Mobile Data Collection with ArcGIS Online

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ArcGIS as a Platform
We Believe in Geographic Understanding

- For Individuals
- For Organizations
- For Developers
- For Governments

ArcGIS Online
ArcGIS Online
Making the Platform Easy

Secure sharing & collaboration
Organized data & document ownership
Cross platform & multiple device support
Self-service

Leverage existing investments
Multiple API’s for the development community
Ready to use apps
Expanding infrastructure needs

Making the Platform Easy
The Power of ArcGIS Online

Intelligent Web Maps that can be used everywhere

One Map – Many Devices
Mobile Data Collection Examples

- Stormwater retention basin inspections
- Illicit discharges into streams and other water quality data
- Americans with Disabilities Act curb ramp inspection
- Tree and Sign inventories
- Event infrastructure planning and status
- Disaster recovery operations
- Pre-fire planning
What Types of Devices Can I Use?

- iPhones and iPads
- Android Phones and Tablets
- Windows Phones
Apps and SDKs for Mobile Data Collection

Windows
- ArcGIS for Windows Mobile
- ArcPad
- Runtime SDK
  - .NET CF

Windows Mobile
- ArcGIS for Windows Mobile
- ArcPad
- Runtime SDKs
  - WPF, Java

Windows Phone
- ArcGIS App
- Silverlight
  - Runtime SDK

iOS
- ArcGIS App
- Collector
  - Objective C
  - Runtime SDK

Android
- ArcGIS App
- Collector
  - Java
  - Runtime SDK

Linux
- Runtime SDK
  - Java
ArcGIS on Smartphones and Tablets

*ArcGIS at your fingertips when you are on the move*

- Carry your maps with you on the go
- Collect and update data
- Multiple users can seamlessly use the same map
- Get access to dynamic information
What are the benefits of Mobile GIS?

Accessible intelligent Web Maps from anywhere

- Data access in the field
- Fast data collection
- Fewer errors
- Live Access to edits
- Less Paper

Make Informed and Timely Decisions

Rapid Data Collection
Seamless Data Integration
Improve Efficiency and Accuracy
A Look at Where We’re Headed....
ArcGIS on Smartphones and Tablets
ArcGIS on Smartphones and Tablets

- Designed for touch-screen phones and tablets
- Connected Workflows (Wifi, 3G)
- Location Integration
- Replace Paper Surveys
  - Intelligent forms
  - Field Validation
  - Media Integration
- Replace paper map books
Who is this for?

- Knowledge Worker
- Customer
- Decision Maker / Storyteller
Discovering and Viewing Maps

- Discover and view web maps
  - ArcGIS Online
  - Connect to your organization
  - Groups, Favorites

- Explore maps
  - Popups, gestures
Finding Your Way

- Reverse geocoding
- Location based searches
- Bookmarks
- Predefined queries (App)
- Get Directions (Collector)
Tools

- GPS
- Measure
- Data Collection and Editing
  - Points with Collector
  - Points, Lines, or Polygons with App
- Track Collectors (Collector)
Data Collection and Editing

- Authored maps
  - ArcGIS Server Feature layers
- Attributes
  - Types / Domains
  - Attachments
- Features
  - Template based
- Updates server
Mobile Data Collection Project
How To Plan and Implement
Plan Your Project

• Is ArcGIS Online the Right Choice?
  - Will positional accuracy suit project needs?
  - Is data connectivity available in data collection location?

• Gather Input
  - Understand and use the terminology of data collectors
  - Provide shortcuts for speed and accuracy
General Steps

1. Prepare the data
2. Publish the data as a feature service
3. Make and share a web map using the feature service
4. Edit features using the ArcGIS App or Collector
Step 1a: Data Preparation
Decide where to host the Feature Service

• On ArcGIS Online (organizational account)
  - Publish with Desktop
  - Shapefile or CSV added to ‘My Content’
  - Empty service based on existing service

• On Your Server
  - Publish with Desktop
Architecture with Service Hosted Online

ArcGIS Online

ArcGIS Services
Architecture with Server

ArcGIS Online

ArcGIS Server

ArcGIS Services
Secured Services

- ArcGIS Server Manager
- Users and Roles
- Web Map prompts users for credentials
- REST exposure without the security risk
- Can use versions
Step 1b: Data Preparation

- If dataset is new, set up the schema
- Consider using an Esri data model
  - Local Government Information Model
  - Saves time
  - Extensible
  - Used with Esri apps
Step 1c: Data Preparation

Prepare Data

- If publishing from Desktop, optionally set:
  - Domains
  - Symbols
  - Field aliases
- If publishing to Server, optionally set:
  - Subtypes
  - Default values
- Do you want attachments?
- Do you want to track editors?
- Set permissions for data
Step 2:

Publish the Feature Service
Step 3: Make the Web Map

- Check settings on feature service
- Choose a basemap
- If not done in Desktop:
  - Symbology
  - Configure Attributes
- Make bookmarks
- Layer visibility ranges
Step 3: Make the Web Map
**Step 4: Collect Data**

Choose an App

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How to Make a Local Copy of Hosted Features
How do I get started?

• Download from device app store
• Evaluate ArcGIS Online Organization
• Resources available on http://resources.arcgis.com
• Community and User driven support on
  - http://forums.arcgis.com
Further information
