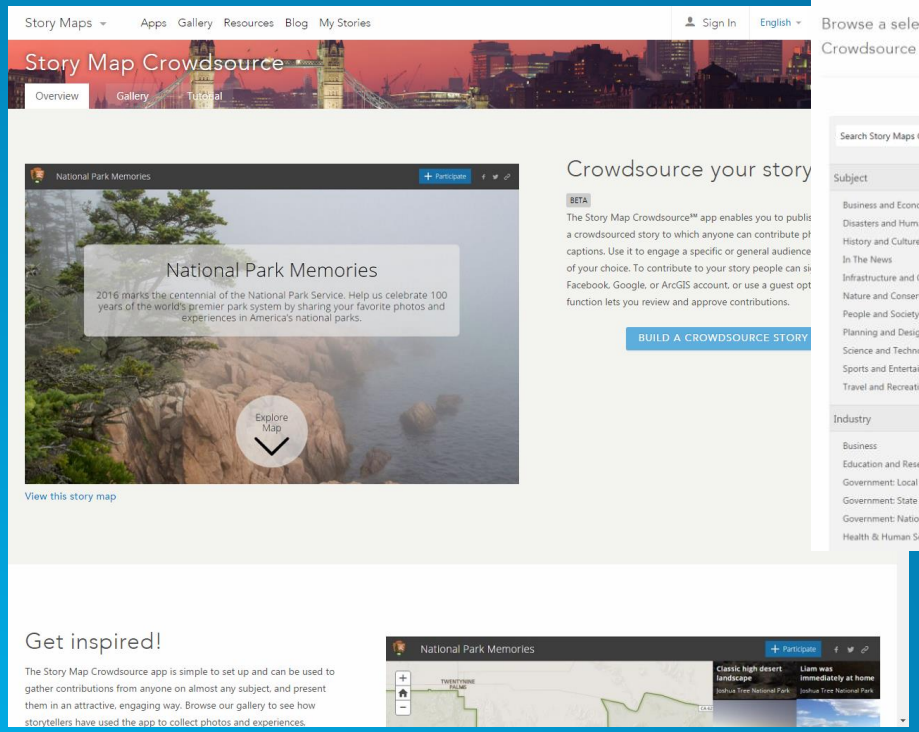


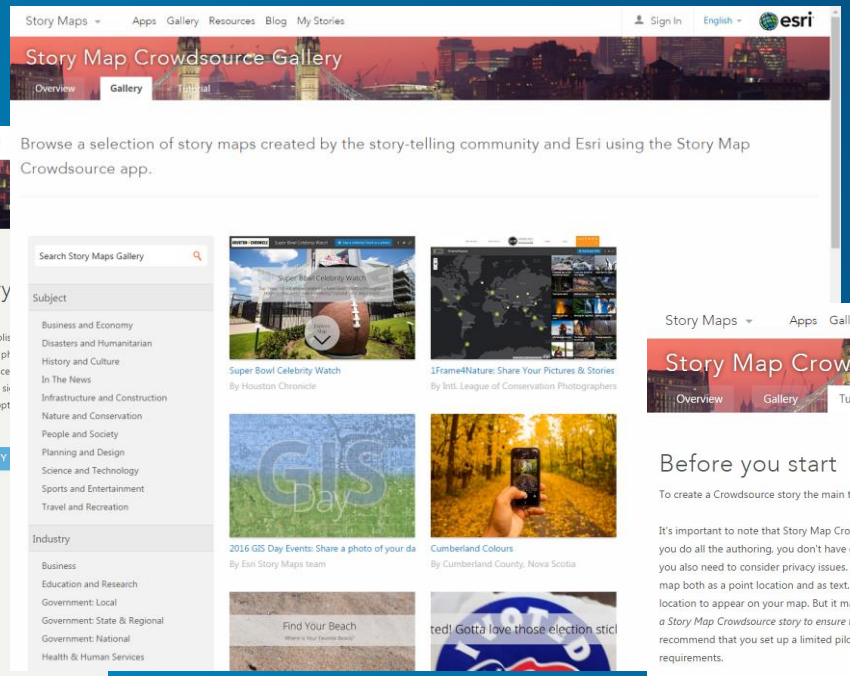
Community Engagement Dashboard

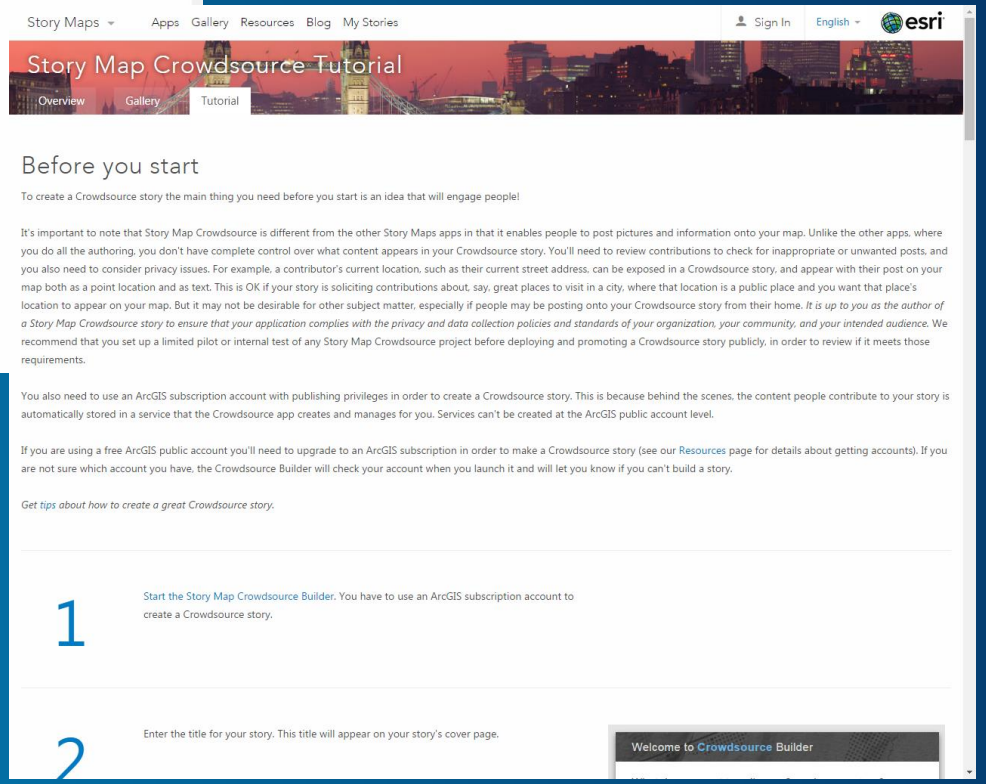
Measure the level of community engagement… overall, by initiative, by event, by location, and by individual.



Story Maps



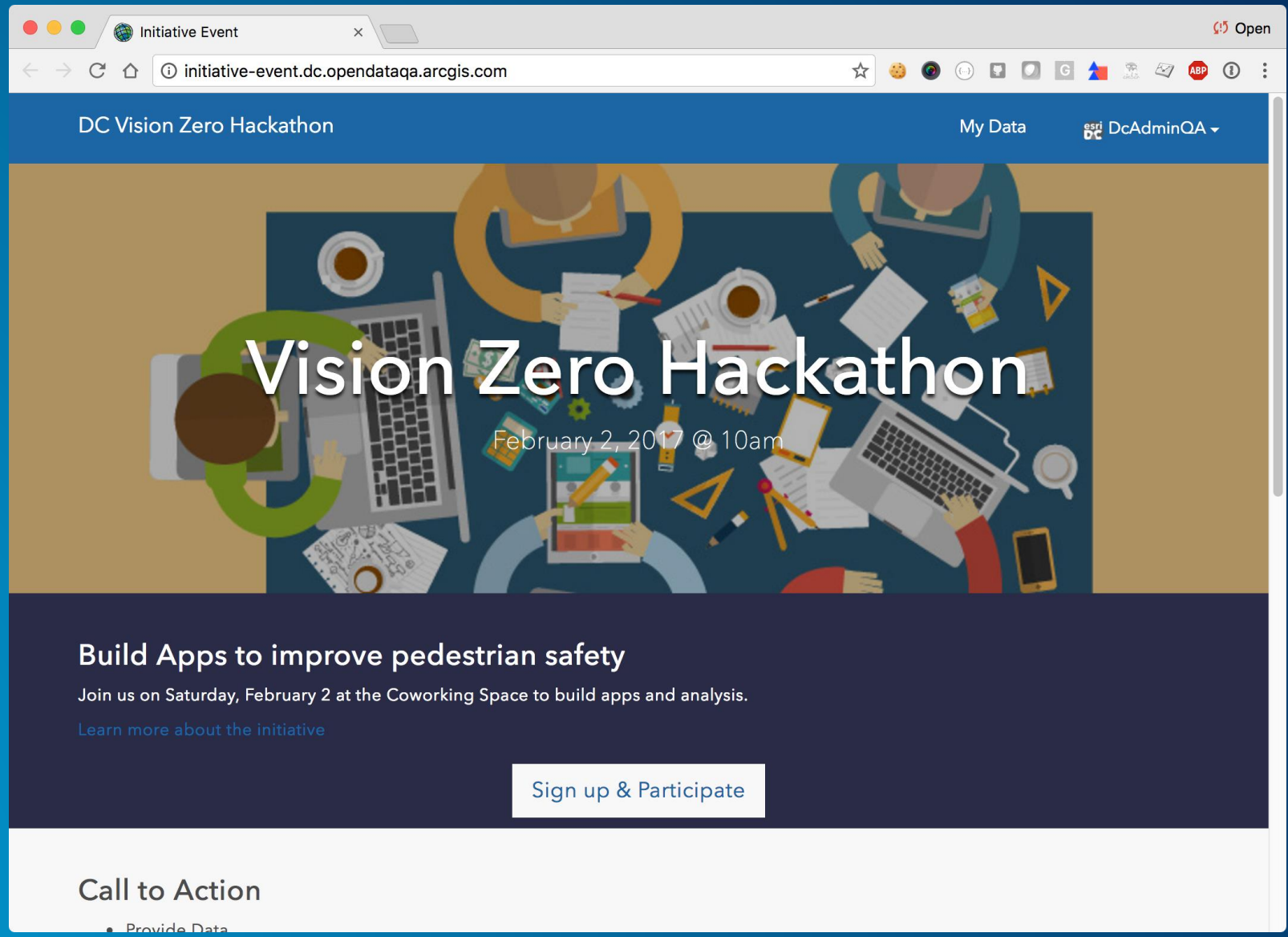




https://storymaps.arcgis.com/en/app-list/crowdsource/

Create Events

- Organizations can schedule Events
- Citizens can sign up to attend event.
- initiative Calls to Action that need help solving.
- Citizen developed solutions are contributed back to the Event Group
- The Event Group maintains an archive of Event participants, contributed solutions, and conversations



A Whole New Type of GIS Is Emerging

Connecting Individuals, Organizations and Communities

Individuals

Breaking Down Barriers

Organizations

Sharing Geographic Knowledge

Networks of Organizations

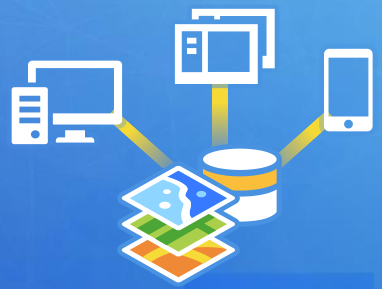
GIS is Evolving Rapidly

Multiple Implementation Patterns

An Interconnected Network
Is Emerging . . .

Desktop

Server



Cloud / SaaS

System of Systems

. . . A Distributed Platform of Open Geospatial Services

GIS Connects Everyone

Creating a System of Engagement

Using Identities

Supporting Real-Time Awareness and Collaboration

Communities

Organizations

People

GIS Provides a Common Language for Communication

esri
THE
SCIENCE
OF
WHERE