

# Automating Workflows:

Wetland Delineations from Survey to Report

Presented by:

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# Introductions



**Jeremy Gaskins**

BGE, Inc.



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# Agenda

1

Background

2

Previous Workflow

3

Moving to Digital  
Collection

4

Automating with  
Python

5

Time Management  
Strategies

### BGE, Inc.

- Civil Engineering Firm
- Office Locations
- Clients

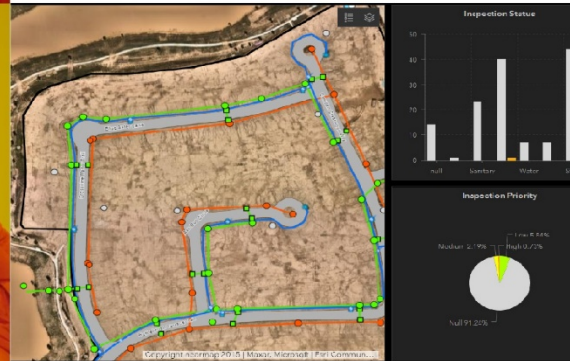
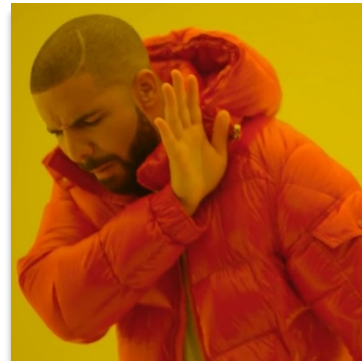
### Technology Solutions

- GIS Analysts
- Solution Architects
- Embedded Program

### Initiative Information



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## Workflow

- Use Collector in field to capture locations
- Record detailed wetland data in field logbook
- Transfer data for each data point to Excel spreadsheet and export the USACE forms

## Issues

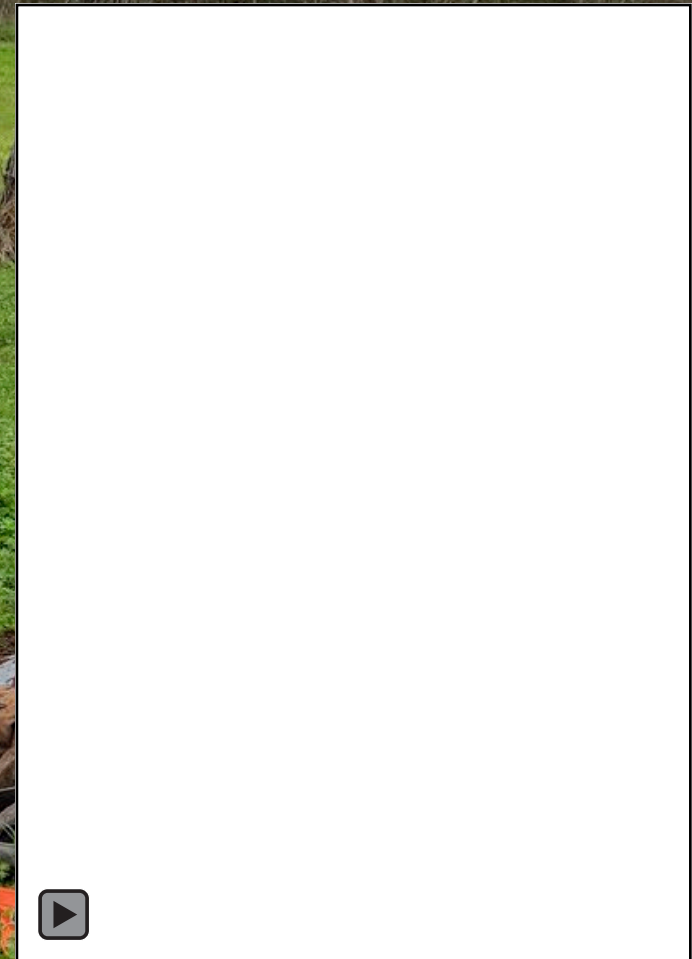
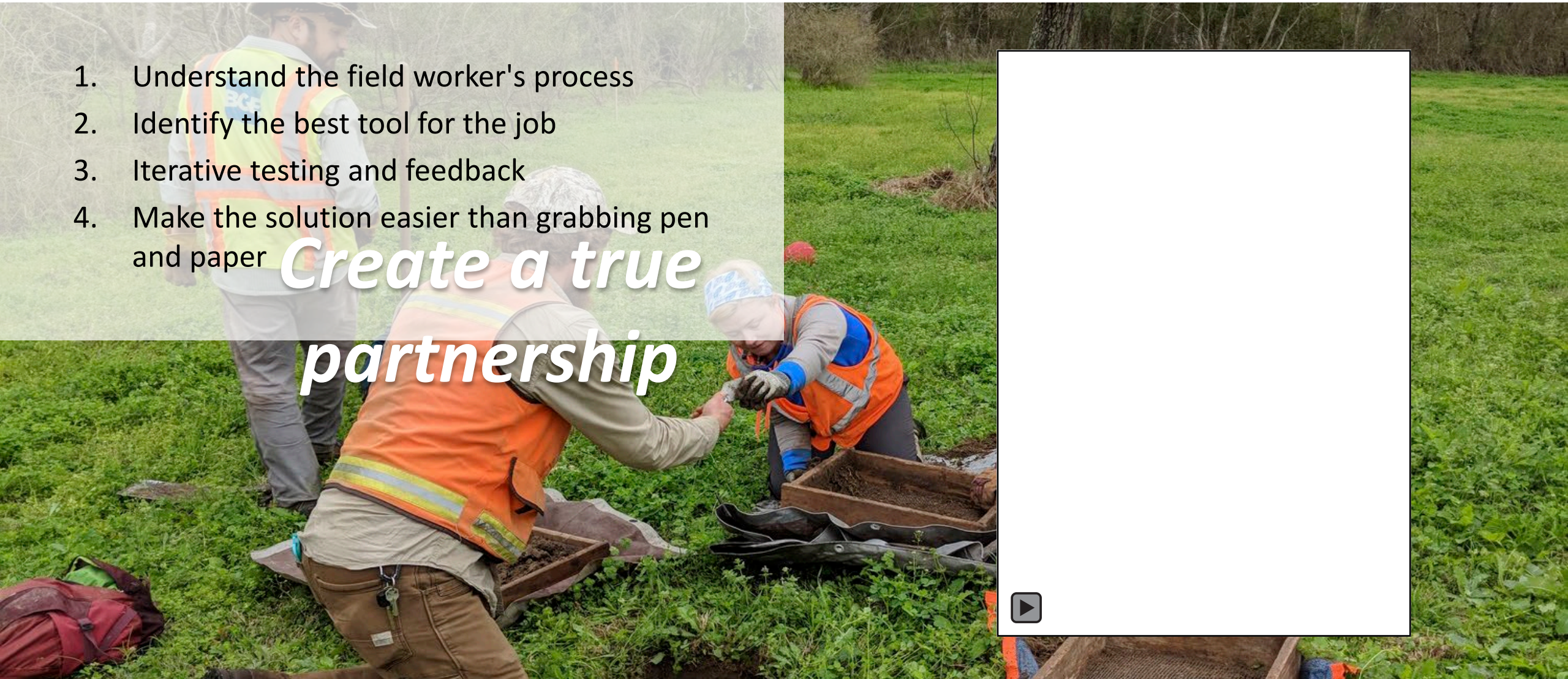
- Duplication of work
- Very tedious and error-prone
- Any change in project information required every spreadsheet to be reopened, edited, and exported
- QA/QC issues



*Problem: "Duplication of work"*

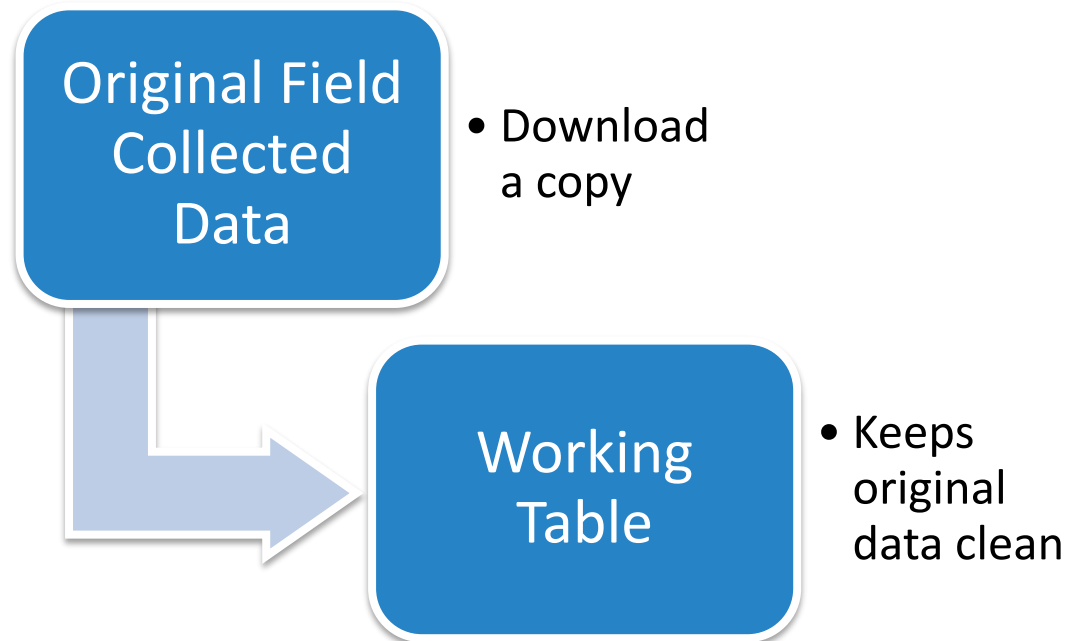
1. Understand the field worker's process
2. Identify the best tool for the job
3. Iterative testing and feedback
4. Make the solution easier than grabbing pen and paper

*Create a true  
partnership*



*Problem: “Very tedious and error-prone”*

## ArcGIS Notebooks



## Spatial Tools

1. Creating Fields
2. Intersection Tables
3. Buffers
4. Data Conversion
5. Data Exporting



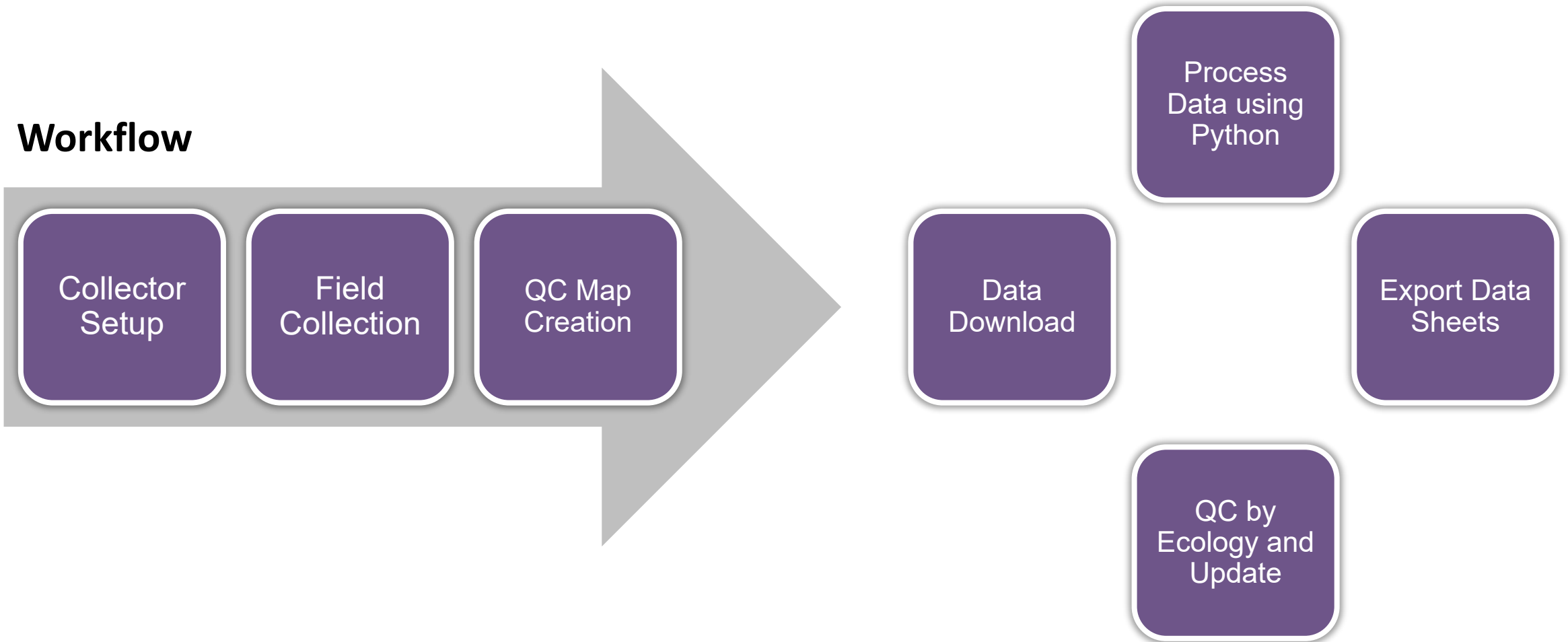
## Iterative processes (Data Access)

1. Same-As Conversion – Insert Cursor
2. Calculating Results – Update Cursor
3. Formatting – Update Cursor
4. Spatial Intersections – Tabulate Intersection to Update Cursor
5. QC common issues – Search Cursor



*Problem: "Any changes to my datasheets require me to reopen every file."*

### Workflow





# Conclusion

## Results

- Increased efficiency by about 30% on medium-sized projects
- More time to QA/QC final deliverable, which is ultimately delivered to USACE

## Next Steps

- Automate more QA/QC
- Create service so process can be run 'On Demand'
- Additional process improvements, like Investigation Point surveys for Cultural Resources

# QUESTIONS?



# Contacts

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