

# Field Operations with ArcGIS

IMAGIN

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Grand Rapids, Michigan

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The VISION

Our WORK

Your EXPERIENCE

# Vision | Why focus today on Field Operations?

**Needs**

**People**

**Technology**

A unique opportunity to make a difference

Apply skills you already have

Mobile GIS at scale

Practical solutions...

... for everyday workflows

## Mobile GIS

### Map Inventories

### Inspections

Call Before You Dig

311 Call for Service

Right of Way  
Inspections

Sign Inventory

Incident Report

Census Surveys

Pigging  
operations

Damage Assessments

Leak surveys

Noxious Weed Mapping

SCAT survey

GCP Collection

Map Change  
Requests

Streetlight inventory

Meter Inspections

### Surveys

Retroreflectivity  
Inspections

Debris Reporting

Tree Management

Hydrant Inspections

Permit Inspections

Search & Rescue

ADA Compliance  
Inspection

Retroreflectivity  
Inspections

Aerial  
Inspections

... Improving the way people work

*Location-aware devices*

*Connectivity*

**THE  
SCIENCE  
OF  
WHERE**

**Mobile  
GIS**

*GIS Innovation*

*. . . Enabling Mobile GIS*

# Vision | People



... Embracing innovation and technology

# ArcGIS | Web GIS is driving digital transformation

Interconnected Information, Processes, and Workflows . . .  
. . . All Happening at the Same Time



*...Leverage your Web GIS to Expand the Power of Location to Field Operations*



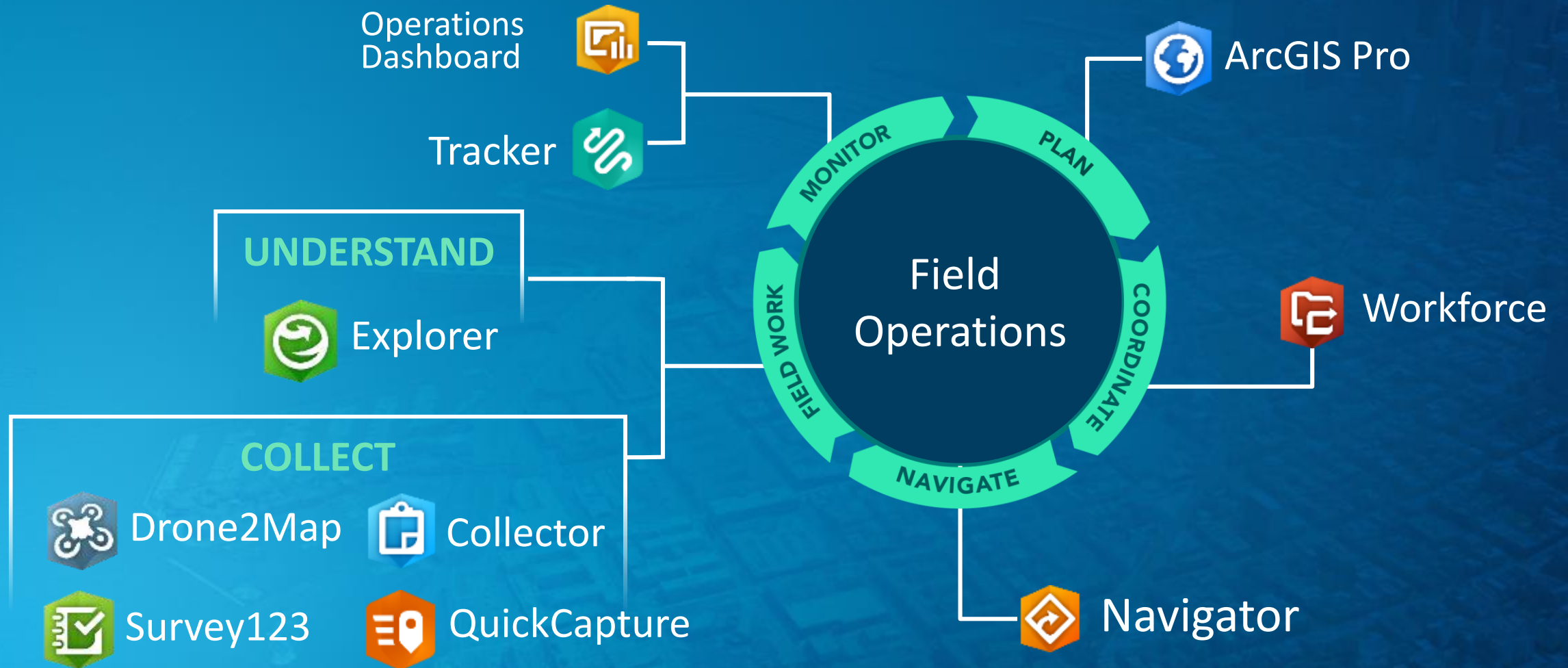
The VISION

Our WORK

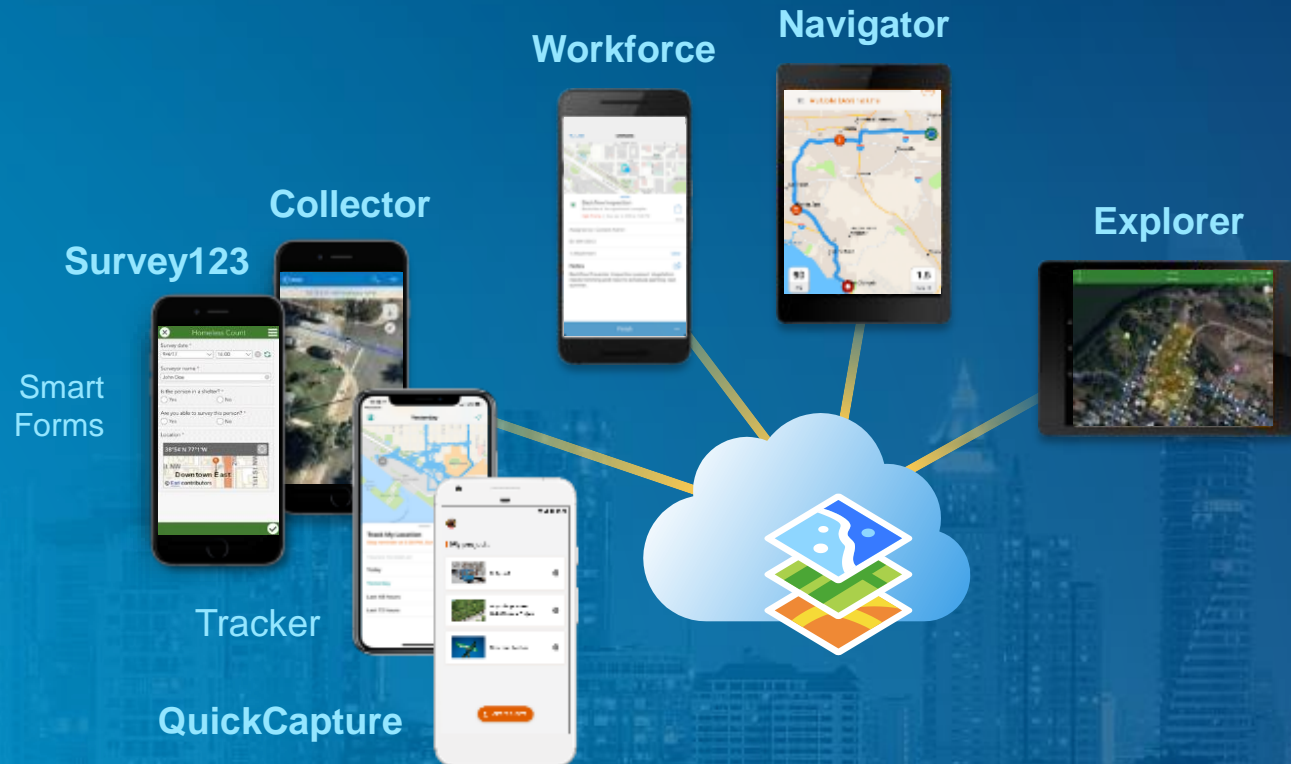
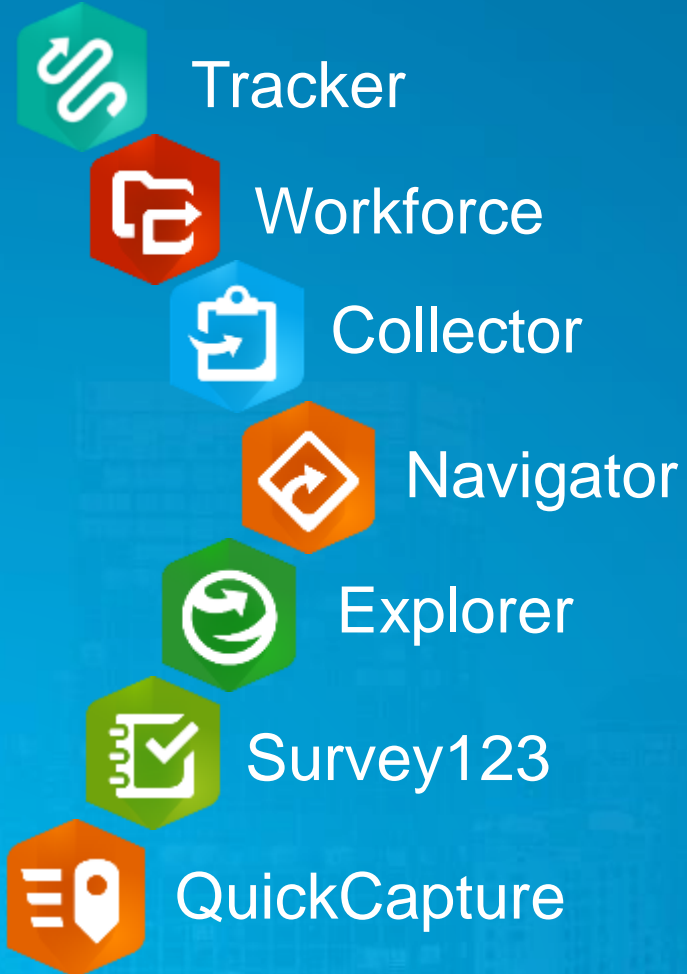
Your EXPERIENCE



# Field Operations with ArcGIS



# ArcGIS | Integrated Mobile Apps for the Field



... Empowering Mobile Users

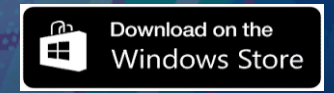
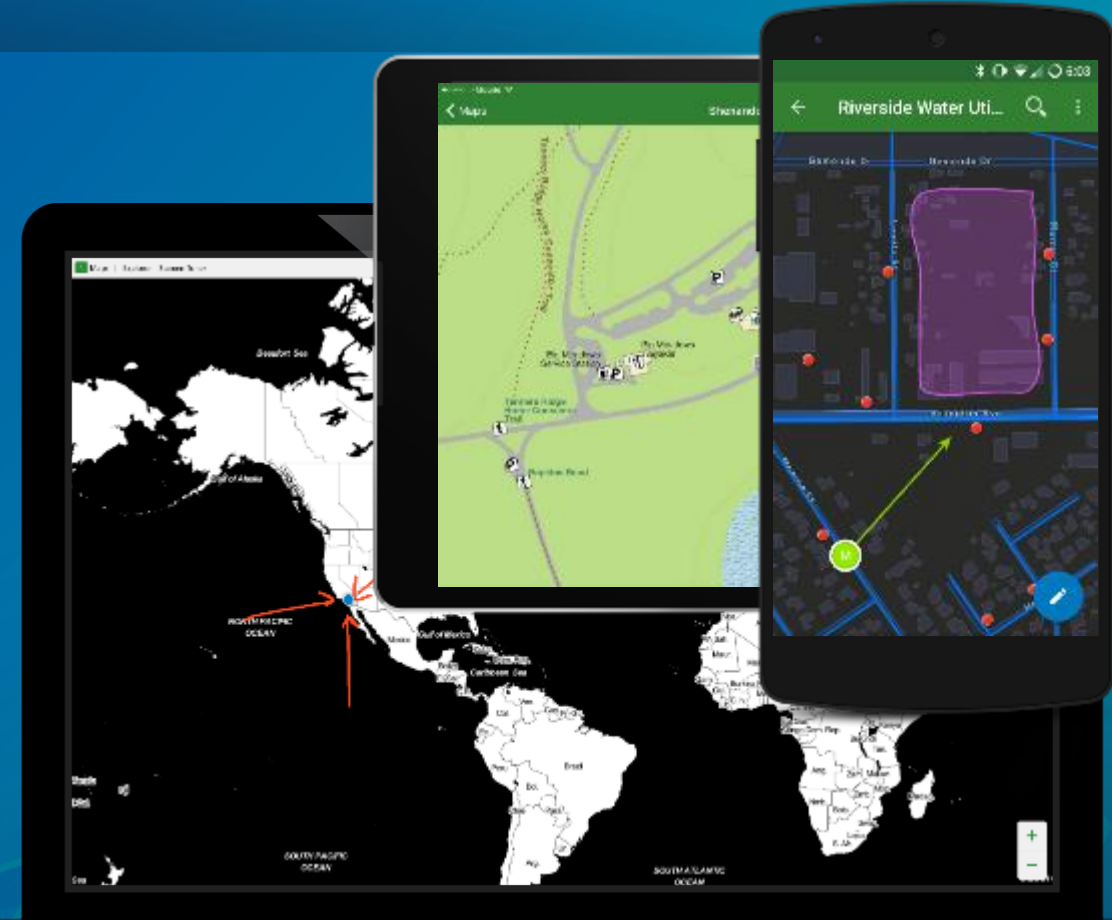


# Explorer for ArcGIS | Maps, wherever you are

View your maps anywhere

Easily find field assets

Create and share notes on-the-go



# Explorer for ArcGIS Demo



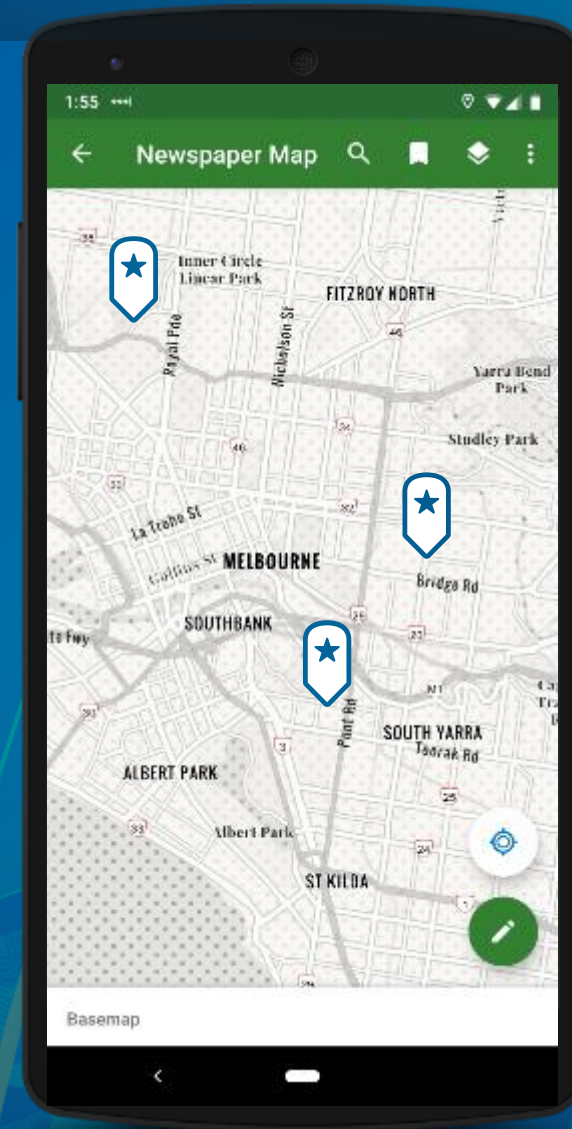
# Explorer for ArcGIS | Live and offline maps



web maps



mobile map packages

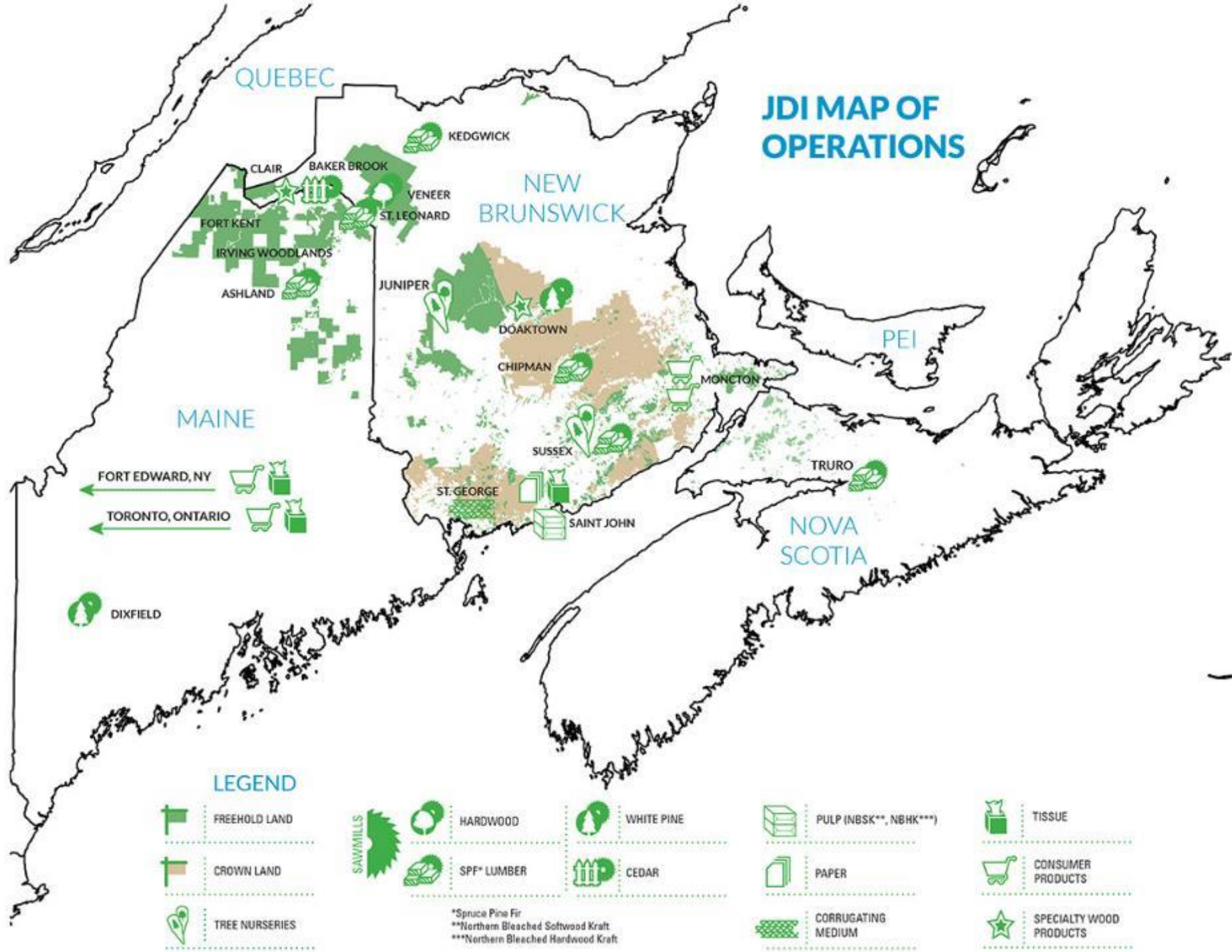




J.D. Irving  
Timber resource  
monitoring

View detailed  
information about  
assets while flying  
over

Mounted in  
harvesters to show  
where to work



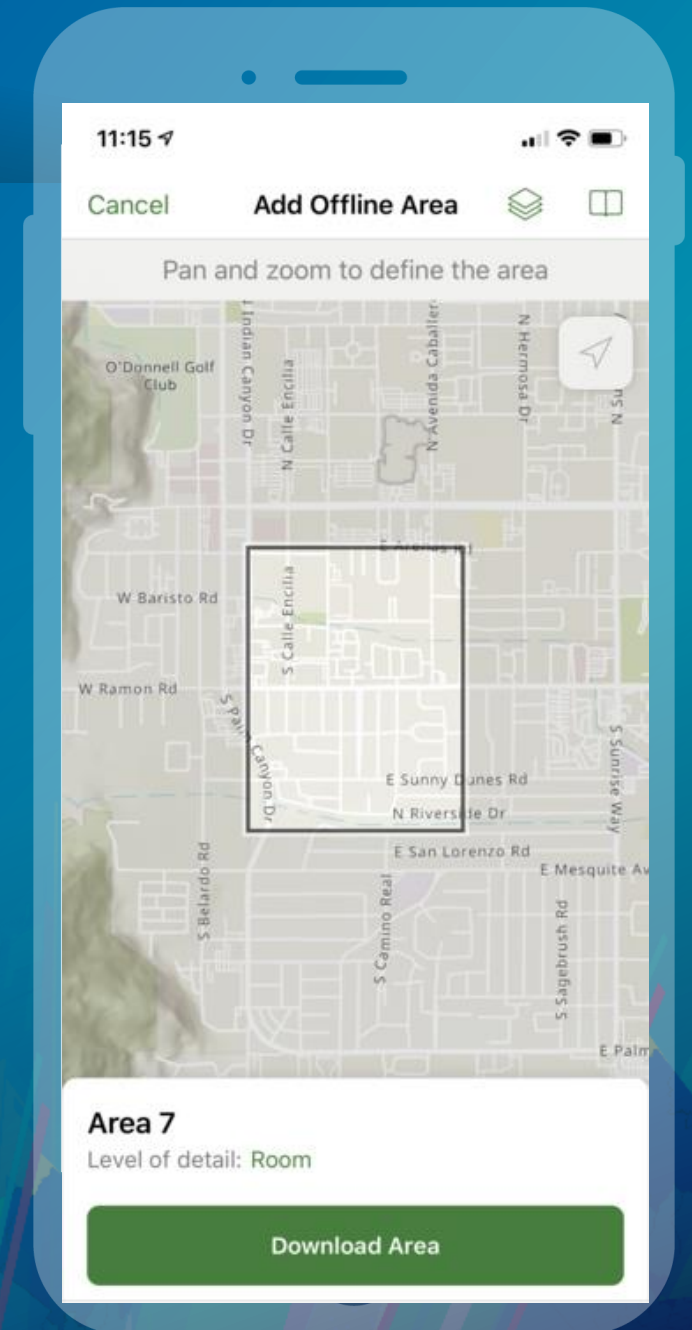


# Explorer for ArcGIS | What is coming?

Windows Support

On-Demand Offline Maps

Pre-Planned Offline Workflows





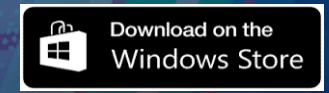
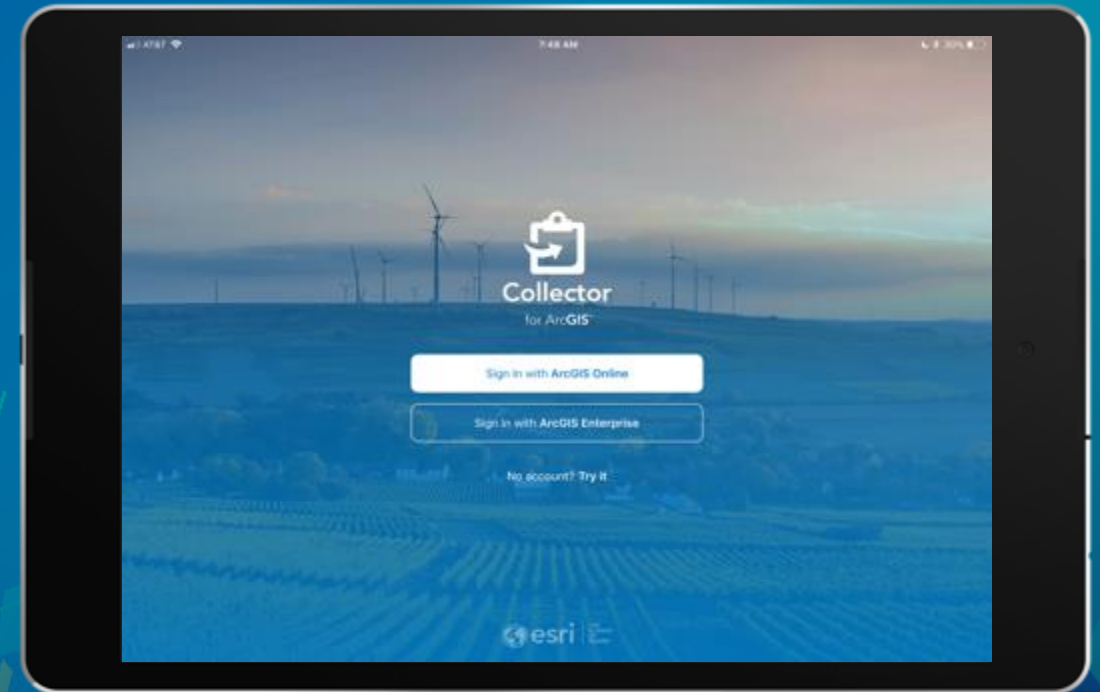
# Collector for ArcGIS

Accurate data collection made easy

Map-centric data collection

Works online and offline

High data accuracy

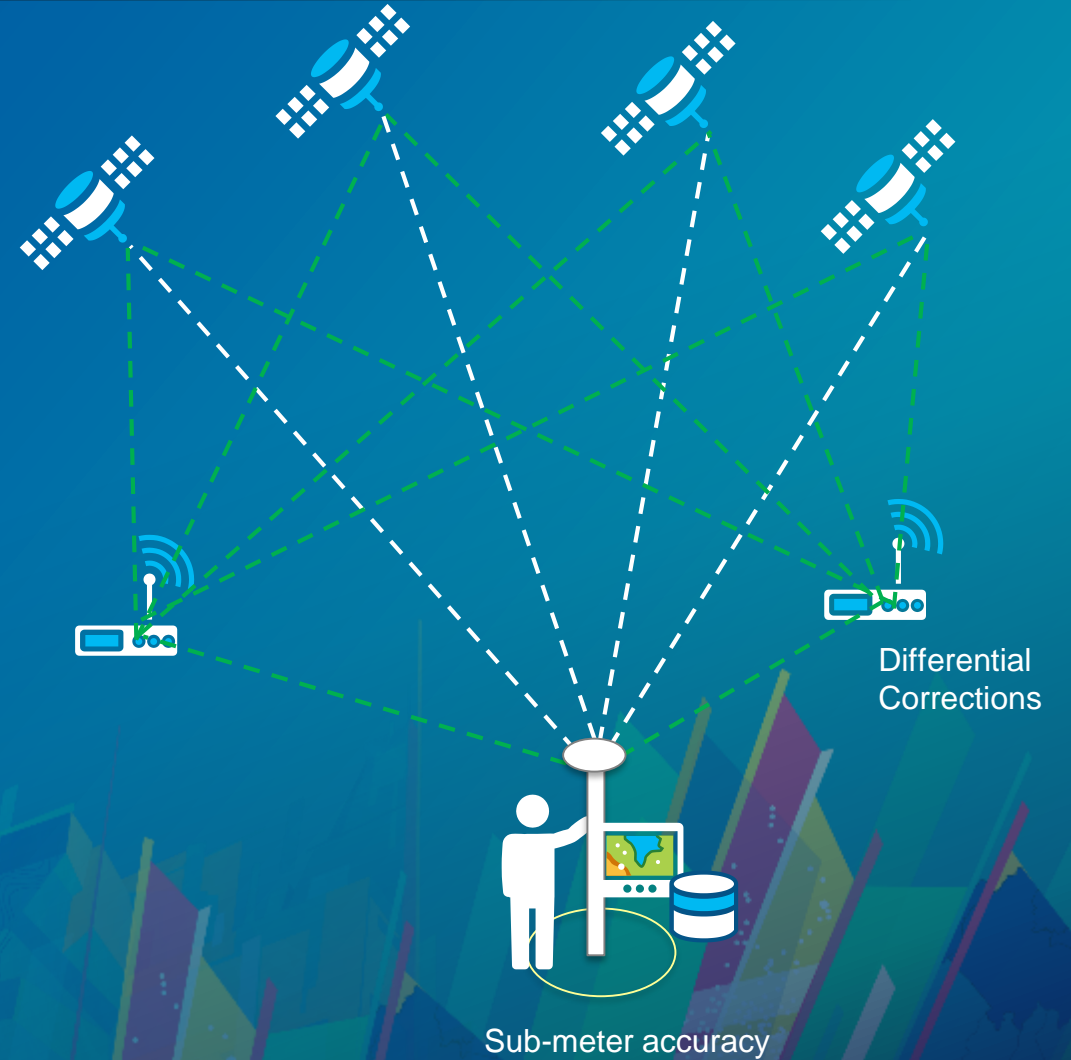






# Collector for ArcGIS

Integrates with high accuracy GNSS receivers



# Collector for ArcGIS Demo



# Oldham County Water District | Accurately mapping assets

- Integrating high accuracy GPS with GIS
- Cutting costs in half and reducing errors
- Integrated Workflow
  - In the field
  - In the back office

“Installing each meter used to cost us approximately \$211.91 in labor and fuel. With the high-accuracy mobile GIS workflow, the cost per meter went down to \$111.19.”

— Kenny Ratliff, GIS Manager, Oldham County Water District of Kentucky





# Collector for ArcGIS | What is coming next?

## Better mapping

- Labels, advanced symbology
- Arcade support
- **Vector basemaps**

## Improved Collect Experience

- Accurate map editing
- Reduced taps for photo attachments
- **Required Fields support**

## New Offline Experience

- Multiple areas offline
- Simplified on demand
- Pre-planned offline map areas
- **Auto-sync**

## New Capabilities

- Units settings
- Directions
- **Compass Navigation**
- Audio Recordings
- Barcode search

## Smarter Forms

- Streamlined UX
- Barcode/QR code support
- **Arcade expressions**

## High Accuracy Improvements

- **Z value support**
- Grid-based transformations
- Trimble NTRIP integration/Eos Orthometric heights



# Collector for ArcGIS

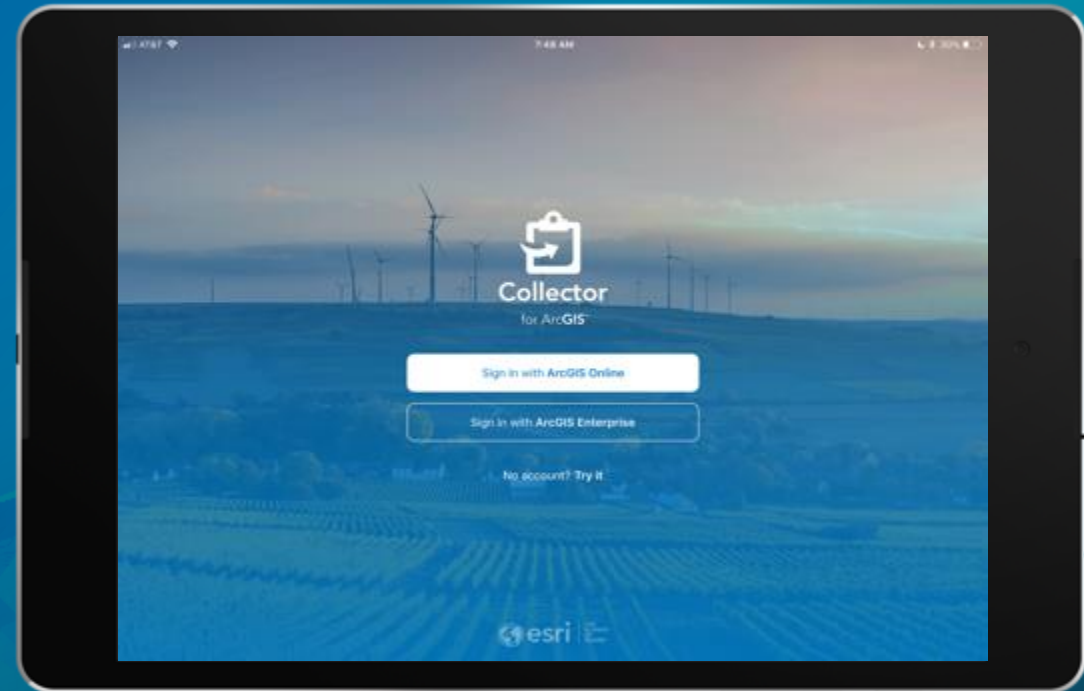
Accurate data collection made easy

- **Collector App**

- Next generation Collector iOS Released in December
- Side-by-side with Classic

- **Other Platforms**

- Android: in beta. Release before end of 2019
- Windows 10: Development to start in 2019



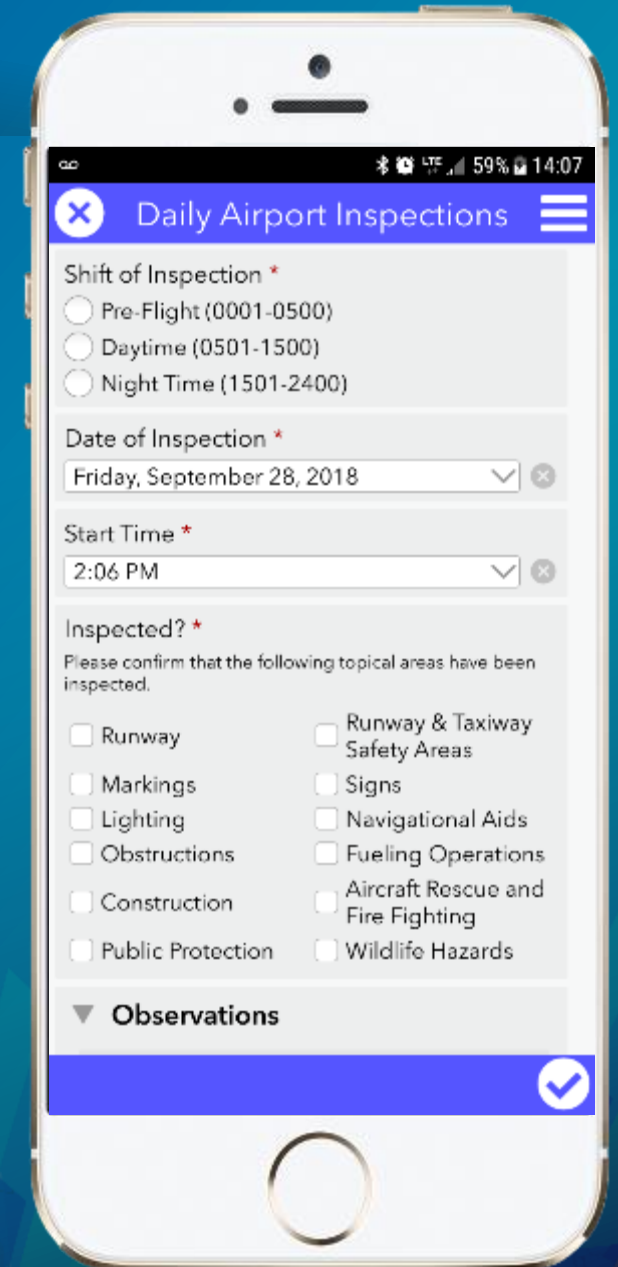


# Survey123 for ArcGIS | Location-aware smart forms

Simple data collection experience

Sophisticated smart form capabilities

Web & Native / Desktop & Devices



# Survey123 for ArcGIS Demo



# American Red Cross

Streamlining field data collection with smart forms

- Field Damage Assessments
- ArcGIS Enterprise
- +40,000 users
- Boost Field Productivity
- Reduces errors
- Real time decisions

The screenshot shows the American Red Cross website. The header includes the logo, navigation links like 'WHAT WE DO', 'LATEST NEWS', and 'RED CROSS STORES', and utility links for 'Sign In/Sign Up', 'Cart: 0 (\$0.00)', 'Español', and 'Redlands, CA (92373)'. A secondary navigation bar contains 'DONATE FUNDS', 'DONATE BLOOD', 'TRAINING & CERTIFICATION', 'WAYS TO HELP', and 'GET ASSISTANCE' with a search bar. The main content area features a sidebar for the 'Louisiana Region' with links to 'About Us', 'Local Chapters', 'Programs & Services', 'Volunteer Opportunities', 'Ways to Donate', 'News & Events', 'Press Releases', 'Events', 'Thanking Our Supporters', and 'Home Fire Campaign'. The main article is titled 'Disaster Assessment – As Easy As 1-2-3' and includes a photo of two people in Red Cross uniforms looking at a map on a screen. A quote states: 'It will cut in half the time it takes us to complete the assessment.' The article text explains that Red Cross Disaster Assessment teams are part of the first step in the recovery process, visiting neighborhoods and homes to assess damage and provide financial aid and other resources. It notes that the process is being done in a new way that will make it faster and easier, using an application and Red Cross teams to get help to clients in a matter of days, not weeks.





# Survey123 for ArcGIS | What is coming next

- **Polygon and polyline support**
- **Photo watermarking**
- **Grid-Themed surveys**
- **High Quality Feature Reports**
- **Extensibility Framework**

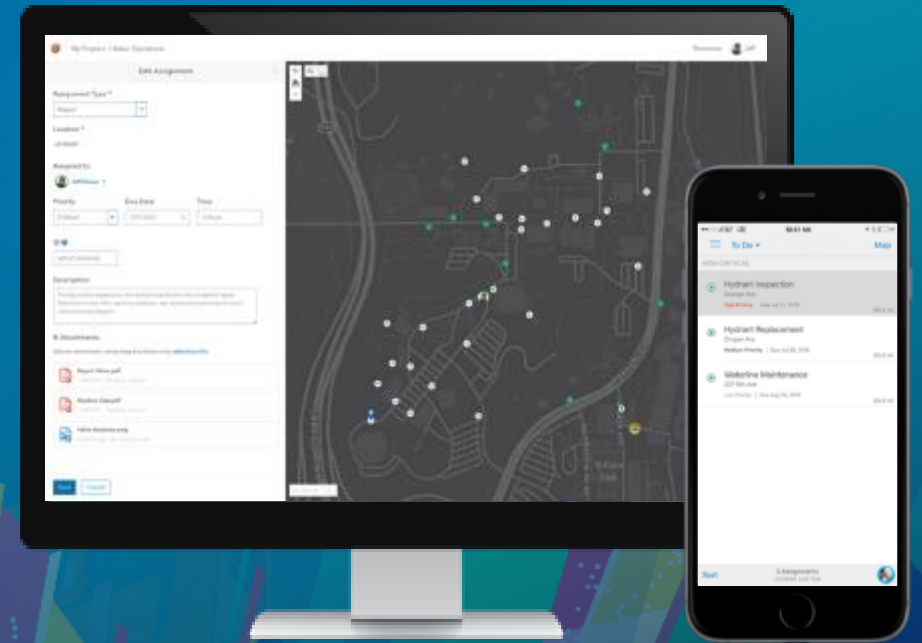


# Workforce for ArcGIS | Coordinate field work

Plan and coordinate field work

Improve efficiency with location awareness

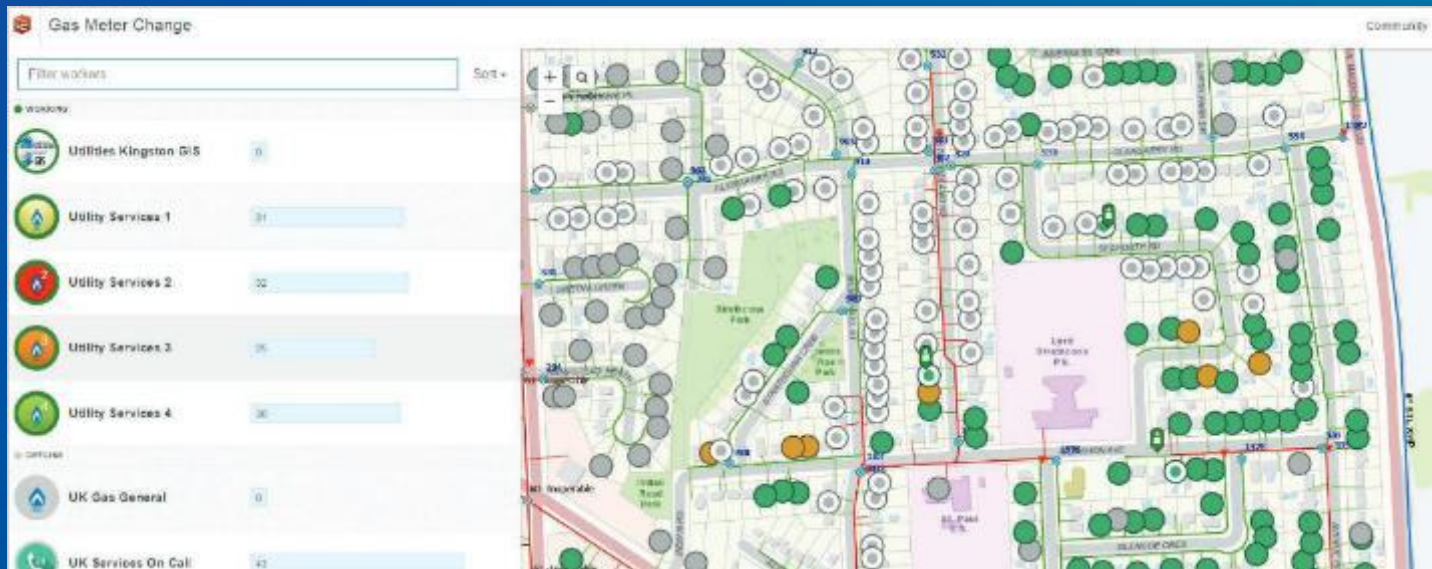
Create & Manage field assignments





# Utilities Kingston, Ontario, Canada

- Streamlined and modernized gas meter inspections
- 15,000 customers
- 4 field crews of two
- 5300 gas meter inspections





# ArcGIS QuickCapture

The Rapid Data Collection app

“Big button” mobile app, simplest way to capture data

Ideal for at-speed data collection workflows

Works offline and online



# ArcGIS QuickCapture Demo





# ArcGIS QuickCapture

Common workflows



Aerial Surveys



At-Speed data capture



Windshield Damage Assessments



On-the-go Inspections



Rapid Incident Reports

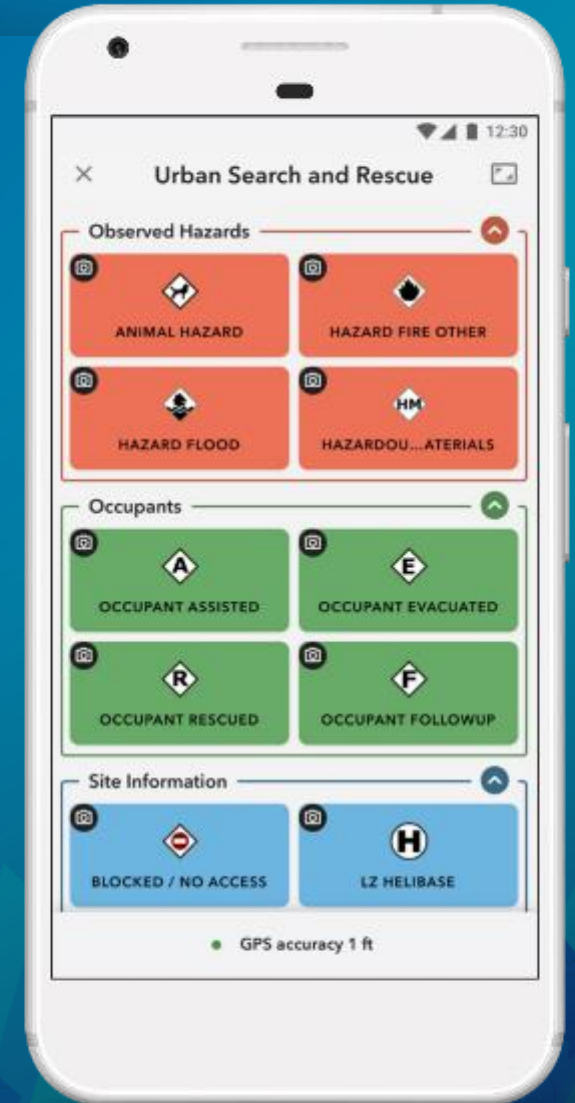


# ArcGIS QuickCapture | Schedule & licensing

Release July 2019

Included with Field Worker, Creator, GIS Analyst

Available as an add-on to Editor user types





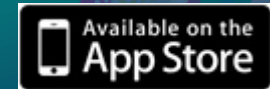
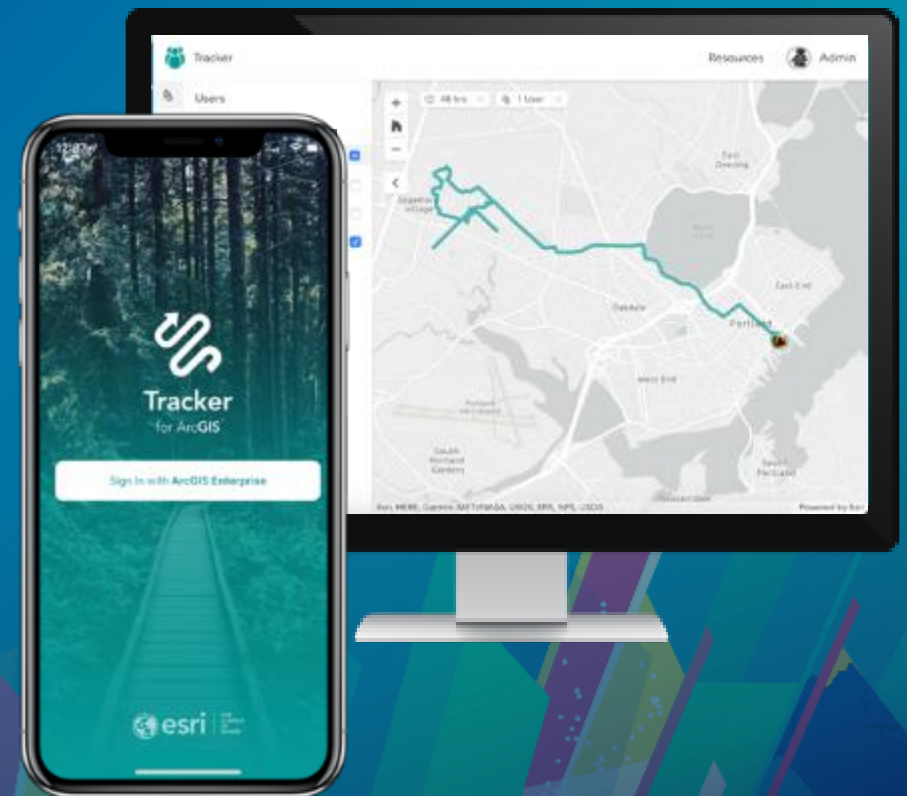


# Tracker for ArcGIS | Know what happens in the field

Share your location

Know where everyone is

Own your locations





# Tracker for ArcGIS | Know what happens in the field

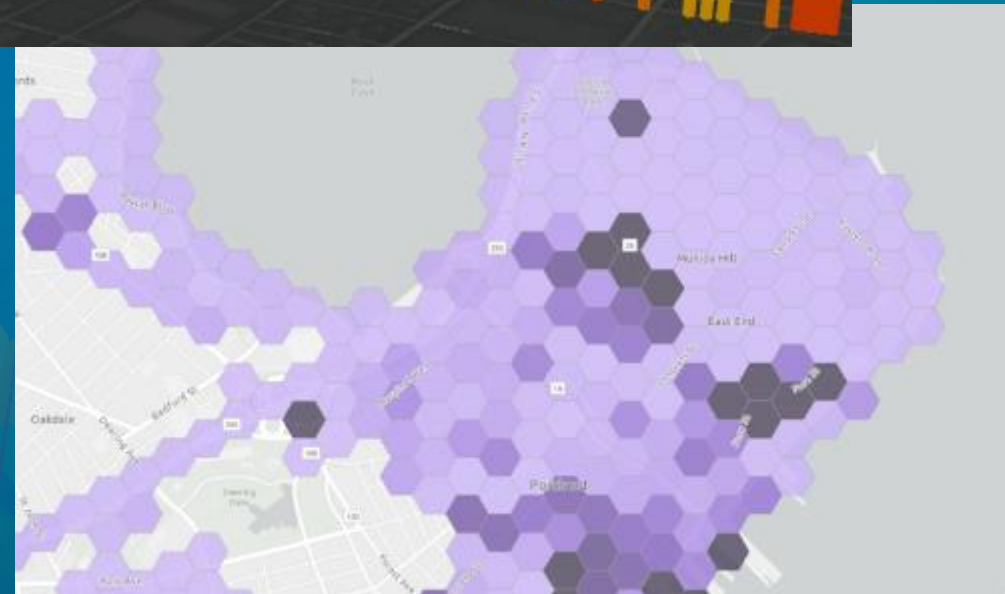
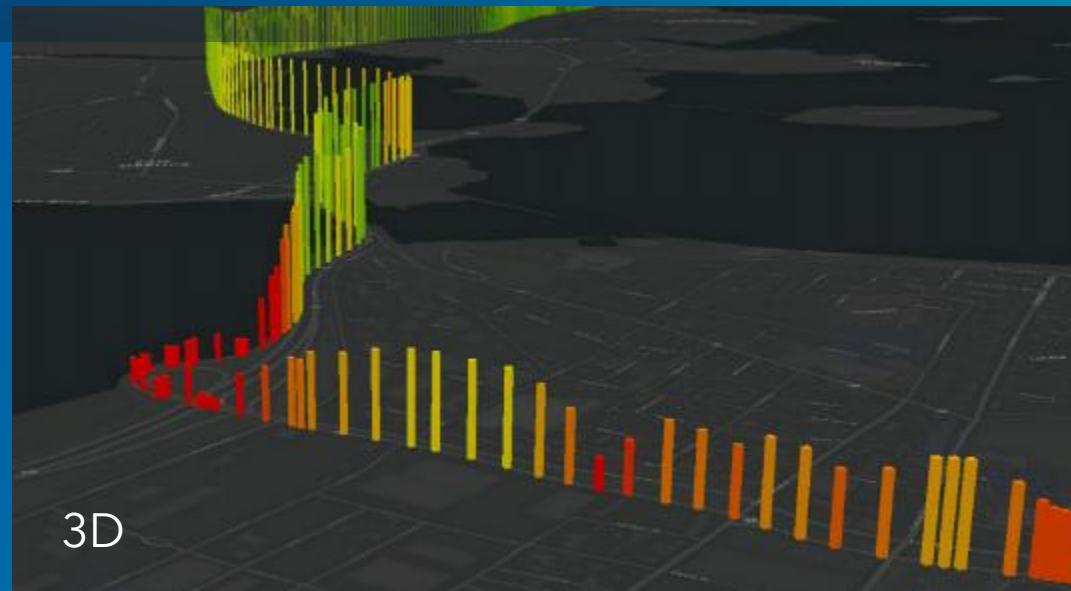




# Tracker for ArcGIS | Know what happens in the field



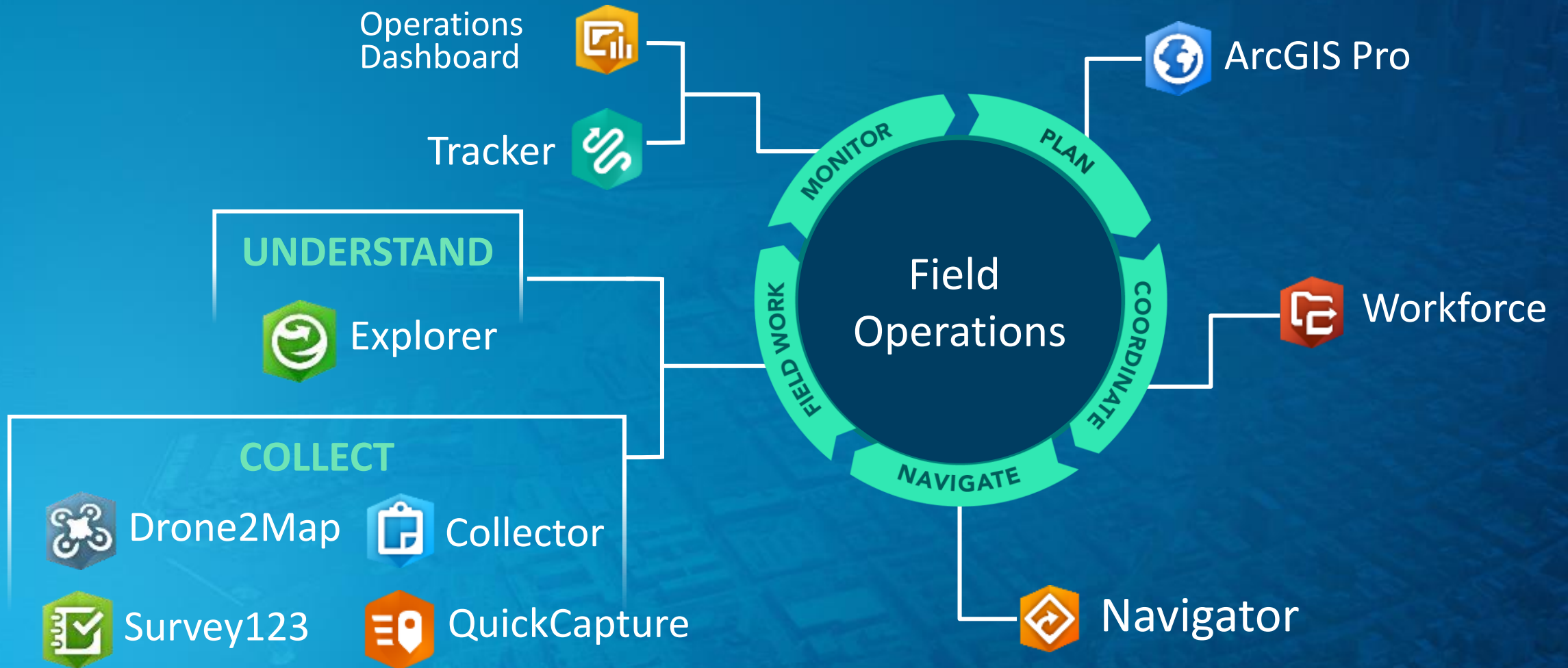
Linear heat maps



Aggregation

# Patterns

# All Apps Work Together



# Pairing ArcGIS Field Apps

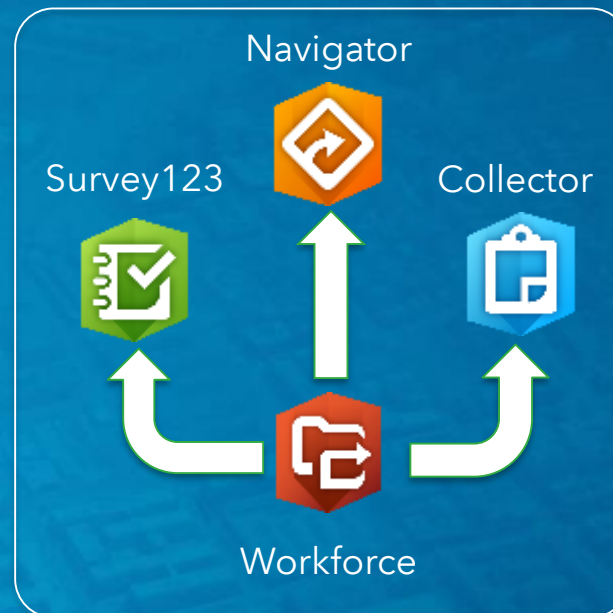
## Collect and Monitor



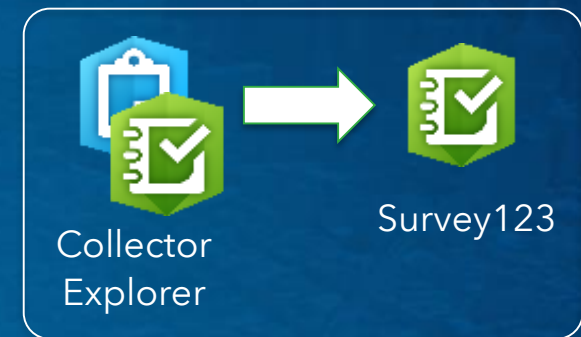
## Third Party Integrations



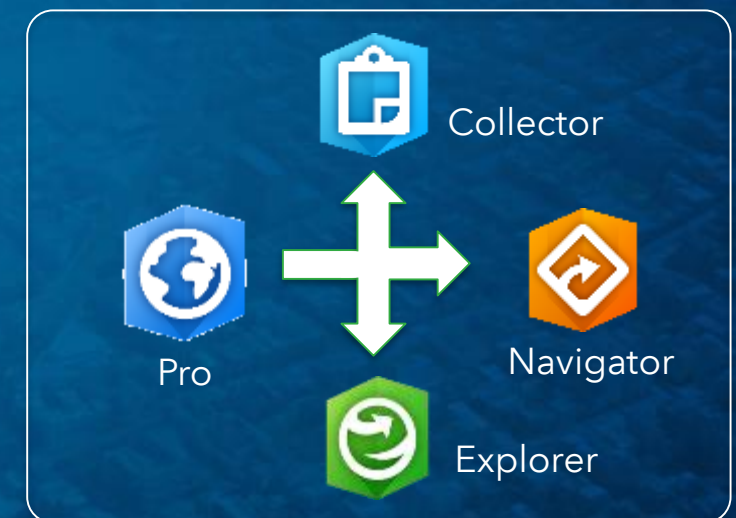
## Workforce Launchpad



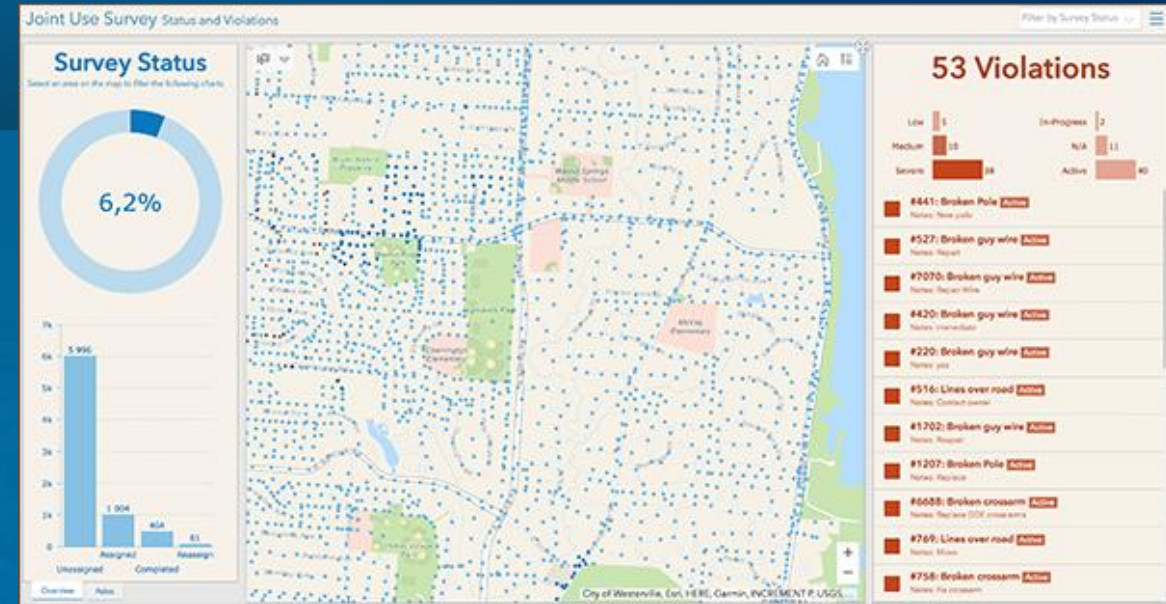
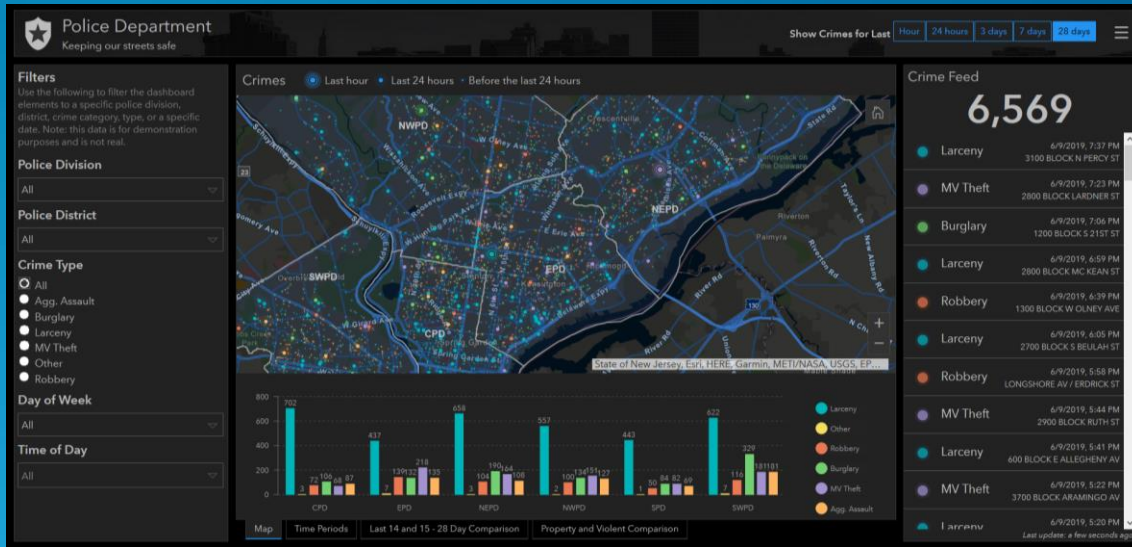
## Maps + Forms



## Prepare - Field



# Real time dashboards



**Collect and Monitor**

# ArcGIS User Types | Role-Based Licensing Model

**Viewer**



**Editor**



**Field Worker**



**Creator**



**GIS Professional**



Includes:  
Collector for ArcGIS  
Survey123 for ArcGIS  
Workforce for ArcGIS  
ArcGIS QuickCapture

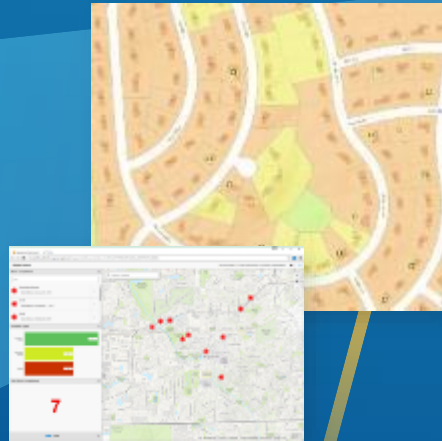
*Now Part of ArcGIS Online and Enterprise*



# ArcGIS Solutions

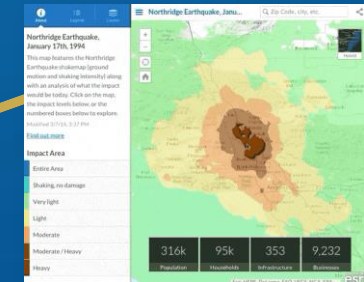
- Easily Configurable
- Fully Supported
- No Cost

## Local & State Government



## Utilities & Telecom

## Emergency Management & Public Safety



Usable and  
Extendable  
by Partners



450+ Solutions  
500,000+ Downloads

*Delivering Innovation & Best Practices*



The VISION

Our WORK

Your EXPERIENCE

# A location-driven approach to vector-borne disease surveillance



Thanks to: Alexis Gieseke



Missouri Department of  
**Health & Senior Services**

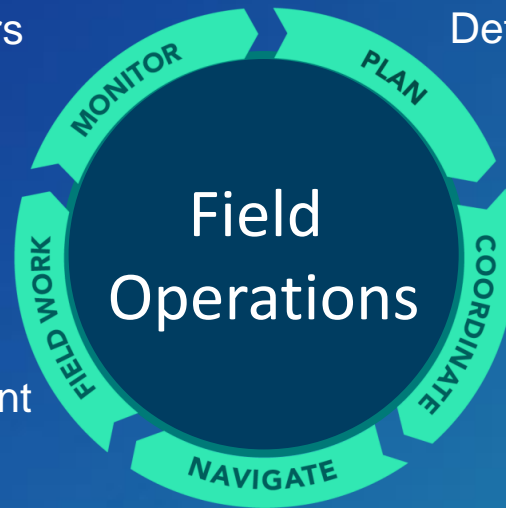
# A location-driven approach to vector-borne disease surveillance

Help supervisors track work stats  
Key Performance Indicators  
Understand service levels

Where to place mosquito traps?  
Define treatment & exclusion zones



Locate mosquito traps  
Collect data from traps  
Enable citizen engagement



Prioritize service requests  
Assign to field staff

Optimize field staff daily routes  
Ad-hoc driving directions

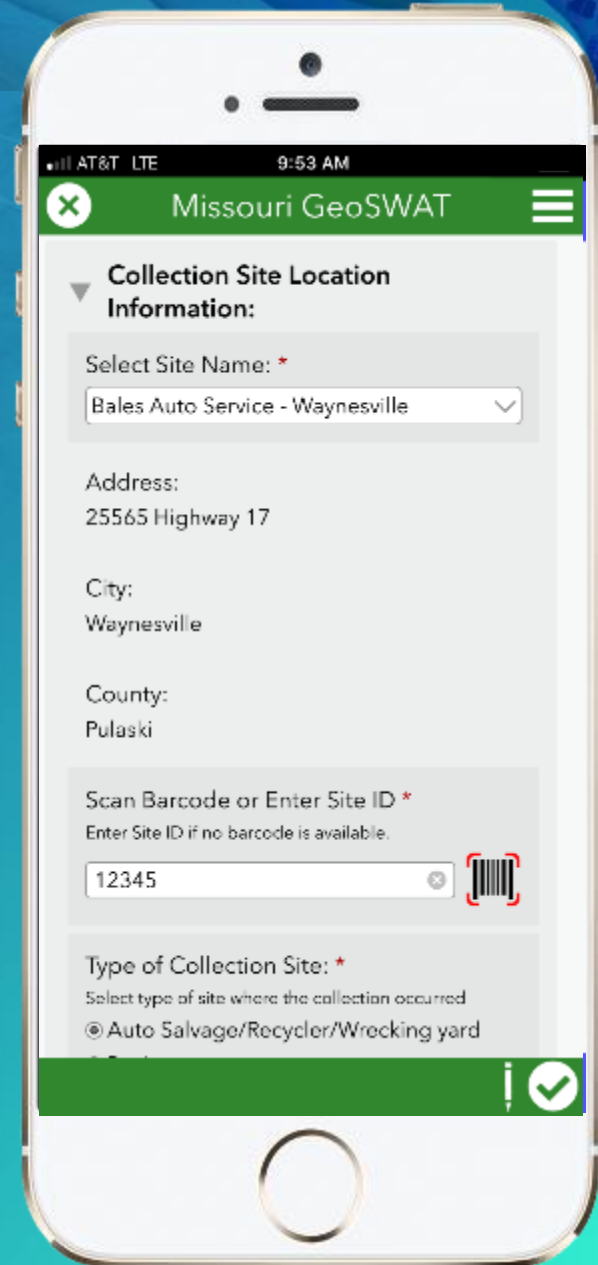


# Fighting mosquito-borne diseases in Missouri

GeoSWAT (Surveillance of Water and Traps) mobile app

Collect data from mosquito traps

Map trap lab results and support decision making



Missouri Department of  
**Health & Senior Services**

# Quick Damage Assessments



Thanks to: Sue Hoch

City of Kalamazoo, Michigan

# Quick Damage Assessments



Thanks to: Sue Hoch

## Flood Housing Assessment

Weekend housing assessment by Housing Official staff and volunteers

Owner Name

Owner Address

Phone Number

Is This A Rental?

Yes

No

Water In Structure?

Yes

No

# Annual Midwest Crane Count [savingcranes.org](http://savingcranes.org)



Thanks to: Dorn Moore





What is next with

Field Operations

in your organization?

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