National Geospatial Infrastructure

A Global Partnership Perspective

Deirdre Dalpiaz Bishop
Chief, Geography Division
U.S. Census Bureau

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U.S. Legislation: Geospatial Data Act of 2018 (43 U.S.C. 46)

Defines the National Spatial Data Infrastructure in the United States as:

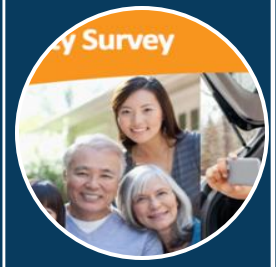
"the technology, policies, criteria, standards, and employees necessary to promote geospatial data sharing throughout the Federal, Tribal, State, and local governments, and the private sector (including nonprofit organizations and institutions of higher education)."

Requires:

1. Interagency committee to be known as the Federal Geographic Data Committee.
2. National Geospatial Advisory Committee.
3. The National Spatial Data Infrastructure shall ensure that geospatial data from multiple sources is available and easily integrated to enhance the understanding of the physical and cultural world.
4. National Geospatial Data Asset data themes serve as the primary topics and subjects for which the coordinated development, maintenance, and dissemination of geospatial data will benefit the Federal Government and the interests of the people of the United States.

Integrating Geospatial and Statistical Data

Decennial Census



American Community Survey

Economic Census

Longitudinal Employer-Household Dynamics Program and other intercensal surveys

UN-GGIM and UN-GGIM: Americas Regional Committee

High-level Group of the Integrated Geospatial Information Framework (HLG-IGIF)

Pan-American Institute of Geography and History (PAIGH)

International Organization for Standardization

Support for achievement of the Sustainable Development Goals

The Census Bureau is a Global Leader in the Integration of Geospatial and Statistical Data

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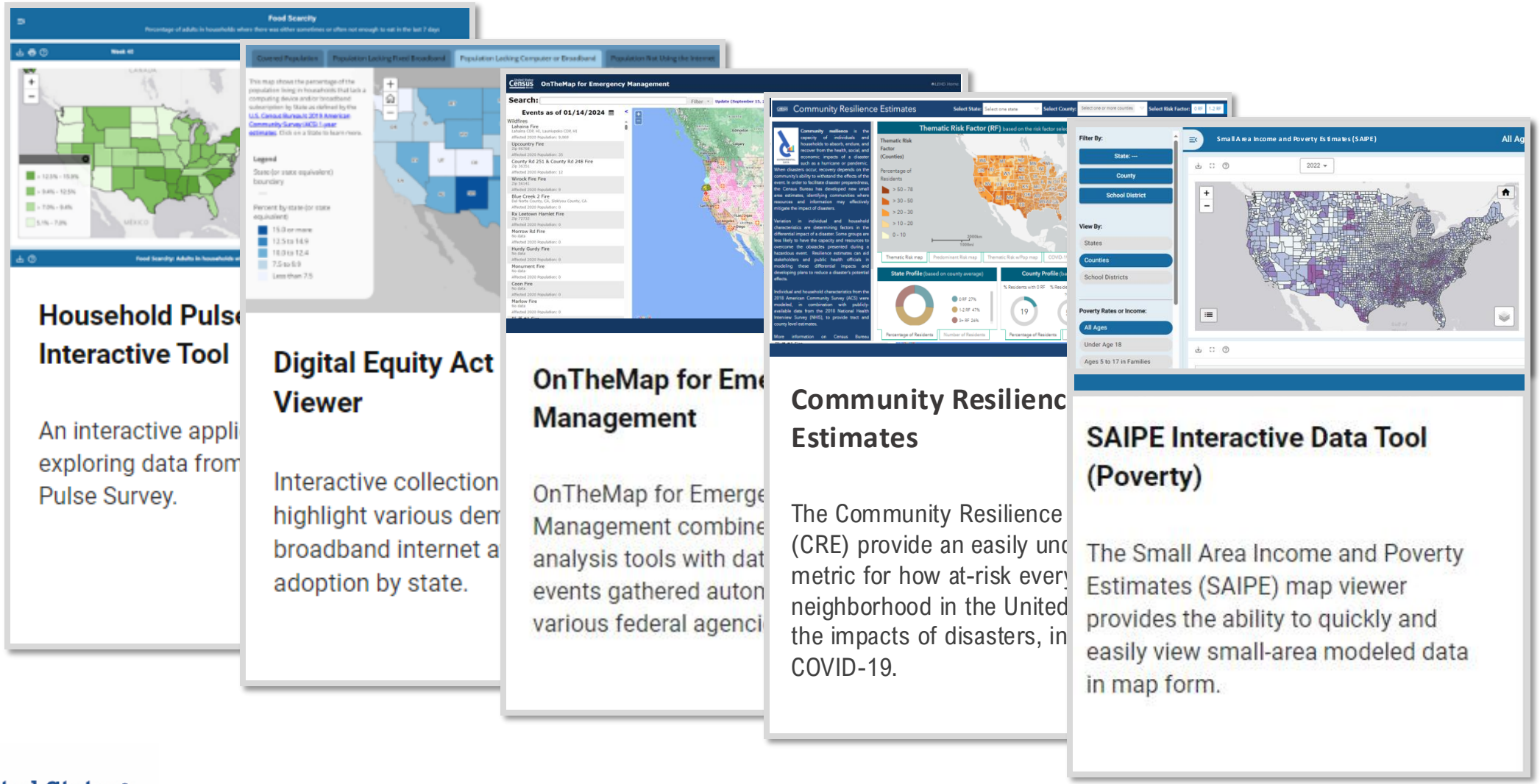
Integrating Geospatial and Statistical Data



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[Interactive Maps (census.gov)]

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What is Community Resilience?

Measuring Community Resilience

Community Resilience Estimates

Select State: Select one state

Select County:

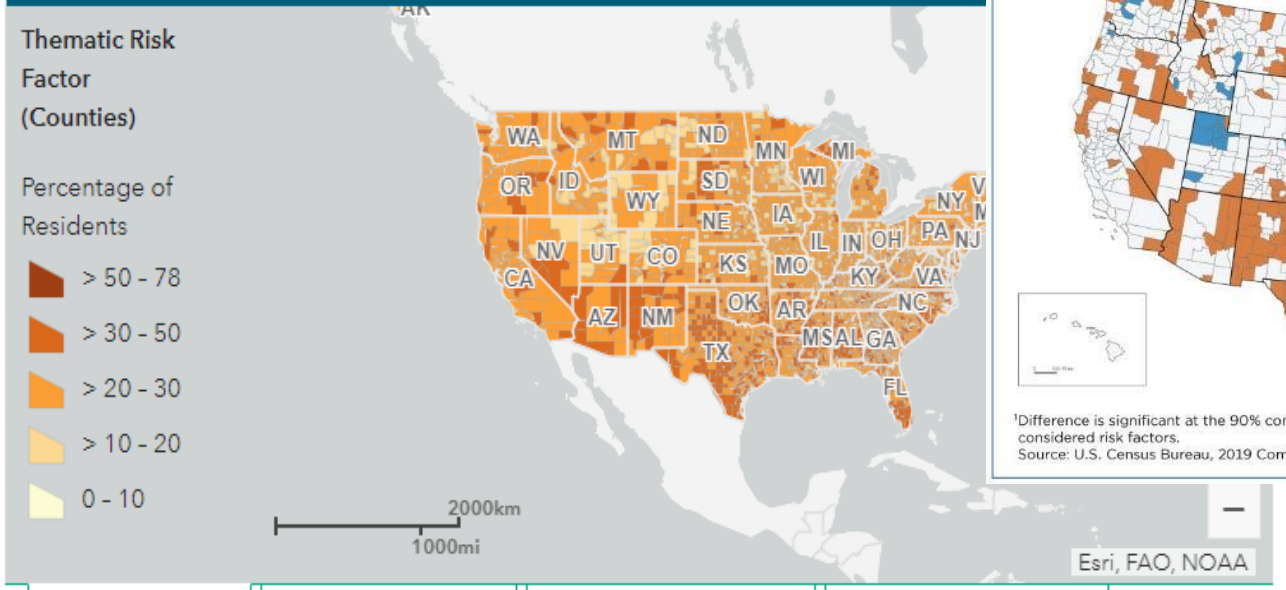
Community resilience is the capacity of individuals and households to absorb, endure, and recover from the health, social, and economic impacts of a disaster such as a hurricane or pandemic. When disasters occur, recovery depends on the community's ability to withstand the effects of the event. In order to facilitate disaster preparedness, the Census Bureau has developed new small area estimates, identifying communities where resources and information may effectively mitigate the impact of disasters.

Variation in individual and household characteristics are determining factors in the differential impact of a disaster. Some groups are less likely to have the capacity and resources to overcome the obstacles presented during a hazardous event. Resilience estimates can aid stakeholders and public health officials in modeling these differential impacts and developing plans to reduce a disaster's potential effects.

Individual and household characteristics from the 2018 American Community Survey (ACS) were modeled, in combination with publicly-available data from the 2018 National Health Interview Survey (NHIS), to provide tract and county level estimates.

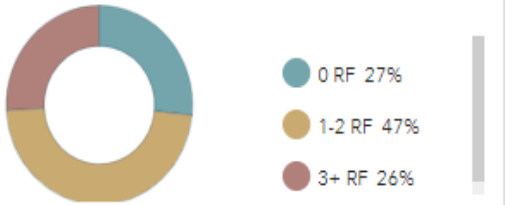
More information on Census Bureau

Thematic Risk Factor (RF) based on the risk factor selected



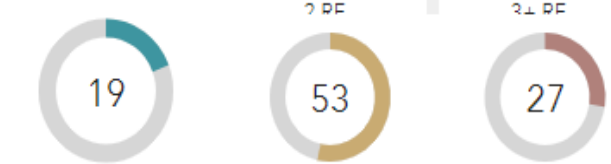
Thematic Risk map | Predominant Risk map | Thematic Risk w/Pop map | COVID-19 Impact Report

State Profile (based on county average)

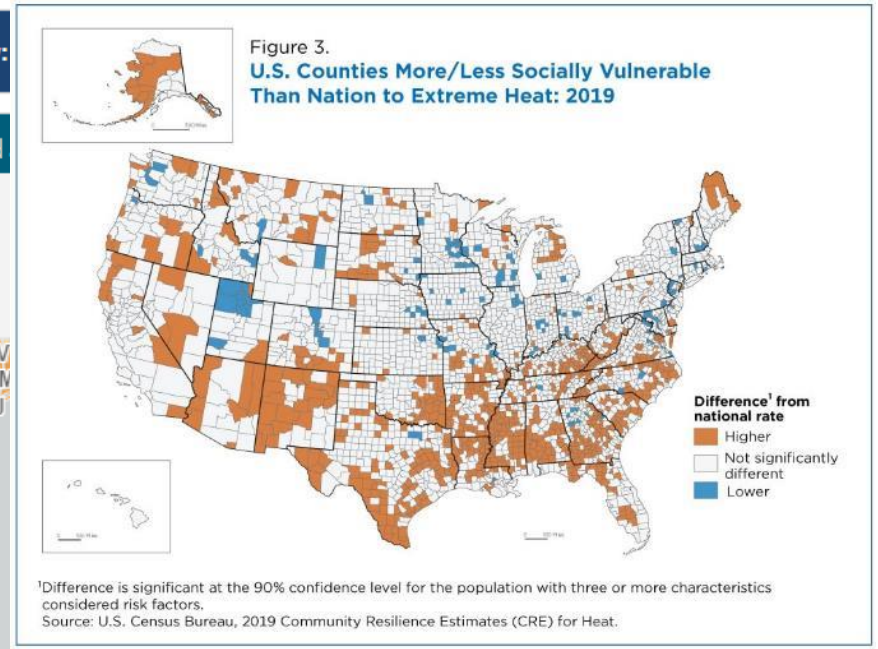


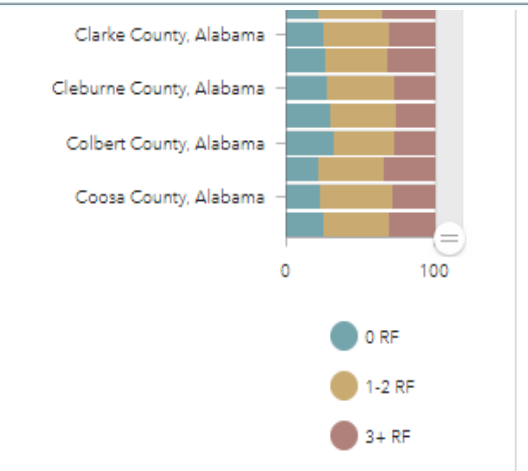
Percentage of Residents | Number of Residents

County Profile (based on tract average)



Percentage of Residents | Number of Residents





County Comparison | Tract Comparison

Francis Scott Key Bridge Collapse

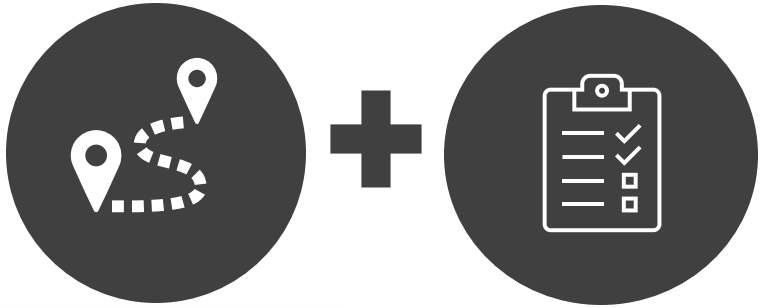
Roadmap

ROute **A**nalysis for **D**isaster **M**anagement **A**nd **P**reparedness

Part of the broader Community Resilience Estimates program, this method uses **road network data** to plot driving, walking or other **transportation routes** to assist members of the public and government partners in emergency management.

Transportation routes

Census data



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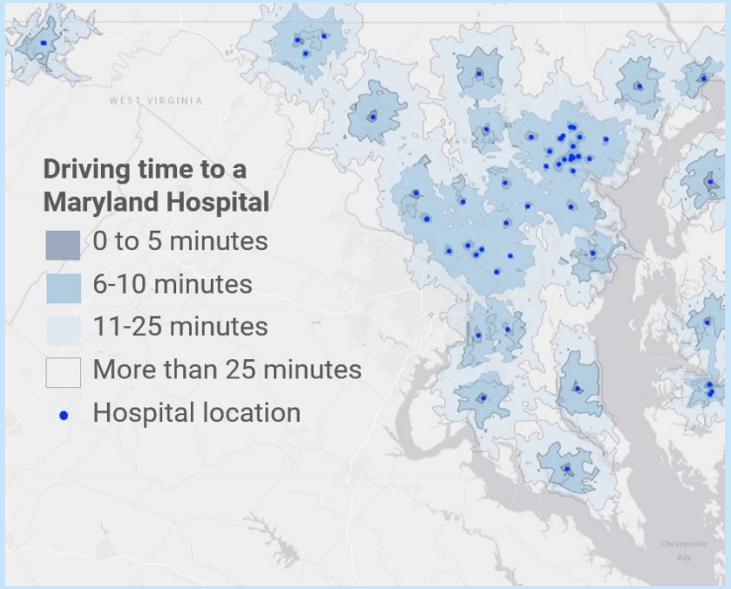
Transportation Routes

Following the collapse of the Key Bridge in Baltimore, analysts identified a subset of American Community Survey respondents who likely drove over the bridge as part of their regular commute to work. This was accomplished by **plotting the likely driving route to work for every car-commuting ACS respondent** who lived or worked in Baltimore city or County. This revealed distinct sociodemographic differences between bridge and non-bridge commuters.

Critical Infrastructure

This method can be used to identify catchment areas for critical infrastructure. In this analysis, shaded areas represents areas represent driving times to the nearest hospital in the state of Maryland. The same analysis could be applied to any set of geographic points such as shelters or community cooling centers during heat waves. For disaster route contingency planning, the underlying map data can be transformed to simulate when key road networks are altered.



U.S. NSDI Strategic Plan 2025 - 2035

Vision: A seamlessly interconnected national geospatial ecosystem.

Mission: Deliver highly responsive, timely, dependable, and interoperable geospatial data, applications, and services that provide knowledge on demand and actionable insights to inform decisions and address local, regional, national, and global challenges and benefit citizens.

Goals	Objectives		
Governance: Implement National Governance	**1.1 Governance and Institutions:**	**1.2 Policy and Legal:**	**1.3 Financial:**
Data and Technology: Modernize the Infrastructure and Leverage Advanced Technology	**2.1 Data:**	**2.2 Innovation:**	**2.3 Standards:** **2.4 Infrastructure**
People: Building a Skilled and Inclusive Geospatial Workforce for a Sustainable Future.	**3.1. Partnerships:**	**3.2 Capacity and Education:**	**3.3 Communication and Engagement:**

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Alignment with the United Nations Integrated Geospatial Information Framework (UN-IGIF)

UN-IGIF

U.S. NSDI

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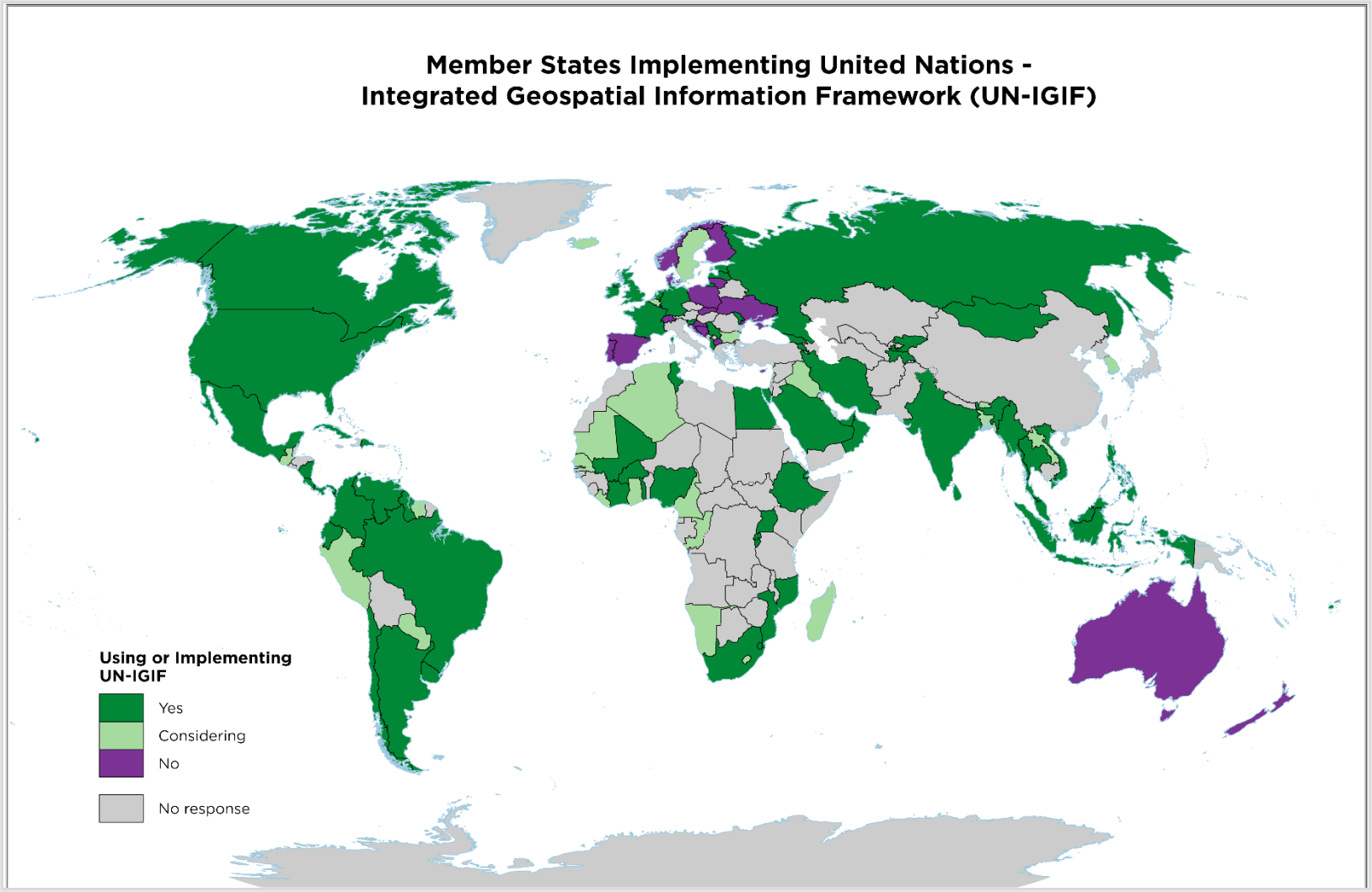
Use and Implementation of the UN-IGIF



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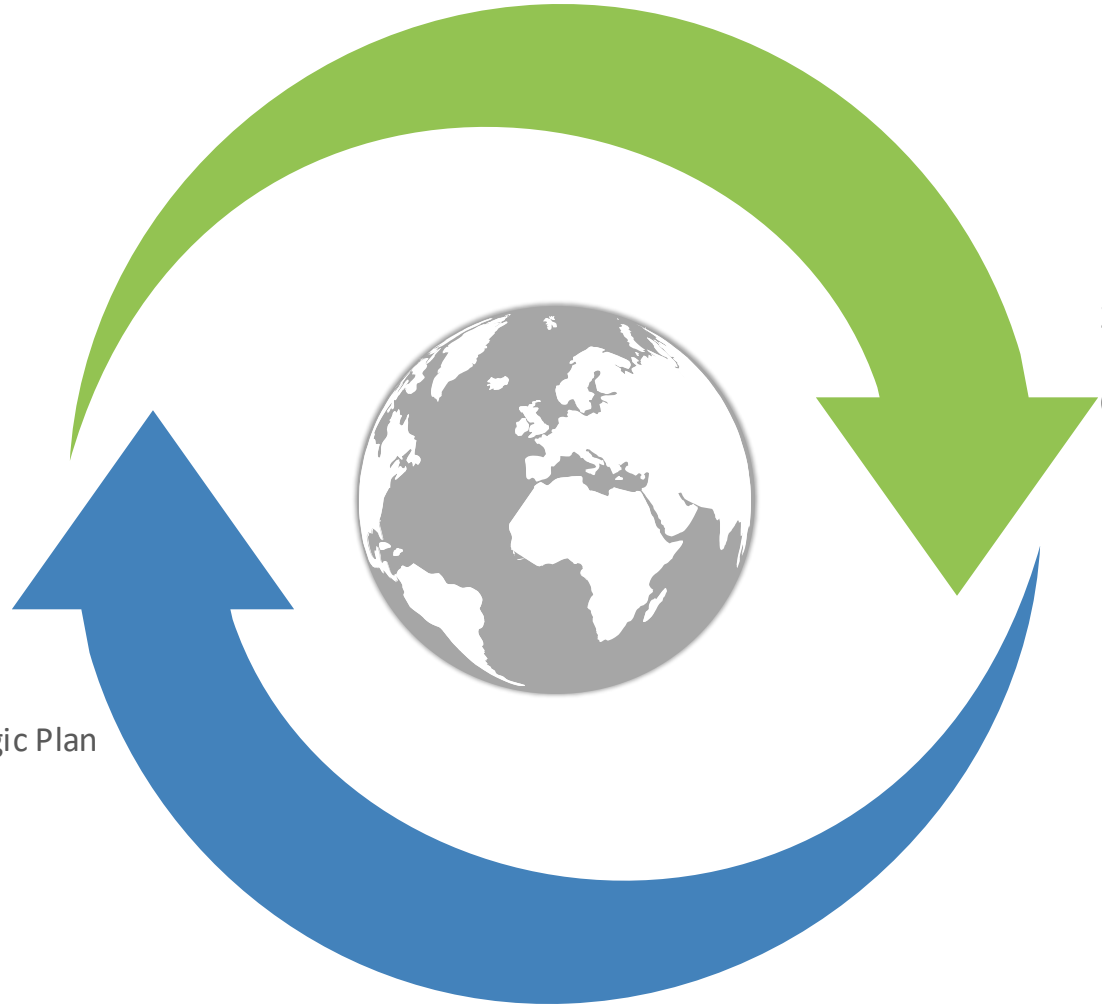
Advancing the NSDI and UN-IGIF through Global Collaboration

International Collaboration

United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM)
High-level Group of the Integrated Geospatial Information Framework (HLG-IGIF)
2030 Agenda for Sustainable Development – SDGs
International Standards Organization (ISO)
Open Geospatial Consortium (OGC)



National Collaboration

Federal Geographic Data Committee
National Geospatial Data Assets
National Spatial Data Infrastructure Strategic Plan
Commerce Geospatial Working Group
National issues and concerns

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Thank You

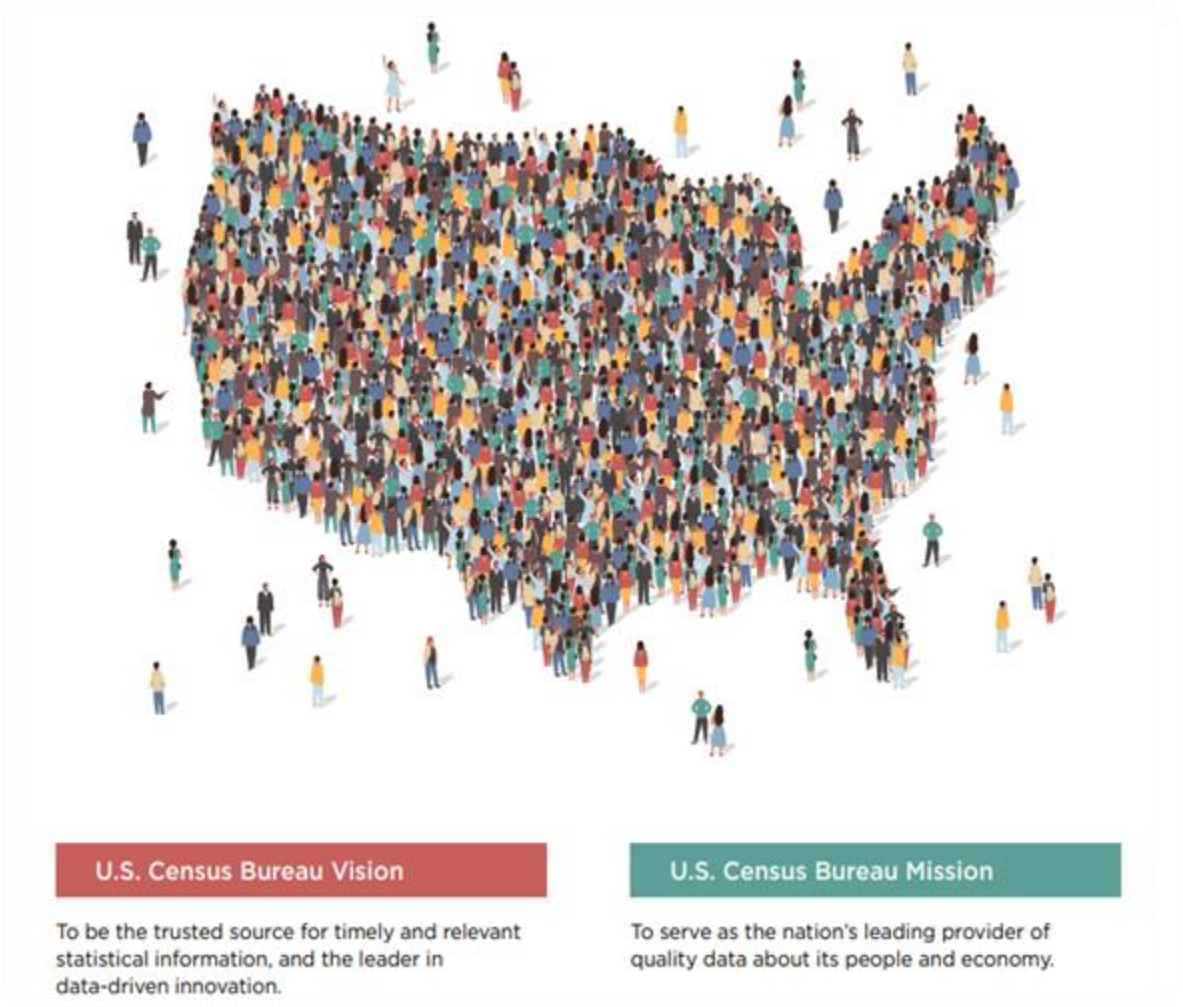
Deirdre Dalpiaz Bishop

Chief, Geography Division

U.S. Census Bureau

U.S. Department of Commerce
U.S. Census Bureau
4600 Silver Hill Rd.
Suitland, Maryland 20746

Office: 301-763-1696
deirdre.dalpiaz.bishop@census.gov



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