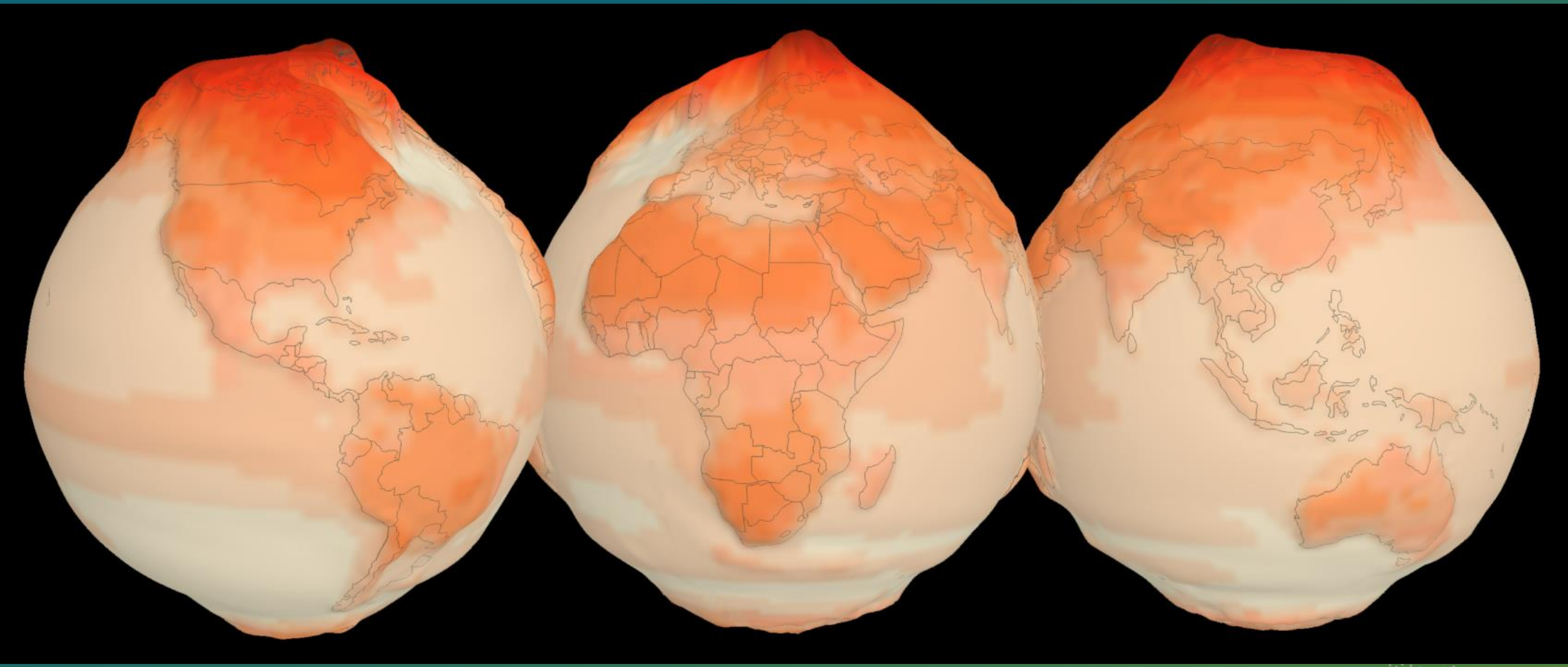
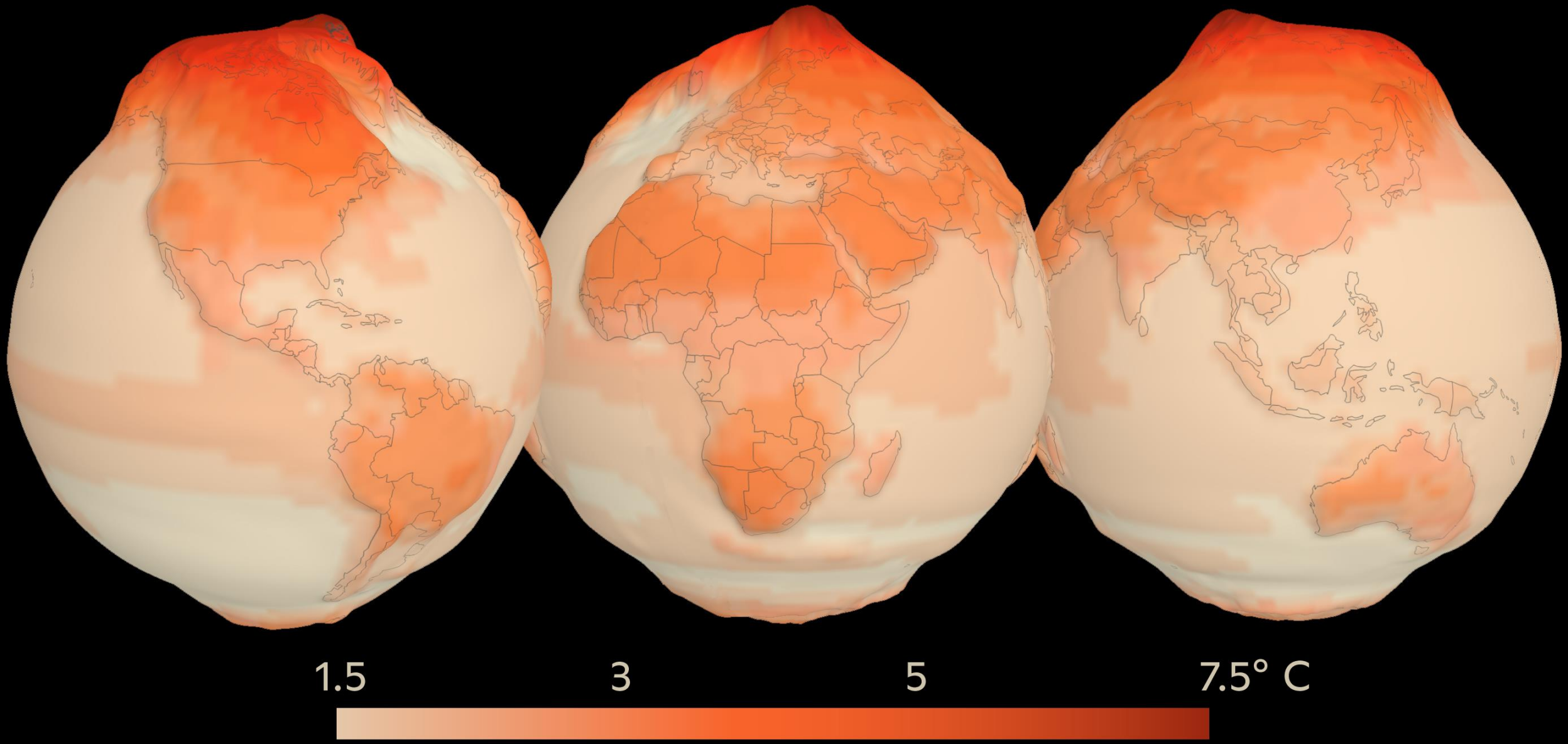
The Value of Data Visualization in Decision-Making & Public Outreach

Sunny Fleming
Industry Lead, Environment & Conservation

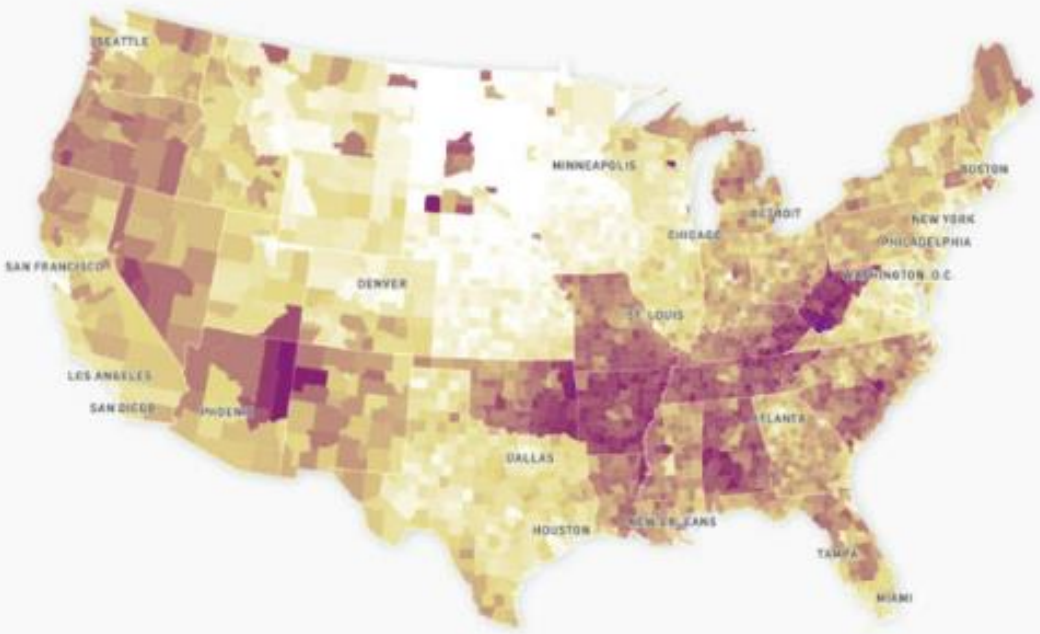
esri THE SCIENCE OF WHERE





@greg.fiske
@woodwellclimateresearchcenter

Values represent projected 2040-2060 temperatures (RCP 8.5) minus 1880–1920.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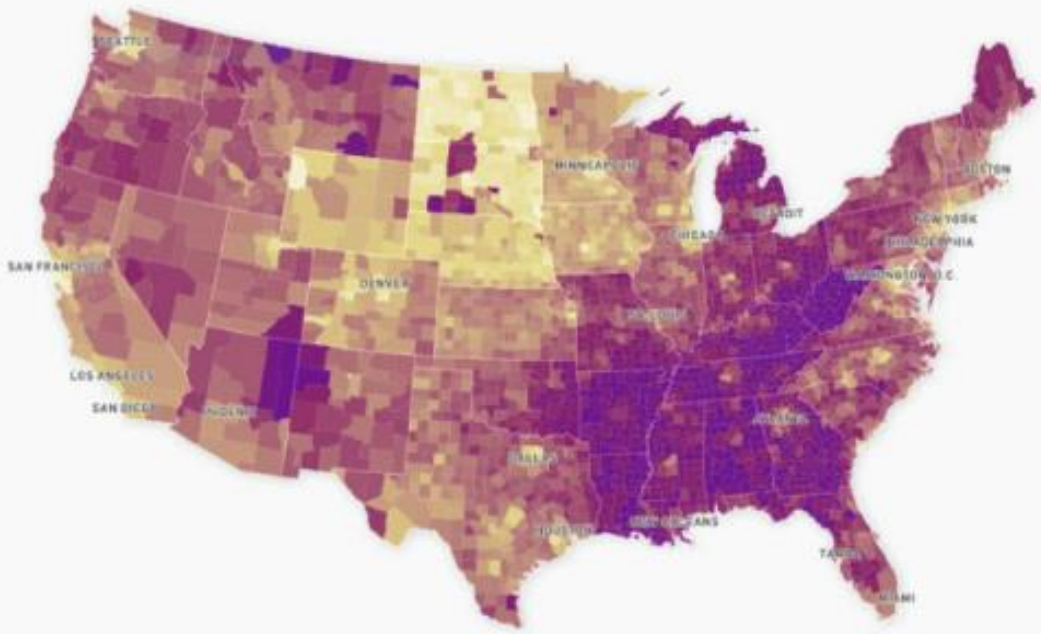
MIAMI

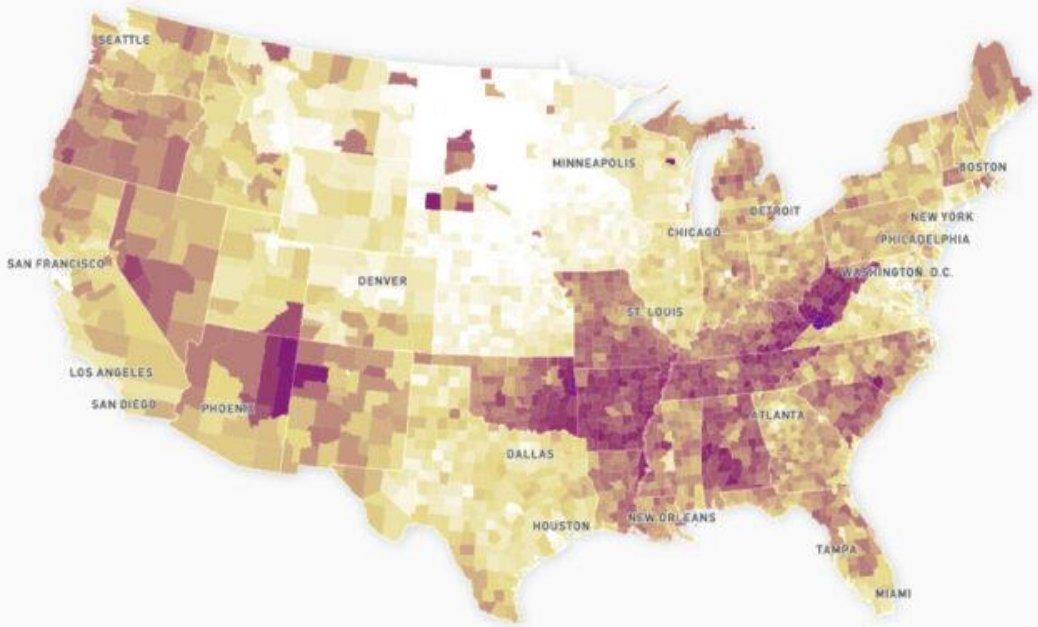
2015



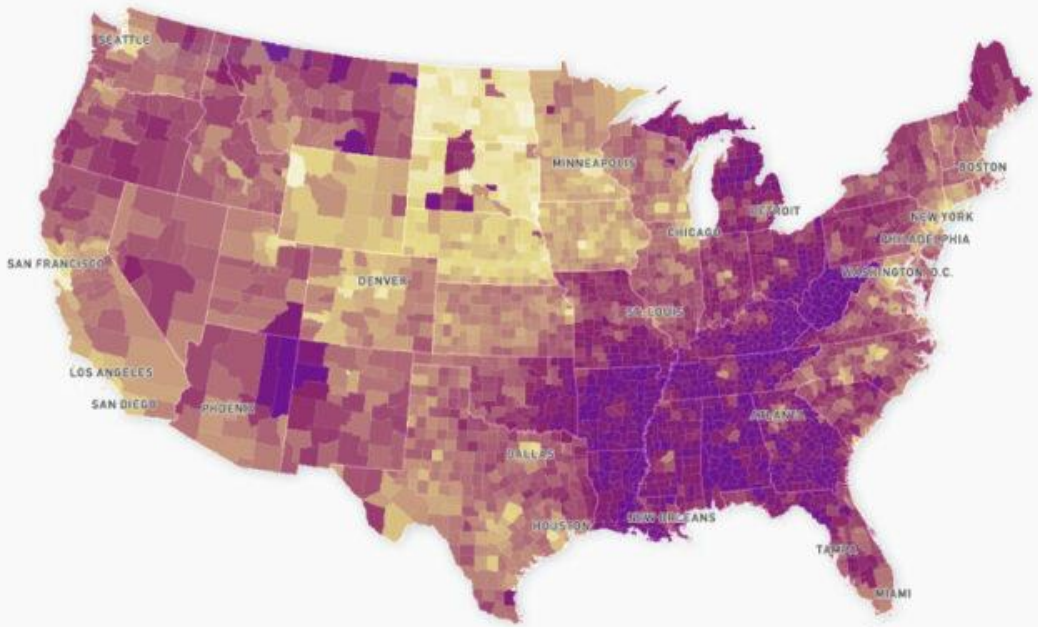
2019

Average number of poor mental health days per month

3 days — 6+ days

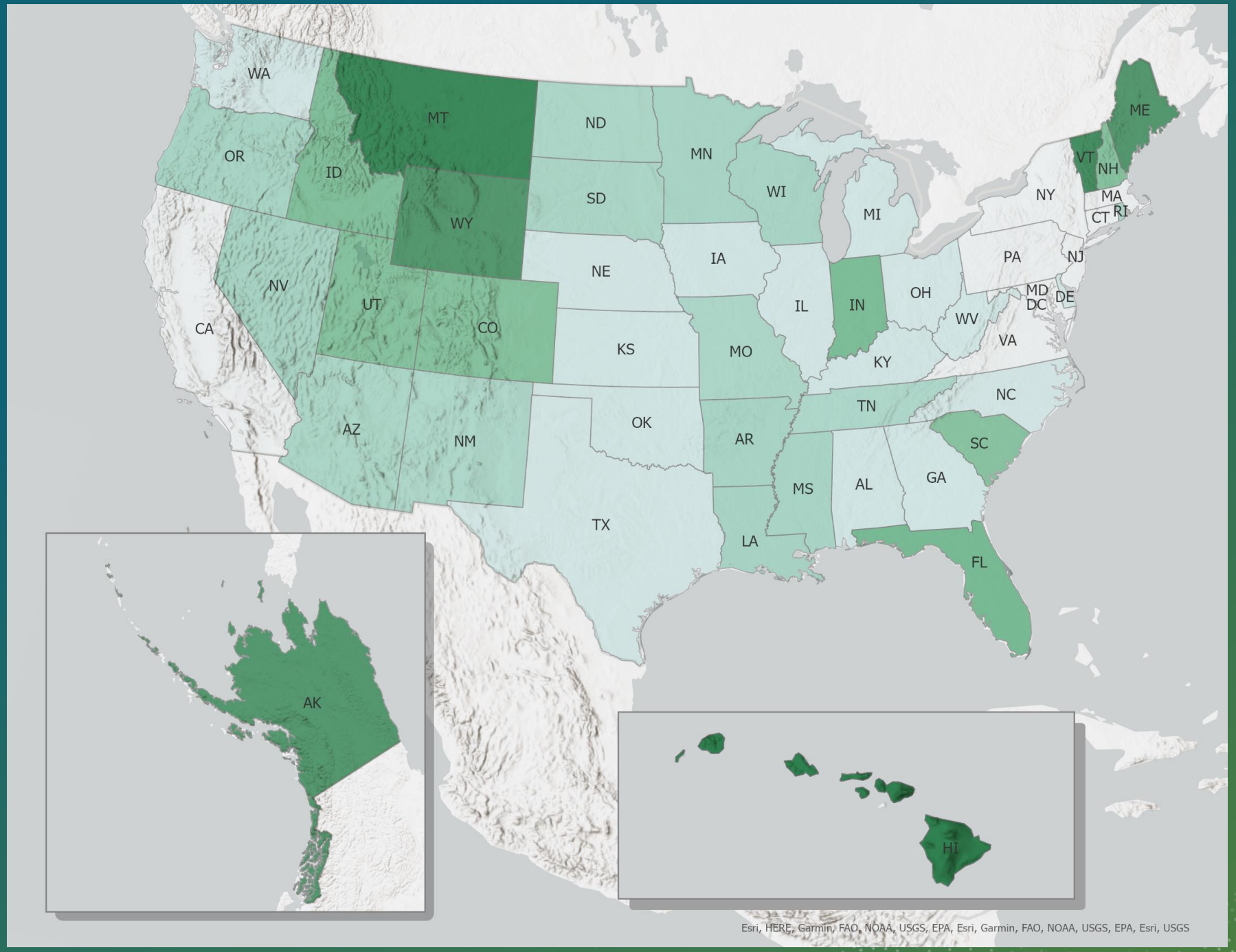


2015



2019

Sources: University of Wisconsin Public Health Institute; Robert Wood Johnson Foundation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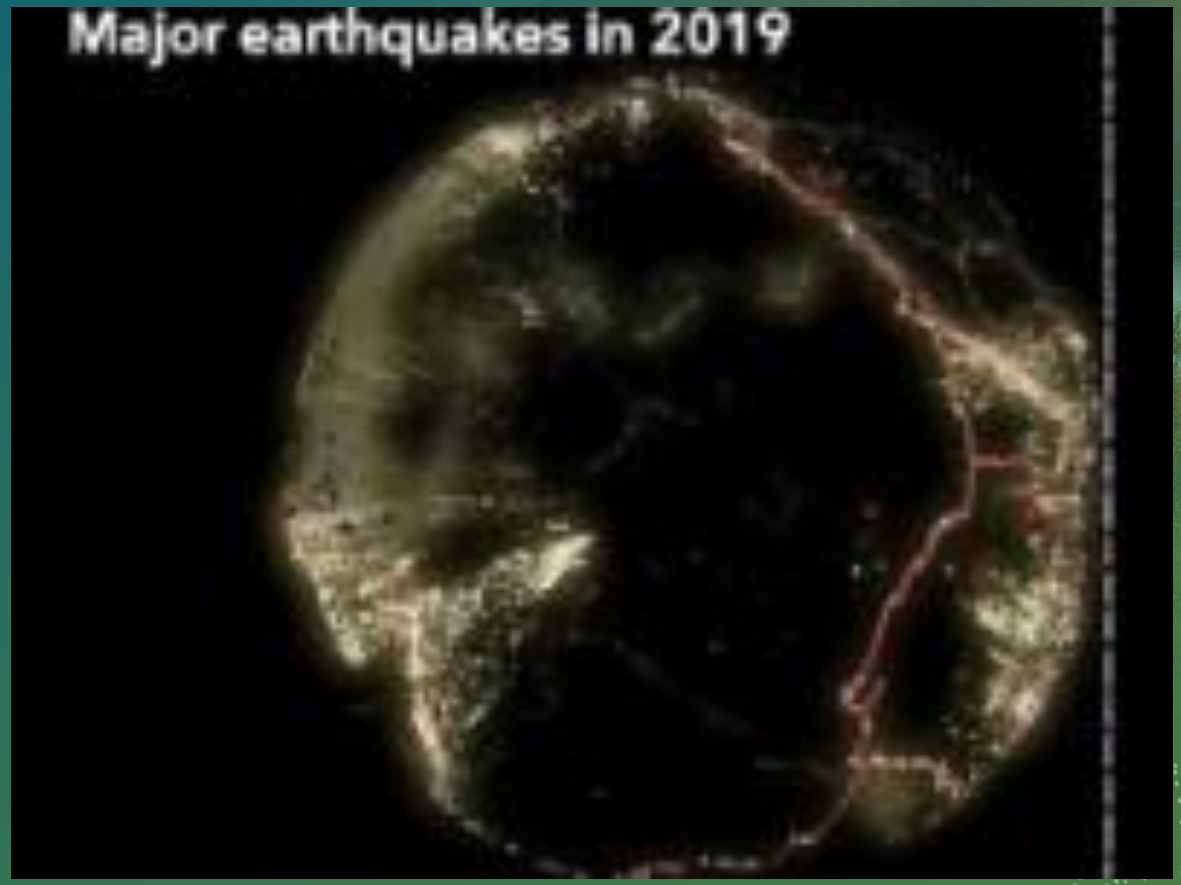
Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, Garmin, FAO, NOAA, USGS, EPA, Esri, USGS

Visual Storytelling

Ensuring Greater Accessibility

- 60,000X faster*
- Multiple concepts at once*
- WHERE is intuitive
- Mitigate the language barrier
- Interactive; invites exploration



*Source: 3M Research

What Is a GIS?

A System for Managing, Sharing and Applying Geographic Information

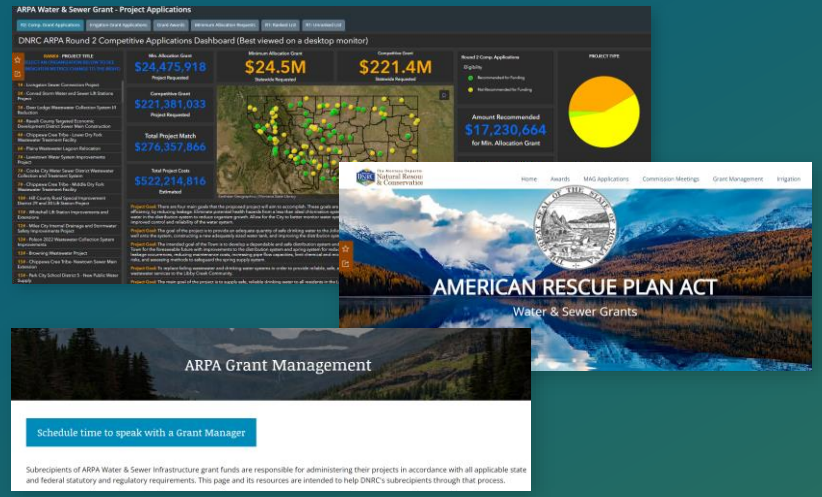
Delivering Value Across Organizations
Improving Efficiency, Communications, Decision Making and Collaboration

Environmental Regulation

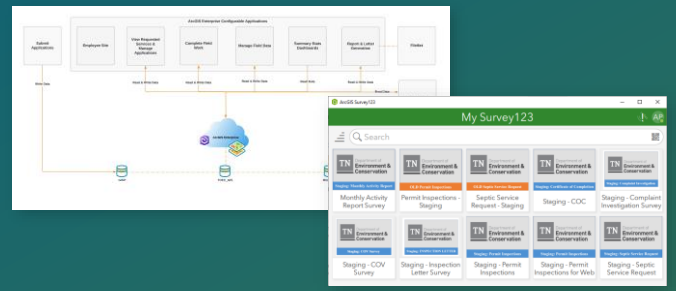
Environmental Regulation

Customer Examples

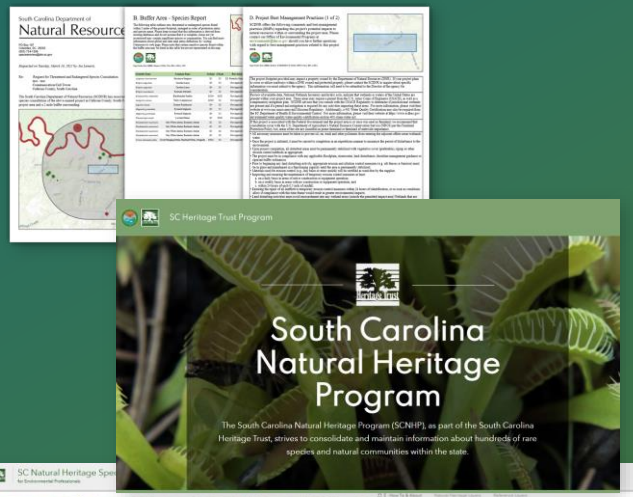
MT DNR ARPA Hub



TDEC Septic Permitting



SC DNR Enterprise Site for Environmental Review

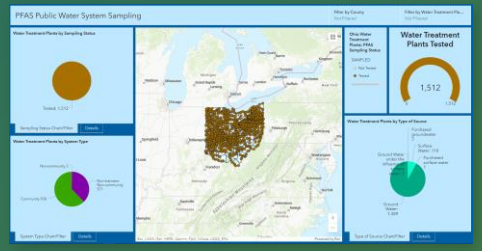


MI EGLE EV Infrastructure

MI EGLE Electric Schoolbusses

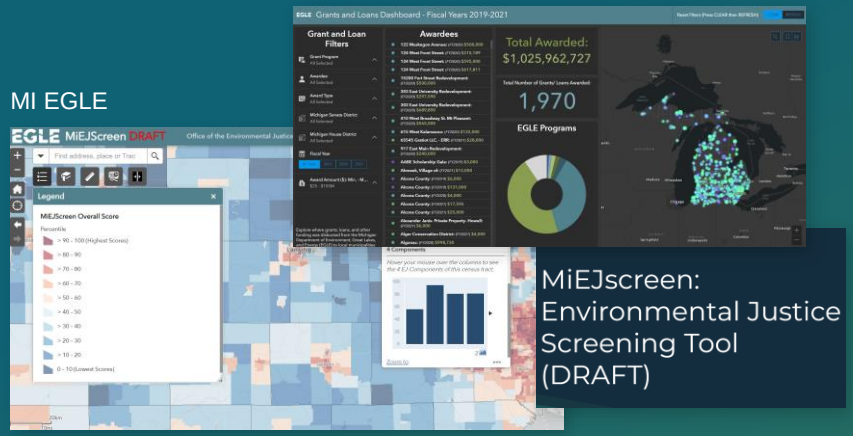
MT DEQ Abandoned Mine Lands Hub

Ohio EPA PFAS Dashboard



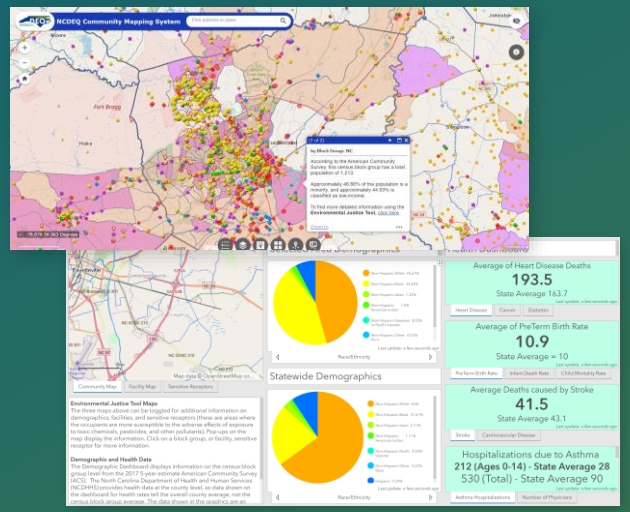
Environmental Justice

MI EGLE

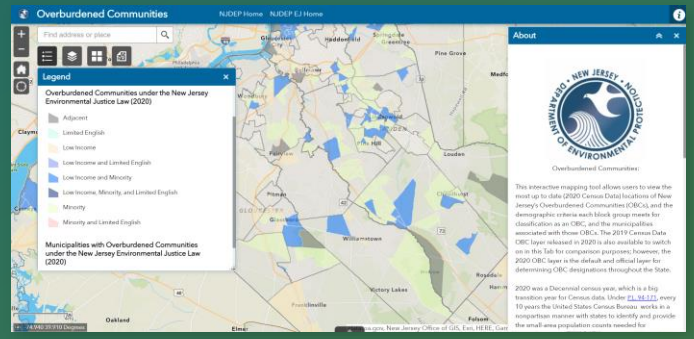


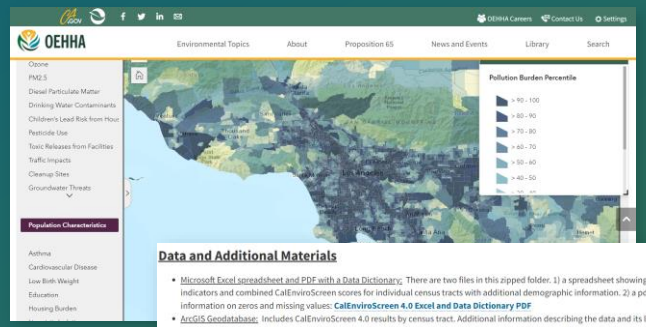
MiEJscreen: Environmental Justice Screening Tool (DRAFT)

NC DENR

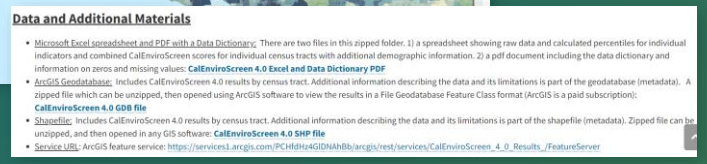


NJ DEP

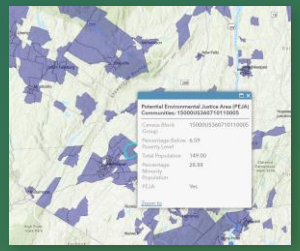




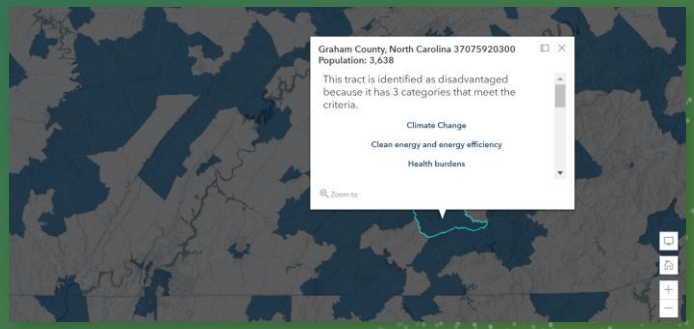
Cal EPA



NYS DEC



Esri Living Atlas – CEQ Justice 40 Nationwide Dataset

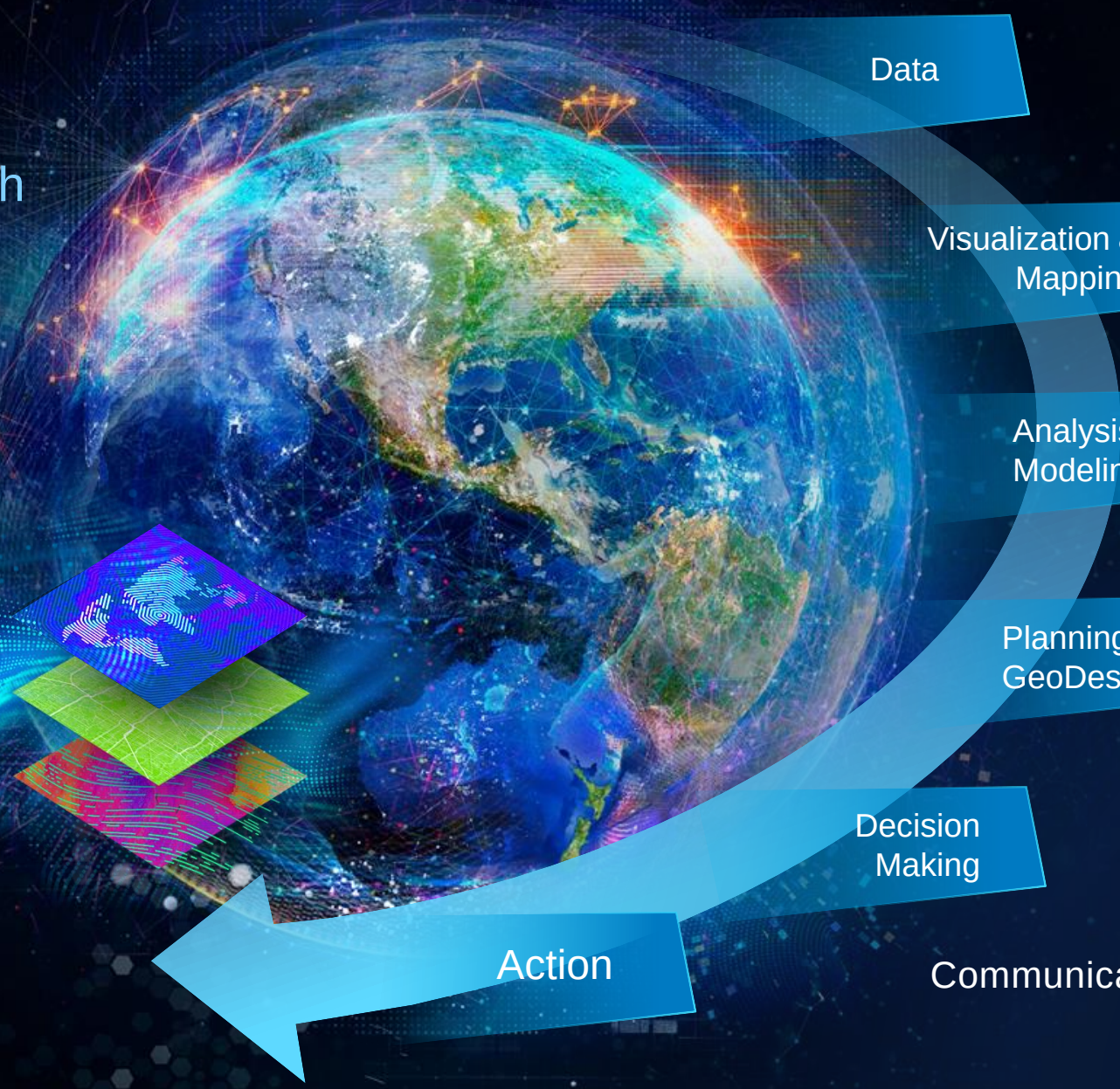


GIS

Enables The Geographic Approach

Providing a Process and Framework . . .

. . . For Applying Geographic Knowledge Widely



Making the Most of Your GIS

Leveraging Your Existing Tech Investment to its Greatest Potential

Making the Most of GIS

Establishing a Geospatial Strategy

A Geospatial Strategy is a **business-oriented** plan that defines how an organization will use GIS to achieve its goals.

An effective geospatial strategy connects your **business needs** with the right **people**, **processes** and **technology** to help you **overcome challenges** and **improve results**.

Geospatial Strategy

App Value Matrix Helps Prioritize Where to Begin

Incorporate and Operationalize

And succeed!

- GIS Integration as a Requirement for New Business Systems
- Call your GIO, GIS Manager:
  - Assess your organization's existing GIS capacity (the lone wolf problem.)
  - Help with geospatial strategy
  - Develop governance!
- Senior Executive Summit and CIO Summit

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