

# Field Operations with ArcGIS

GIS for a Sustainable World Conference

April 2019

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The VISION

Our WORK

Your EXPERIENCE

# Vision | Why focus today on Field Operations?

**Needs**

**Technology**

**People**

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

### Surveys

311 Call for Service

Right of Way  
Inspections

Damage Assessments

Debris Reporting

Search & Rescue

ADA Compliance  
Inspection

Streetlight inventory

Tree Management

Aerial  
Inspections

Leak surveys

Sign Inventory

Noxious Weed Mapping

Meter Inspections

Retroreflectivity  
Inspections

Call Before You Dig

Incident Report

SCAT survey

GCP Collection

Hydrant Inspections

Census Surveys

Map Change  
Requests

Retroreflectivity  
Inspections

Permit Inspections

Pigging  
operations

... 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

# Vision | Optimize efficiency in field operations with the Science of Where



A unique opportunity to make a difference

Apply GIS to solve everyday challenges

Leverage the Power of Location

Improve the way people work

# 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*



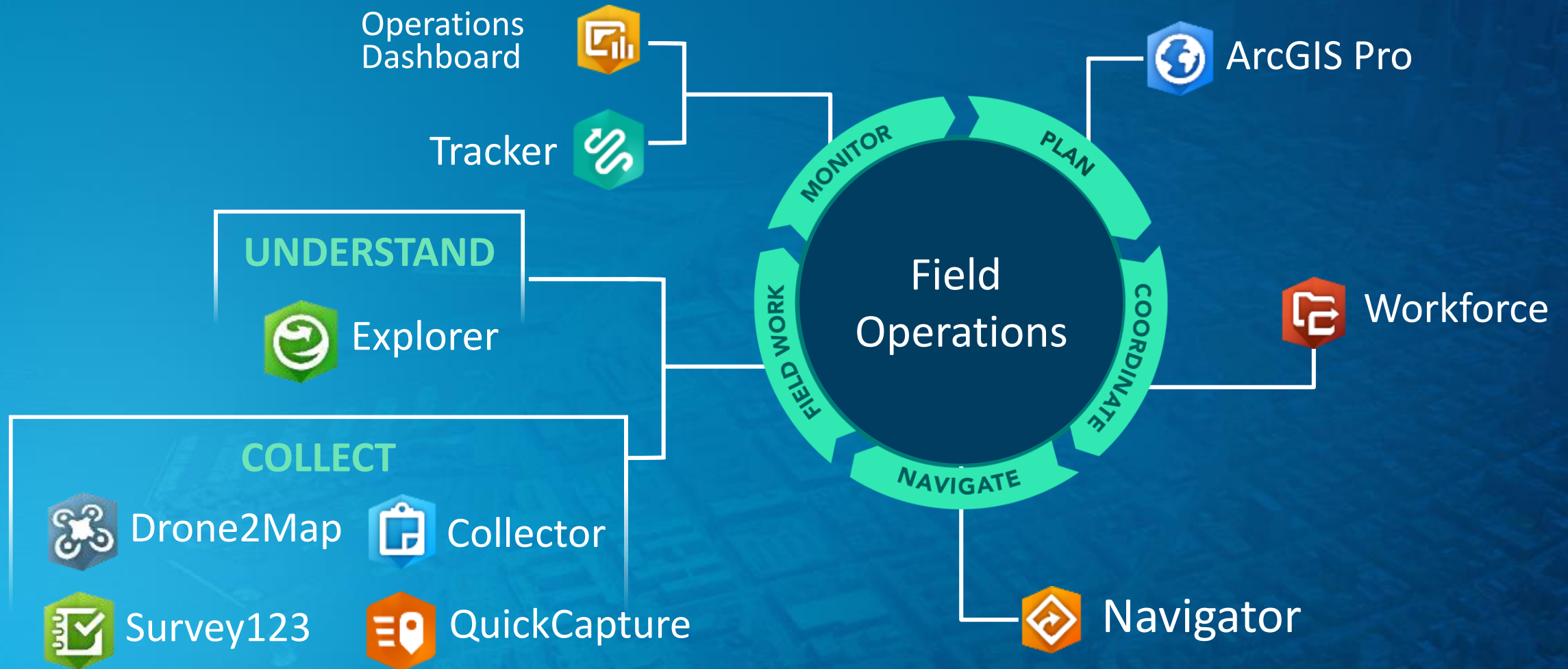


The VISION

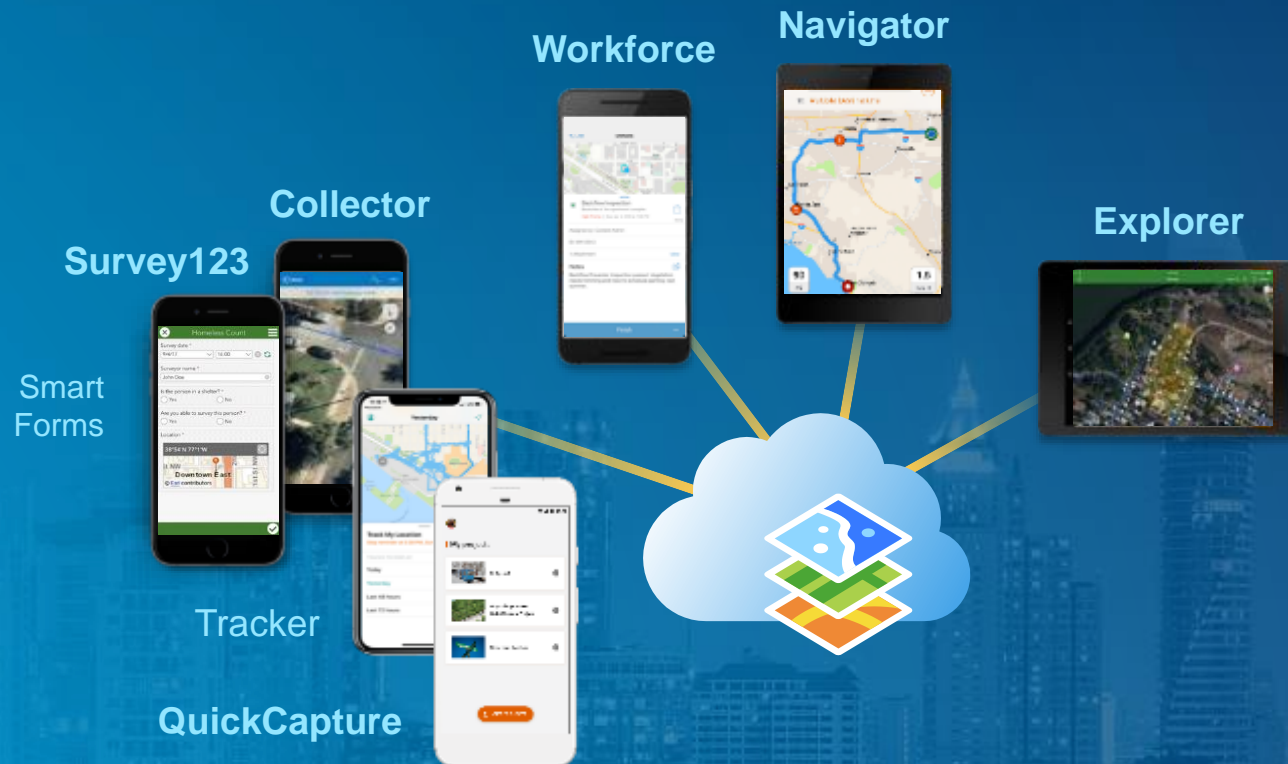
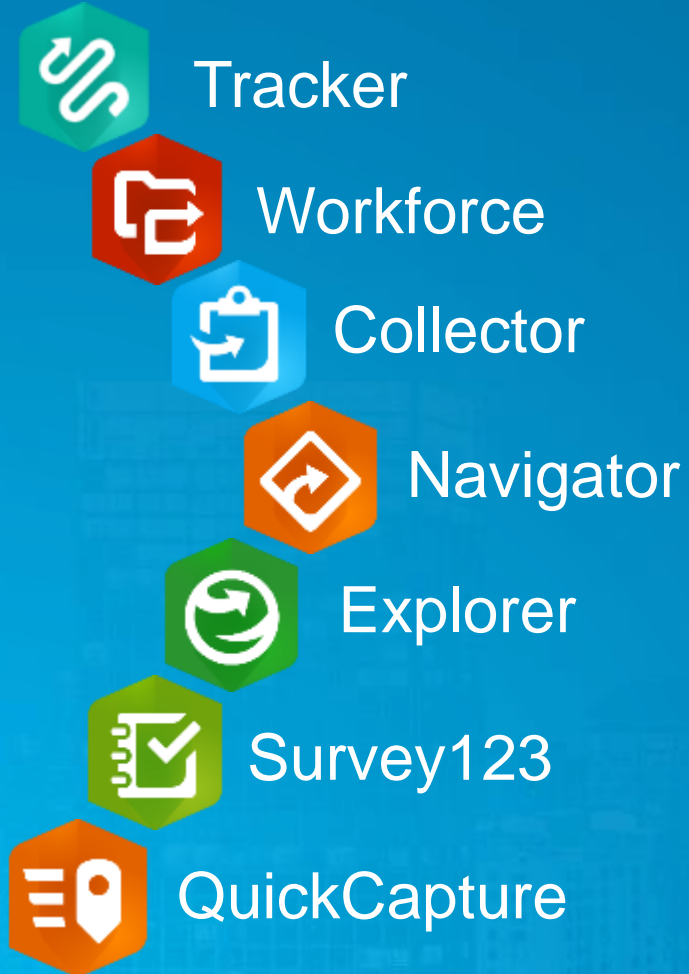
Our WORK

Your EXPERIENCE

# Field Operations with ArcGIS



# ArcGIS | Integrated Mobile Apps for the Field



... Empowering Mobile Users





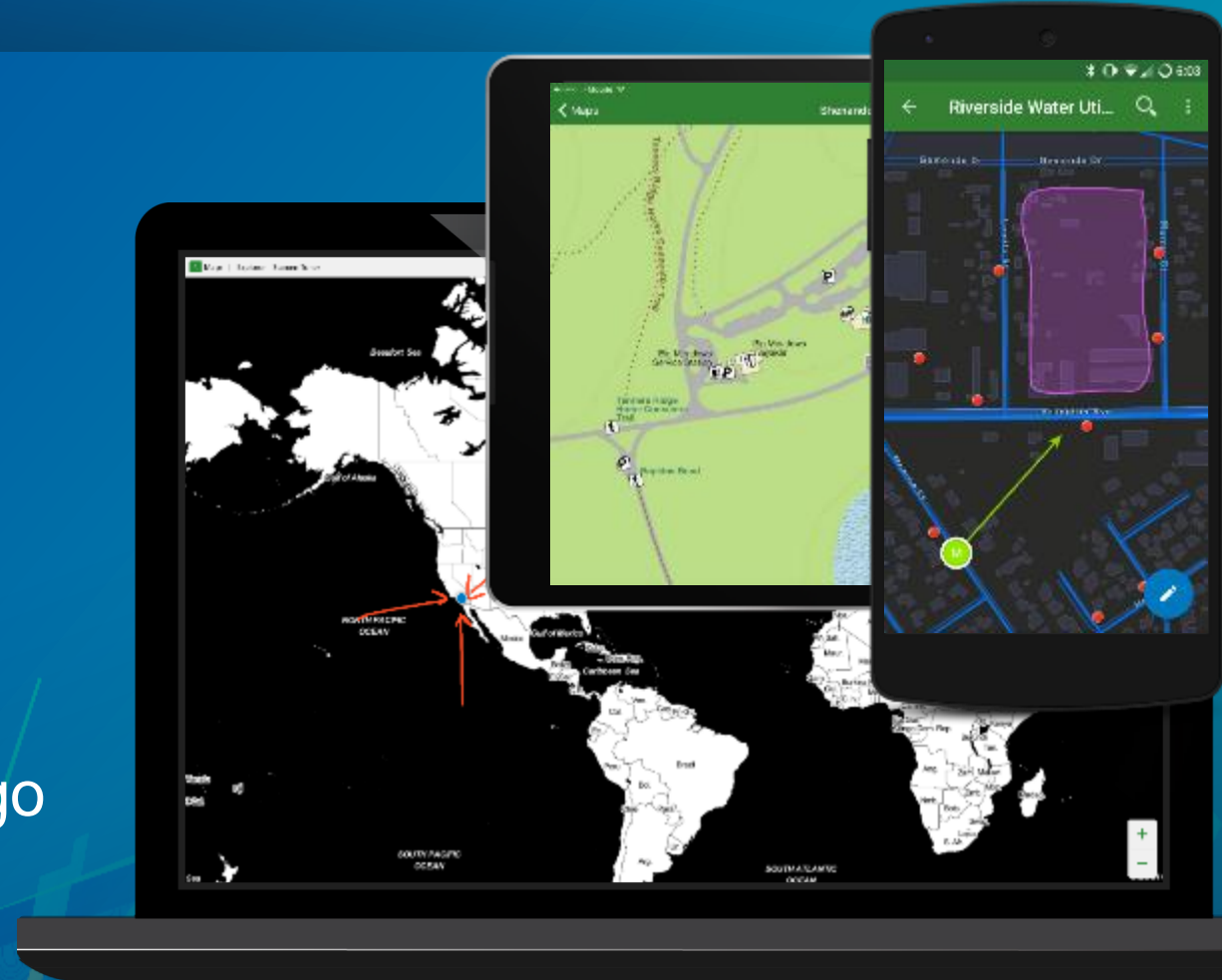
# Explorer for ArcGIS

Maps, wherever you are

View your maps anywhere

Easily find field assets

Create and share notes on-the-go



# Explorer for ArcGIS Demo



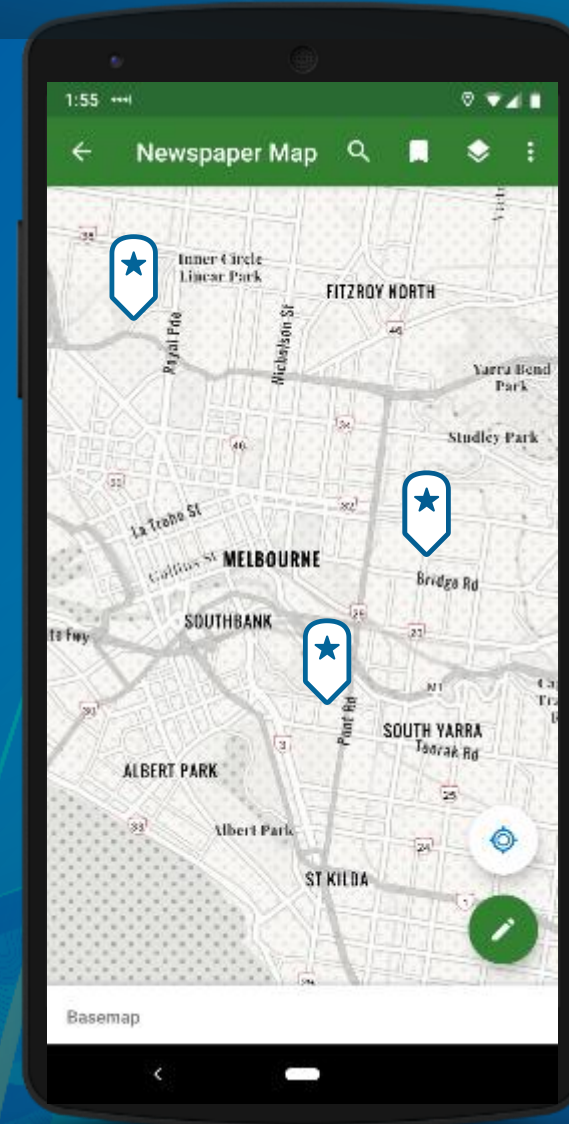
# Explorer for ArcGIS | Live and offline maps



web maps



mobile map  
packages



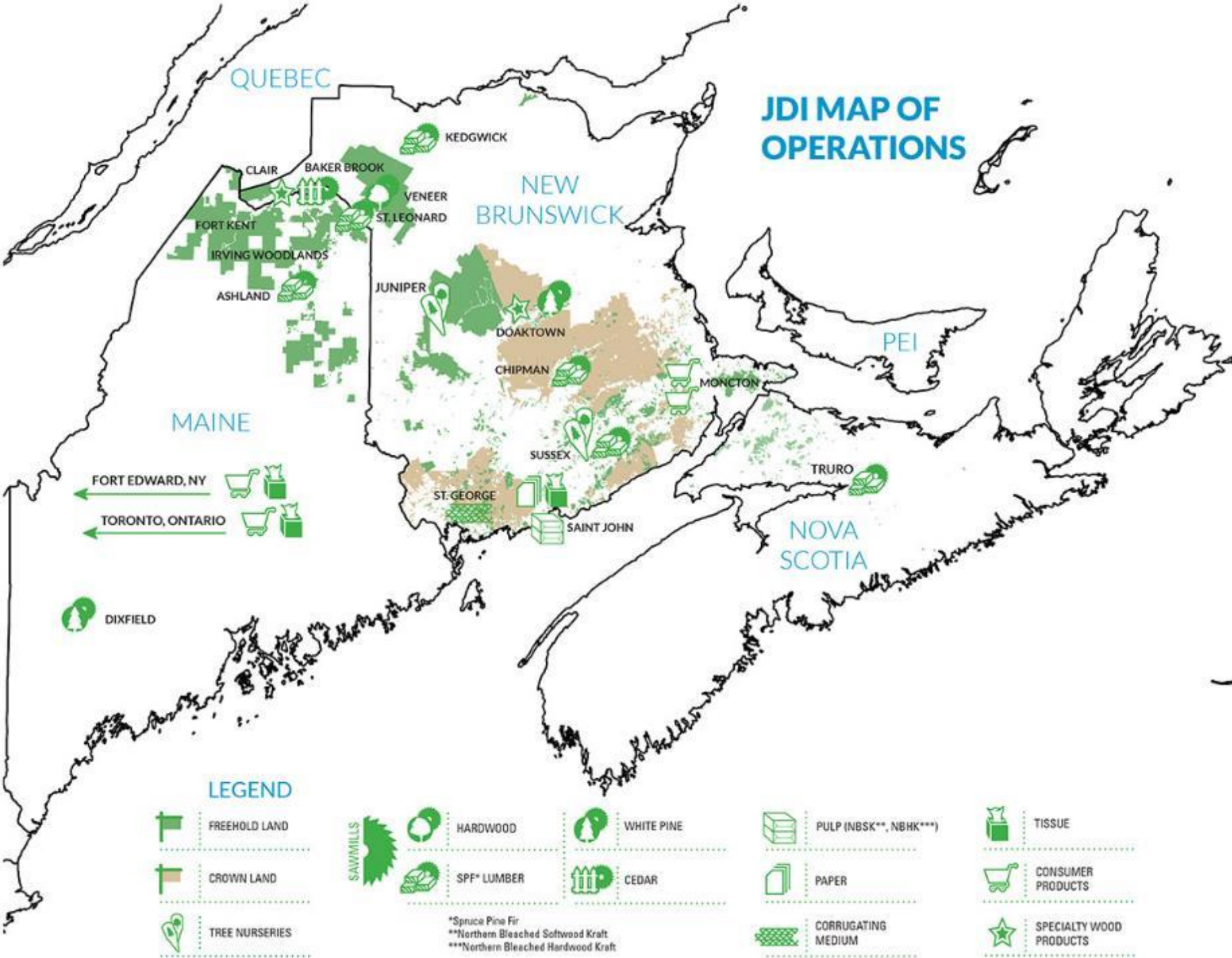




J.D. Irving  
Timber resource  
monitoring

View detailed  
information about  
assets while flying  
over

Mounted in  
harvesters to show  
where to work



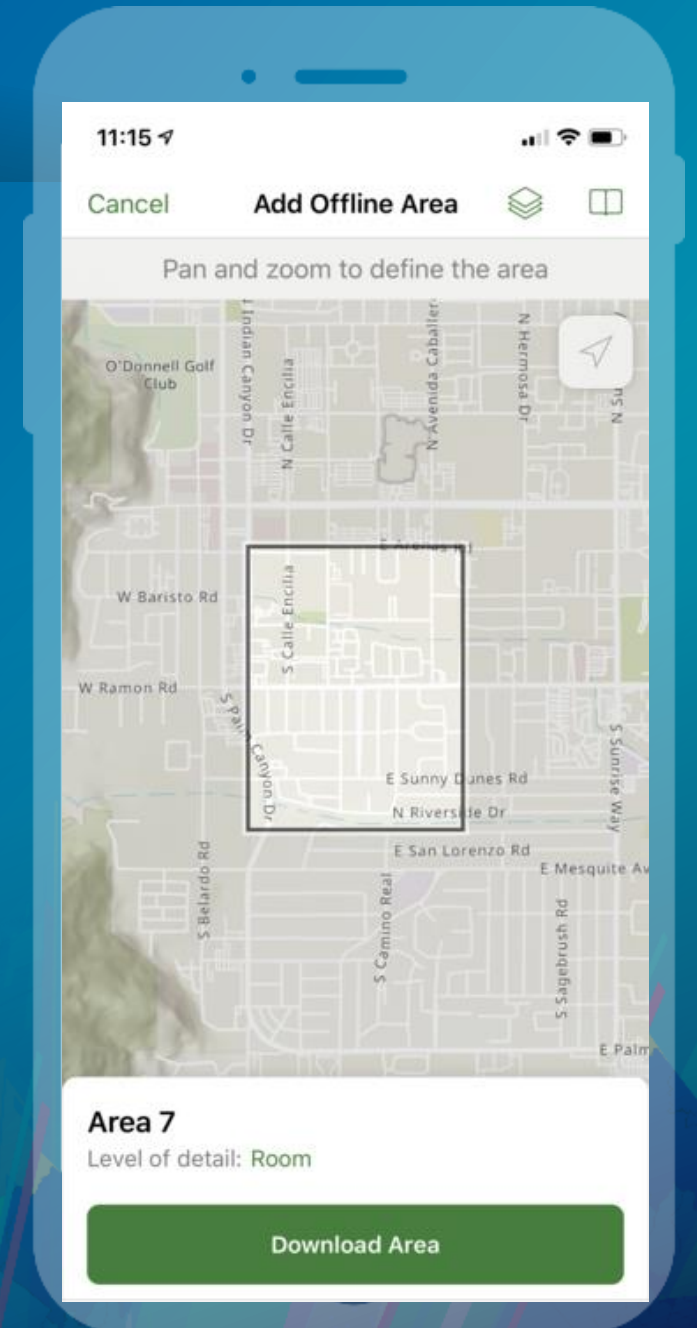


# Explorer for ArcGIS | What is coming?

Windows Support

On-Demand Offline Maps

Pre-Planned Offline Workflows





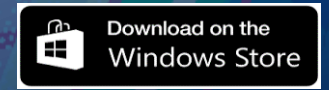
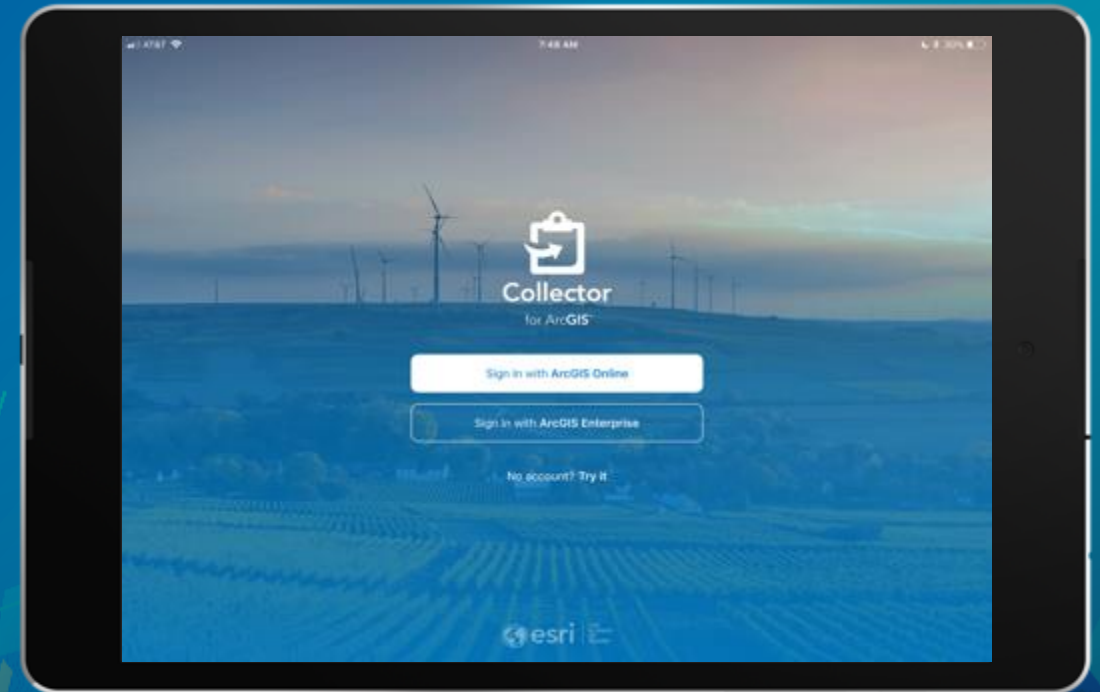
# Collector for ArcGIS

Accurate data collection made easy

Map-centric data collection

Works online and offline

High data accuracy

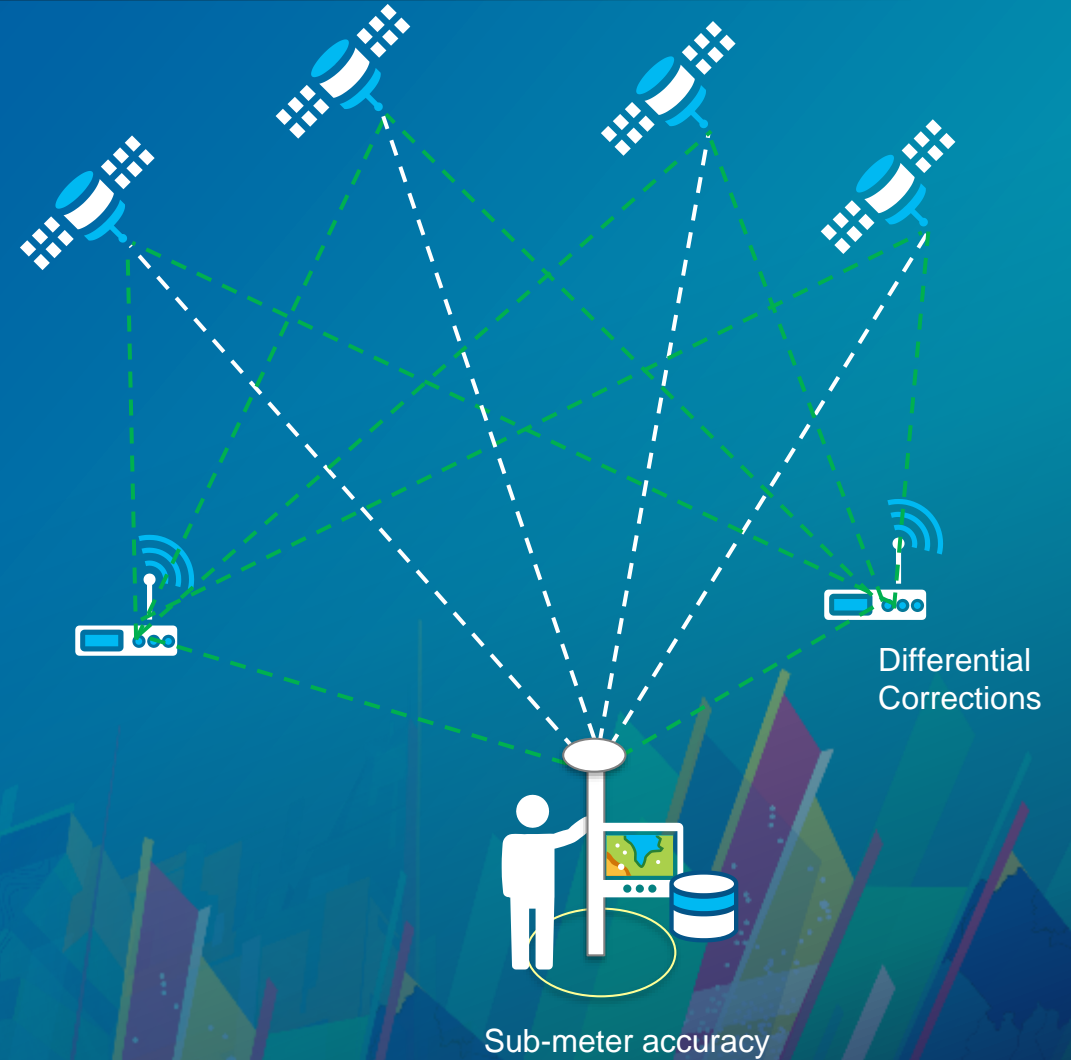






# Collector for ArcGIS

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



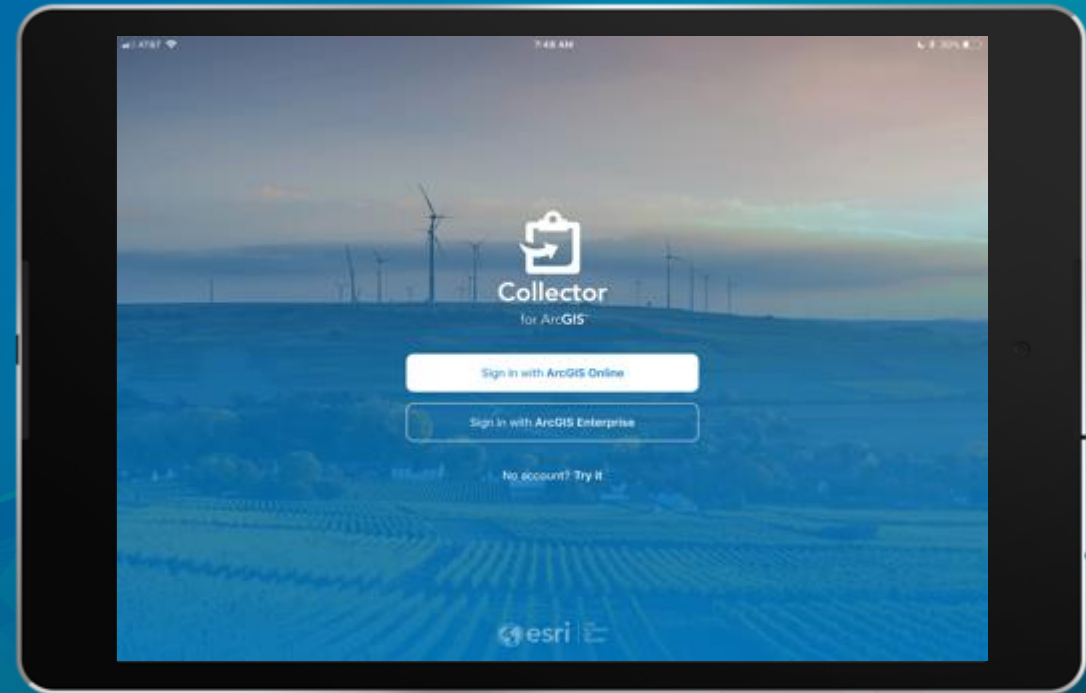
# Collector for ArcGIS | Accurate data collection made easy

- **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



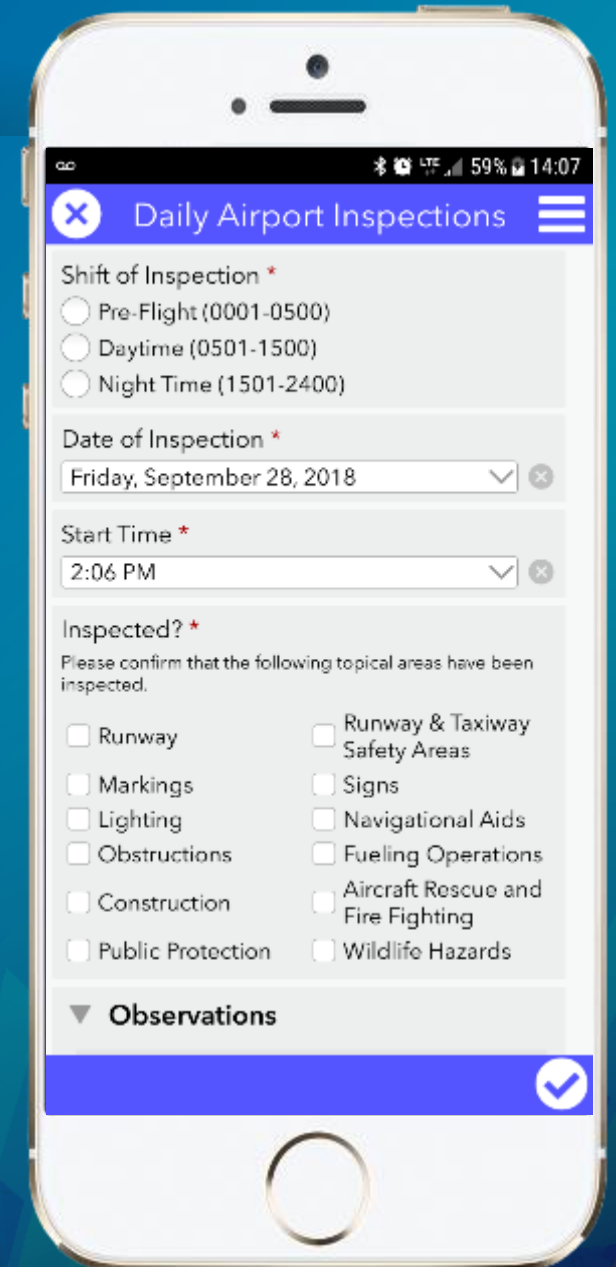
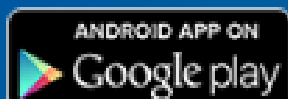


# Survey123 for ArcGIS | Location-aware smart forms

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 (WHAT WE DO, LATEST NEWS, RED CROSS STORES, FIND YOUR LOCAL RED CROSS, SHOP THE RED CROSS STORE), and a search bar. The main content area features a news article titled "Disaster Assessment – As Easy As 1-2-3" with a photo of two people looking at a map. The article text describes the process of disaster assessment and the use of the Survey123 application.

**American Red Cross**

Sign In/Sign Up | Cart: 0 (\$0.00) | Español | Redlands, CA (92373) ▼

WHAT WE DO | LATEST NEWS | RED CROSS STORES | FIND YOUR LOCAL RED CROSS | SHOP THE RED CROSS STORE

DONATE FUNDS | DONATE BLOOD | TRAINING & CERTIFICATION | WAYS TO HELP | GET ASSISTANCE | Search

Louisiana Region

- ▶ About Us
- ▶ Local Chapters
- ▶ Programs & Services
- ▶ Volunteer Opportunities
- ▶ Ways to Donate
- ▼ News & Events
  - News
  - Press Releases
  - Events
- ▶ Thanking Our Supporters
- Home Fire Campaign

Home > Louisiana Region > News & Events > Community News > Disaster Assessment – As Easy As 1-2-3

## Disaster Assessment – As Easy As 1-2-3

Posted September 11, 2016, Todd James, Baton Rouge, LA

Red Cross Disaster Assessment teams are part of the first step in the recovery process. They visit neighborhoods and homes immediately after a disaster to assess and verify the level of damage incurred. The Red Cross and its partners—like FEMA and the United Way—use this information to provide financial aid and other resources. It often takes one to two weeks to visit to every home, gather and enter the information and distribute it to everyone who needs it to begin providing aid. It's vital that this process is done to make sure families get the help they need and that donor and taxpayer dollars are used wisely.

After the record flooding that occurred in Louisiana, Disaster Assessment is being done in a new way—a way that will make it faster and easier. Disaster Assessment now has an application and Red Cross teams are using it to get help to clients in a matter of days, not weeks. Survey123 allows the teams to enter information on the spot—not fill out forms that

*It will cut in half the time it takes us to complete the assessment.*



# Survey123 for ArcGIS | What is coming next

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



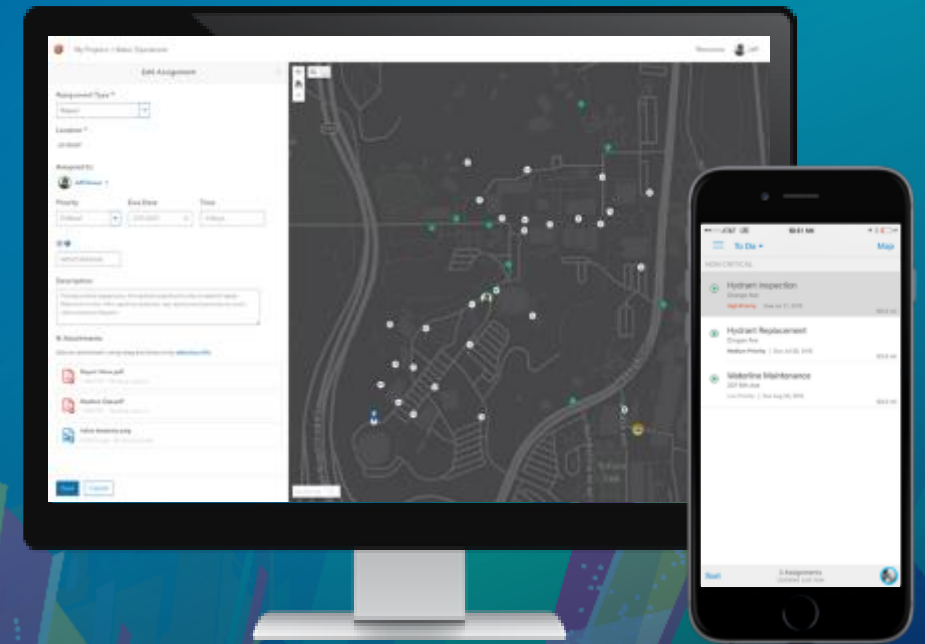


# Workforce for ArcGIS | Coordinate field work

Plan and coordinate field work

Improve efficiency with location awareness

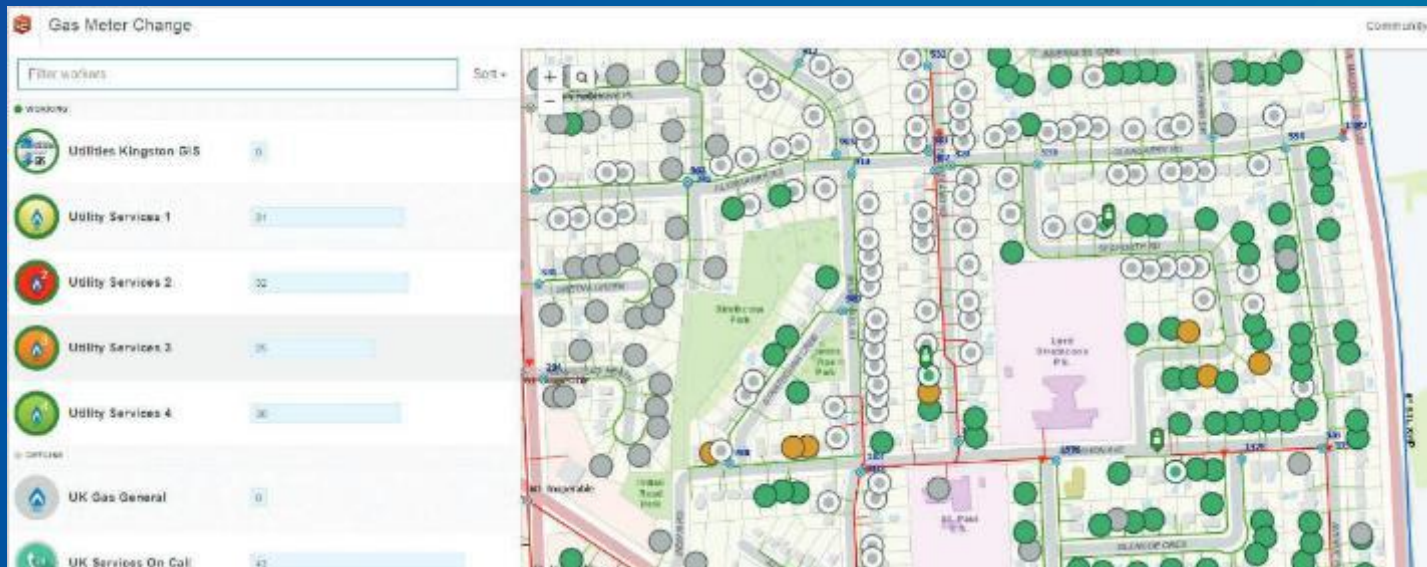
Create & Manage field assignments





# Utilities Kingston, Ontario. Canada

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







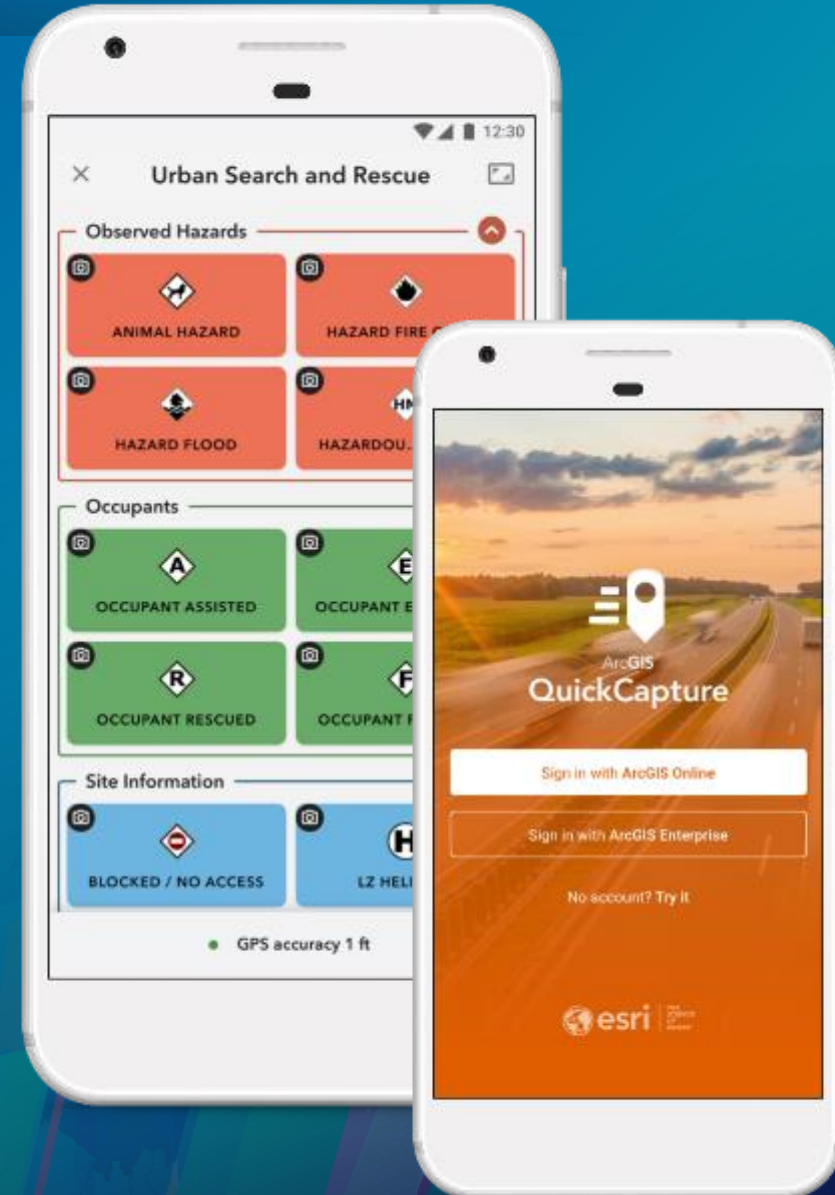
# ArcGIS QuickCapture

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



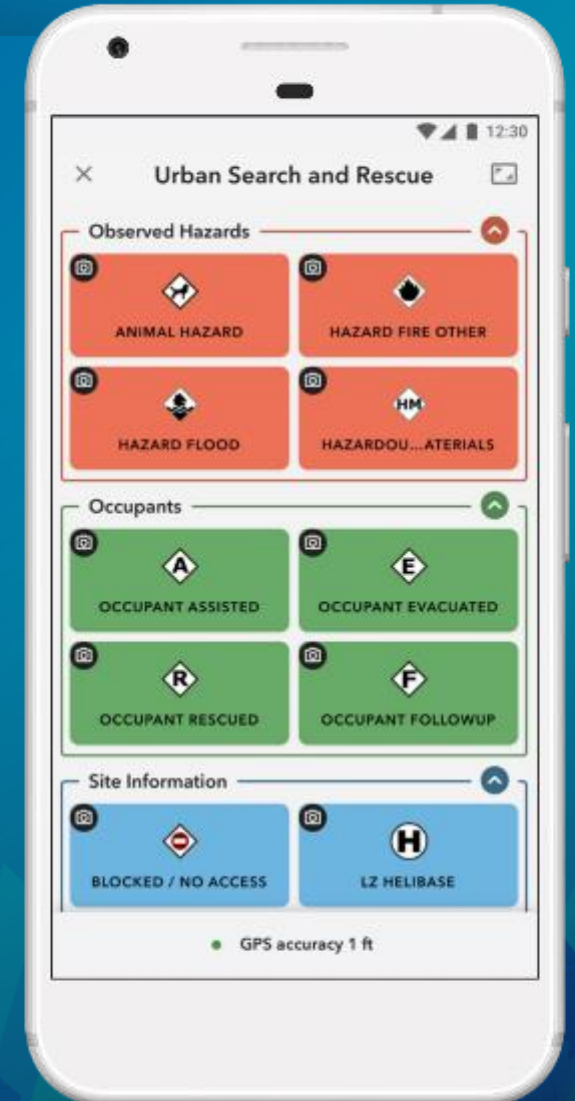
# ArcGIS QuickCapture

Schedule & licensing

Release July 2019

Included with Field Worker, Creator, GIS Analyst

Available as an add-on to Editor user types







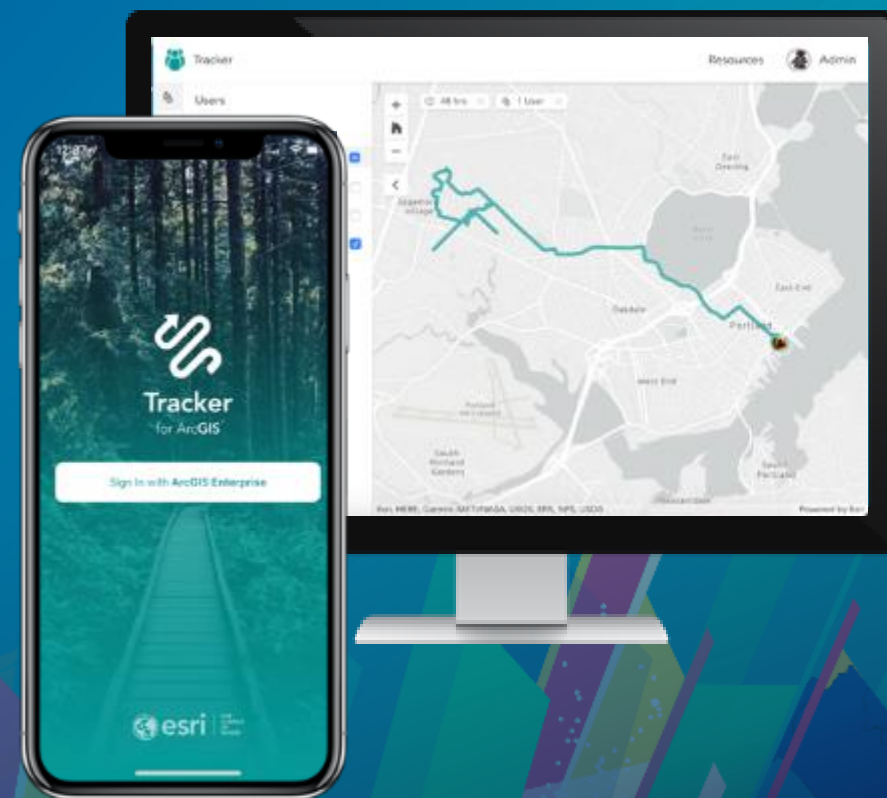
# Tracker for ArcGIS

Know what happens in the field

Share your location

Know where everyone is

Own your locations





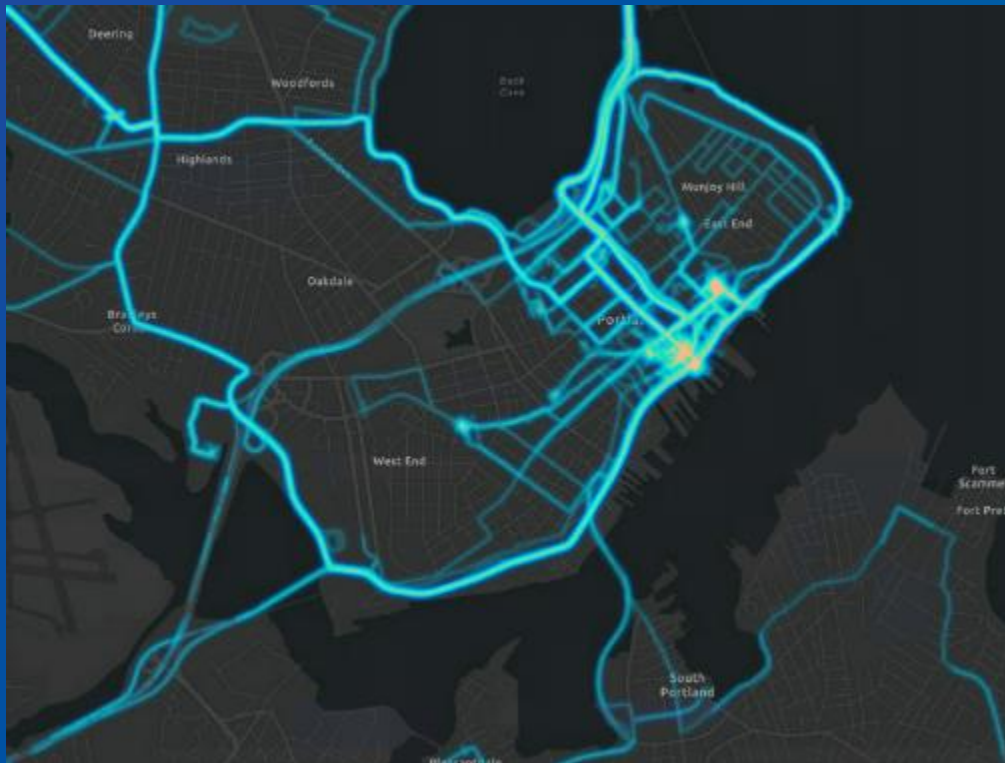
# Tracker for ArcGIS

Know what happens in the field

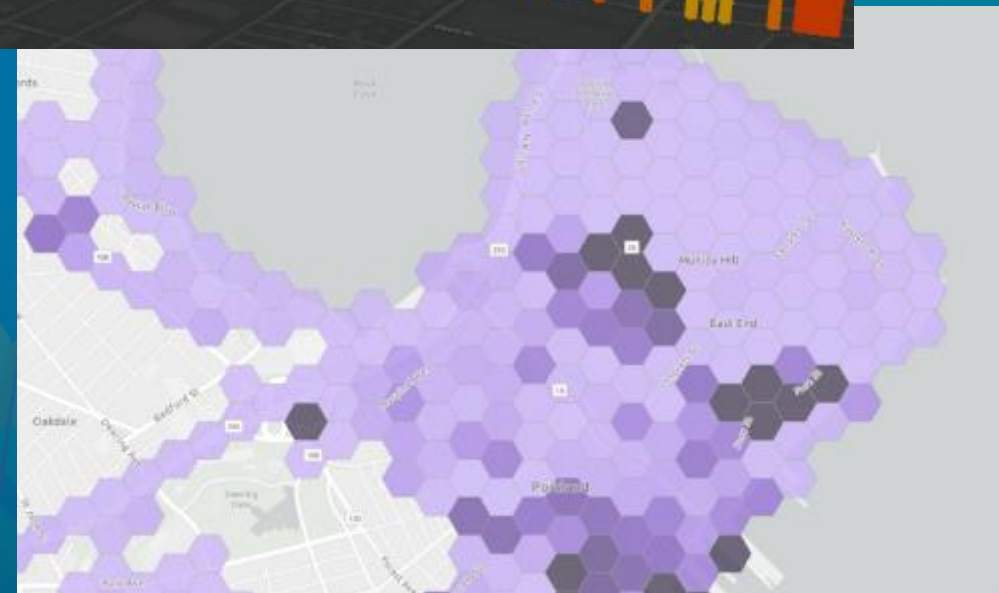
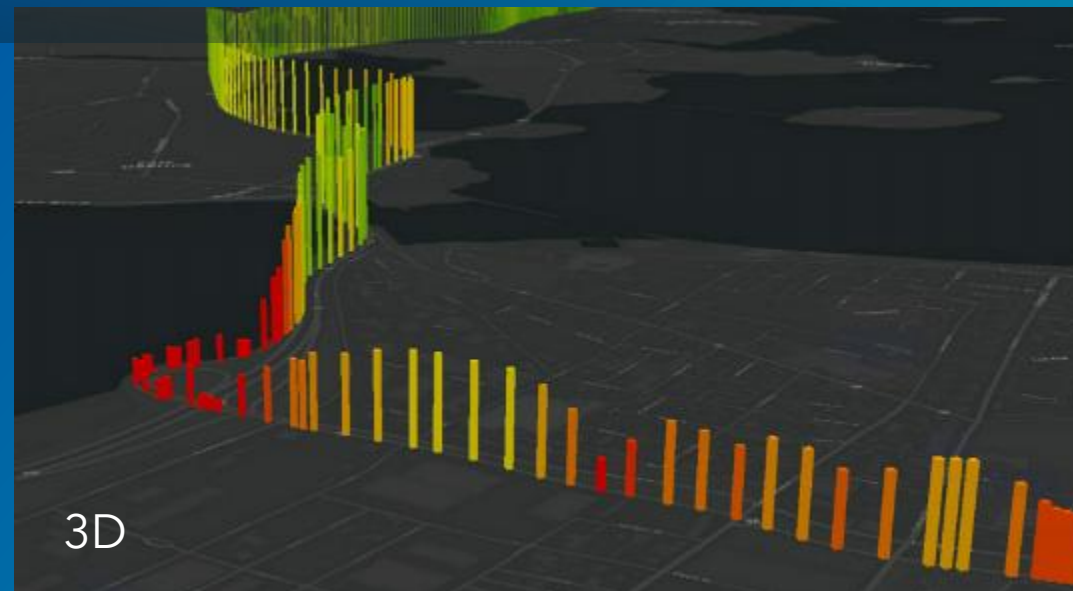




# Tracker for ArcGIS | Know what happens in the field



Linear heat maps

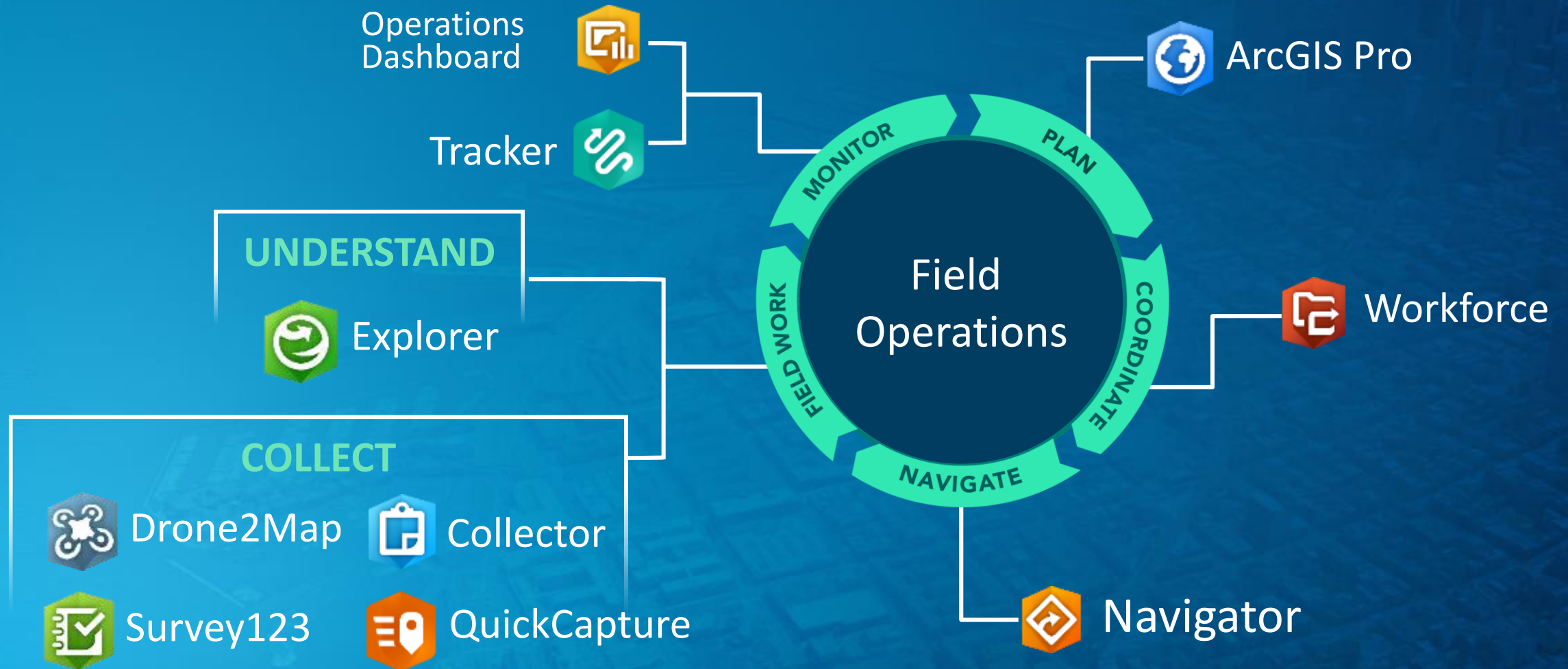


Aggregation



# Patterns

# All Apps Work Together



# Pairing ArcGIS Field Apps

## Collect and Monitor



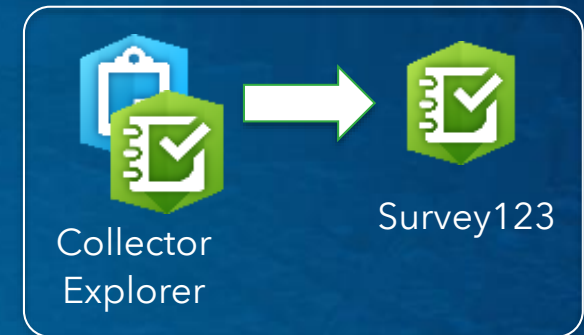
## Third Party Integrations



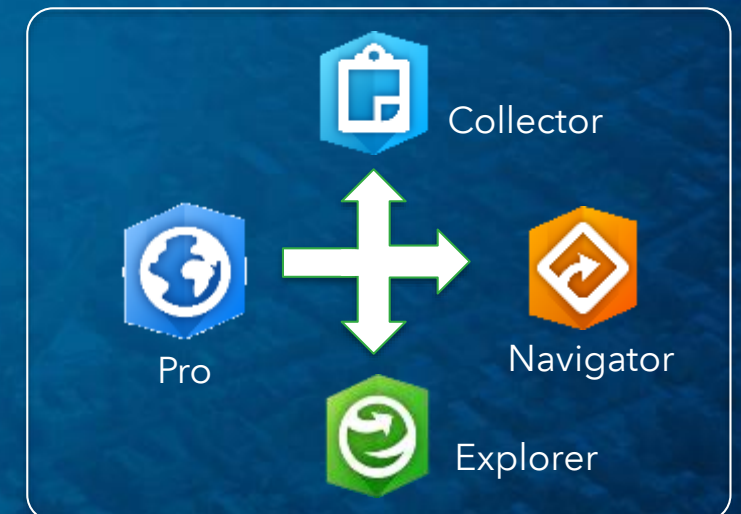
## Workforce Launchpad



## Maps + Forms

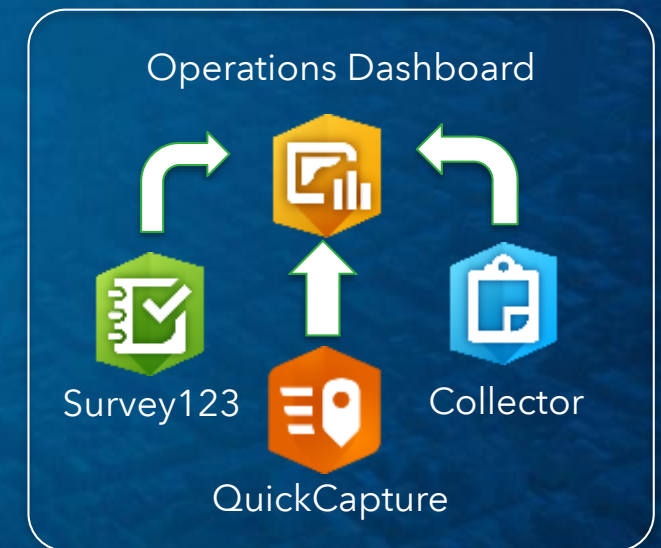
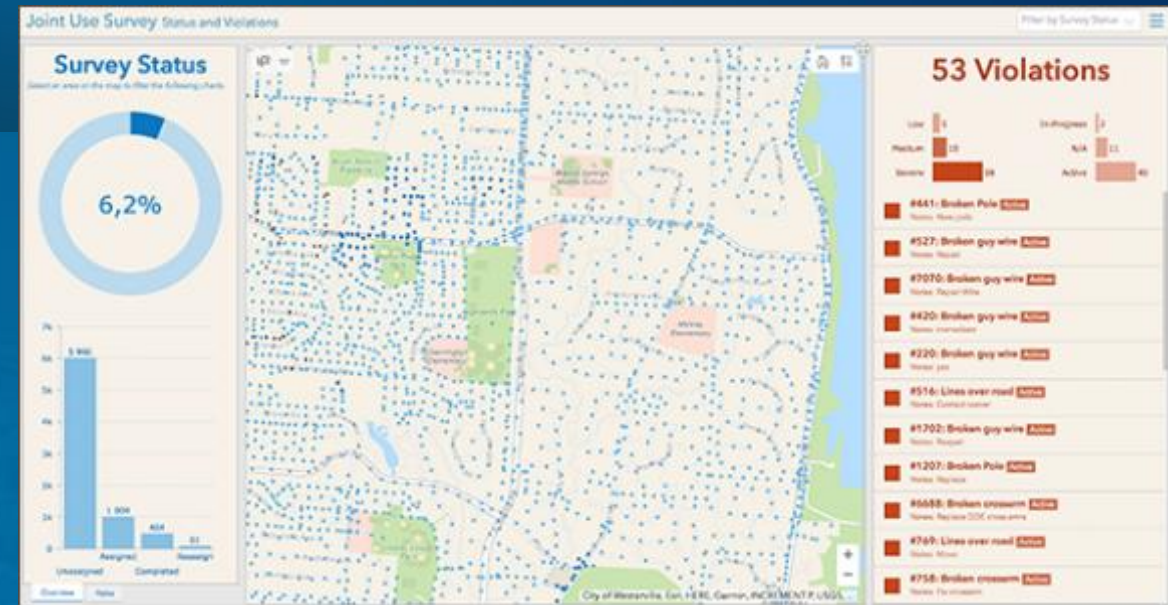


## Prepare - Field





# 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

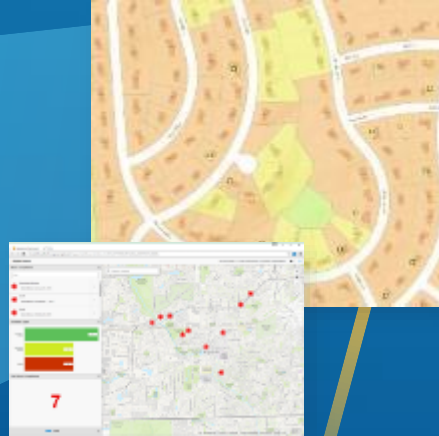
*Now Part of ArcGIS Online and Enterprise*



# ArcGIS Solutions

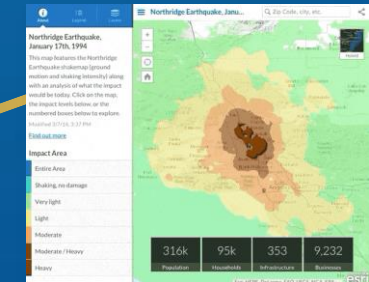
- Easily Configurable
- Fully Supported
- No Cost

## Local & State Government



## Utilities & Telecom

## Emergency Management & Public Safety




Usable and  
Extendable  
by Partners



450+ Solutions  
500,000+ Downloads

*Delivering Innovation & Best Practices*





# What is next with Field Operations in your organization?

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