ArcGIS Apps for the Field: Working Together

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2019 Esri Southwest User Conference

Agenda

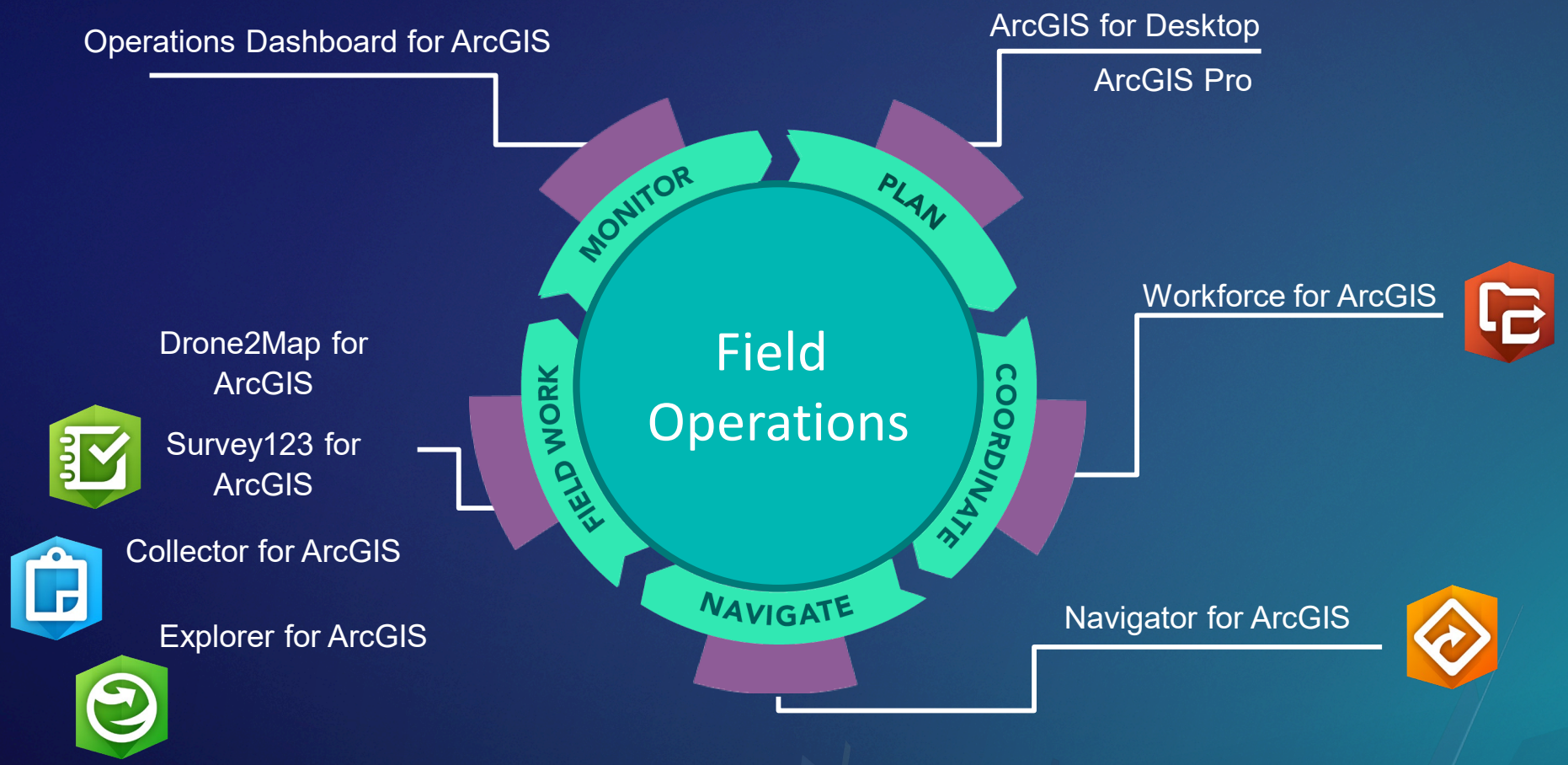
- ArcGIS Field Apps overview
- What ways do the apps work together?
  - **Demo**
- How are the apps able to work together?
- What other ways can the apps communicate?
  - **Demo**
- Why is this important to you? (with developers in mind)

ArcGIS Field Apps overview

Workforce for ArcGIS
Navigator for ArcGIS
Explorer for ArcGIS
Collector for ArcGIS
Survey123 for ArcGIS

ArcGIS Field Apps

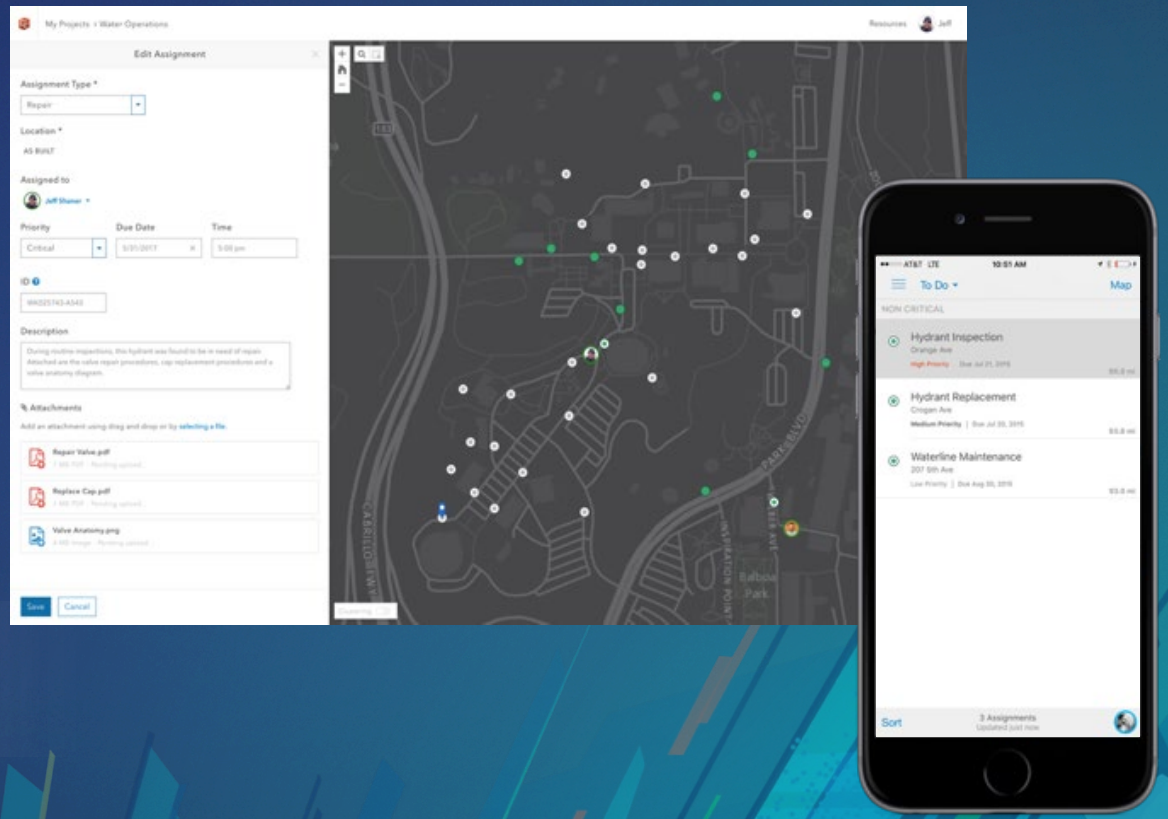
Ecosystem



ArcGIS Field Apps

Workforce for ArcGIS

- Plan, coordinate field work
- Create & Manage field assignments
- Location Awareness
- Complete Field App integration



https://doc.arcgis.com/en/workforce/

Download on the App Store

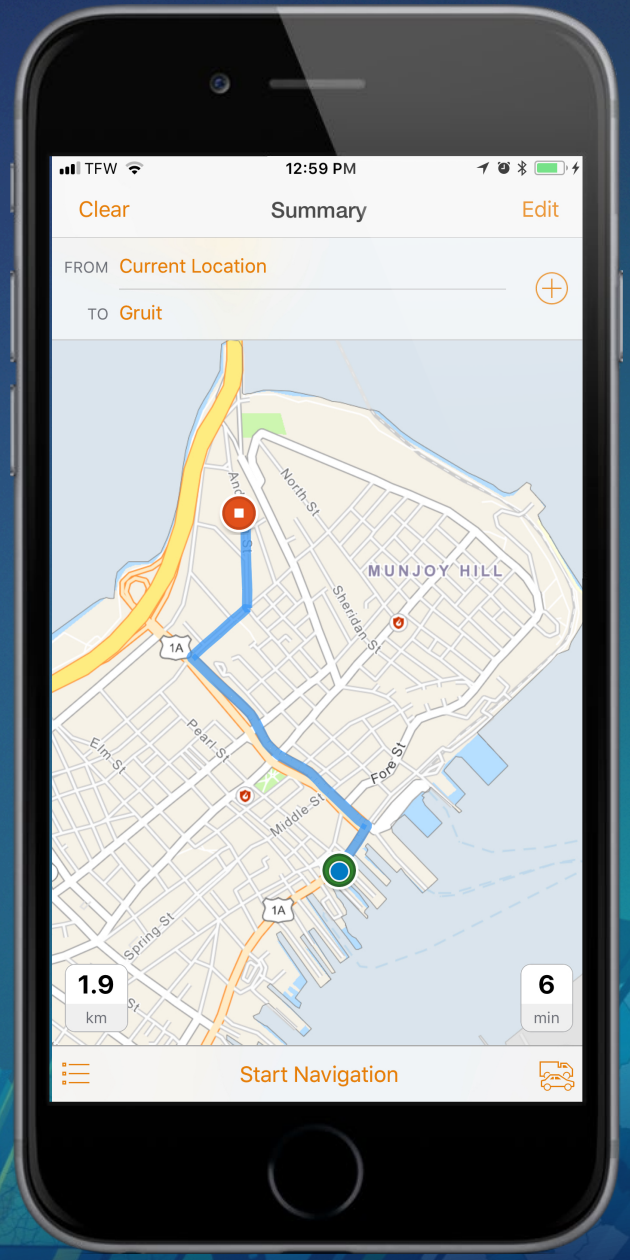
GET IT ON Google Play

available at amazon appstore

ArcGIS Field Apps

Navigator for ArcGIS

- Maps built from your own data
- Fully integrated with other Field Apps
- Work Offline
- Route with custom travel modes



https://doc.arcgis.com/en/navigator/

Download on the App Store

GET IT ON Google Play

available at amazon appstore

ArcGIS Field Apps

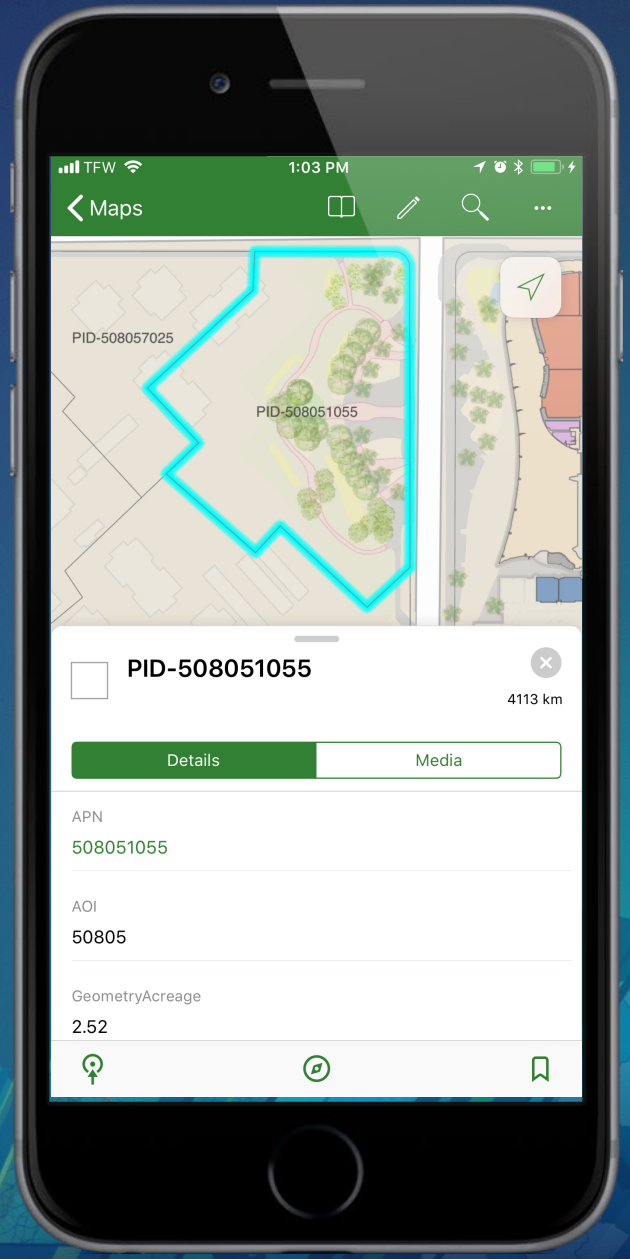
Explorer for ArcGIS

The platform ice-breaker

Your maps anywhere

Access information while disconnected

Sketch, annotate, and communicate



https://doc.arcgis.com/en/explorer/

Download on the App Store

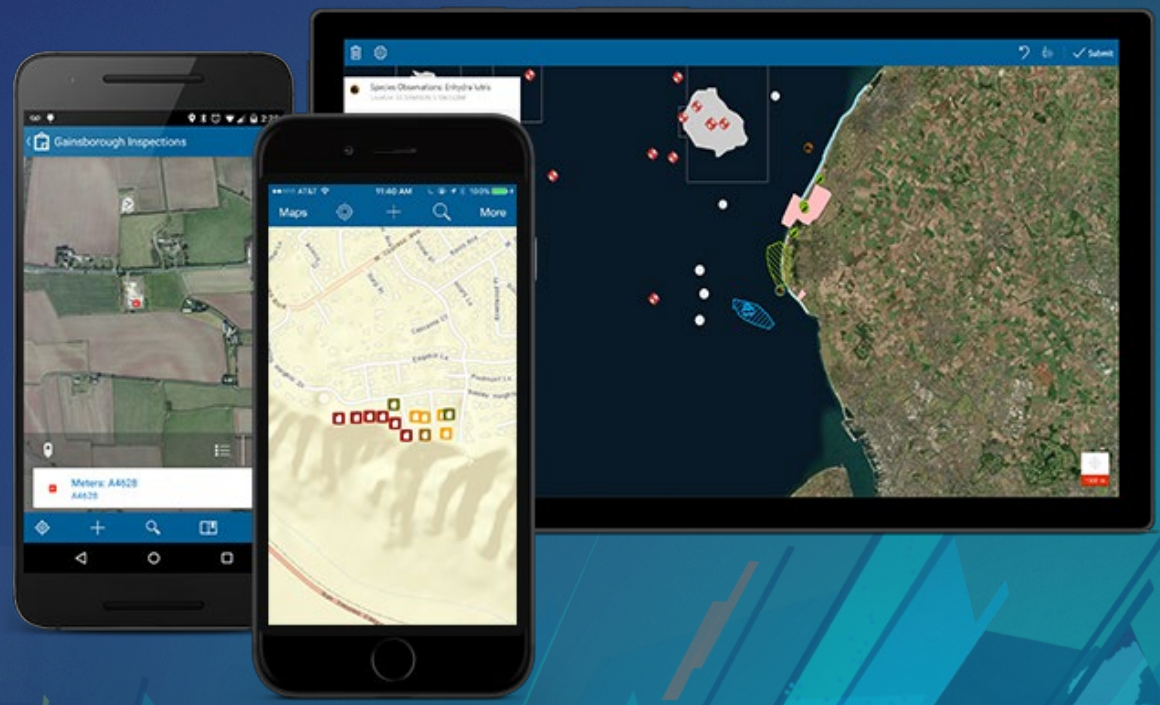
GET IT ON Google Play

available at amazon appstore

ArcGIS Field Apps

Collector for ArcGIS

- Map Centric Data Collection
- Web Maps
- Works offline
- High accuracy GPS



https://doc.arcgis.com/en/collector/

Download on the App Store

GET IT ON Google Play

available at amazon appstore

Get it from Microsoft

ArcGIS Field Apps

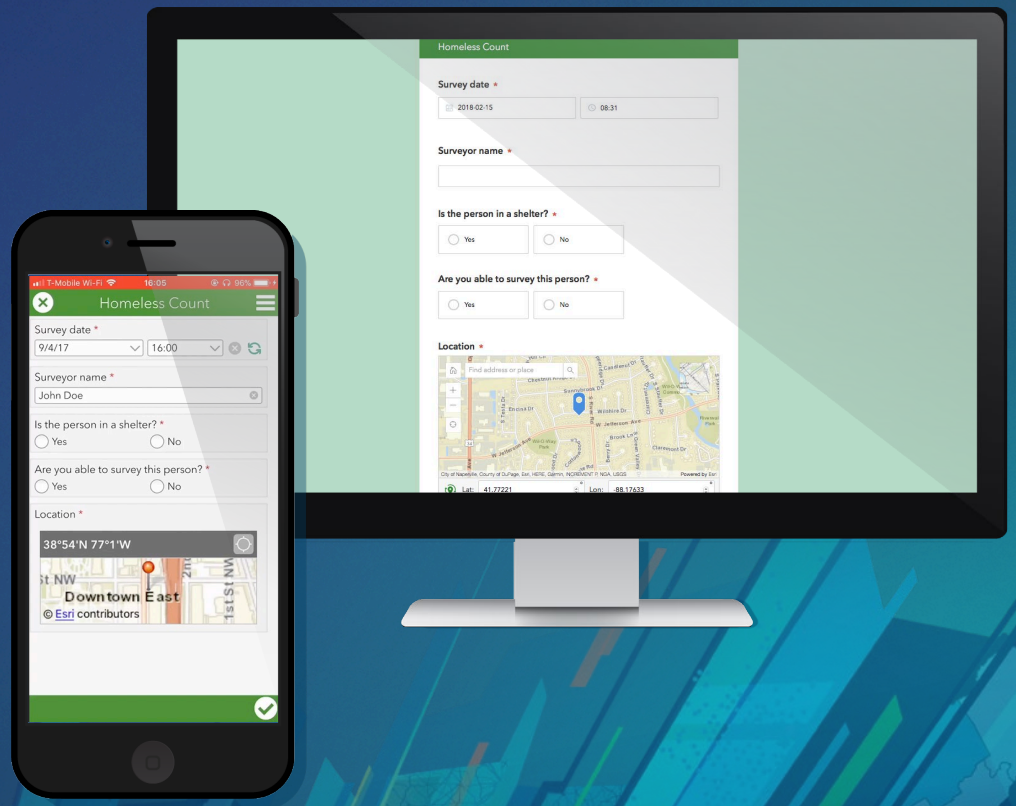
Survey123 for ArcGIS

Form Centric Data Collection

Create smart forms

Collect anytime, anywhere

Analyze & share results



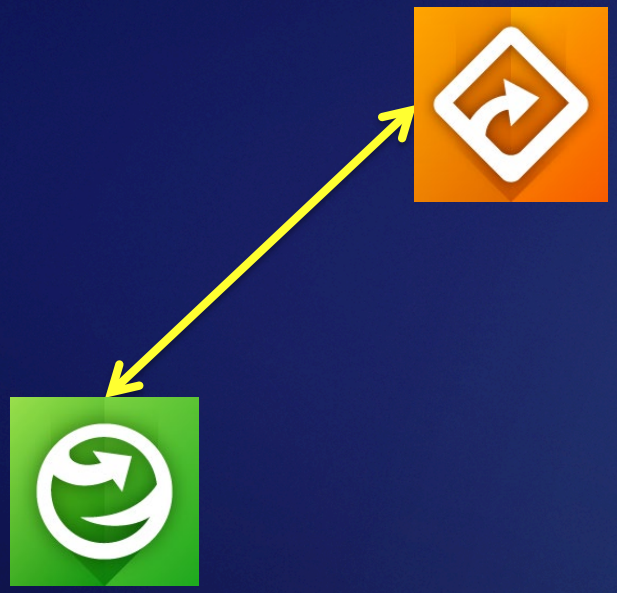
Download on the App Store

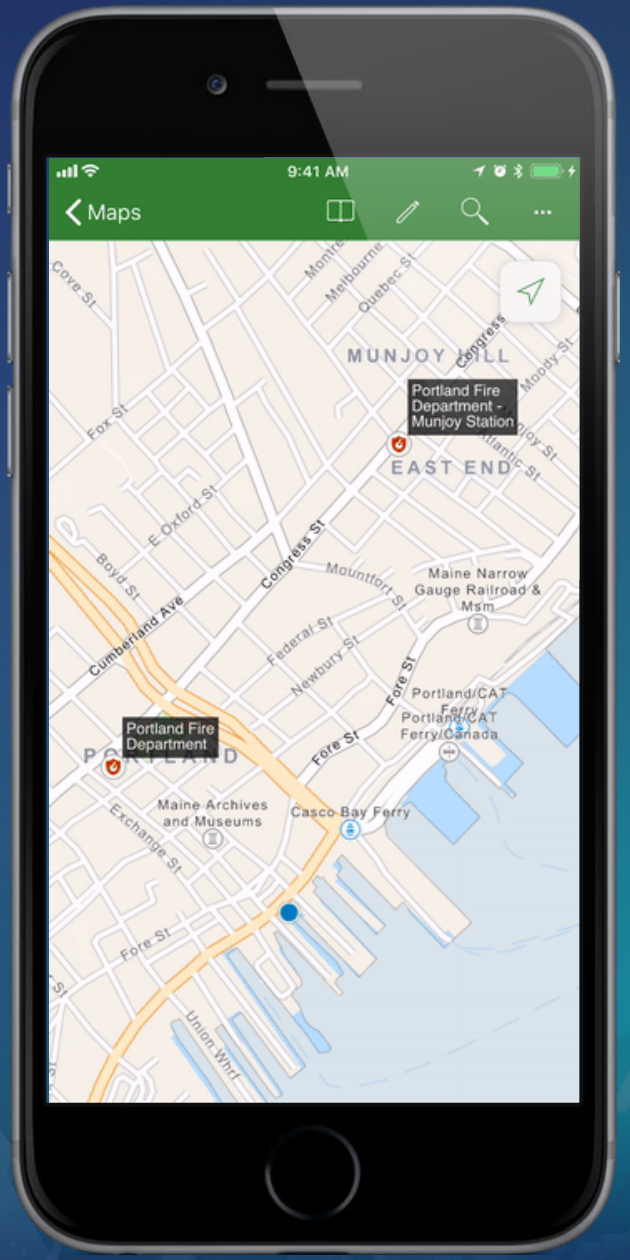
GET IT ON Google Play

https://doc.arcgis.com/en/survey123/

ArcGIS Field Apps

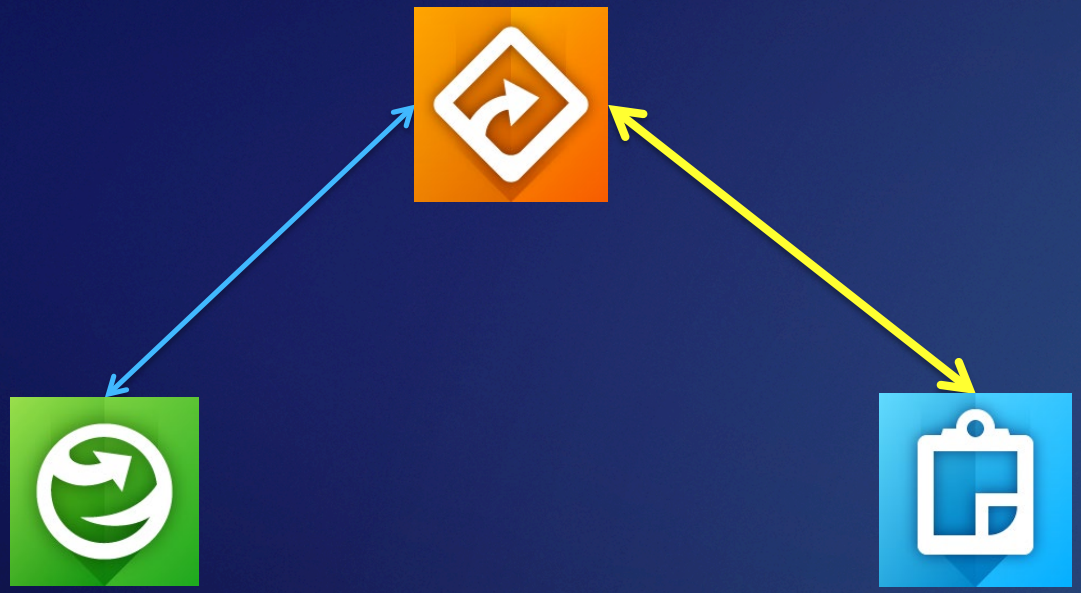
What ways the apps work together

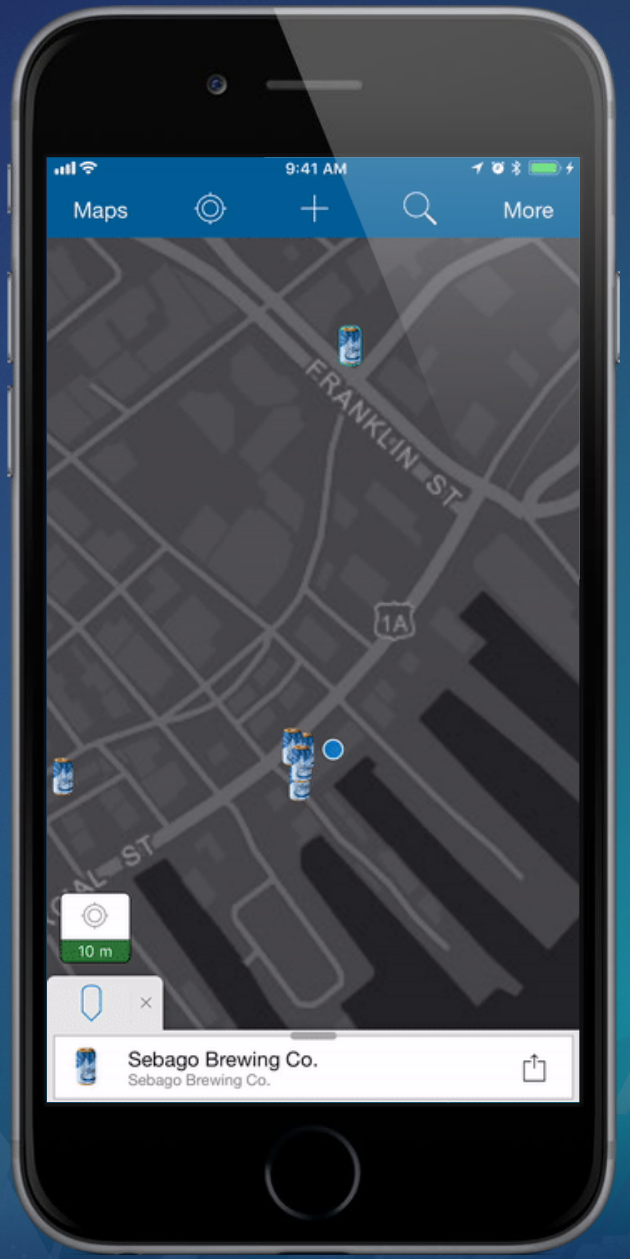




ArcGIS Field Apps

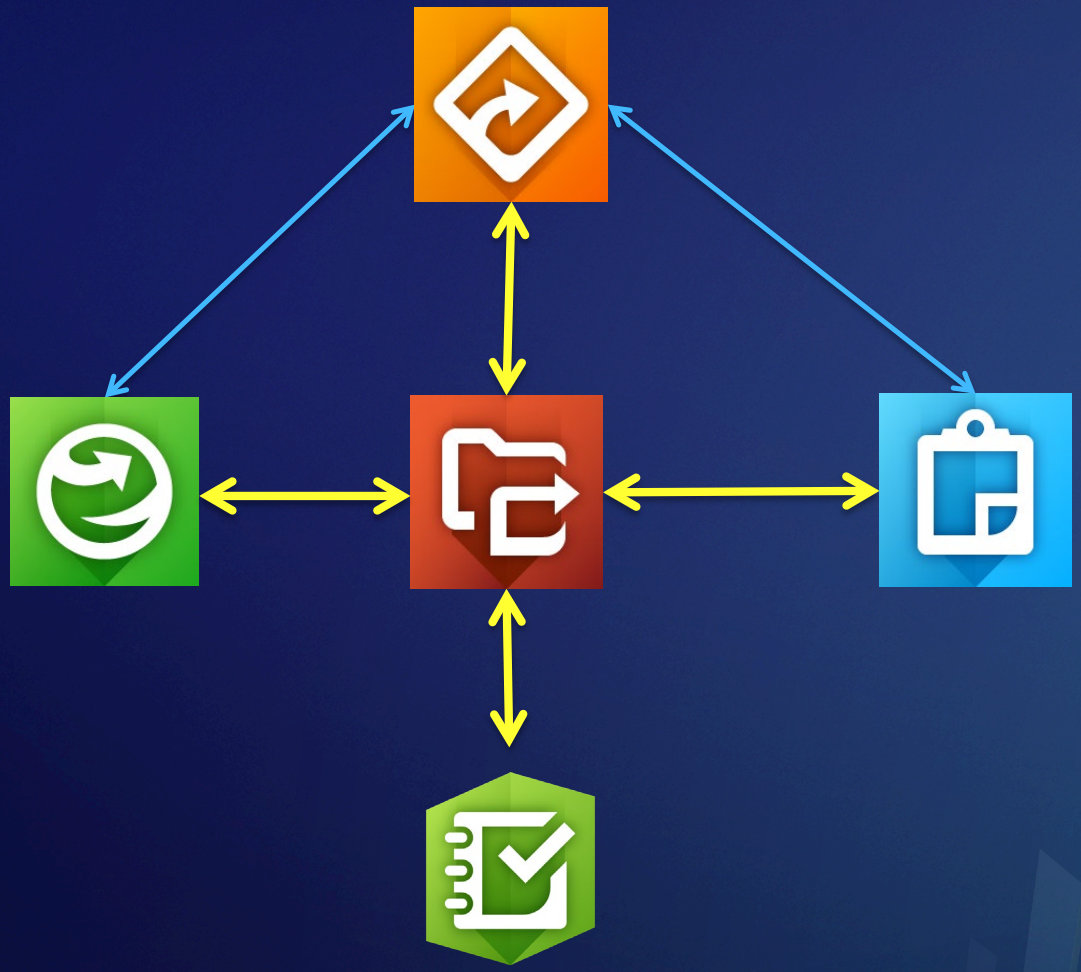
What ways the apps work together

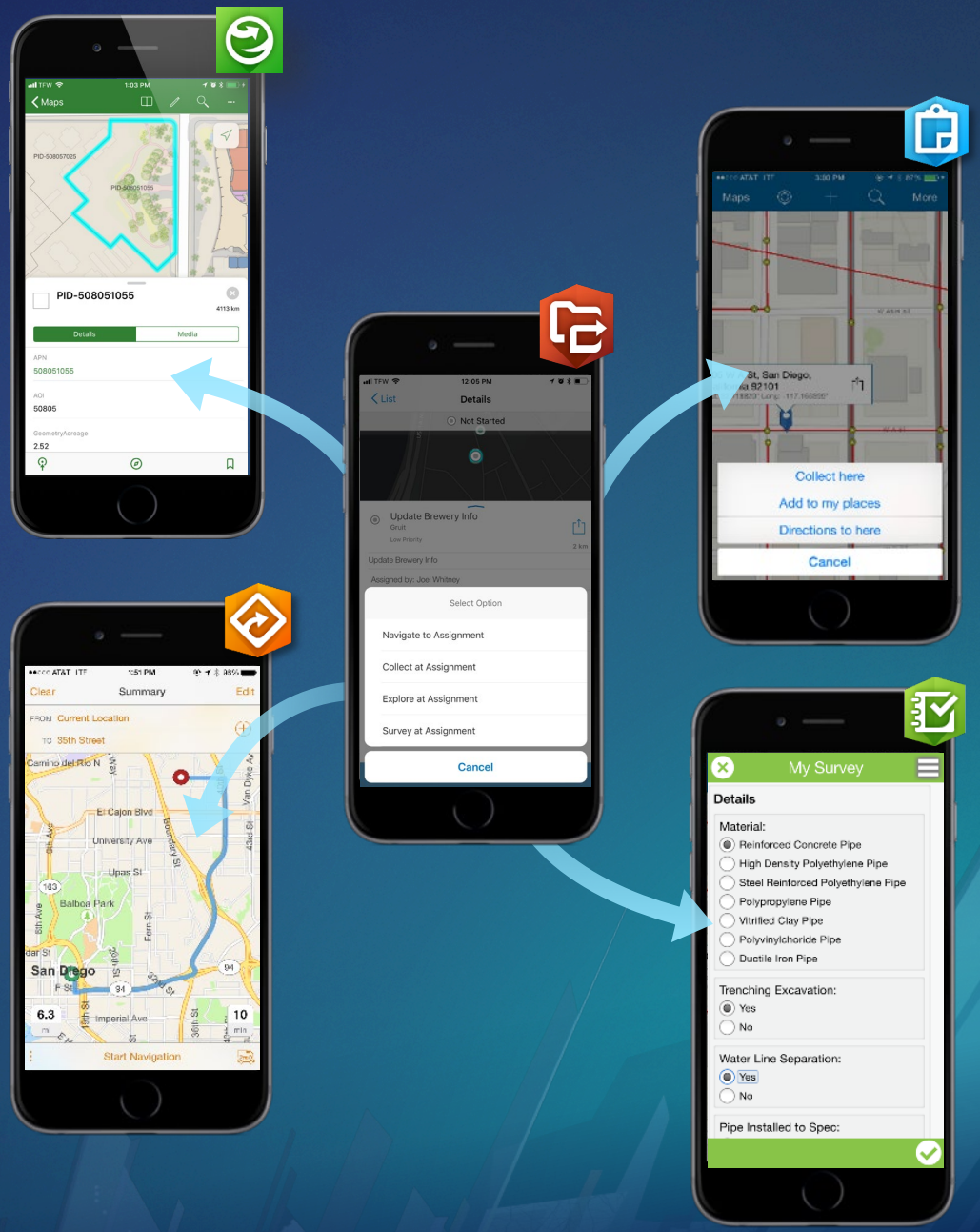




ArcGIS Field Apps

What ways the apps work together





Demo: ArcGIS Field Apps working together

Workforce for ArcGIS
Navigator for ArcGIS
Explorer for ArcGIS
Collector for ArcGIS
Survey123 for ArcGIS

How are the apps able to work together?

Deep Linking with URL Schemes

How the apps are able to work together

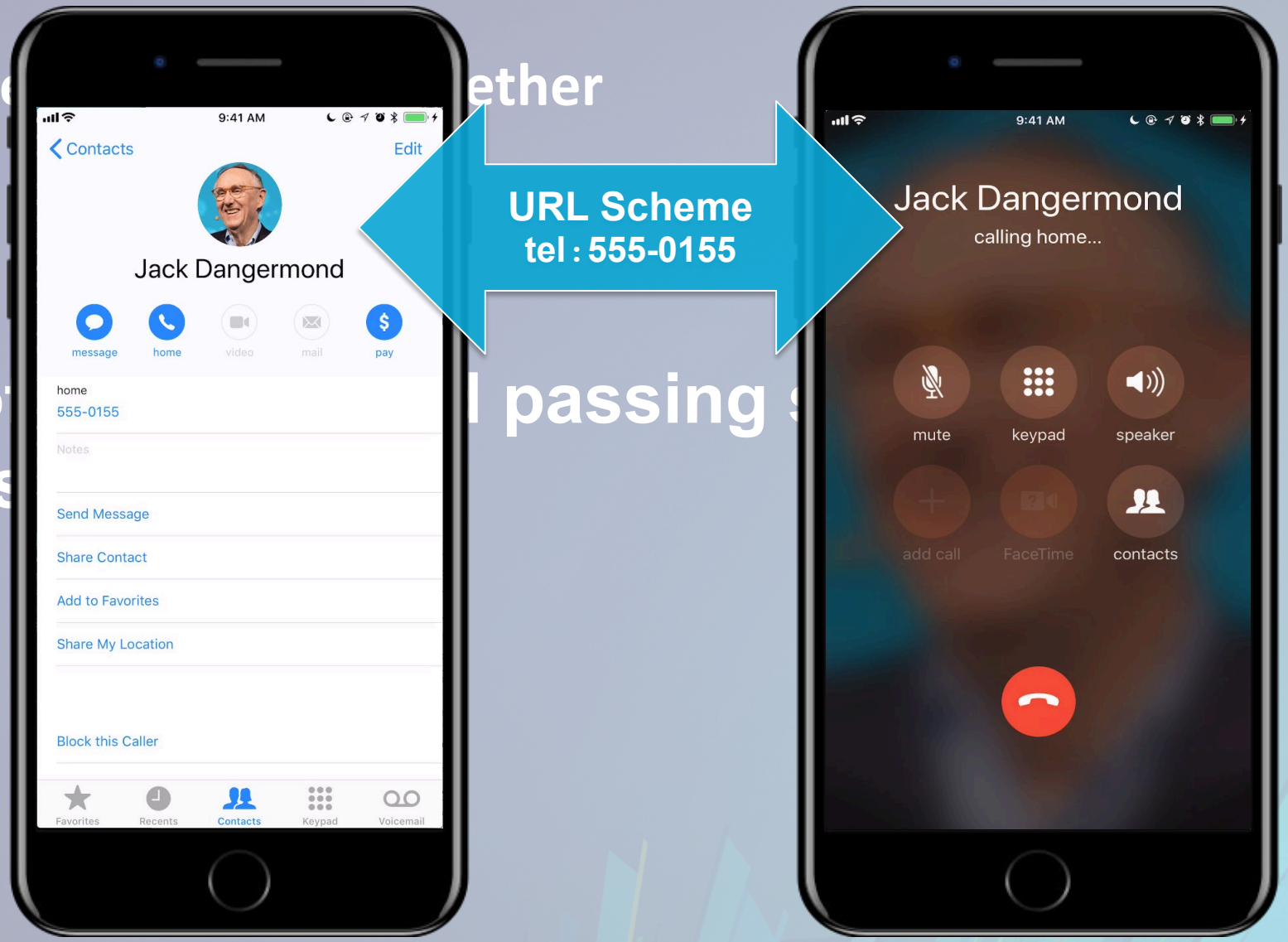
What is deep linking with URL Schemes?

A method of invoking and passing state between applications

How the apps ar ether

What is a URL Scheme?

A method o l passing
applications



Contacts.app

Phone.app

How the apps are able to work together

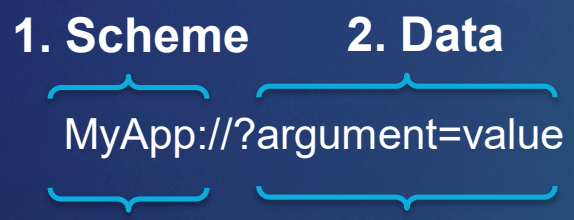
Sounds fancy ….

1. Identifying information for the app being invoked – “App Scheme”
2. App specific data or parameters

How the apps are able to work together

Sounds fancy ….

1. Identifying information for the app being invoked – “App Scheme”
2. App specific data or parameters



arcgis-explorer://?itemID=1cde286f20b74fa69b3c36dfa1e81a85

arcgis-navigator://?stop=41.780618,-88.179449&stopname=Dropped+Pin

What other ways can the apps communicate?

URL Scheme support

Workforce for ArcGIS

Navigator for ArcGIS

Explorer for ArcGIS

Collector for ArcGIS

Survey123 for ArcGIS

URL Scheme support

Survey123 for ArcGIS

arcgis-survey123://?

- **itemID** – The ID of the form to load
- **field:<field_name>** – assign a value to a given field/question
- **center** – The location for the point question

https://doc.arcgis.com/en/survey123/reference/integratewithotherapps.htm

URL Scheme support

Survey123 for ArcGIS

Demo Examples:

Open survey

arcgis-survey123://?itemID=1a92d27fc41a4d7da3ec30489fc9eee1

URL Scheme support

Survey123 for ArcGIS

Demo Examples:

Pre-populated fields

arcgis-survey123://?itemID=1a92d27fc41a4d7da3ec30489fc9eee1&field:name=Daniel&center=39.6276207,-104.9041879,17

URL Scheme support

Explorer for ArcGIS

arcgis-explorer://?

- **itemID** – Web Map or MMPK to open/download on launch
- **center** – center point of map – Lat/Lon, Address, Feature
- **wkid** – provide wkid for Lat/Lon in non-WGS84 spatial reference
- **scale** – scale to display the map at on launch
- **rotation** – custom map rotation
- **markup** – enable markup tool on launch
- **bookmark** – center map on bookmark instead of using center param
- **search** – quickly execute search for feature in map

GitHub Repository: https://github.com/Esri/explorer-integration

URL Scheme support

Explorer for ArcGIS

Demo Examples:

Open Web Map

arcgis-explorer://?itemID=0c900ae2a1084d27b608233921ef1a84

URL Scheme support

Explorer for ArcGIS

Demo Examples:

Open MMPK

arcgis-explorer://?itemID=6ca5f9cfea0c47b2969ee9750693301f

URL Scheme support

Explorer for ArcGIS

Demo Examples:

Center on coordinates

arcgis-explorer://?itemID=0c900ae2a1084d27b608233921ef1a84&center=4807094.8078305572,-1096767.7053304175&scale=1000&wkid=26919

URL Scheme support

Explorer for ArcGIS

Demo Examples:

Center on feature

arcgis-explorer://?itemID=0c900ae2a1084d27b608233921ef1a84&center=43141&scale=500

URL Scheme support

Explorer for ArcGIS

Demo Examples:

Search feature

arcgis-explorer://?itemID=0c900ae2a1084d27b608233921ef1a84&search=43141

URL Scheme support

Navigator for ArcGIS

arcgis-navigator://?

- **start** – Start location
- **startname** – Name of start
- **stop** – Location of a stop
- **stopname** – Name of stop
- **callback** – Callback URL scheme
- **callbackprompt** – Prompt displayed in the app
- **optimize** – Boolean to determine if route is optimized
- **travelmode** – Travel mode used when calculating the route

GitHub Repository: https://github.com/Esri/navigator-integration

URL Scheme support

Navigator for ArcGIS

Demo Examples:

Route to single stop

arcgis-navigator://?stop=Mile+High+Stadium

URL Scheme support

Navigator for ArcGIS

Demo Examples:

Route to many stops

- **arcgis-navigator://?stop=Mile+High+Stadium&stop=Pepsi+Center+North+Door&stop=Coors+Field+Denver&stop=Denver+International+Airport&stop=Red+Rocks+Amphitheatre**

URL Scheme support

Navigator for ArcGIS

Demo Examples:

Optimize route to many stops

Arcgis-navigator://?stop=Mile+High+Stadium&stop=Pepsi+Center+North+Door&stop=Coors+Field+Denver&stop=Denver+International+Airport&stop=Red+Rocks+Amphitheatre&optimize=true

URL Scheme support

Collector for ArcGIS

arcgis-collector://?

- **itemID** – item ID of the webmap you want to to open on launch
- **center** – coordinates of centering point
- **featureSourceURL** – the URL to the layer to collect a feature
- **featureAttributes** – JSON dictionary of attributes for new feature

GitHub Repository: https://github.com/Esri/collector-integration

URL Scheme support

Collector for ArcGIS

Demo Examples:

Open Web Map

- **arcgis-collector://?itemID=abcb9fea08984c489bcd4ff940be5755**

URL Scheme support

Collector for ArcGIS

Demo Examples:

Set location for new feature

arcgis-collector://?itemID=abcb9fea08984c489bcd4ff940be5755&center=39.6276207,-104.9041879

URL Scheme support

Collector for ArcGIS

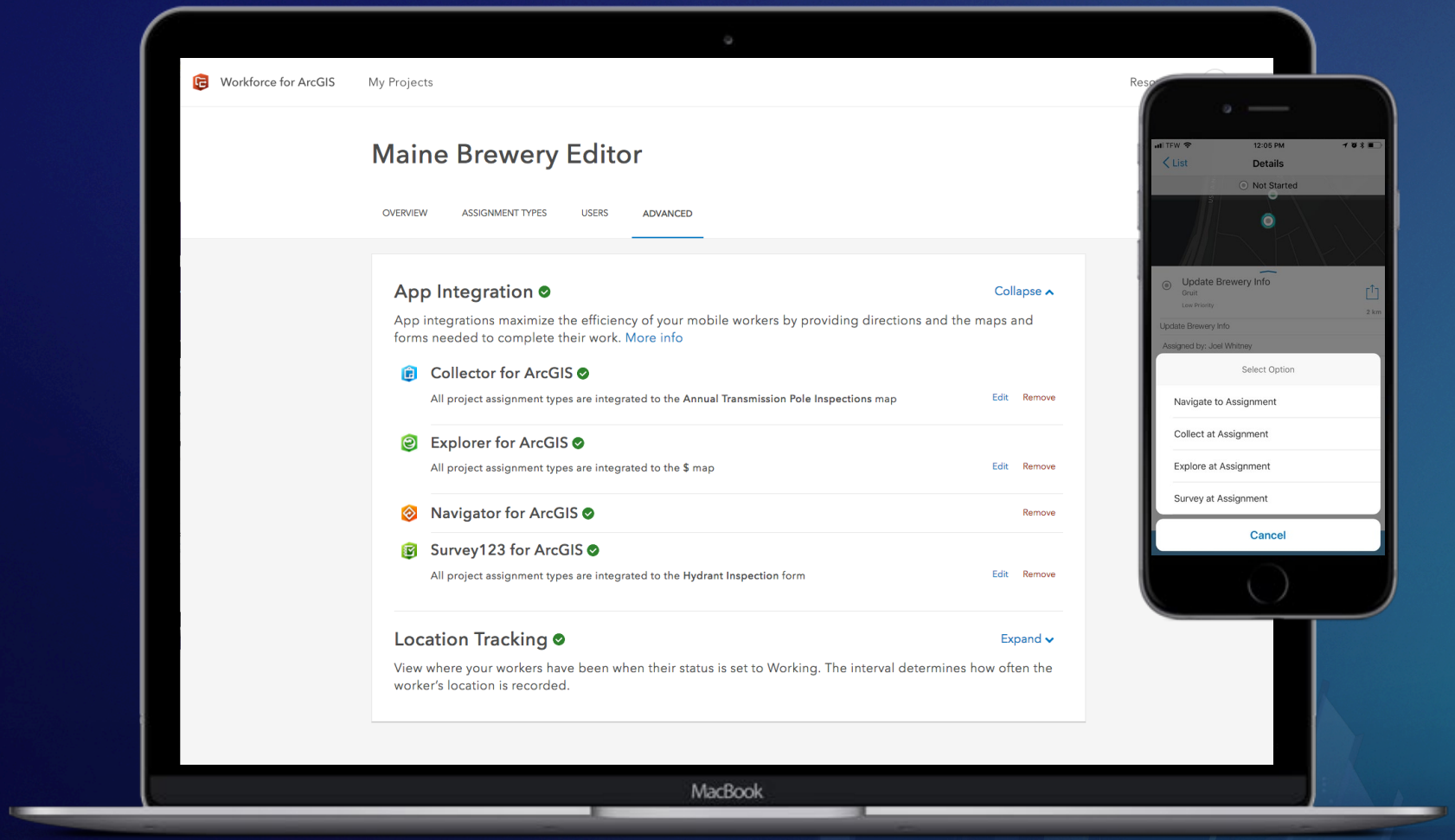
Demo Examples:

Set location and pre-populated fields

- **arcgis-collector://?itemID=abcb9fea08984c489bcd4ff940be5755&center=39.6276207,-104.9041879&featureSourceURL=https://services6.arcgis.com/0p6i4J6xhQas4Unf/arcgis/rest/services/Denver_Breweries/FeatureServer/0&featureAttributes=%7B%22Name%22:%22Daniel's Brewery%22,%22Address%22:%224900 S Syracuse St, Denver, CO%22%7D**

URL Scheme support

Workforce for ArcGIS: Default app integrations



Collector for ArcGIS

1. Select map
2. Assignment type
3. Select information to pass

Explorer for ArcGIS

1. Select map
2. Assignment type

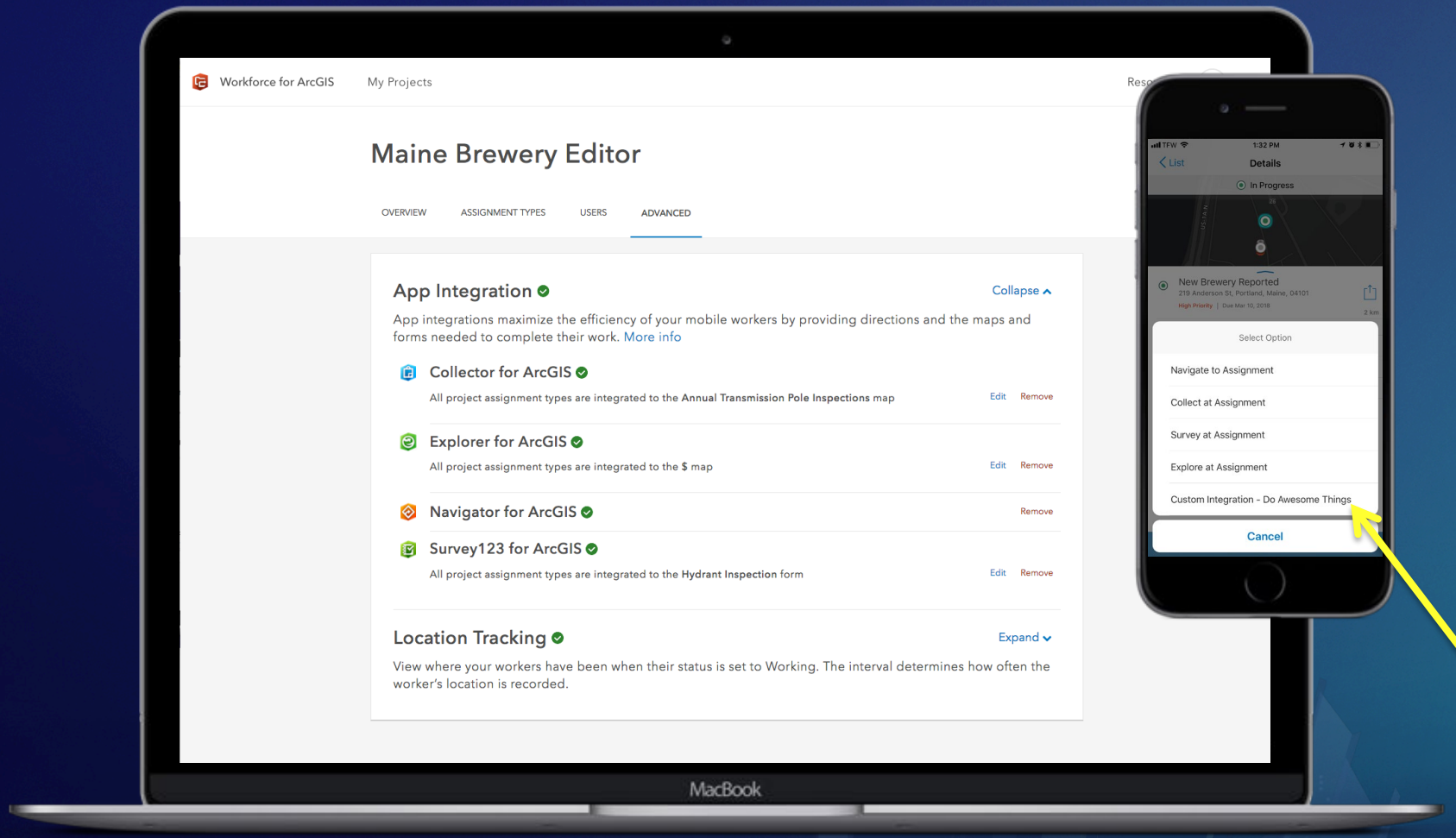
Navigator for ArcGIS

Survey123 for ArcGIS

1. Select map
2. Assignment type
3. Select information to pass

URL Scheme support

Workforce for ArcGIS: Custom app integrations



Collector for ArcGIS

1. Select map
2. Assignment type
3. Select information to pass

Explorer for ArcGIS

1. Select map
2. Assignment type

Navigator for ArcGIS

Survey123 for ArcGIS

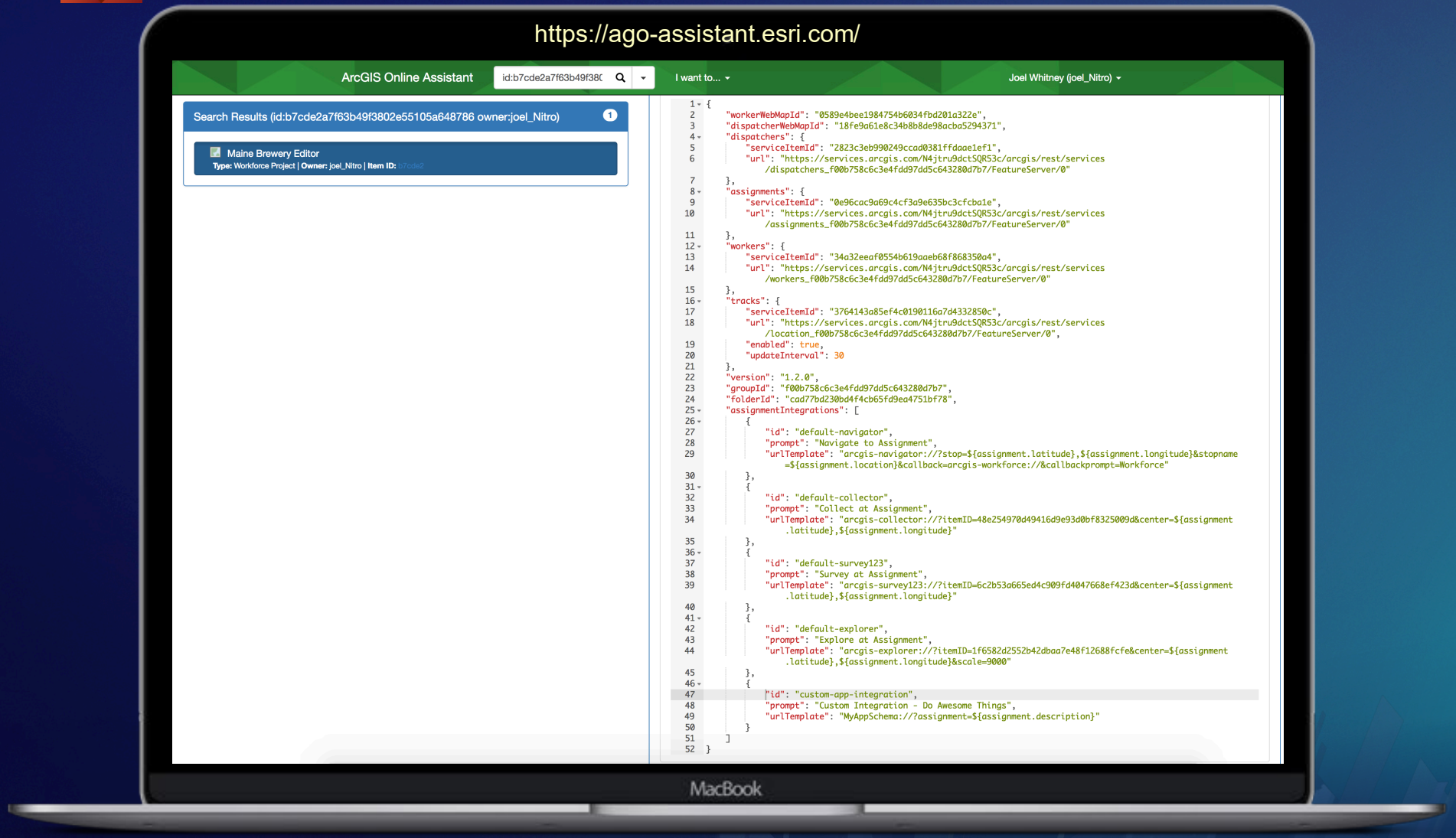
1. Select map
2. Assignment type
3. Select information to pass

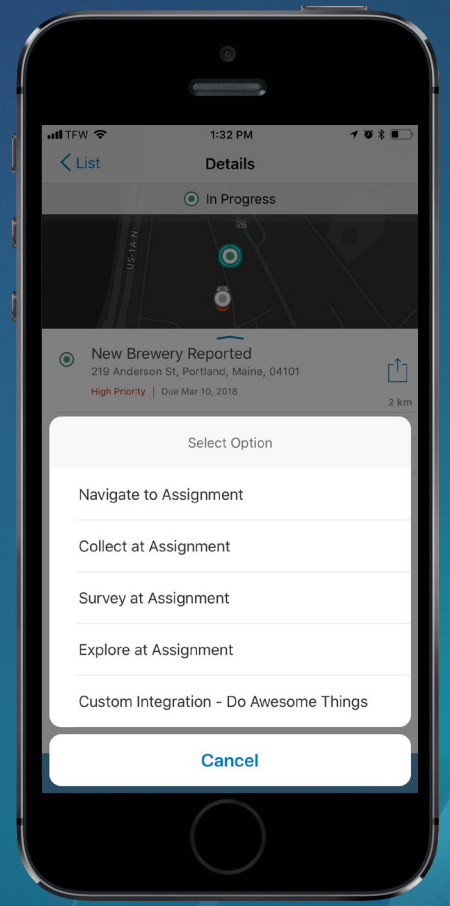
Your custom app

1. ????

URL Scheme support

Workforce for ArcGIS: Add custom app integrations

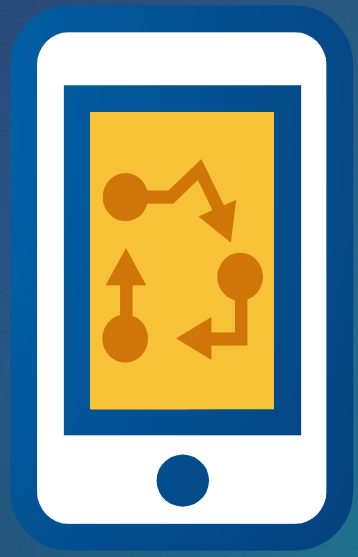




URL Scheme support

Ways to deep link to ArcGIS Field Apps

- Host a web page with links
- Email or text message
- Email or text attachment
- Custom app



Why is this important to you?

(with developers in mind)

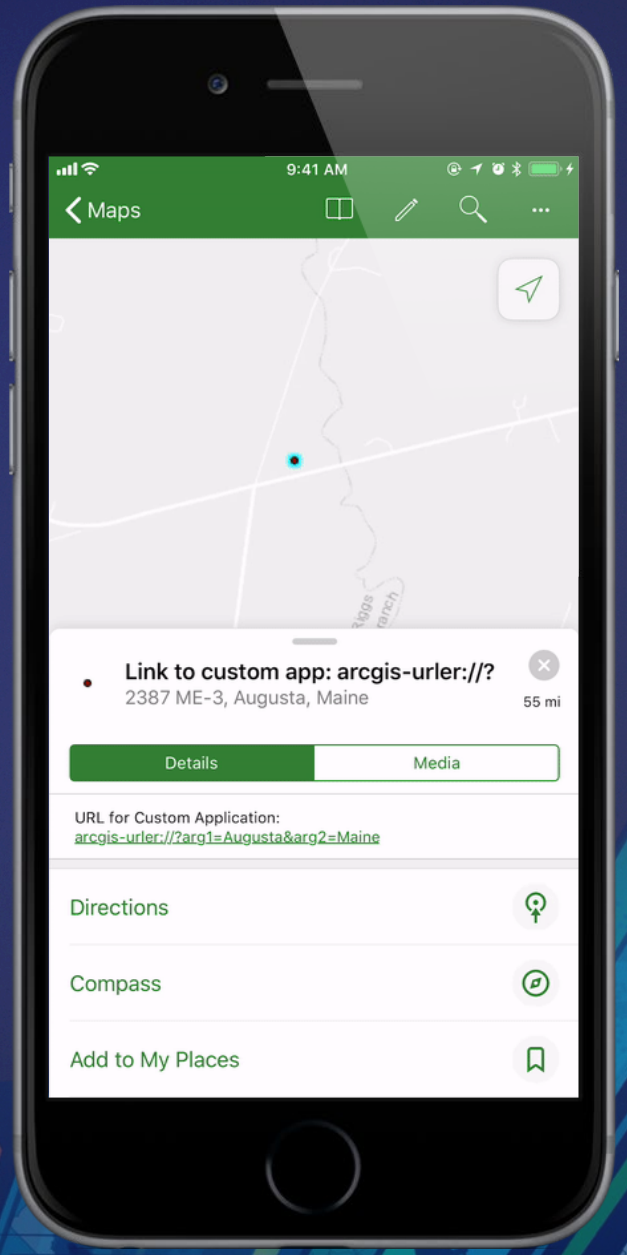
Why is this important to you?

Not only our apps can talk to each other

Why is this important to you?

Not only our apps can talk to each other

- ☑ Custom integrations *in* Field Apps
  - **Shown from Workforce for ArcGIS**
- ☑ Integrate *to* Field Apps from custom app
  - **Shown from QR codes**
- ❑ Custom integrations from Field Apps
  - **Let's see how…**



Overview

- ArcGIS Field Apps overview
- What ways the apps work together (Out of the box integrations)
- How the apps are able to work together (Deep linking with URL Scheme)
- What other ways the apps can communicate (URL Scheme support)
- Why is this important to you? (Integrate with custom / 3rd party applications)

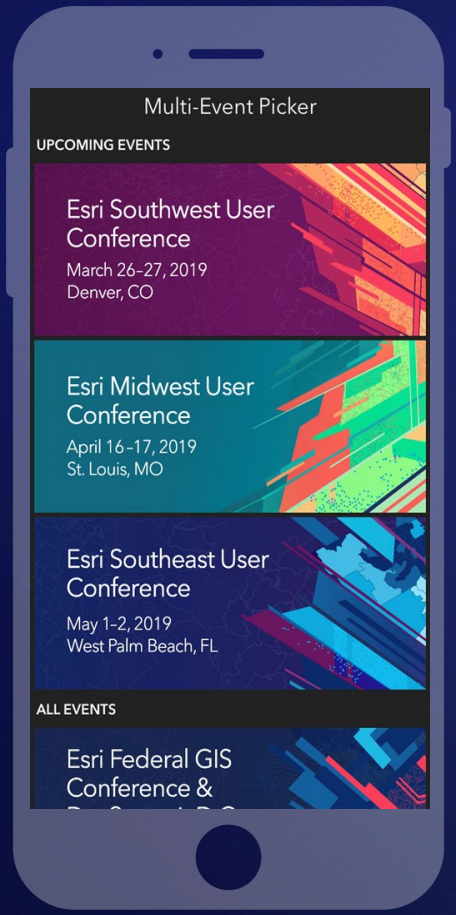
Resources and Questions

GitHub repos

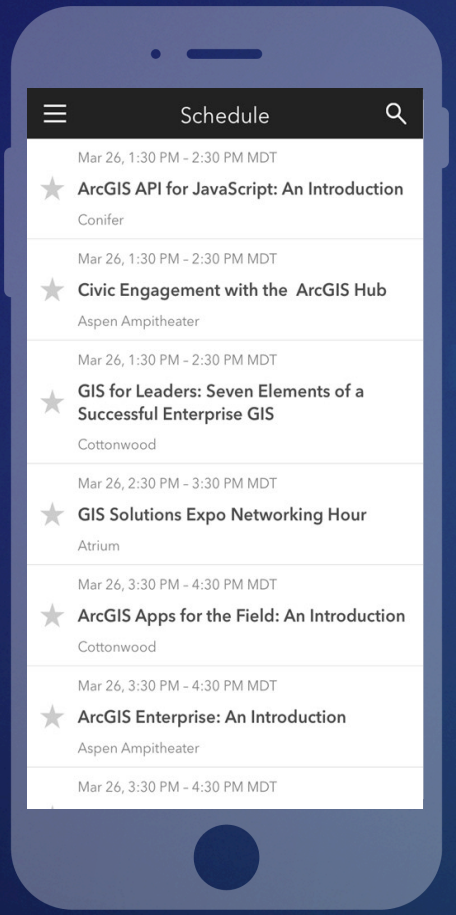
- Navigator: https://github.com/Esri/navigator-integration
- Collector: https://github.com/Esri/collector-integration
- Explorer: https://github.com/Esri/explorer-integration
- Survey123 help documentation: https://doc.arcgis.com/en/survey123/reference/integratewithotherapps.htm

Please Take Our Survey on the App

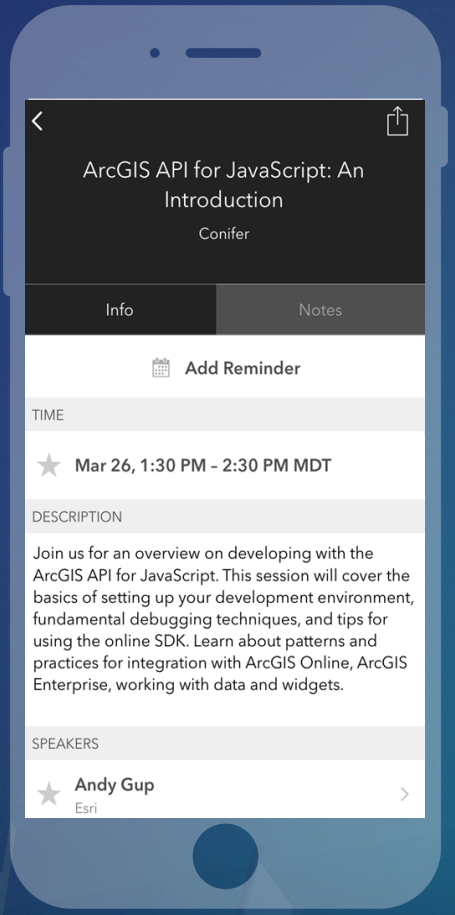
Download the Esri Events app and find your event



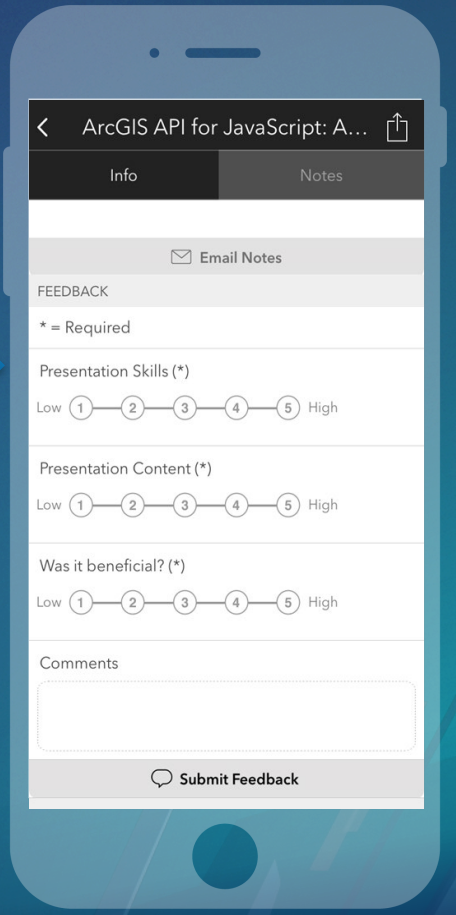
Select the session you attended



Scroll down to find the feedback section



Complete answers and select “Submit”



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