



ArcGIS Field Maps: Enabling inspection workflows

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DEVELOPER SUMMIT

Where we're going

- Overview of Field Maps
- Relationship overview
- Configuring Smartforms
- Demos
- What's next





ArcGIS Field Maps | Introducing Field Maps Mobile app

Requirements

- iOS 13.5 & Android 8 (API 26)

Capabilities

- Map viewing
- Robust **smart form** editing for inspections
 - Simplified form management, conditional visibility, required fields
- High accuracy data collection
- Indoor mapping
- Map markup
- Record and share tracks



View



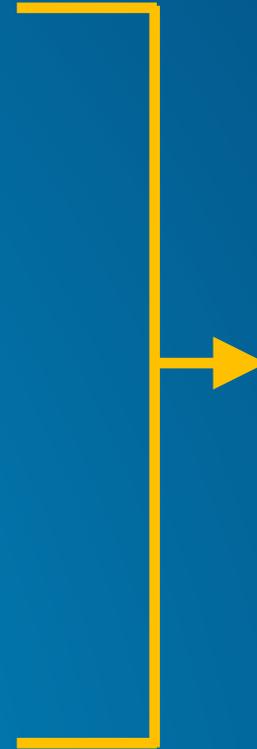
Collect



Track

ArcGIS Field Maps | Key Benefits

- Single app to deploy and learn
- Sign in to ArcGIS only once
- Eliminate duplication of offline content
- Consistent user experience
- Improved feature deployment



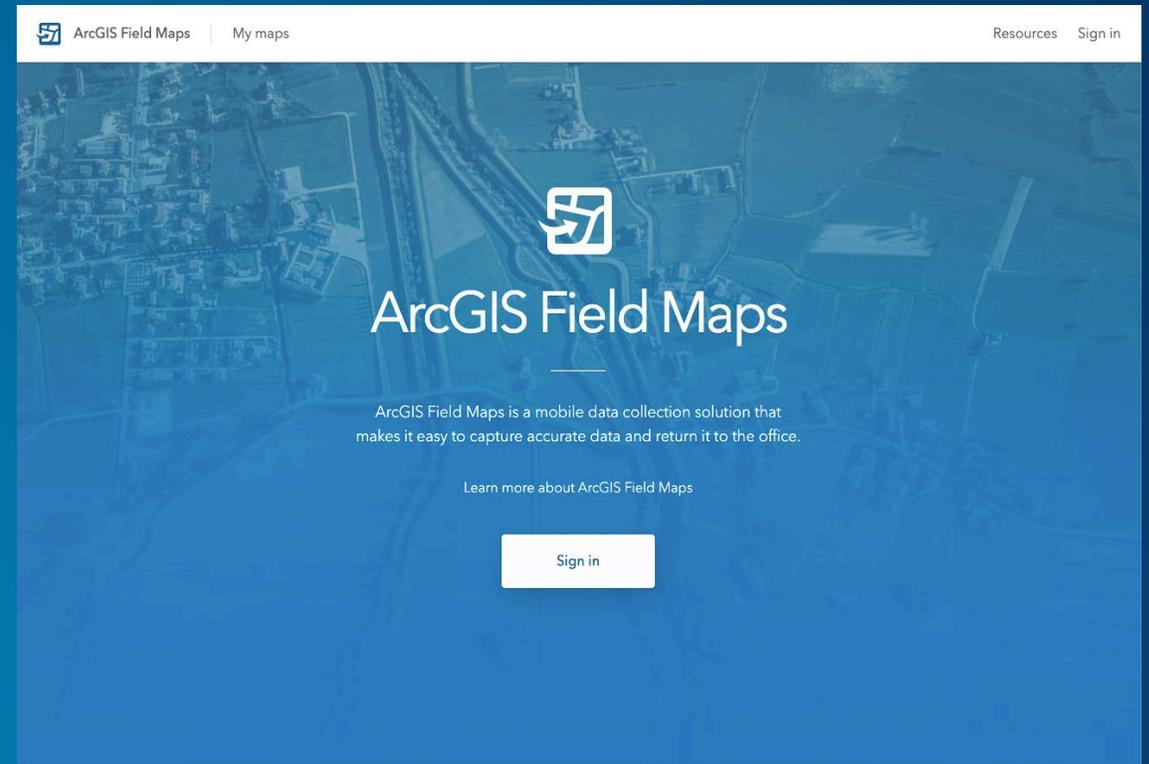
ArcGIS Field Maps | Introducing Field Maps Web app

Requirements

- ArcGIS Online or ArcGIS Enterprise 10.8.1+
- Create privilege required
- Maps

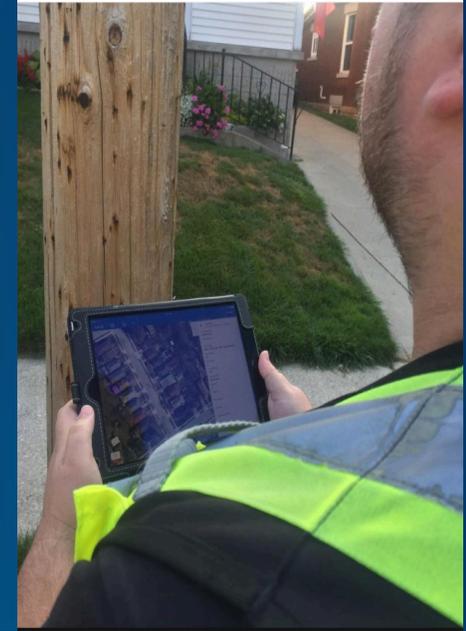
Capabilities

- Configure map properties
- Configure your content (layers, tables)
- Manage offline experience
- Share and deploy maps



Maintenance and Inspection Workflows

- Inspection types
 - Feature inspections (new feature, update attributes on existing)
 - Historical, tabular inspections (model using 1:M relationships)
- Transaction model support
 - Non-versioned
 - Traditional versioning
 - Offline Branch versioning (10.8.1+)
- Smart forms supported on layers and tables
 - Group fields, apply conditional visibility
 - Use pick lists, required and read-only fields



Relationship Overview – Part 1

- **Cardinality**

- 1 to 1 – ex. Parcel related to its legal description, etc.
- 1 to m – ex. Asset inspections, single owner with many parcels, etc.
- M to m – ex. Property has several owners, owners have several properties
- * Note – m to m is not supported in Field Maps

- **Types**

- Simple – Parent and child records independent
- Composite – Parent and child records feature linked

Relationship Overview – Part 2

- **Setups**

- Basic – ex. Parent > Child
- Nested tables – ex. Parent > Child > Grandchild 1 >
- Multiple tables – Parent > Child 1
 - > Child 2
 - >

Pairings

- Feature – to - Feature
- Feature – To – Table

Relationship Overview – Part 3

- **Setting up primary and foreign key fields**
 - GlobalID (parent)-> GUID (child)
 - User defined ID (parent)-> User defined ID(child)

Note: ObjectID based isn't supported.

Field inspections setup - How to choose? (Part 1)

- Cardinality

- Will multiple inspections occur for the asset throughout its life?
- Do I want/need to maintain an audit trail for past inspections?

- Types

- Do I want to maintain past inspection records in the event the asset feature were removed/replaced?

- Setups

- What type of inspection am I performing?
- How many tables do I require to properly inspect the desired asset?
- Is the asset itself being inspected or some other related component of it?

Field inspections setup - How to choose? (Part 2)

- Pairings

- Can the location of the inspection record be derived from the main parent features location?

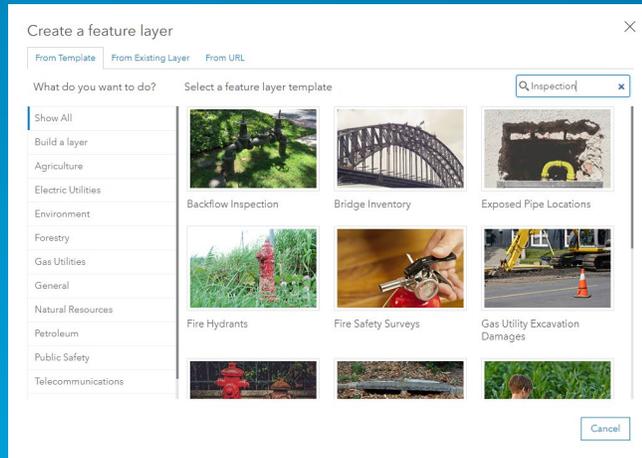
- PK/FK fields

- Should I manage keys or system manage key?

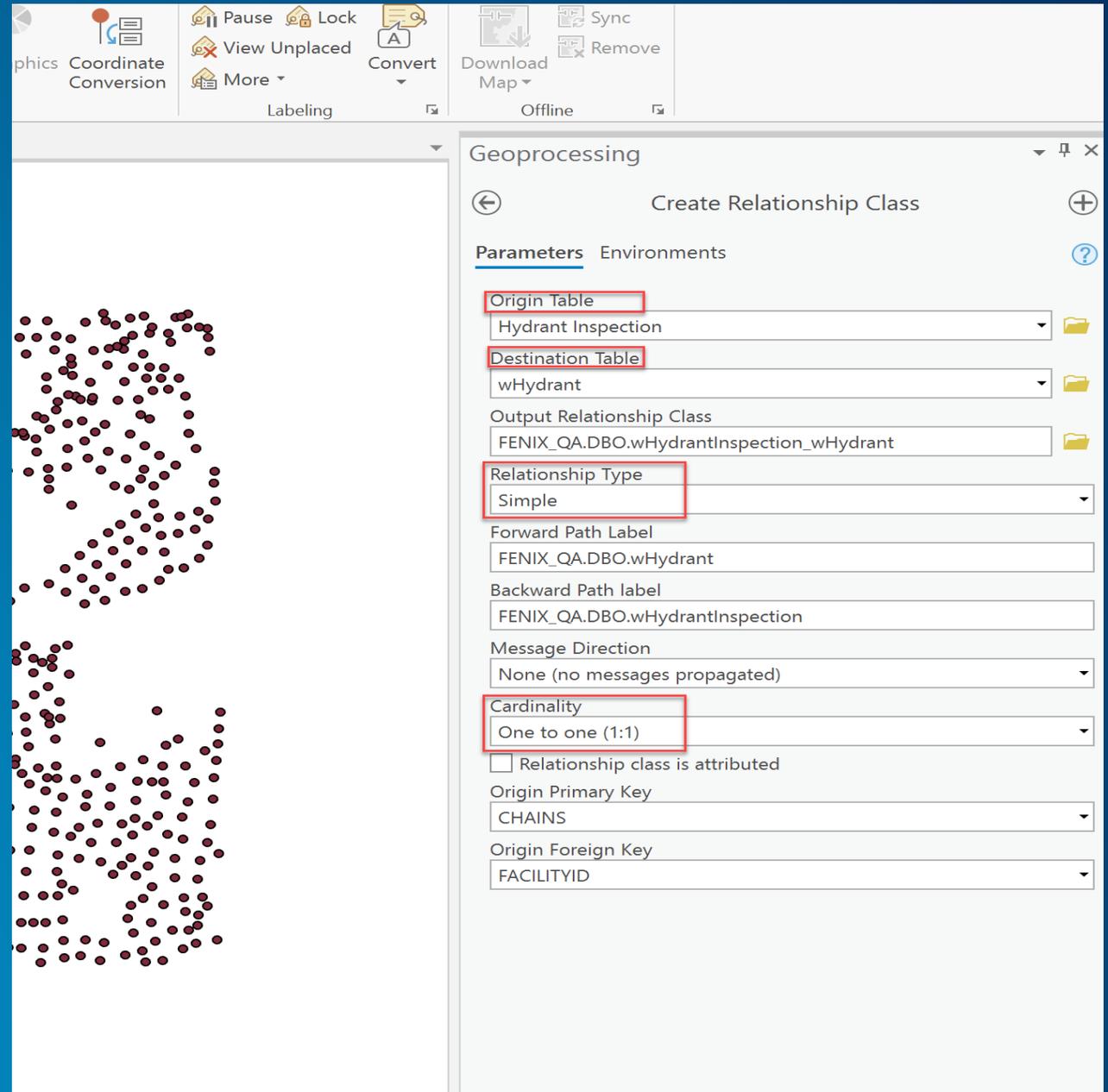
How to get started?

1. Feature template

i.e. Vineyard Management



2. Create own relationship class in ArcGIS Pro





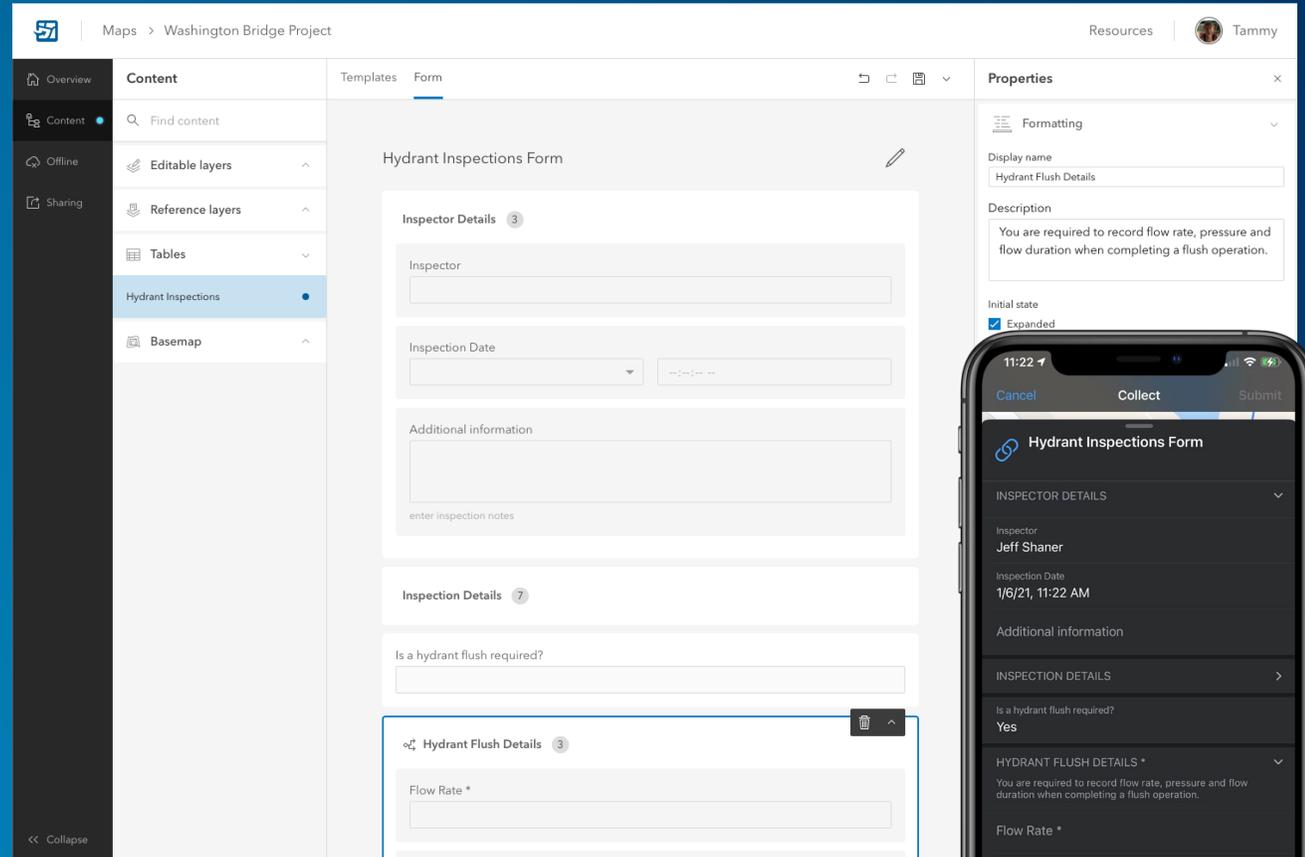
ArcGIS Field Maps | Smart forms

Benefits

- New form editing experience in ArcGIS
- Improves field inspection workflows
- Included in the [web map specification](#)

Key capabilities

- Convert pop-ups to forms
- Organize Attributes using groups
- Qualify required and read-only fields
- Apply conditional visibility to fields using Arcade expressions
- Specify input types and ranges



Inspection Demo Map 2021

Templates Form

Hydrant Inspection

Facility ID *

Inspection Details 2

Enter Inspector name *

Enter Inspection Date *

Needs Repair *

Repair Details 7

Chains Req'd?

Paint Req'd?

Form builder

Form Elements

Group

Attributes

Add all (1)

Find Attributes

Pressure (PSI)
(PRESSURE)

Smart Forms Demo

Li Lin

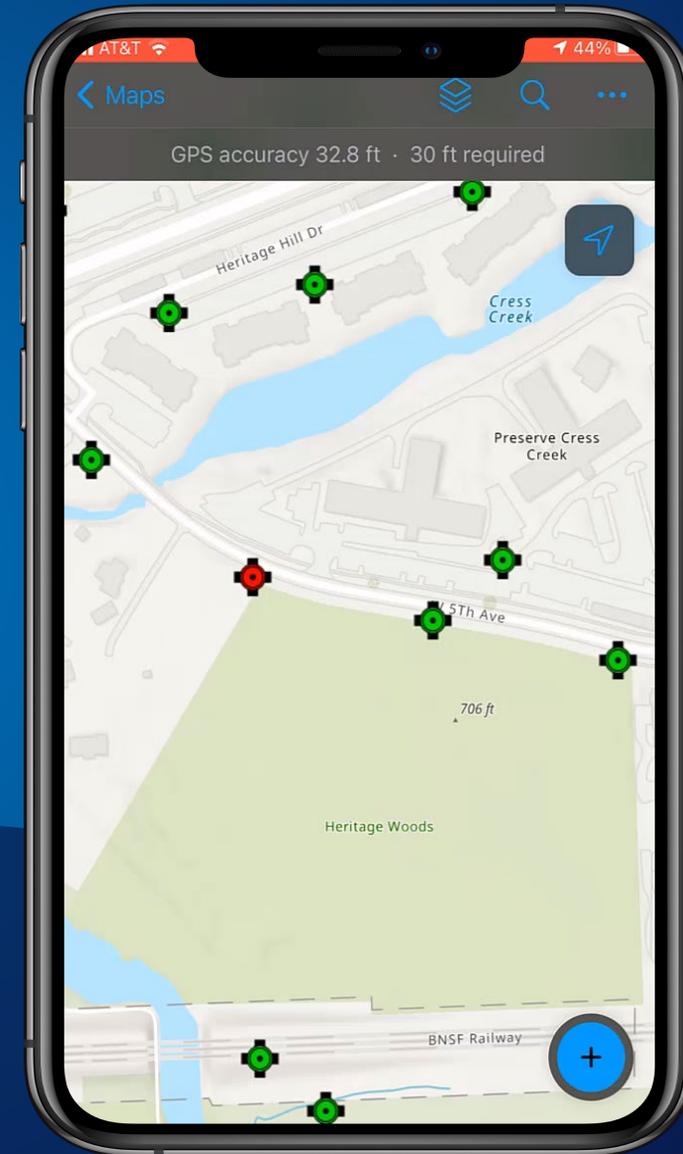
- Conditional visibility
- Required fields
- Grouping of fields



ArcGIS Field Maps | Maintenance inspection

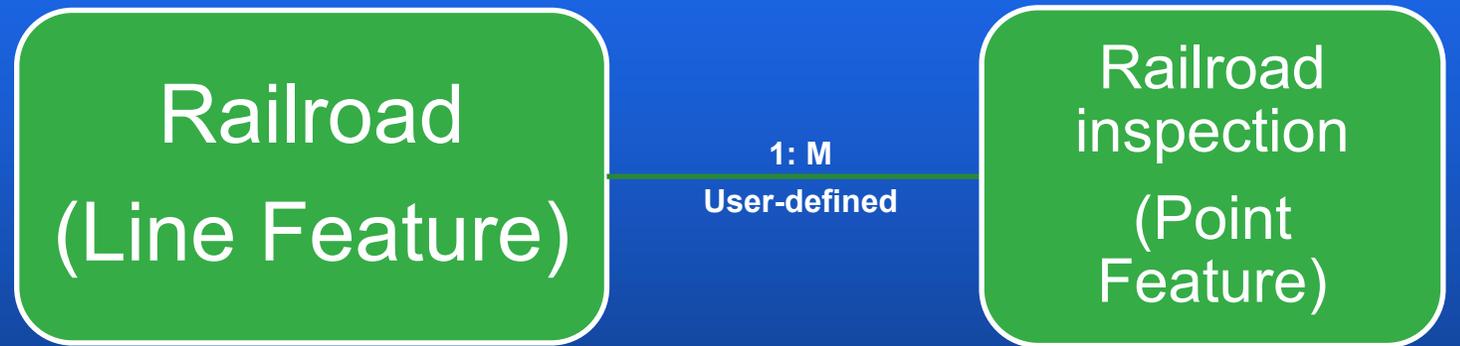
- Includes all capabilities from Collector
- Perform inspections, create or update asset inventory
- Form support – Groups, Required fields, and Conditional visibility

```
var relatedTable = FeatureSetByRelationshipName($feature,  
'wHydrantInspection')  
  
var countInspection = Count(relatedTable)  
  
return Text(countInspection, '#')
```



Composite Relationship Demo

One Feature-To-Multiple Features





ArcGIS Field Maps | App integration

Washington Street Project

OVERVIEW ASSIGNMENT TYPES USERS ADVANCED

App Integration ✓

App integrations maximize the efficiency of your mobile workers by providing directions and the maps needed to complete their work. [More info](#)

- ArcGIS Collector Add
- ArcGIS Explorer Add
- ArcGIS Field Maps Add**
- ArcGIS Navigator ✓ Remove
- ArcGIS Survey123 Add

Location Tracking

Learn how to use **ArcGIS Tracker** to capture the tracks of your workforce in the field, monitor where they are, and analyze where they have been.



Washington Street Project

OVERVIEW ASSIGNMENT TYPES USERS ADVANCED

Step 1 of 3: Integrate ArcGIS Field Maps

Select the map you want Field Maps to use with this project.

Filter

- Redlands Campus Indoors ... Updated Nov 13, 2020
- Washington Bridge Proj Updated Dec 5, 2020 ✓

Next Cancel

Step 2 of 3: Integrate ArcGIS Field Maps

Integrate Washington Bridge Project with the project or specific assignment types.

Project (applies to all assignment types)

Asset Inspection Site Survey

Next Cancel

Step 3 of 3: Integrate ArcGIS Field Maps

Select the information you would like Workforce to pass to Washington Bridge Project.

Workforce Field: Select field

Field Maps Layer: Commercial Service

Field Maps Field: Select field

Workforce Field	Field Maps Layer	Field Maps Field
Location	Commercial Service	Notes

Done Cancel

ArcGIS Field Maps | Recap:

- You can use smartforms to improve form configuration
- You can improve the efficiency of your field crew with the mobile app
- You can apply appropriate relationship models depending on your inspection scenarios
- You can now be Try Field Maps in your own organization

ArcGIS Field Maps | What's next ?

- **Smarter forms**

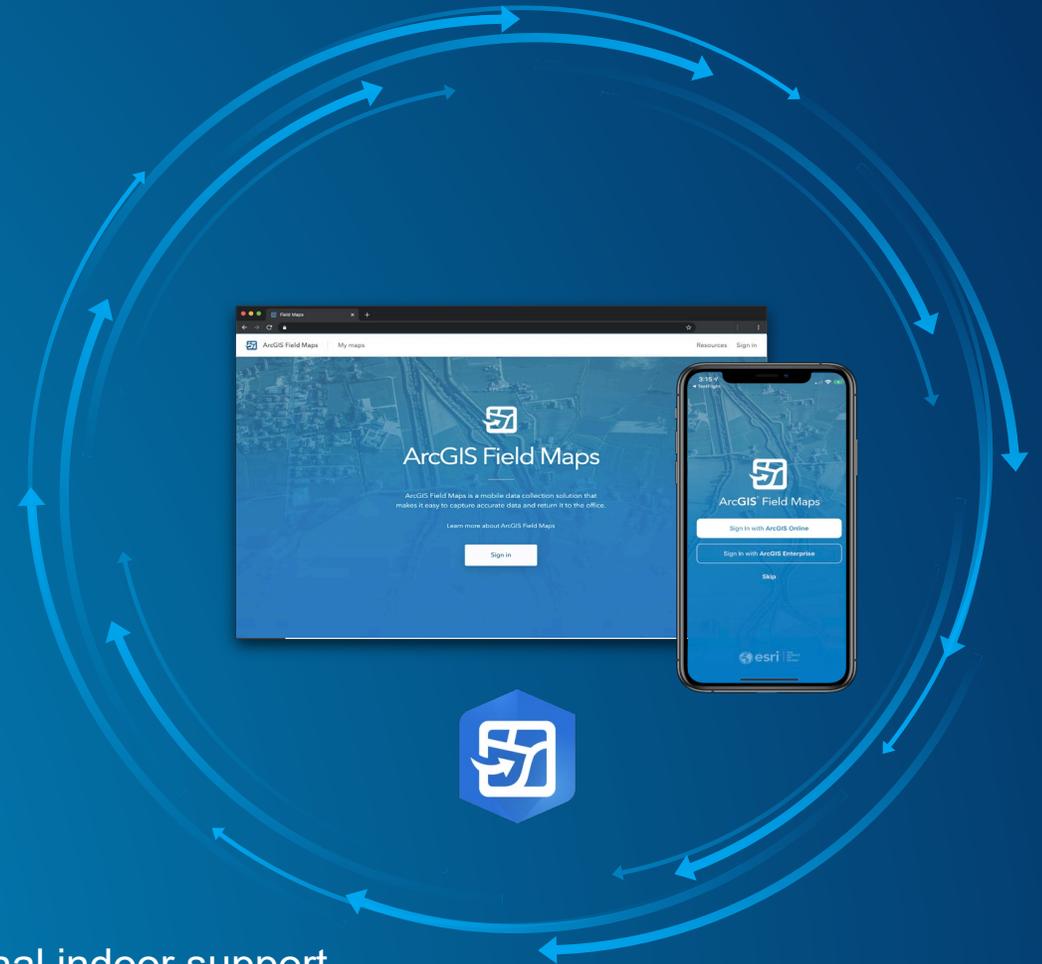
- Additional input types, descriptive text for fields
- Streamline the mobile experience with map settings

- **New experiences for map authoring**

- Provide a new experience for creating maps
- Key productivity improvements when working with content

- **Advance iOS integrations**

- **Beyond..** Smartforms enhancements, workforce integration, additional indoor support, Utility network support, orthometric heights





ArcGIS Field Maps | Resources



Product page



Blog articles



ArcGIS ideas

Feedback? Email ArcGISFieldMaps@esri.com





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