771: Mobile Technology for Data Collection and Asset Inspection

UC2139 - NYSDOT Mobile Asset Inventory and Inspection Data Collection

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Agenda

• Why use Esri Collector for ArcGIS for Enterprise Asset Management (EAM)

• Solution Overview

• NYSDOT Use Case Demos
Why Collector for ArcGIS and AgileAssets EAM

• Collector is an easy-to-use app that helps collects and edit data in the field – whether connected or disconnected
• It allows the collection and updating of data in the field, improving efficiency of the field workforce and the accuracy of the GIS
• Key features include:
  – Download maps to devices and work offline
  – Use GPS to create and update map data
  – Collect points, lines, and area features
  – Fill out easy-to-use map-driven forms
  – Find places and features
  – Track and report areas you visited
  – Integrate with Navigator for ArcGIS and with AgileAssets Asset Management Solutions
• Available on IOS, Android and Windows 10
Why Collector for ArcGIS and AgileAssets EAM

EAM Strengths:
• AgileAssets system looks after the assets and contains all relevant data about assets and performance (inspections), level of service, cost of asset management, etc.

Collector Strengths:
• Collector provides an easy to use interface for field workers to view and edit this information offline and online helping to capture, maintain and inspect the asset data.
Challenges for Collector For ArcGIS and EAM

- No custom business rules and validation during field capture
  - Challenge for EAM as many business/validation rules are configured
  - Validate is separate QC environment first to ensure data is clean for loading into EAM system.
- No customized screen layout
  - As in Survey 123
  - Can only do basic hide attributes, change labels, etc.
- Screen logic
  - Cannot change screen based on specific input (as in Survey 123)
- High Accuracy GPS – post processing
  - Supports real time correction via GNNS devices
- Document Management Systems – storage of attachments
  - Oracle WCC, eDocs, OnDemand
- Multiple locations for same asset
  - E.g. a linear asset that is split by an LRS change
- Line and points mixed assets
• Esri full versioning requires a separation of tables from main EAM table
• Esri full versioning is required for offline editing in Collector.
• Edits between Collector and AgileAssets must now be synchronize for bi-directional updates
Clients looking at Collector

• New York DOT as part of Maintenance Management project
  – Various assets and inspections
• Alaska DOT as part of Maintenance Management project
  – Quality Assurance Program yearly surveys
• Indiana DOT – Culvert inspections
• Caltrans – Storm water management
• West Virginia Parkways – Culvert management
• Minnesota DOT – various assets
Use Case Demos
Use Case Demo Scenario

Signal System

Inspections

Work Request

Pole

Components
Use Case: Asset / Inventory – Field data viewer

As a field worker I would like to

• Search for asset name/number to locate it in the field.
• See the asset / inventory location and information spatially in the field.
esri® Collector for ArcGIS
AgileAssets Enterprise Asset Management

Demo
View AgileAssets Asset Information in Collector
Use Case: Asset / Inventory Capture

As a asset collector I would like to

• Capture a new asset / inventory item spatially
• Update an existing asset / inventory properties
• Capture photos
esri Collector for ArcGIS
AgileAssets Enterprise Asset Management

Demo
Capture Asset Information in Collector
Use Case: Asset / Inventory Inspection

As an asset inspector I would like to

- Capture a new inspection on an asset / inventory item
- View previous inspections
- Take photos during inspection
Demo Video
Use Case : View Inspection Due

As an asset inspector I would like to

• Quickly view on map which inspections are due
Demo Video
Use Case : Add Work Request

As an asset inspector I would like to

• Add a work request for an issue found in the field
Demo Video
What's next?

- Additional support for synchronization in the product
- Additional support for version commits (reconcile and post)
- Make configuration easier with out of box functionality – allowing quicker deployment of new collections.
- Enable Quality Control scenarios
- Survey 123
  - Version 2 added download capability – now becomes viable for inspection surveys
  - Reuse the same feature service as Collector – but separate configuration
  - More advance screen configurations
  - Points only for now
Thank You!