

# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

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U.S. Census Bureau

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# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## Agenda

Our Goal

Production Workflow

Previous Processing Methodology

What Sparked the Change?

What to Automate?

Demonstration

Previous/New Workflows

Productivity Rates

User Perspective

Issues

Benefits

# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## Geography Division Mission

Provide high quality geographic data and products to customers across the Census Bureau; to tribal, federal, state, and local governments; and to the public.

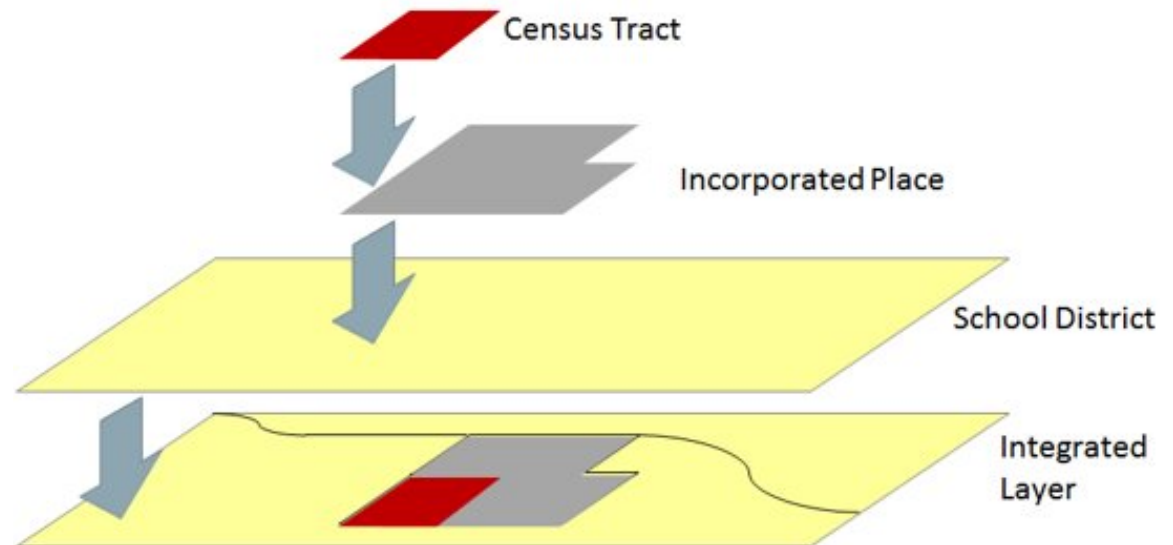
Plan, coordinate, and administer all geographic and cartographic activities needed to facilitate the Census Bureau's statistical programs, censuses, and surveys.

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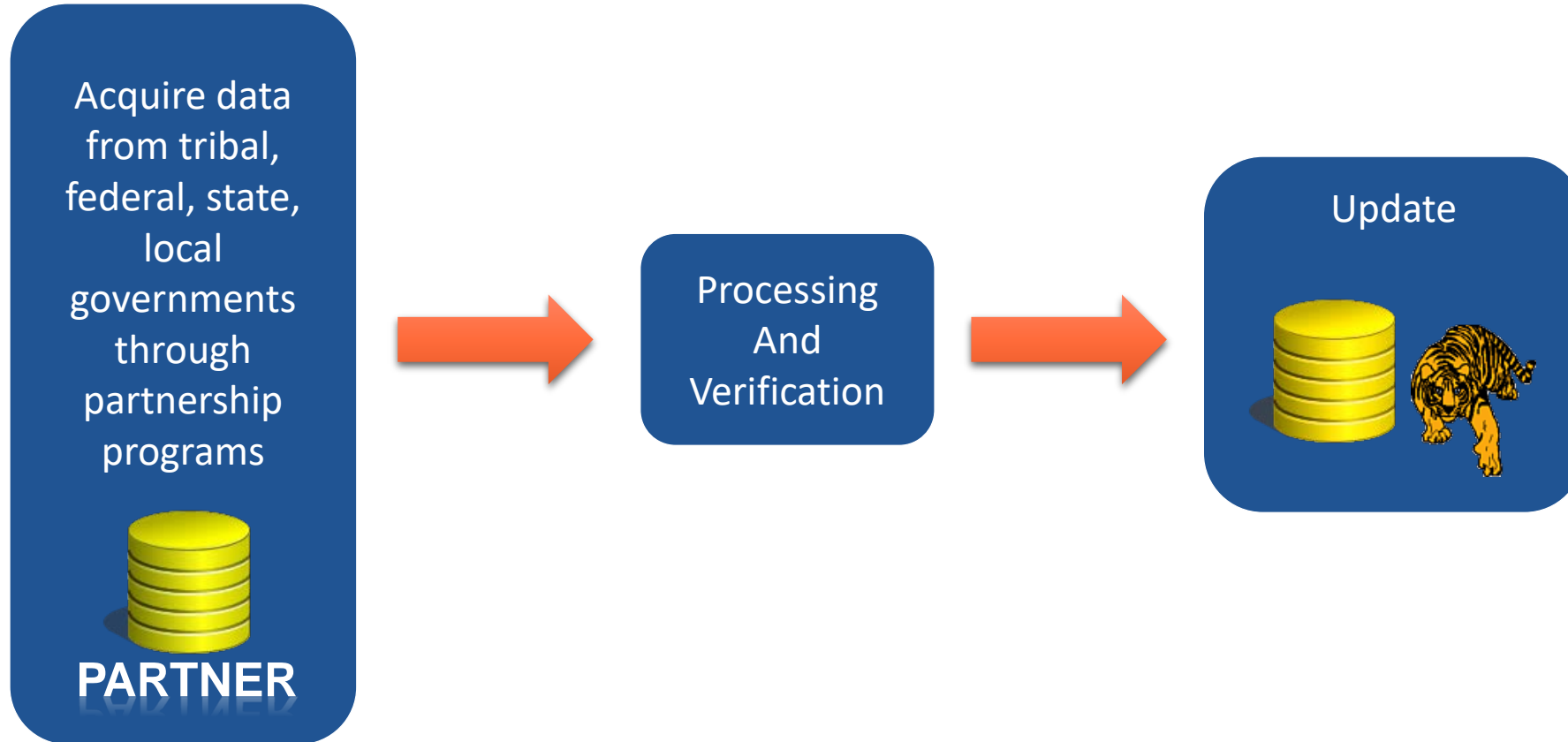
## Our Goal

The Master Address File (MAF)/Topologically Integrated Geographic Encoding and Referencing (TIGER) System provides the address and spatial frame that is used at the U.S. Census Bureau.

This network allows for spatial accuracy and completeness in boundary delineation, geocoding, and tabulation.



# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals Production Workflow

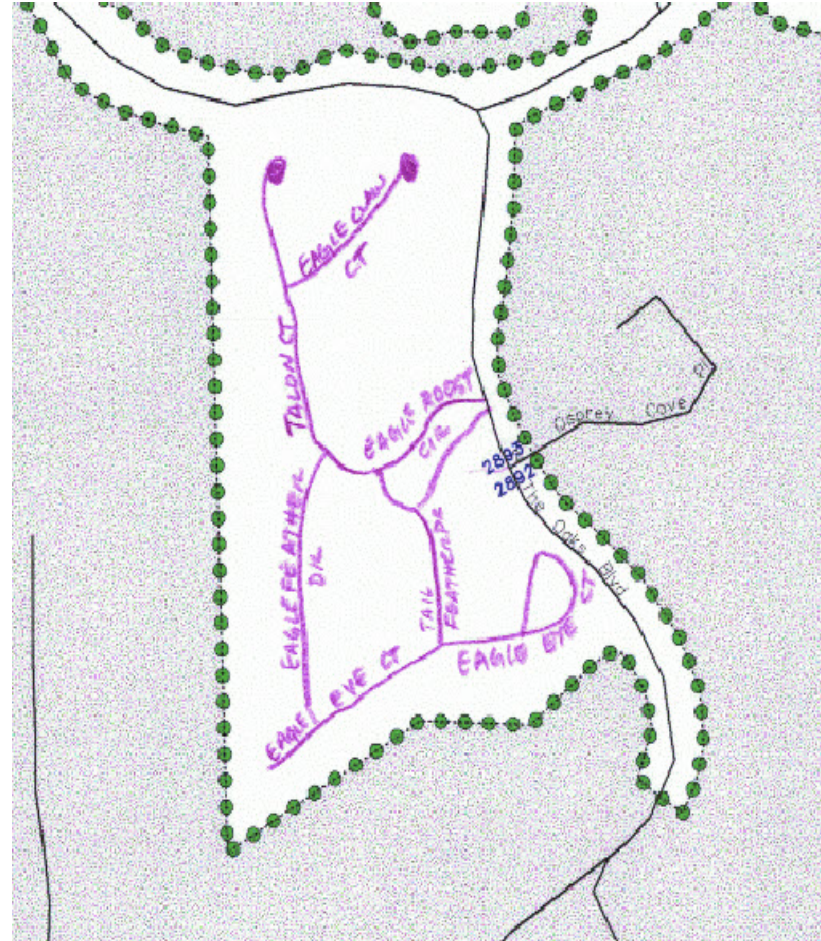


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## Previous Processing Methodology

### Paper Responses

- Smaller number of updates.
- Relational updates.
- Manual digitizing.

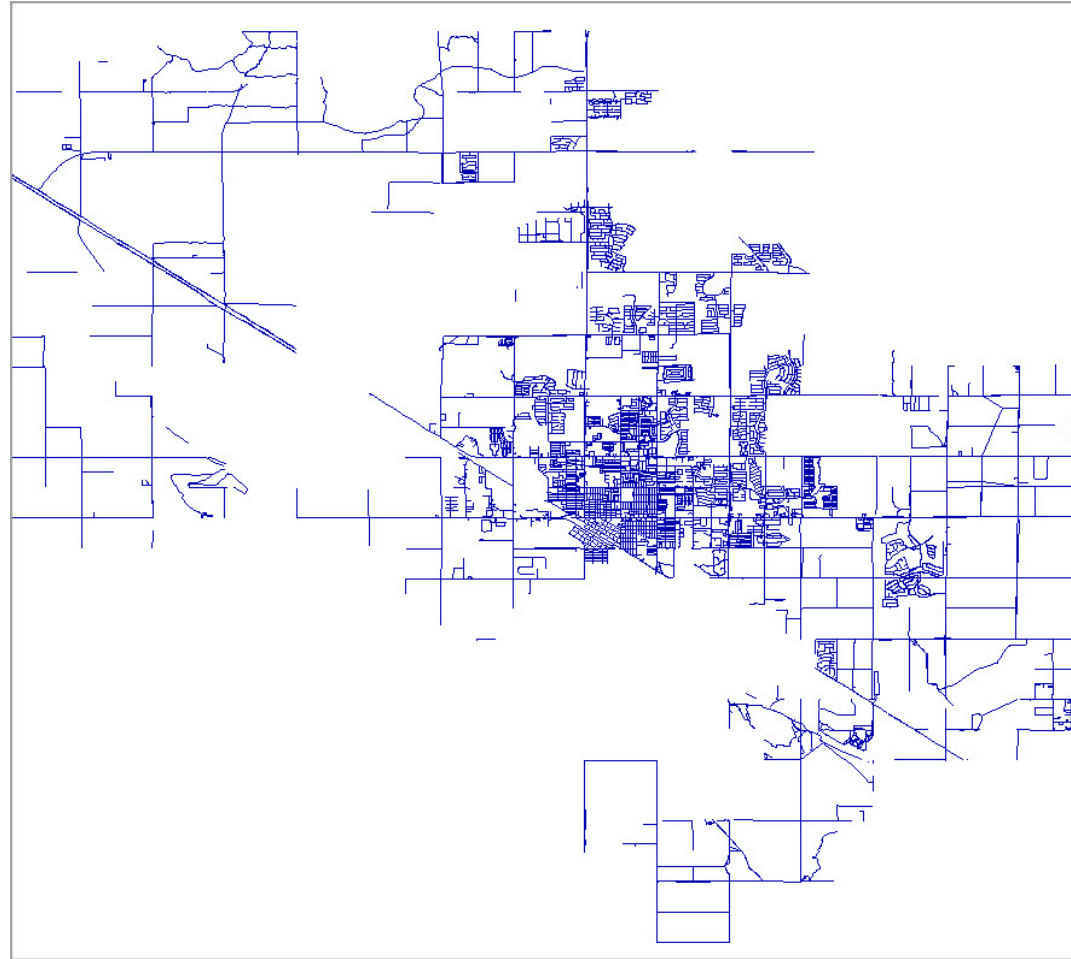


# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## Previous Processing Methodology

### Digital Responses

- Larger amount of updates.
- Spatial updates.
- Continue to perform manual digitizing.
- Introduction of automated methods of digitizing over time.





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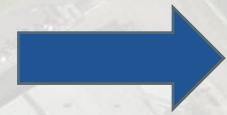
## What Sparked the Change?

### National Processing Center (NPC)

The NPC is the Census Bureau's primary center for mail processing, survey processing, data capture, and imaging/scanning.



**Flexible labor force, with the ability to rapidly expand and contract in size - from 1,700 to more than 5,000 employees - to meet changing work requirements and customers' needs.**



**Located in Jeffersonville, Indiana (Louisville, KY metro area).**

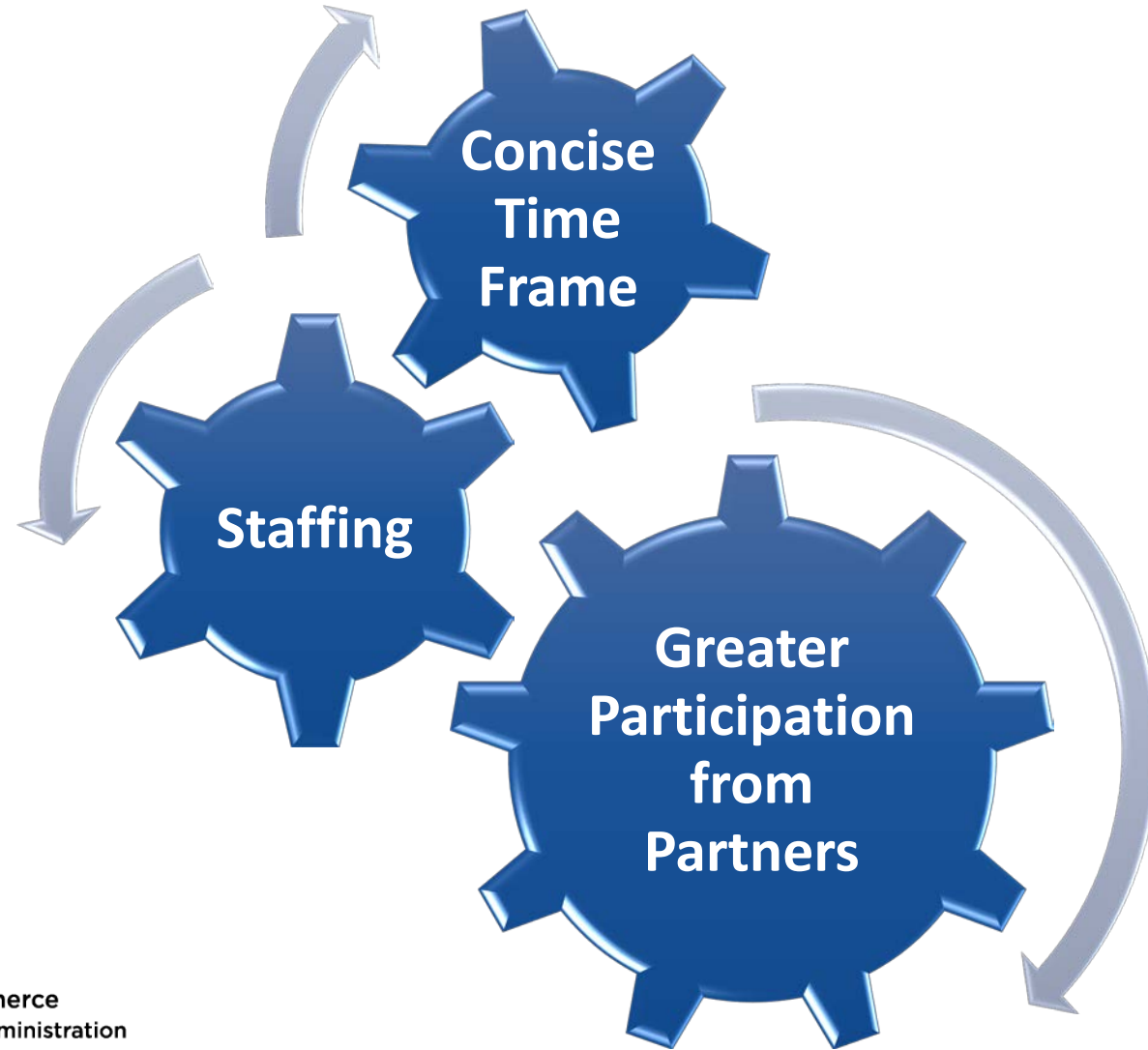


**Geography Branch - coordinates and directs geographic operations/services in partnership with GEO Division at Census Bureau HQ.**



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## What Sparked the Change?



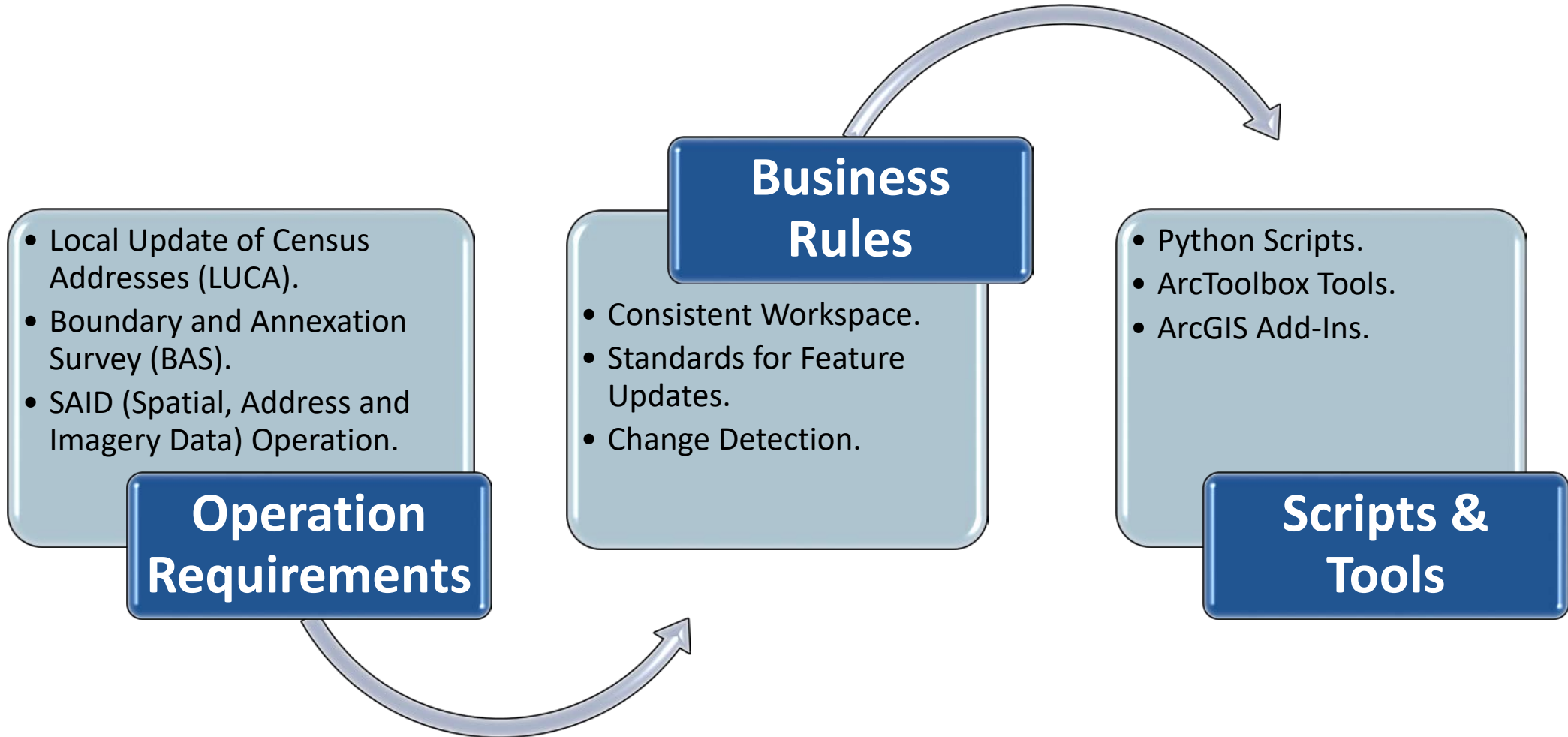
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## What to Automate?



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## What to Automate?

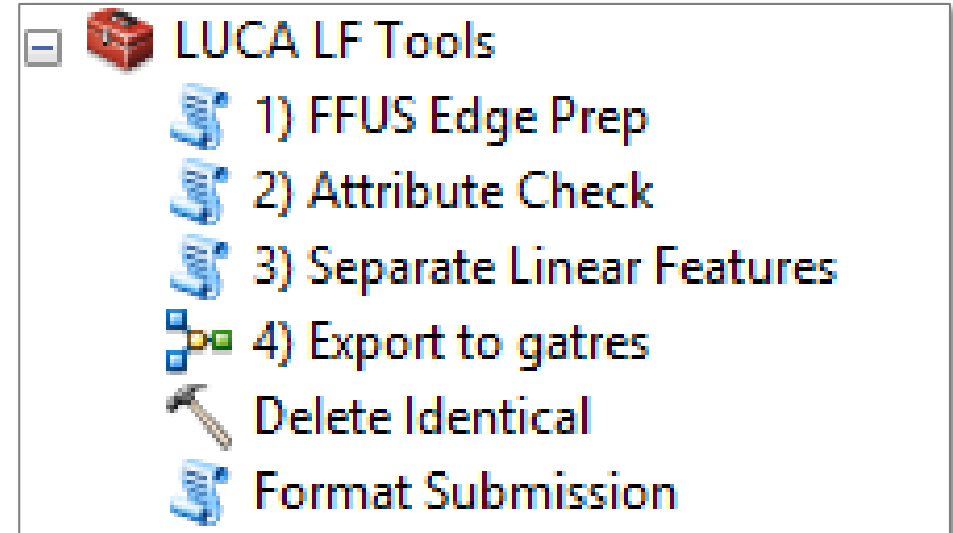


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## Demonstration

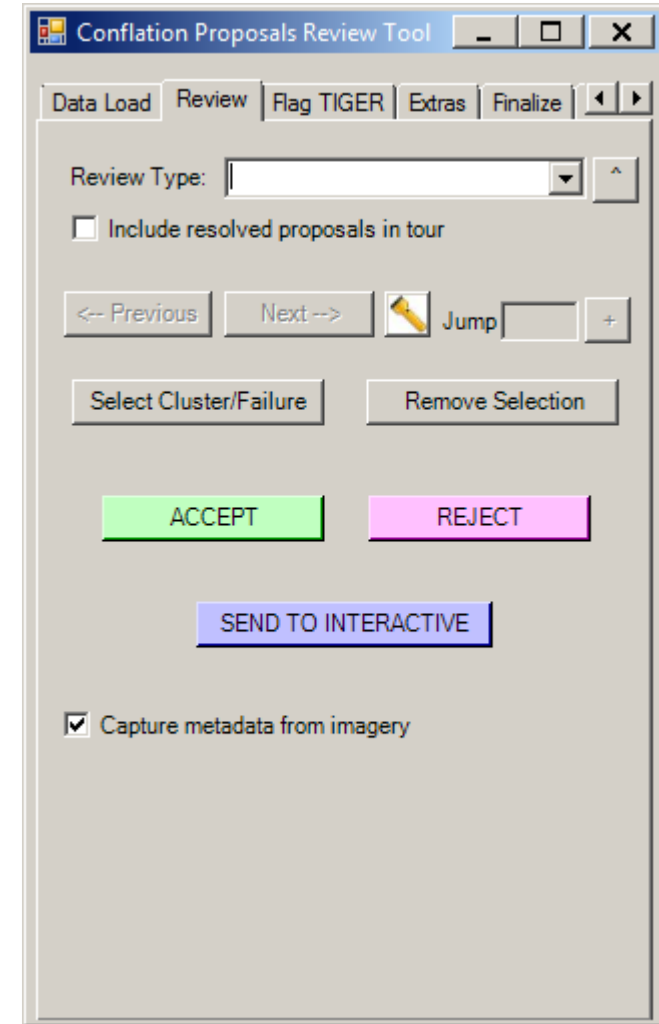
Used python scripts to create project specific toolboxes

- User friendly
- Simplified Workflow



# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals Demonstration

- ArcGIS Add-In software.
- ArcGIS .NET SDK.
- Validates proposals against MAF/TIGER System and current imagery.





# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## Demonstration





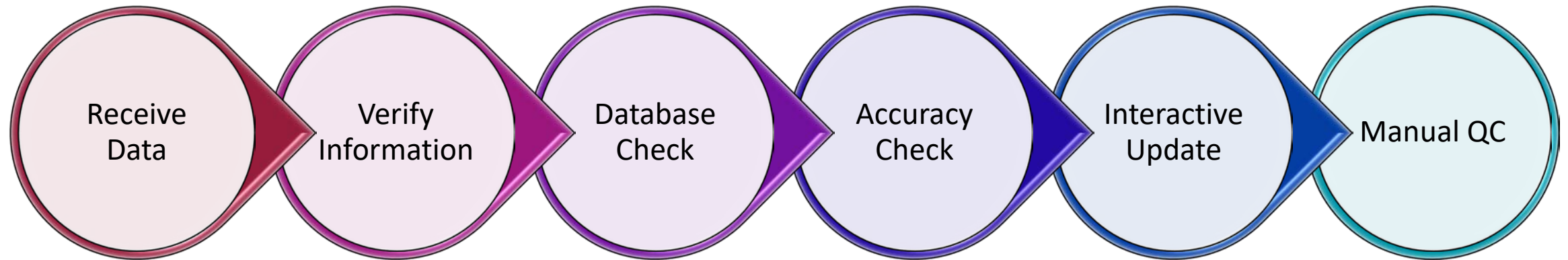
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## Demonstration



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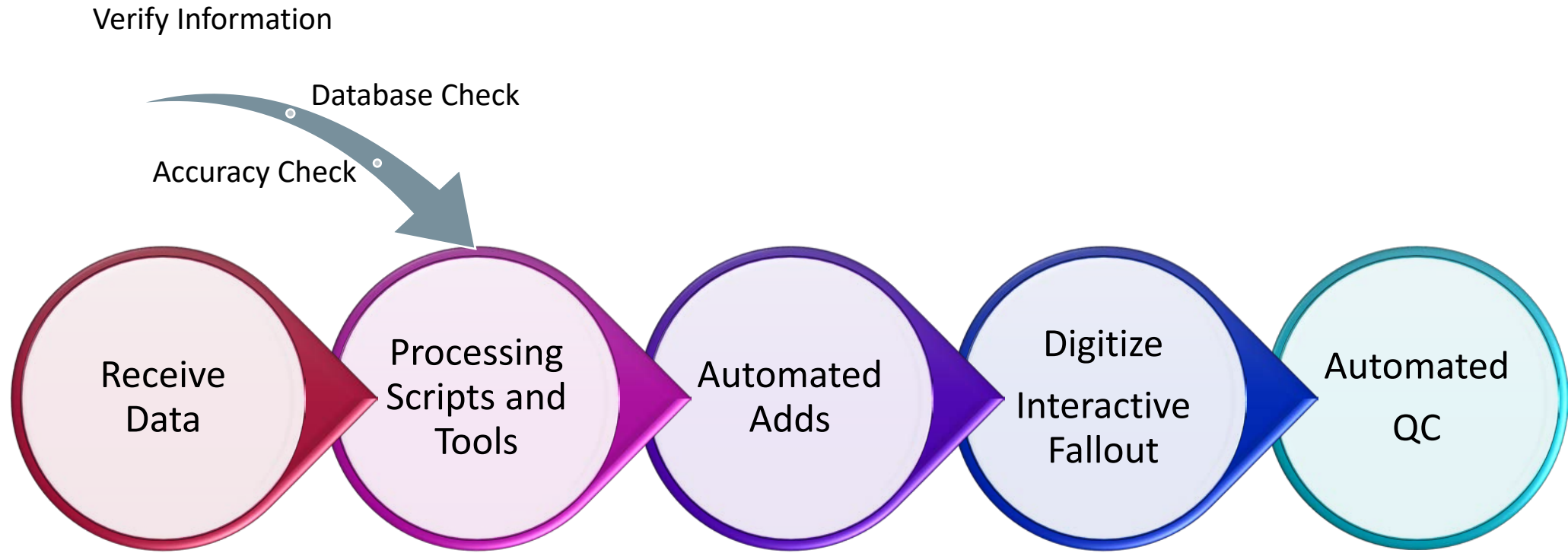
## Previous Workflow



UNIVERSITY

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## New Workflow



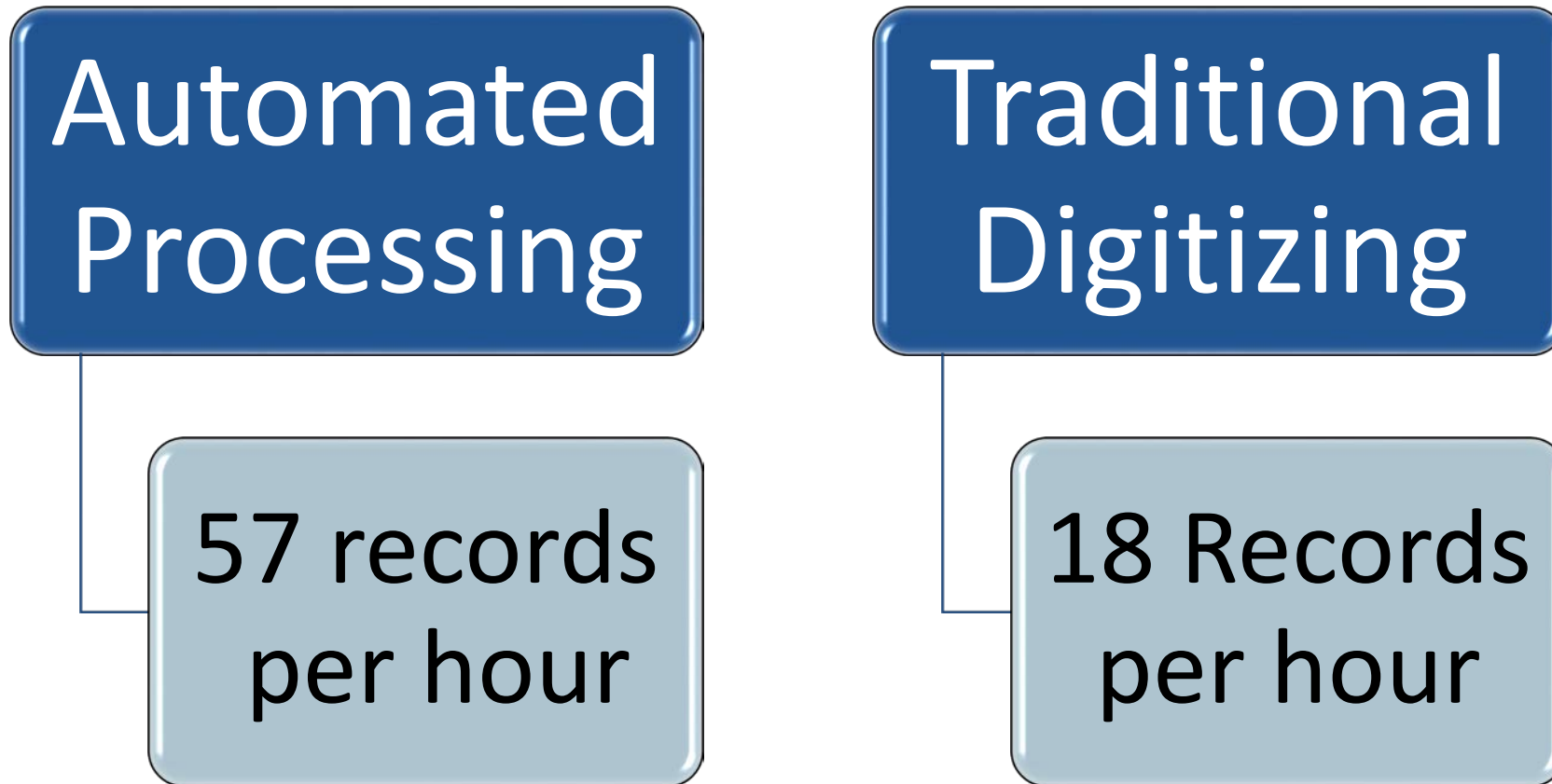
U.S. CENSUS BUREAU

## Progress to Date (2010 – Present)

- Completed updates in over 500 geographic entities.
- Added over 25,000 miles of roads to the MAF/TIGER System.

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## Productivity Rates





# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## User Perspective

Increased Production Rate

Symbolization Helpful

Provided Context to Areas of Update

Built Confidence





# Customizing ArcGIS to Enable Feature Update by Non-GIS Professionals

## Issues

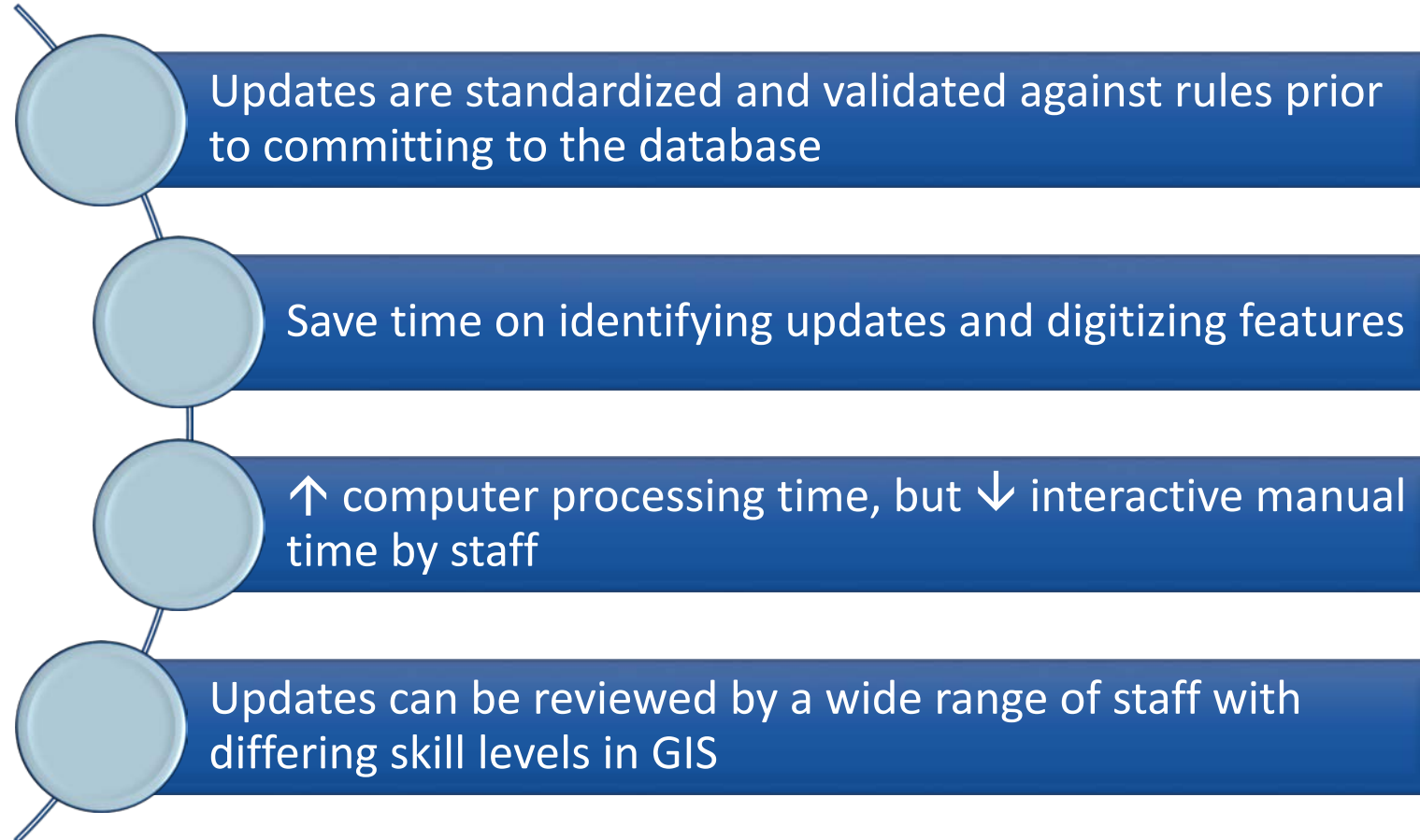
Covering  
“Every”  
Scenario

Training  
Time

Inconsistent  
Data

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## Benefits



# Questions?

# Contact Information

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