



# ArcGIS Collector – Online and Offline Field Data Workflows

Mark Scott, Solutions Engineer, Esri County Government Team

[mscott@esri.com](mailto:mscott@esri.com)

# Web GIS Extends GIS Across Organizations

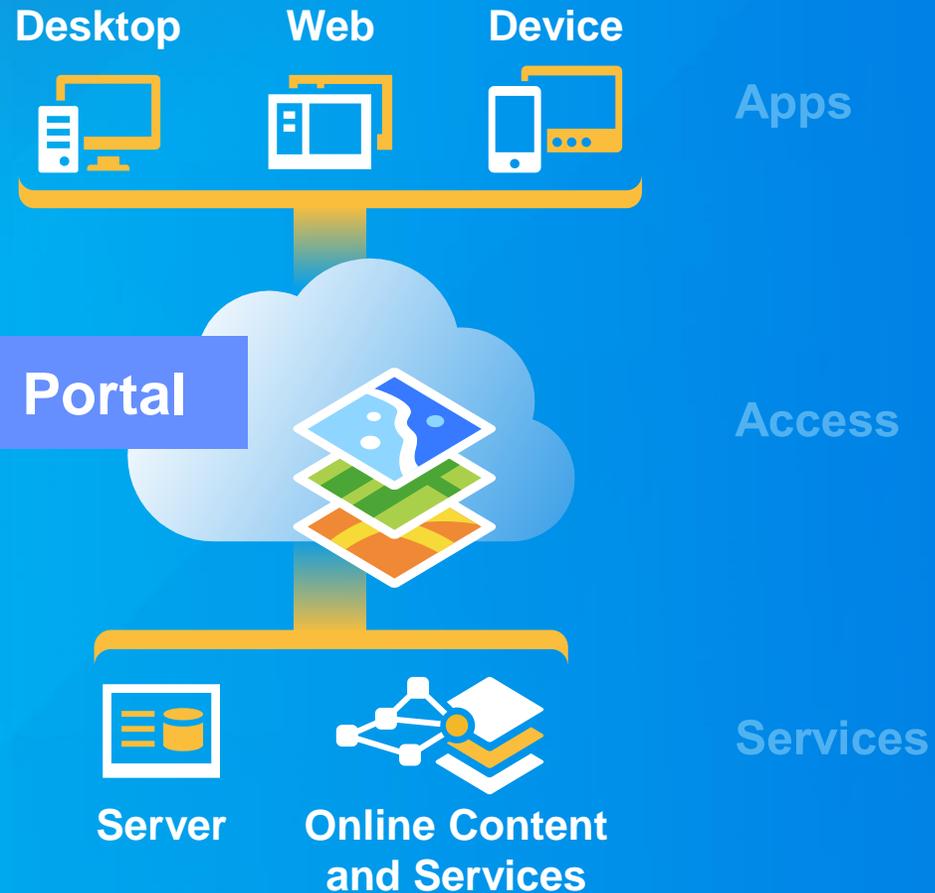
Throughout Communities



# Web GIS Extends GIS Across Organizations

Throughout Communities

Providing Mapping, Analysis, Data  
Management, and Collaboration



*Available on the Open Web . . .  
. . . and On-Premises*

# Device Strategy

Get the device that makes sense for your work

- Identify the level of ruggedness required
- Hardware requirements
- Decide on the size
- Software requirements
  - Off the shelf, custom, etc.
- Do you have IT restrictions
- Choose a platform
- Do a pilot project before scaling up
- Cheap is tempting but not always the right choice



# Collector for ArcGIS an Overview

What is the problem we are trying to solve

**Organizations need a easy way to build or maintain a GIS of authoritative data**

- **Some of that data is collected from scratch in the field**
- **Some of that data comes from other sources (surveying, photogrammetry, digitizing)**
  - **That data needs to be validated by ground truthing**
- **Some of that data may already exist and simply needs to be assessed and updated**
  - **Condition of assets**
- **In the “past” this was done with notebooks, clipboards, and maps**
  - **Can be error prone, and slow down the turn around time to make that data accessible and useful to your organization**

# Collector for ArcGIS an Overview

## What can Collector for ArcGIS do ?

- **Collect and update data**
  - Using your location or the map
  - Fill out forms
  - Capture media (pictures, videos)
  - Additional tools to help your field workforce (measure, search, basemaps, directions)
- **Types of use**
  - Collect and inspect assets
  - Ground-truth their GIS data
  - Make observations/conduct surveys
  - Replace paper-based forms/process
  - Spatial awareness in the field



# Collector for ArcGIS an Overview

How can I make a map for collector?



- **Offline layers needs to have sync enabled**
- **Tips: leverage domains, subtypes, default values, scale ranges etc.**
- **Choose symbology for the end user (sunlight)**

# Collector for ArcGIS an Overview

How can I make a map for collector?



- **Only show the fields in the form that the end user needs**
- **Turn off tools the user won't use to do their job (measure, basemap etc)**
- **Use scale dependency to hide read only layers till they're needed**
- **Side load basemaps to device to save time**

# Working with offline

Great idea, BUT, consider...

## Offline is a great way to work in areas of no connectivity

- **Requires**
  - A sync enabled feature service either hosted in AGO or from your own server (10.3.1 recommended)
  - Tiled map service (basemap) with export tiles enabled or a previously created/side loaded TPK
- **Sync frequently when you have access to a stable connection**
  - Reduces the risk of timeouts
  - Attachments can add up and cause sync to take awhile
- **If you are using server and seeing failed syncs check the server debug logs for more information**
- **Increase the IIS uploadReadAheadSize for your server (~20mb)**

# When bad things happen to good GIS people

Help is on the way

- **Recovery tool in desktop:** *Copy Runtime Geodatabase To File Geodatabase*
  - **This is not a substitute for sync, it is intended for recovery scenarios (deleted service)**
  - **Make sure to copy the entire offline map folder to your computer (use itunes for apple devices, android just plug in)**

# Demo Using Collector Online and Offline

Mark Scott

# Tips and Tricks

## Avoiding pot holes along the way

- **Maps in collector need an editable layer and to be shared through a group to show up in collector**
- **Do not use the same layer twice in a map if you intend to use it offline**
- **Definition filters are not supported offline**
- **Test your symbology outside before sending people to the field**

# What's next?

Filling in the missing features

- **Collector for ArcGIS on Windows!**
- **More tools for planning field work (pre-planned)**
  - Prepare your data in advance
  - Pre package multiple areas
  - Skip attachment downloads
- **High accuracy collection**
- **Smarter data collection forms**
  - Auto field population
  - Inherited attributes
- **More templates**



# Questions ?

[mscott@esri.com](mailto:mscott@esri.com)



Understanding our world.