

Smarter Inspections, Safer Network with ArcGIS Online

- Gibson County Utility District -



Agenda

- Introduction
- Breakdown Workflows to Identify Problems
- Assess Products
- Implement Solutions
- Challenges & Lessons Learned
- Q & A

Introduction

Focus = Identify & Solve Problems

- *Preventative Maintenance Workflows*
 - *Valve Inspections*
 - *Regulator Station Inspections*
 - *Leak Survey*
- *Relevant Across Many Industries*
 - *Utilities (Gas, Water, Electric, etc.)*
 - *Public Works*
 - *Etc...*
- *Platform First Mentality*
 - *ArcGIS Online + ArcGIS Server (hybrid approach)*
 - *Collector for ArcGIS*
 - *Operations Dashboard for ArcGIS*

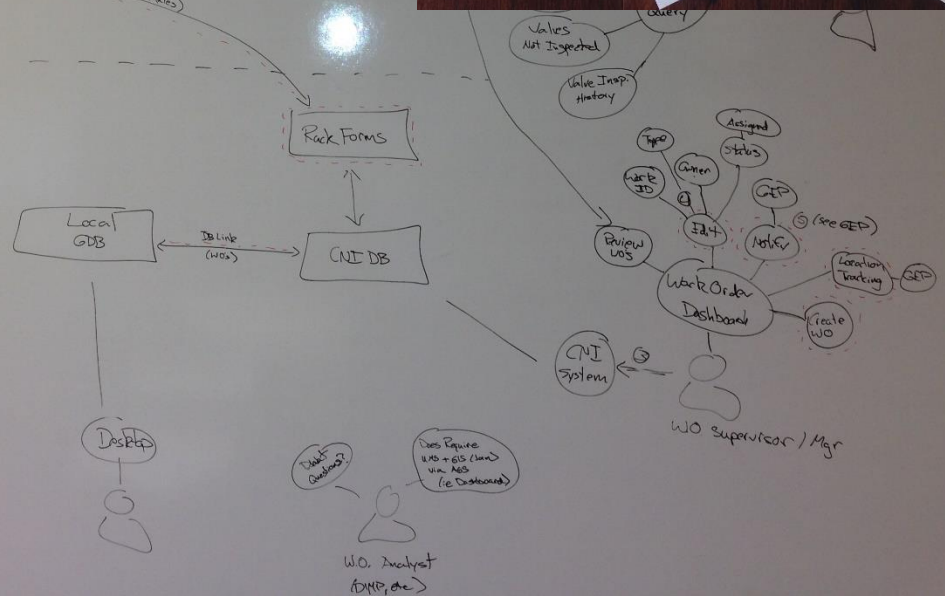
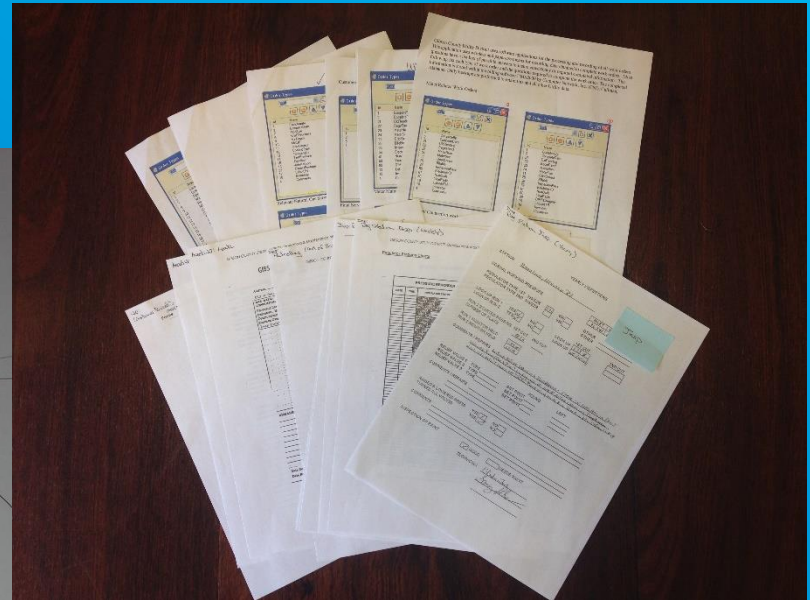
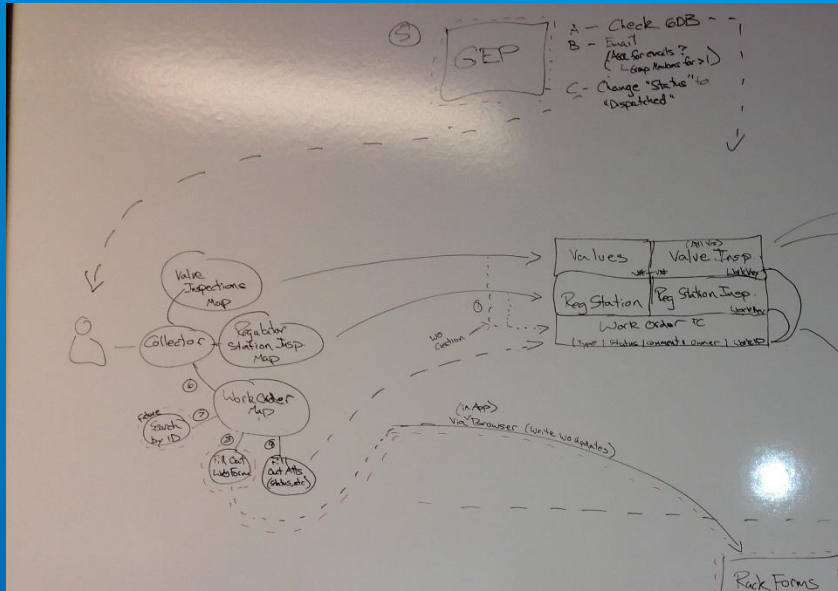
Utility Inspections

The Context...

- *Why Preventative Maintenance (Inspections)*
 - *Regulatory Compliance*
 - *Ensure System Integrity*
 - *Minimize Risk – Safety (Clients, Operators, etc.)*
 - *Maximize Efficiency (Minimize gas loss, prevent large repairs, etc.)*
- *Inspection Workflows*
 - *Valve Inspections, Regulator Station Inspections, Leak Survey, Gas Sniff Odorization, Corrosion, Rectifier, etc.*
 - *A Lot of: Work, Documentation, Time, Money, etc.*
- *Big Opportunities*
 - *Increase Efficiency & Effectiveness*
 - *Save Money*
 - *Increase Safety!!!*

Breakdown Workflows

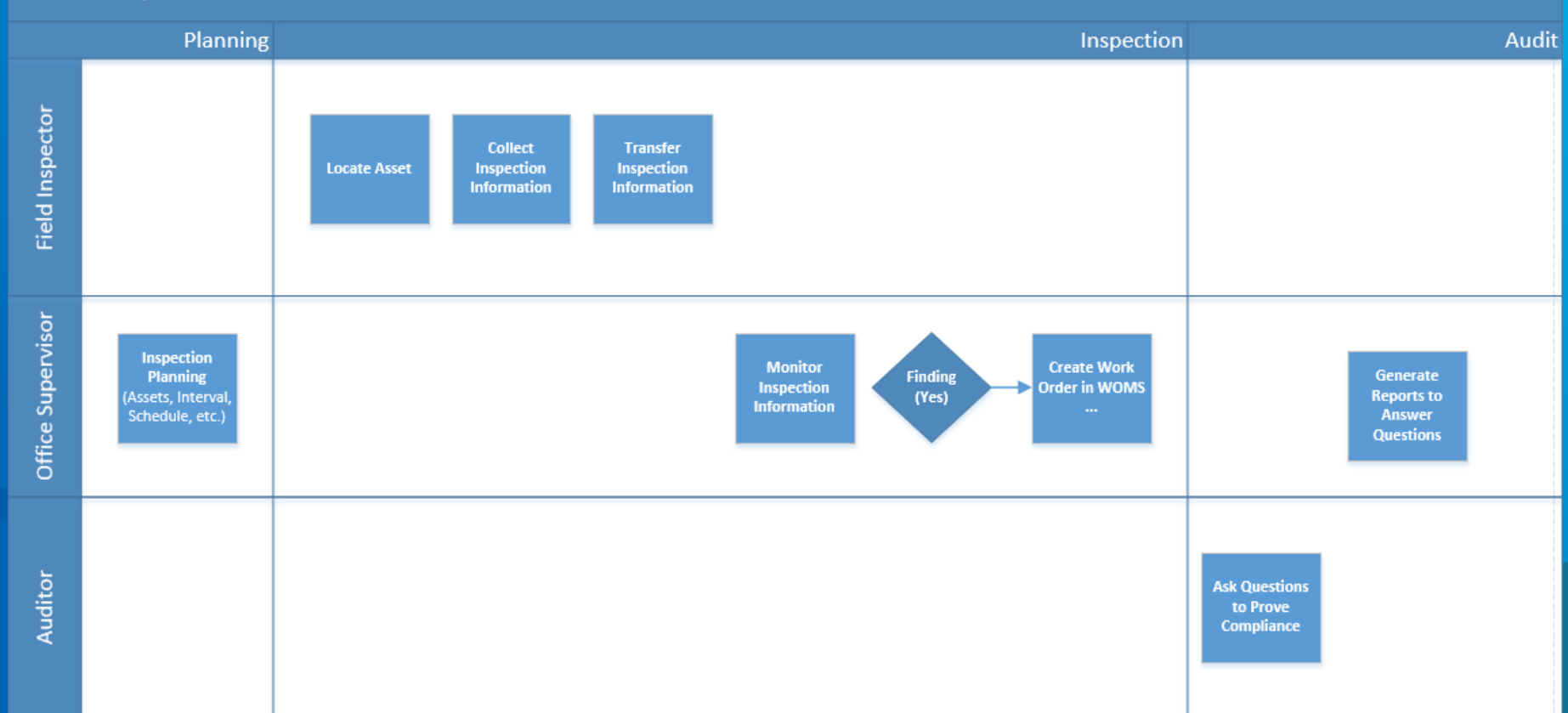
Talk, Draw, Document...



Breakdown Workflows

Common Pattern

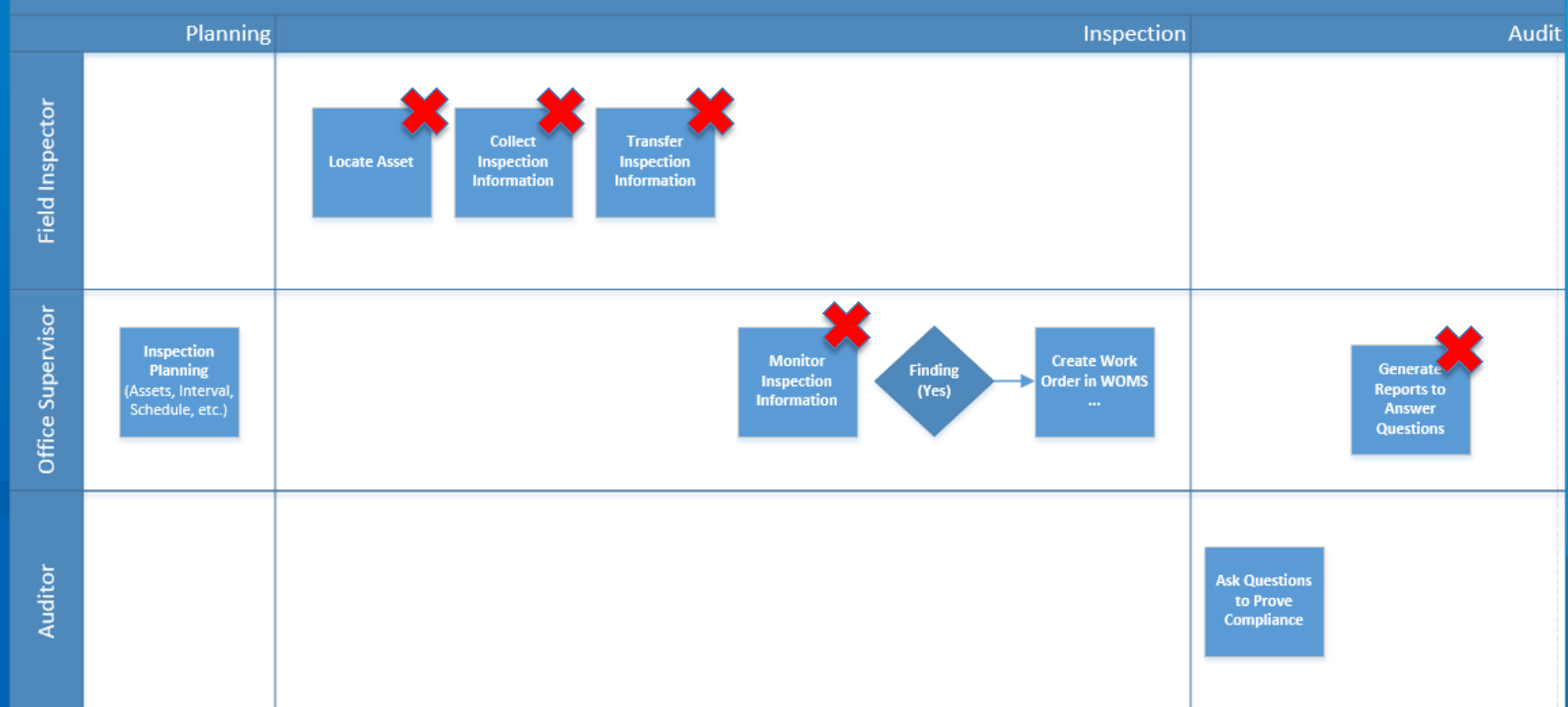
GCUD Inspection Flowchart



Breakdown Workflows

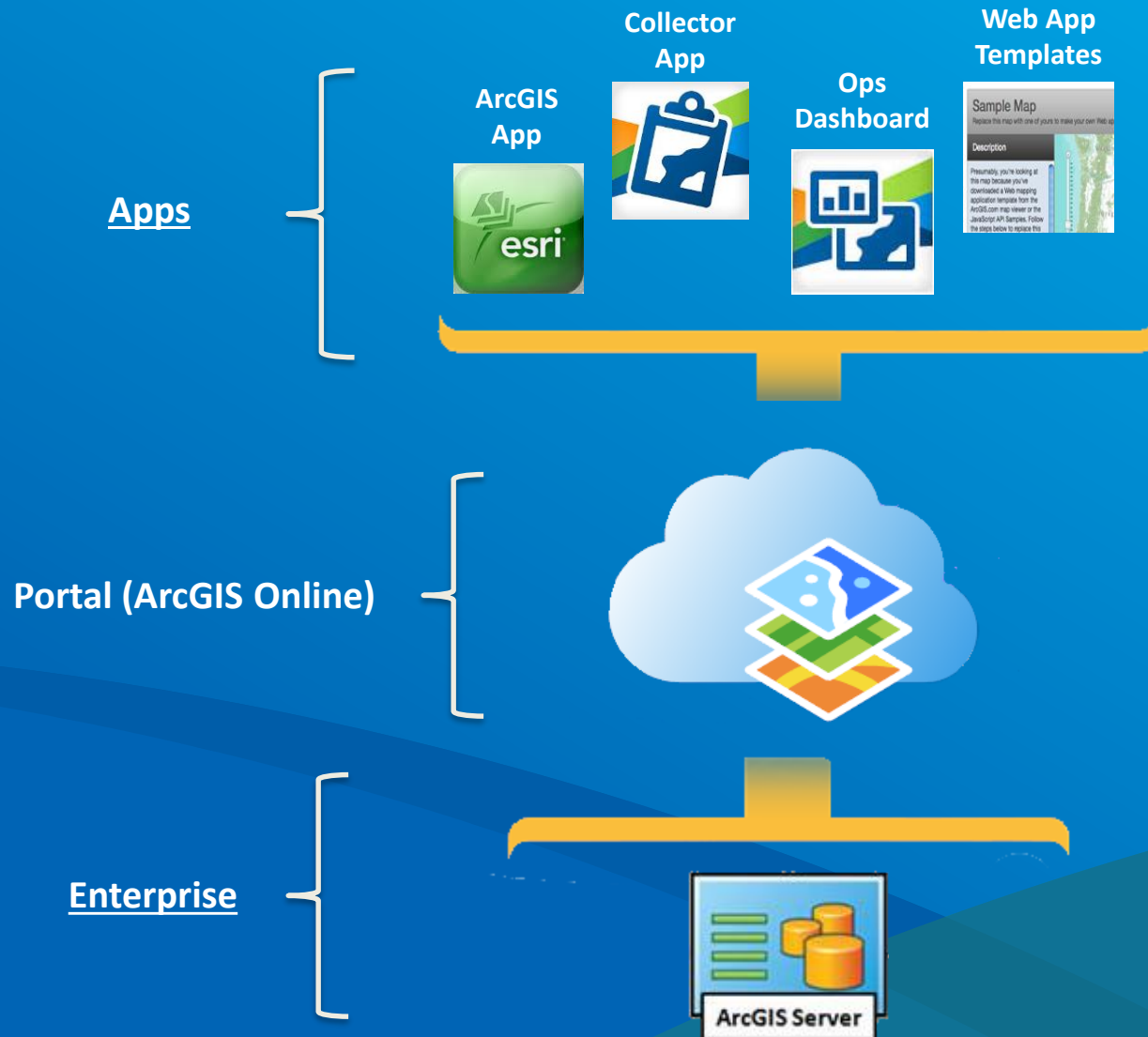
Identify Problems...

GCUD Inspection Flowchart



Assess Products

Platform First Mentality



Assess Products

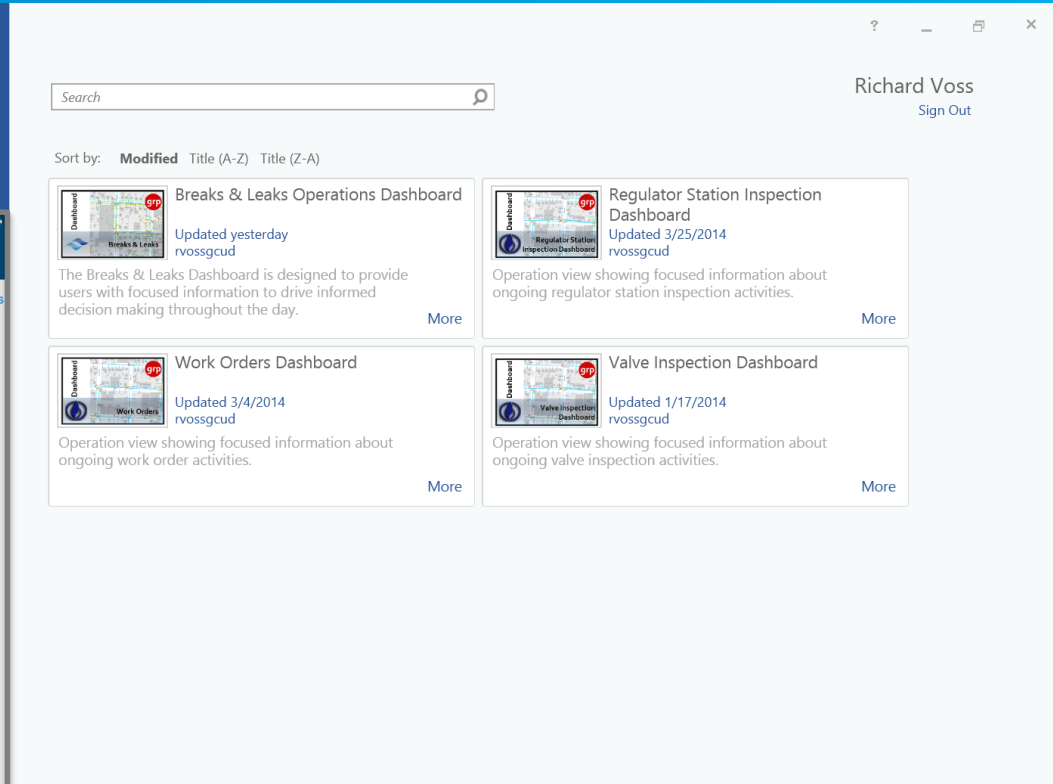
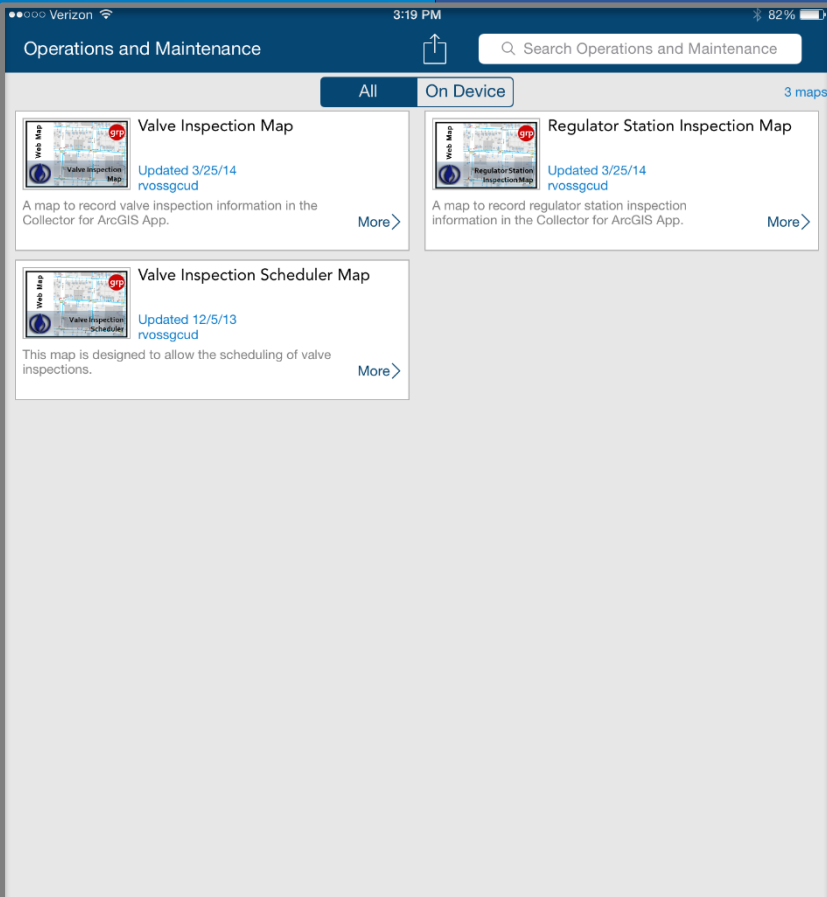
Platform First Mentality



Collector for
ArcGIS App

Operations Dashboard
for ArcGIS

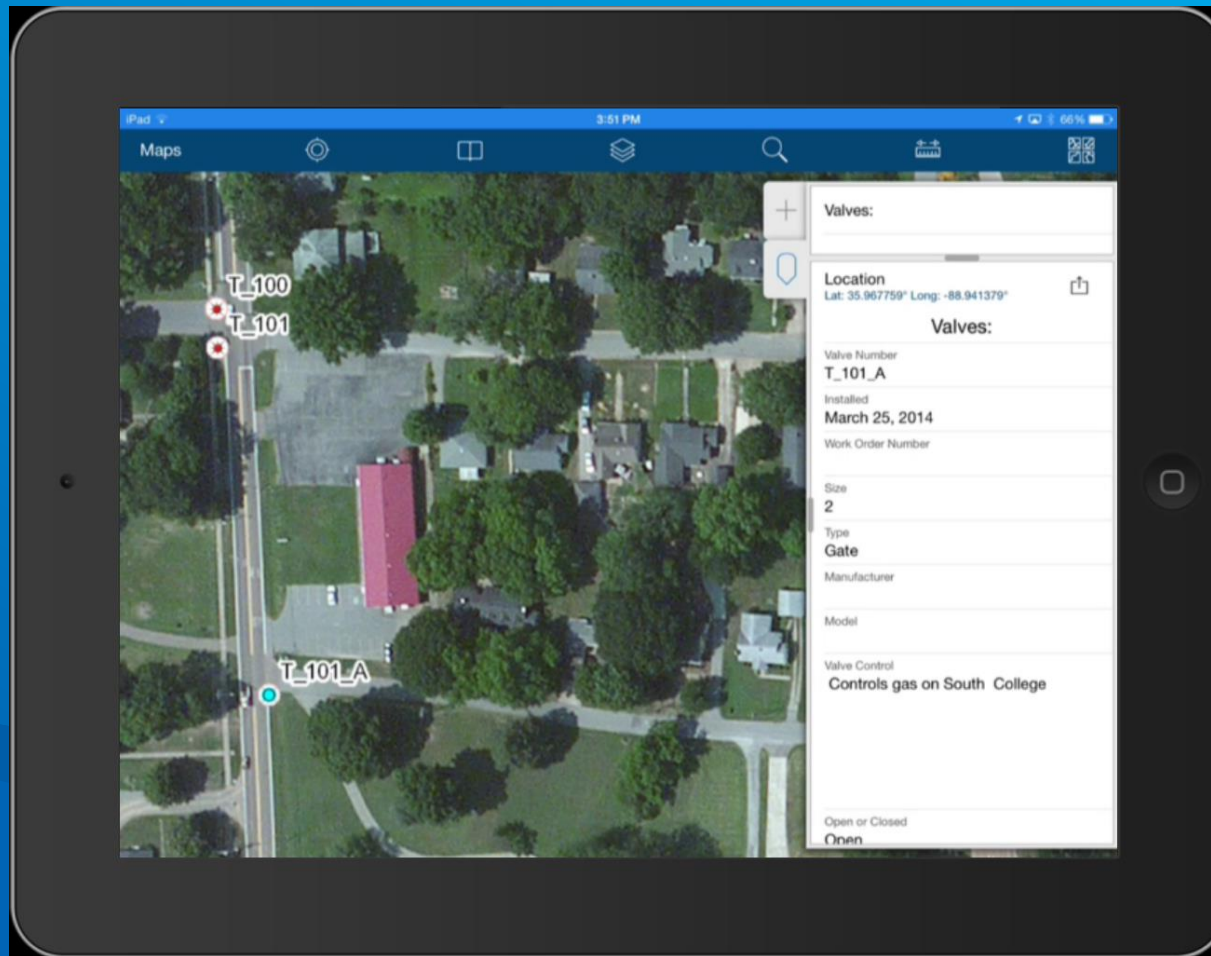
Recent



Operations Dashboard
for ArcGIS

Implement Solutions

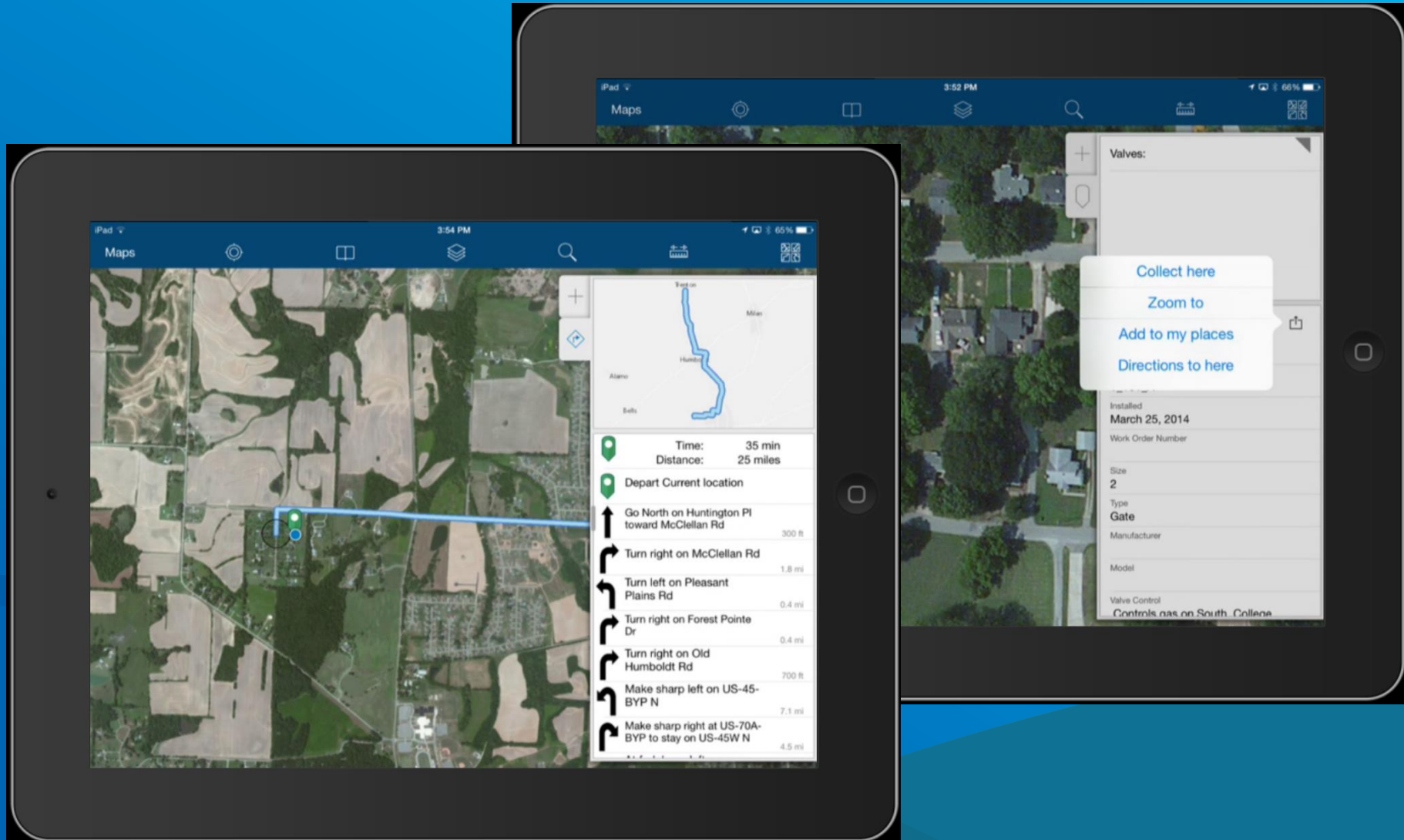
Locate Assets



Current GPS Location, Asset Locations, Asset Attributes...

Implement Solutions

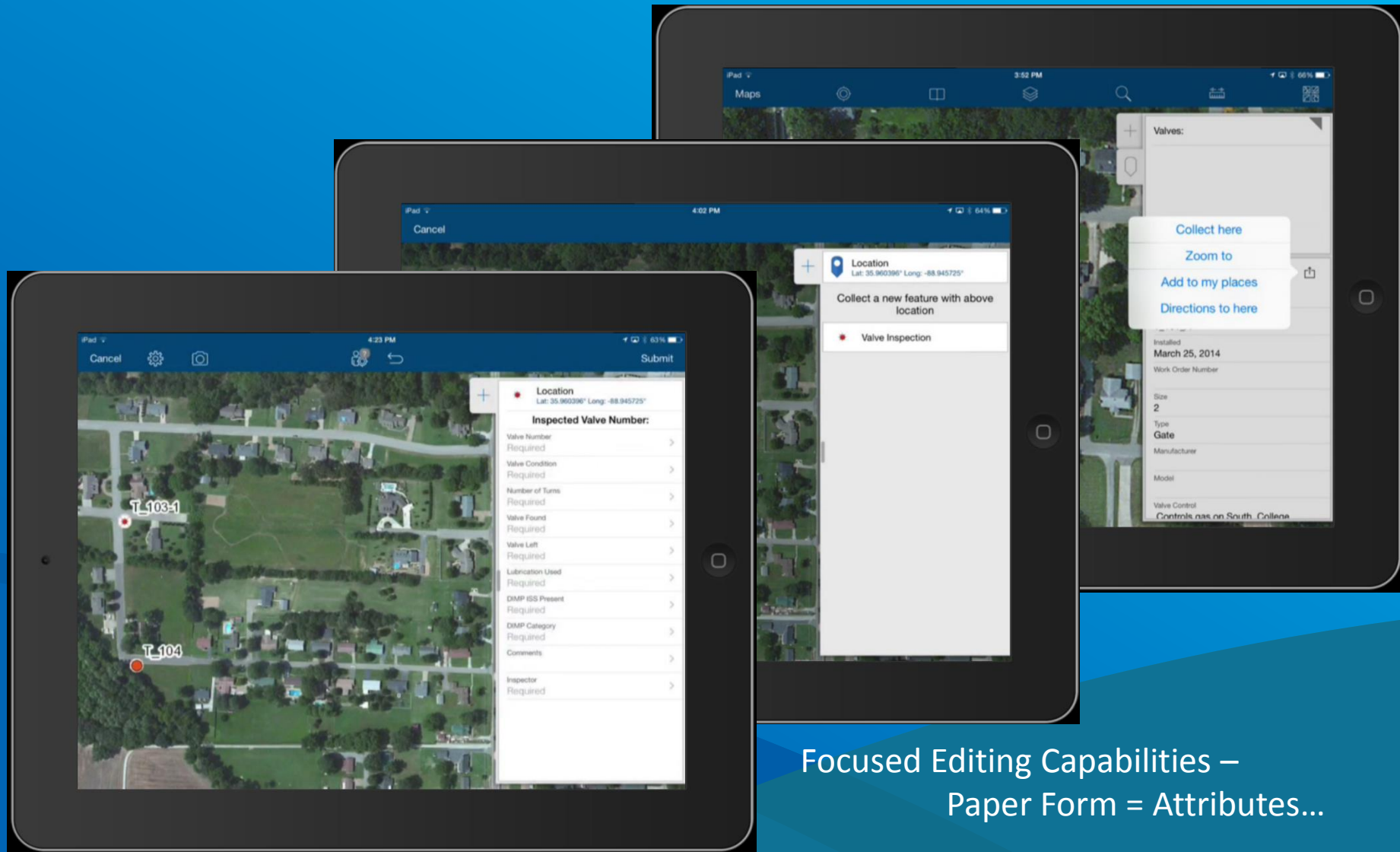
Locate Assets



Turn by Turn Navigation... To Assets

Implement Solutions

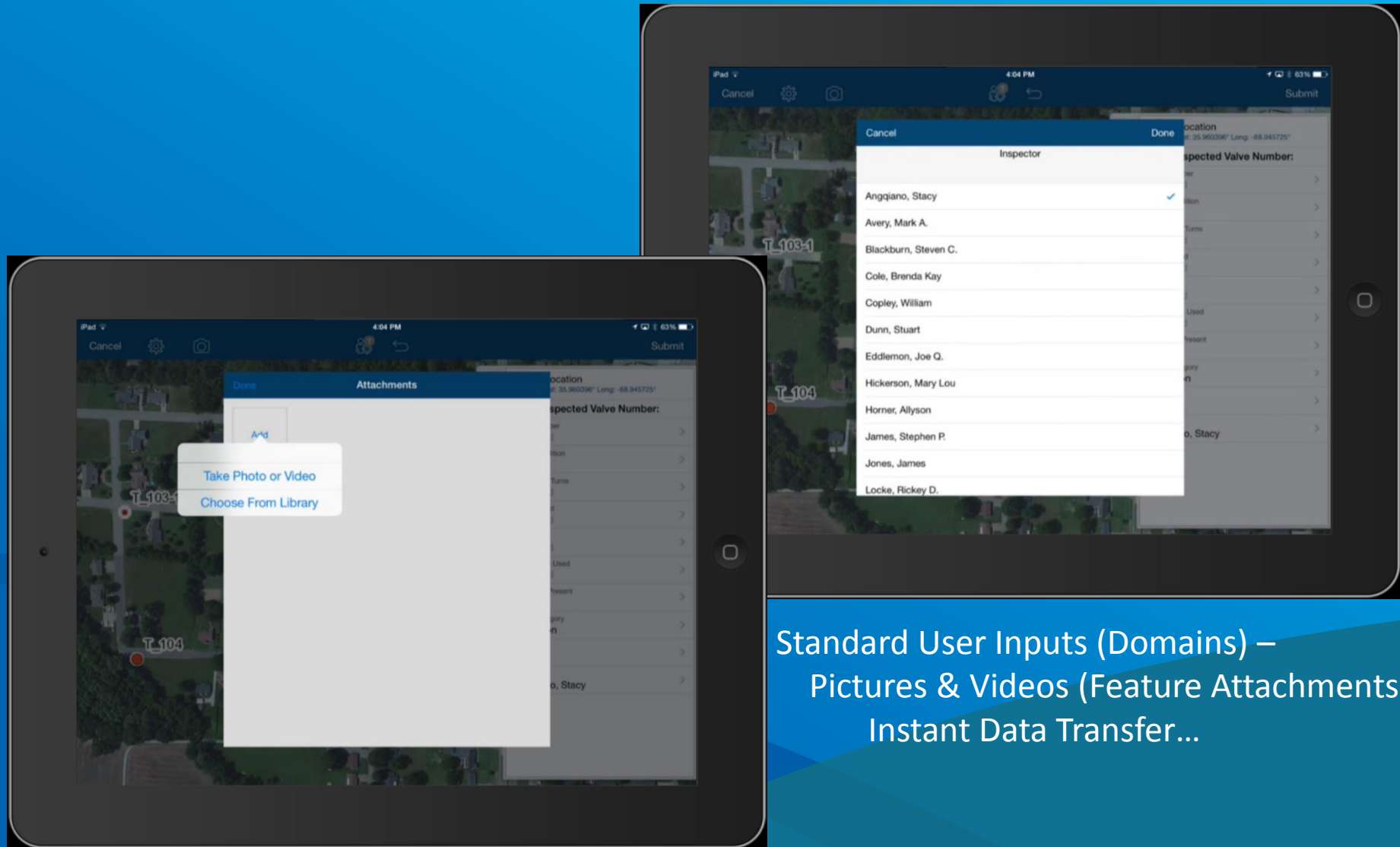
Collect & Transfer Inspection Information



Focused Editing Capabilities –
Paper Form = Attributes...

Implement Solutions

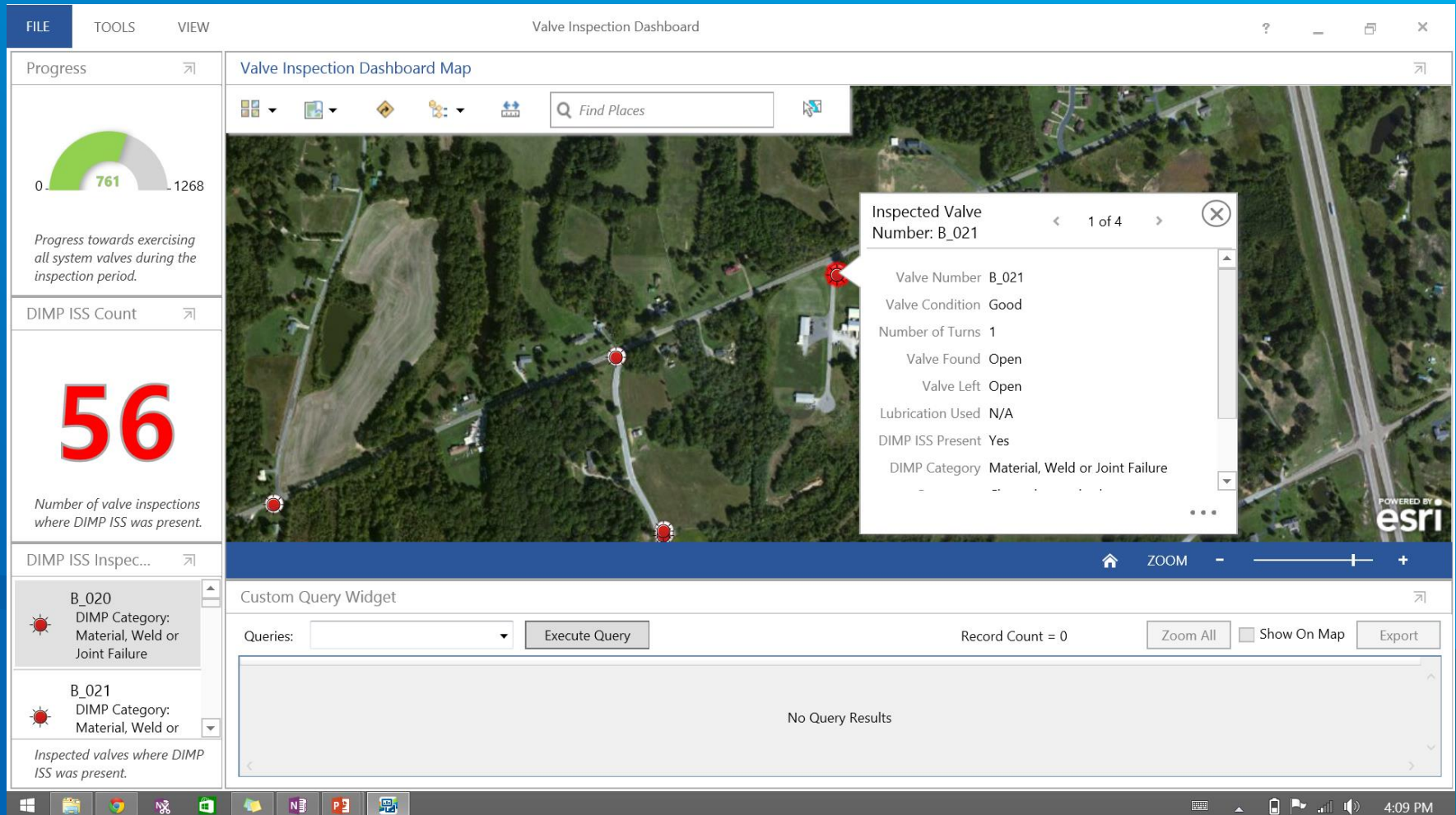
Collect & Transfer Inspection Information



Standard User Inputs (Domains) –
Pictures & Videos (Feature Attachments)
Instant Data Transfer...

Implement Solutions

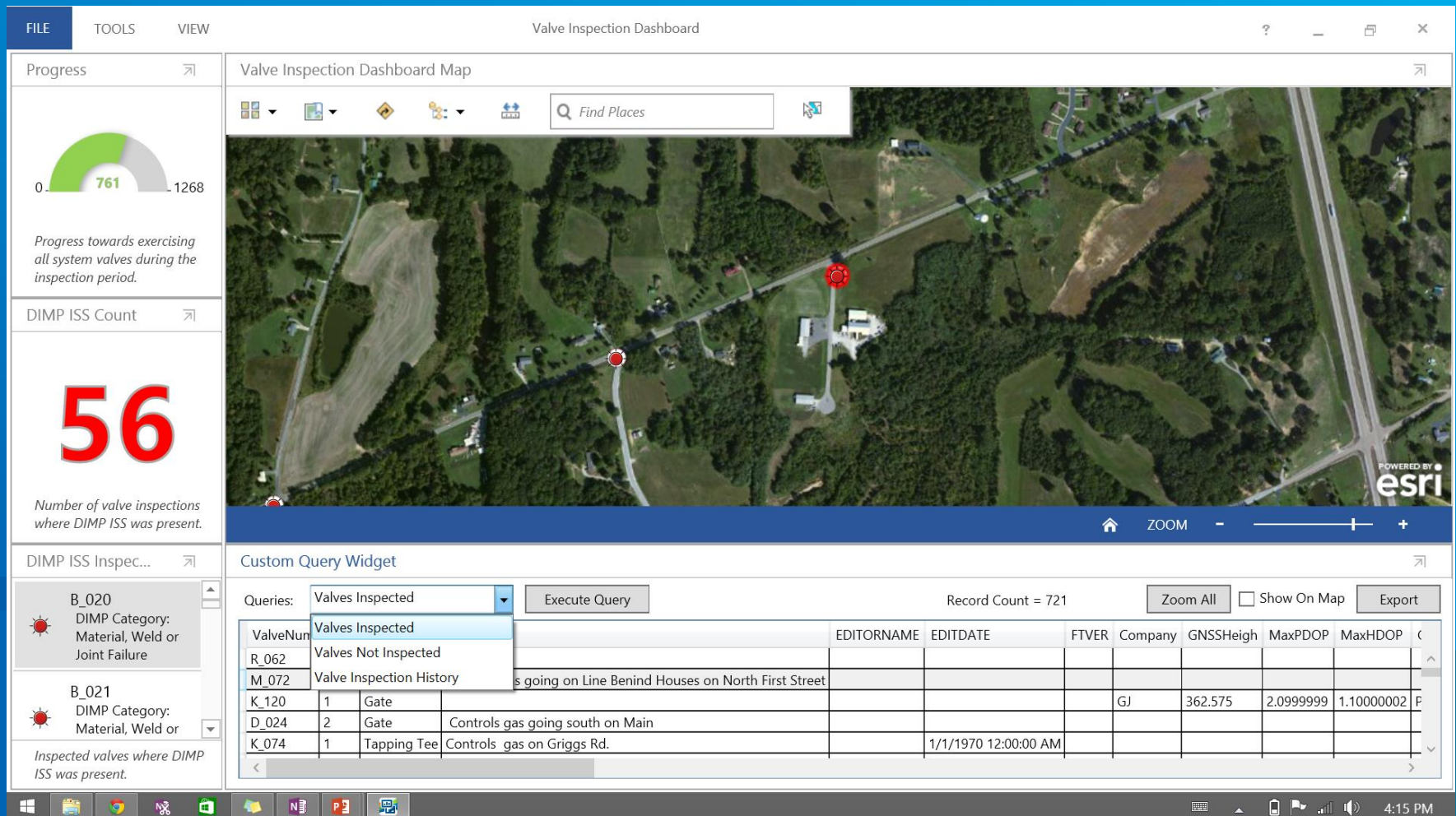
Monitor Inspection Information



Valve Inspection Dashboard: Real-time Data, Focused Information...

Implement Solutions

Generate Reports



Custom Query Widget: Build & Execute Queries, Table View, View on Map...

Implement Solutions

Generate Reports

The screenshot displays the 'Valve Inspection Dashboard' application. The interface includes a top menu bar with 'FILE', 'TOOLS', and 'VIEW'. The main area is divided into several sections:

- Progress:** A gauge showing progress towards exercising all system valves during the inspection period, with a value of 761 out of 1268.
- DIMP ISS Count:** A large red number '56' representing the number of valve inspections where DIMP ISS was present.
- Valve Inspection Dashboard Map:** A map view showing the inspection area. An 'Export Options' dialog box is open over the map, allowing users to export data to PDF or CSV. The dialog includes fields for Title, Page Size, and a list of fields to include in the export.
- Custom Query Widget:** A section for querying the data. The current query is 'Valves Inspected'. Below the query, a table lists the results.

The 'Export Options' dialog box shows the following fields:

- Title: Valve Inspection Report
- Output Type: PDF (selected)
- Page Size: Letter Landscape
- Fields to include: DIMPISSPresent, DIMPCategory, Comments, Inspector, created_user, created_date, last_edited_user, last_edited_date, OBJECTID, ValveNumber, ValveCondition, Turns, ValveFound, ValveLeft, LubricationUsed, DIMPISSPresent, DIMPCategory, Comments.
- Save Path: C:\Users\Jeremy\Desktop\Valve Inspection

The 'Custom Query Widget' shows the following table:

ValveNum	Size	Type	ValvContr	EDITORNAME	EDITDATE	FTVER	Company	GNSSHeigh	MaxPDOP	MaxHDOP	
R_062	2	Gate									
M_072	2	Gate	Controls gas going on Line Benind Houses on North First Street								
K_120	1	Gate					GJ	362.575	2.0999999	1.10000002	F
D_024	2	Gate	Controls gas going south on Main								
K_074	1	Tapping Tee	Controls gas on Griggs Rd.		1/1/1970 12:00:00 AM						

The bottom of the dashboard shows a 'Count = 721' and buttons for 'Zoom All', 'Show On Map', and 'Export'. The system tray at the bottom indicates the time is 4:17 PM.

Export Query Results, Customize Output Fields, PDF or CSV

Challenges & Lessons Learned

- Significant time investment on front-end to document workflows
- You must be patient with people & listen to their input because they know their business
- Now that information is accessible to the entire organization, people want more information – collect as much as possible on the front-end
- While we're solving these problems in a very user friendly way, it's still change and people react differently to that – be patient
- ArcGIS Online basemaps don't provide enough level of detail, especially for utility data – dynamic basemap

Thank You!

Q&A

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