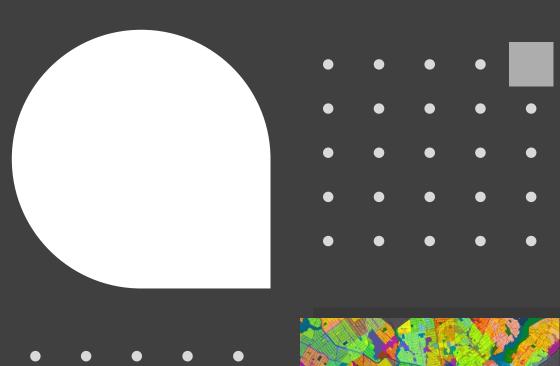


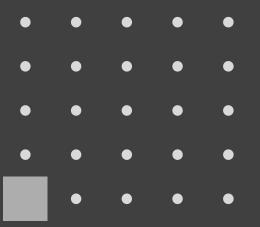
2<sup>nd</sup> Philippine Data Festival

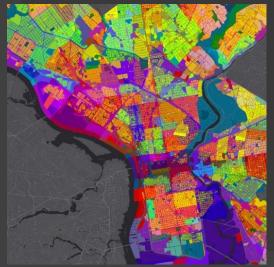
# Visualizing and Analyzing Statistical Data with GIS

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Training Supervisor I Geodata Systems Technologies, Inc.







#### In this session...

• Incorporate and leverage statistical data's spatial property in doing statistical inquiry using a technology called Geographic Information Systems (GIS)

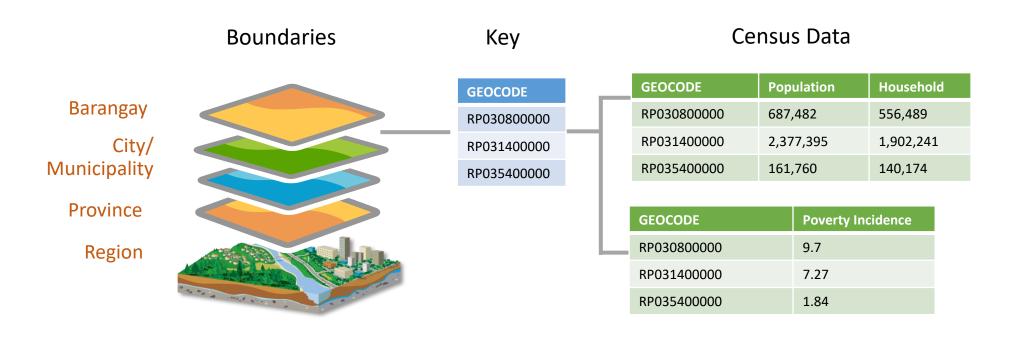
- Data Visualization in ArcGIS
- Spatial Analysis in ArcGIS
- R-ArcGIS Integration



### Geography and Statistical Data are Foundational

An Integrated Data Model is Essential

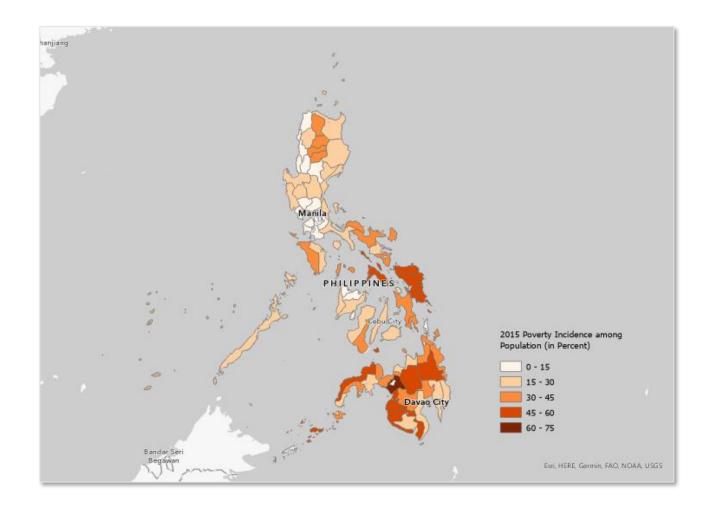






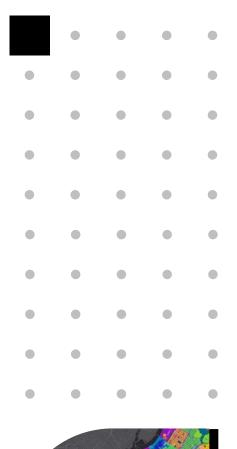
## Integrating Geography and Statistics

To Understand Poverty









## Demo 1:

Data Visualization in ArcGIS



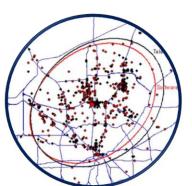


### GIS, Spatial Analysis, and Statistics

# **Statistical Proximity Overlay**

What is inside of or on top of what?

What is nearby?



What do geographic patterns tell us?



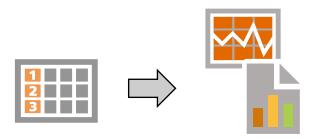


What changes have occurred over time?

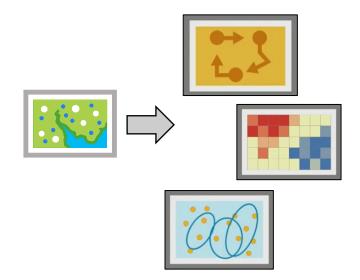




### GIS, Spatial Analysis, and Statistics



- Mean
- Standard Deviation
- Min and Max



Spatial statistics are a set of exploratory techniques for describing and modeling spatial distributions, patterns, processes, and relationships.

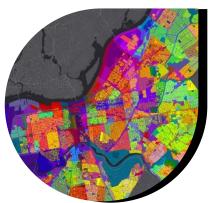






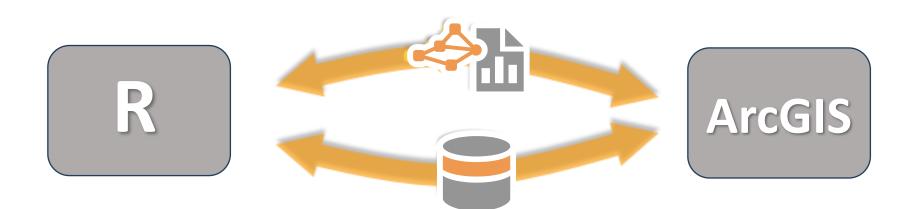
# Demo 2:

Spatial Analysis in ArcGIS





#### Integrating R with ArcGIS



Store your data in ArcGIS, access it quickly in R, return R objects back to ArcGIS native data types (e.g., geodatabase feature classes).

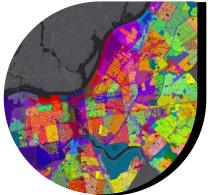






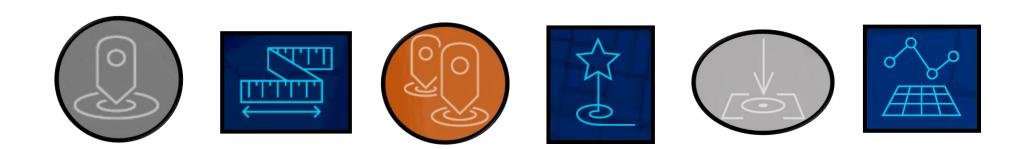
# Demo 3:

Solving statistical problem in ArcGIS and R



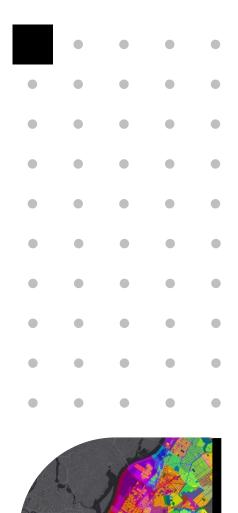


#### In Summary...



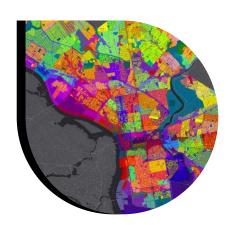
Using the **Science of Where** to understand our world — mapping where things are, how they relate, what it all means, and what actions to take.





Thank you for attending!





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Geodata Systems

