LEVERAGING TOOLS TO MAKE DATA AVAILABLE FOR DECISION MAKING

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OVERVIEW

• Data Collection History – Collector / Survey123
• Research Analytics
• Field Usage
• Related Projects
• Analytics Tools
DATA COLLECTION HISTORY
COLLECTOR / SURVEY123

• Started collecting data in 2011 with Culverts

• Migrated to ArcGIS Online and Collector in 2013 with Culverts data

• Since have added Lighting, Traffic Barriers, Walls, Patching and migrated Signs from an older system

• Also leveraging Survey123 for sample collection in 2017
A standard look at what our field crews see in Collector.
COLLECTOR APPS EXAMPLES
FEATURE DATA GATHERED BY MAINTENANCE AND CONSTRUCTION STAFF

• Culvert Data within ROW (75% collected – 72,000)

• Guardrail, Crash Cushions (95% collected – Cable 1800, Concrete 815, Steelbeam 9787, Crash Cushions 192)

• Signs (95% collected statewide – 250000 signs, 166000 poles)

• Lighting (65% collected statewide – poles 18600, cabinets 256, handholes 736)

• Patching Locations
DATA COLLECTION HISTORY
COLLECTOR / SURVEY123

• Most of the data is feeding directly to Oracle SDE enabled databases

• Data is AD authenticated so users just need email address/userIDs and DOT password to access information

• Maps hosted leveraging rest services from DOT servers on AGOL

• 500+ users between Maintenance and Construction staff
DATA COLLECTION HISTORY
COLLECTOR / SURVEY123

• Leveraging Survey123 for construction sample collection
• Collector systems are a series of related tables for inventory and inspection
• QA/QC is ongoing, nightly/weekly processes being established to maintain data quality
• All data is tied to our RAMS (Roads and Highways network) system on the back end
HOW ARE WE USING THE DATA?

• Research – Study looked at crash cushions and crash data within proximity -
  http://www.intrans.iastate.edu/research/projects/detail/?projectID=748702236

• Research – Study looking at cable barriers -
  http://www.intrans.iastate.edu/research/projects/detail/?projectID=237656017

• Research – Looking at culvert extensions -
  http://www.intrans.iastate.edu/research/projects/detail/?projectID=-664380356
HOW ARE WE USING THE DATA?

• Direct tie to crash incidents
  • Pink Tags – Enforcement officers, tagging signs, lights or traffic barriers involved in a crash
  • TRACS ID, tied to collector feature inspection
  • Piloting two areas soon
HOW ARE WE USING THE DATA?

• District design engineers leveraging feature locations and condition information for corridor project analysis – challenges related to making data MicroStation enabled
HOW ARE WE USING THE DATA?

• Geocortex tools sitting on ArcGIS server
LOOKING AT TOOLS FOR THE FUTURE

• Currently leveraging Dundas for salt usage, etc.
• Pushing up AGOL Portal to leverage Insights
• Looking at Microsoft Power BI

• Looking for ideas on how other organizations are leveraging Tools to provide information
QUESTIONS

Thank you!

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