Optimizing Field Operations with ArcGIS

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Agenda

• Notes from the field

• ArcGIS apps
  • Concepts
  • Demonstrations

• Q&A
Who are we?

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• Notes from the field

• ArcGIS apps
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• Q&A
The Taste of Clarkston, Michigan

4000+ visitors to the “Taste” festival

Logistics, Road Closures, Safety

Coordinate with few resources

http://www.esri.com/esri-news/arcnews/spring17articles/a-taste-of-gis
Before the event…

- Planned location of stands using a Web Mapping Application
- Setup road closures, services and safety features accordingly
- Resulting map becomes the live foundation for the rest of the event coordination efforts

Independence Township's Geospatial Information and Solution Office (GISO)
During the event...

- Mobile phones used to locate incidents, tasks and events.
- All parties working on top of a single information model
- Real-Time awareness and informed decision making
The Taste of Clarkston, Michigan

Esri's Disaster Response Program

ArcGIS for Local Government Solution

Web AppBuilder for ArcGIS

Workforce for ArcGIS

Collector for ArcGIS
Pima County, Arizona

Building and Site Development Division

6 inspectors serving over 1M people

Saving $197,000 per year

Before going into the field…

- Prepare map with County’s addresses and network
- Plan schedule for the day using ArcGIS Desktop and Network Analyst
- Assign building inspections to field crews
- Communicate expected time of arrival to customers
While in the field…

• Turn by turn directions with Navigator for ArcGIS
Pima County, Arizona

Better customer service

Improved worker safety

Saving $197,000 per year


ArcGIS Desktop
Network Analyst
ArcGIS Online

Navigator for ArcGIS
San Francisco Public Utilities Commission

Routine Asset Inspections

1000-mile long network plus 7 pump stations

Integrating ArcGIS with IBM-Maximo and Sharepoint

https://www.fieldtechnologiesonline.com/doc/mobilizing-inspections-saves-0001
Before going into the field…

- **Craft smart forms for asset inspections**
  - Input Data validation rules
  - Branching logic and smart defaults
  - Iterative form design with field inspectors

- **Schedule inspections through work order management system**
While in the field…

- Inspection apps run on any device
- Easy to use, reliable
- Works even if disconnected
- Data immediately available in the back office for analysis

“Now, thanks to this new app, we can access anything instantly through SharePoint in our organization, and that’s been a huge time-saver.”

Lewis Harrison, SFPUC’s Wastewater Enterprise Collection System Division
San Francisco Public Utilities Commission

Moved away from paper-based workflows

Inspection times reduced from 30 to 5 minutes

Saving tens of thousands of dollars a year
California Governor’s Office of Emergency Services

Emergency Response

Earthquakes, Flooding, Wildfires

Coordinate multiple agencies

Driving directions
Your Own Maps

Field Operations
- ArcGIS for Desktop
- Workforce for ArcGIS
- Navigator for ArcGIS
- Capture
- Coordinate
- Navigate
- Plan
- Monitor
Collector for ArcGIS

Map Centric Data Collection
High Accuracy GPS
Survey123 for ArcGIS

Collector for ArcGIS

Navigator for ArcGIS

ArcGIS for Desktop

Workforce for ArcGIS

Field Operations

Smart Forms
Desktop, Web, Phone/Tablet
Source Code Available
Bring Drone Imagery easily into ArcGIS
2D Imagery, Point Clouds, 3D Meshes

Field Operations

- Drone2Map for ArcGIS
- Survey123 for ArcGIS
- Collector for ArcGIS
- ArcGIS for Desktop
- Workforce for ArcGIS
- Navigator for ArcGIS
Real-Time Monitoring
Key Performance Indicators
Next Generation

Operations Dashboard

Field Operations

MONITOR
PLAN
COORDINATE
NAVIGATE
CAPTURE

OSIsoft
Operations Dashboard
Geodecisions
Pix4D
Drone2Map for ArcGIS
Survey123 for ArcGIS
Collector for ArcGIS
Trimble
Leica
BadElf

ArcGIS for Desktop
Workforce for ArcGIS
Navigator for ArcGIS
Navigate

CityWorks

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

Free map viewer for smartphones and tablets

Maps on the go: for the Enterprise and Public

Works online and offline

Available on the App Store, Android App on Google Play
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