

National Information Infrastructures for Sustainable, Resilient Nations

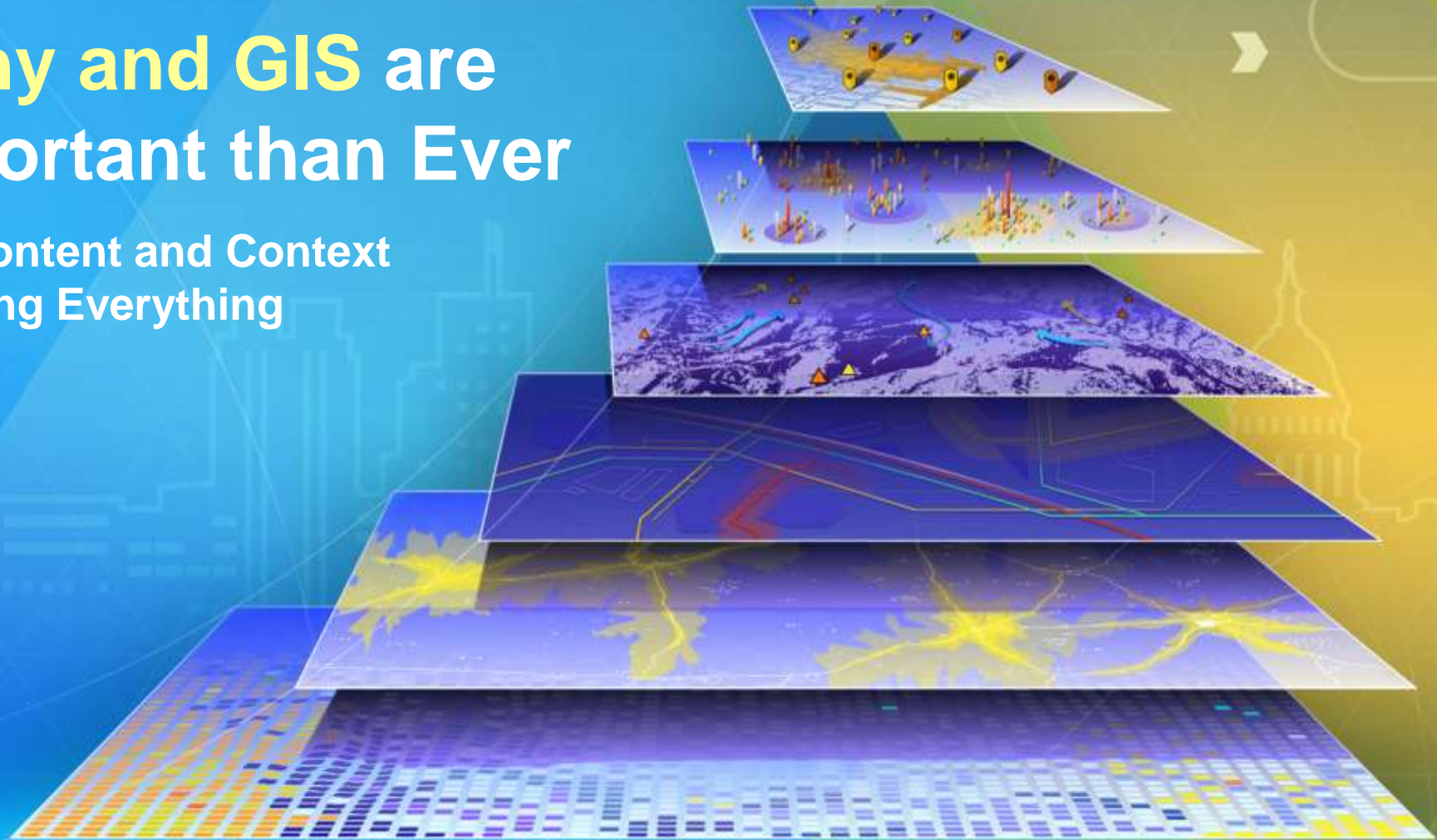


Carmelle Terborgh, Ph.D., Esri

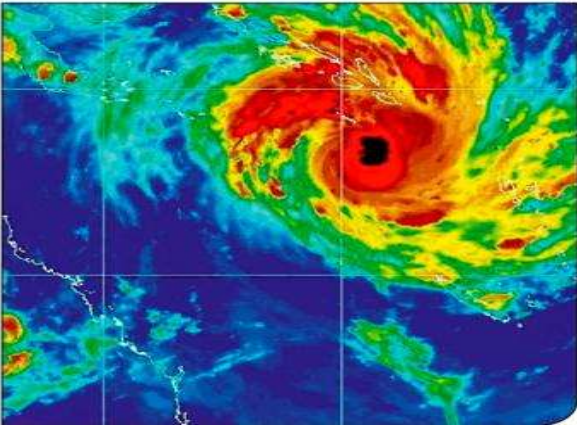


Geography and GIS are More Important than Ever

Providing the Content and Context
for Understanding Everything



How can you measure and monitor sustainable development...



...without geography, place and location?



UN-GGIM

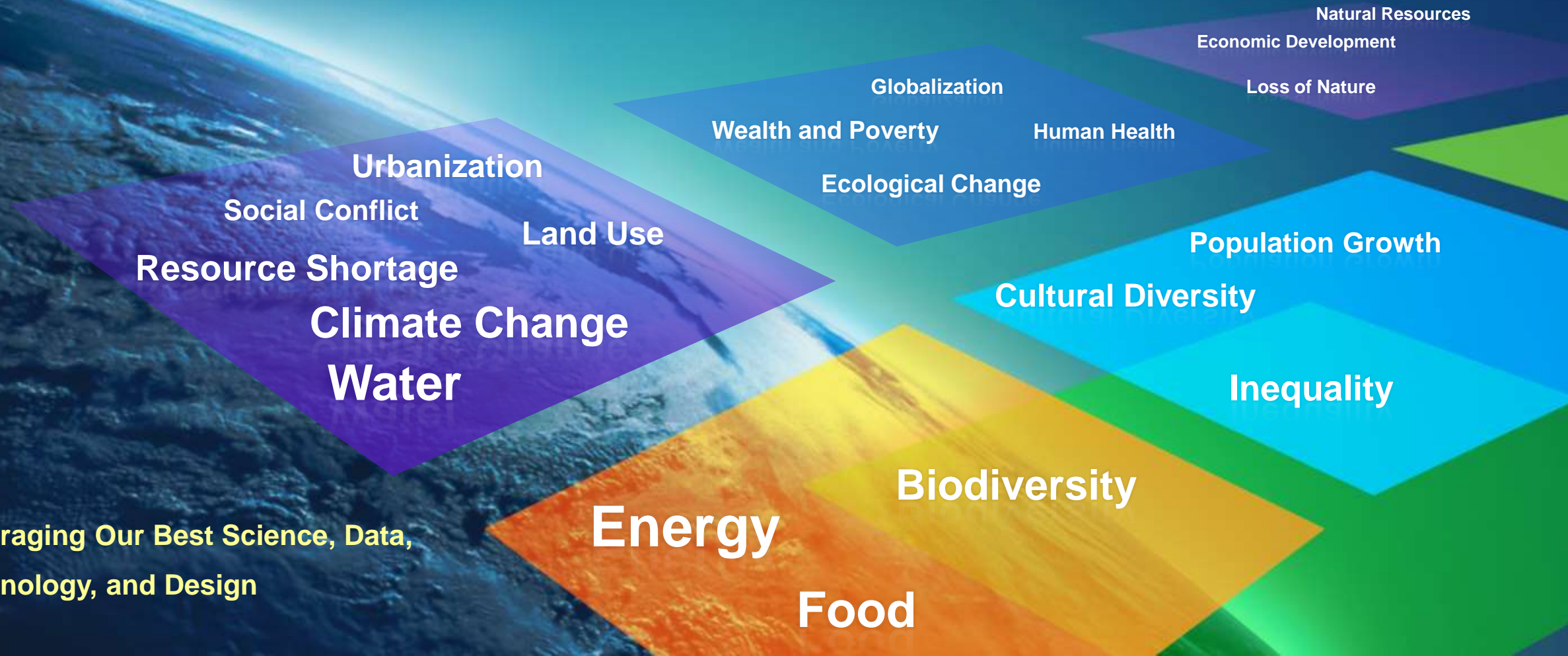
United Nations Committee of Experts on
Global Geospatial Information Management

Positioning geospatial information to address global challenges

ggim.un.org

Our World is Facing Serious Challenges

Collectively We Need to Create a Better Future



Leveraging Our Best Science, Data,
Technology, and Design

We have a choice...



World Bank 
@WorldBank

We as humanity have a choice to
take responsibility for global
challenges. Blog: wrld.bg/nipmj

5:10am · 25 Jul 13 · HootSuite

Our World has Significant Benefits

Collectively We Will Create a Better Future



Leveraging Our Best Science, Data,
Technology, and Design

The SDGs

Building Sustainable, Resilient Nations

Goal 1: Poverty Eradication

Goal 2: Food Security and Nutrition

Goal 3: Health and Well-being

Goal 4: Education

Goal 5: Gender Equality and Women's Empowerment

Goal 6: Water and Sanitation

Goal 7: Modern Energy

Goal 8: Employment and Economic Growth

Goal 9: Industrialisation and Infrastructure

Goal 10: Equality Among Countries

Goal 11: Sustainable Cities and Settlements

Goal 12: Sustainable Consumption and Production

Goal 13: Climate Change

Goal 14: Marine Resources, Oceans, and Seas

Goal 15: Ecosystems and Biodiversity

Goal 16: Peaceful and Inclusive Societies and Capable Institutions

Goal 17: Means of Implementation

Goal 11: Sustainable Cities and Settlements

Make cities and human settlements inclusive, safe, resilient and sustainable

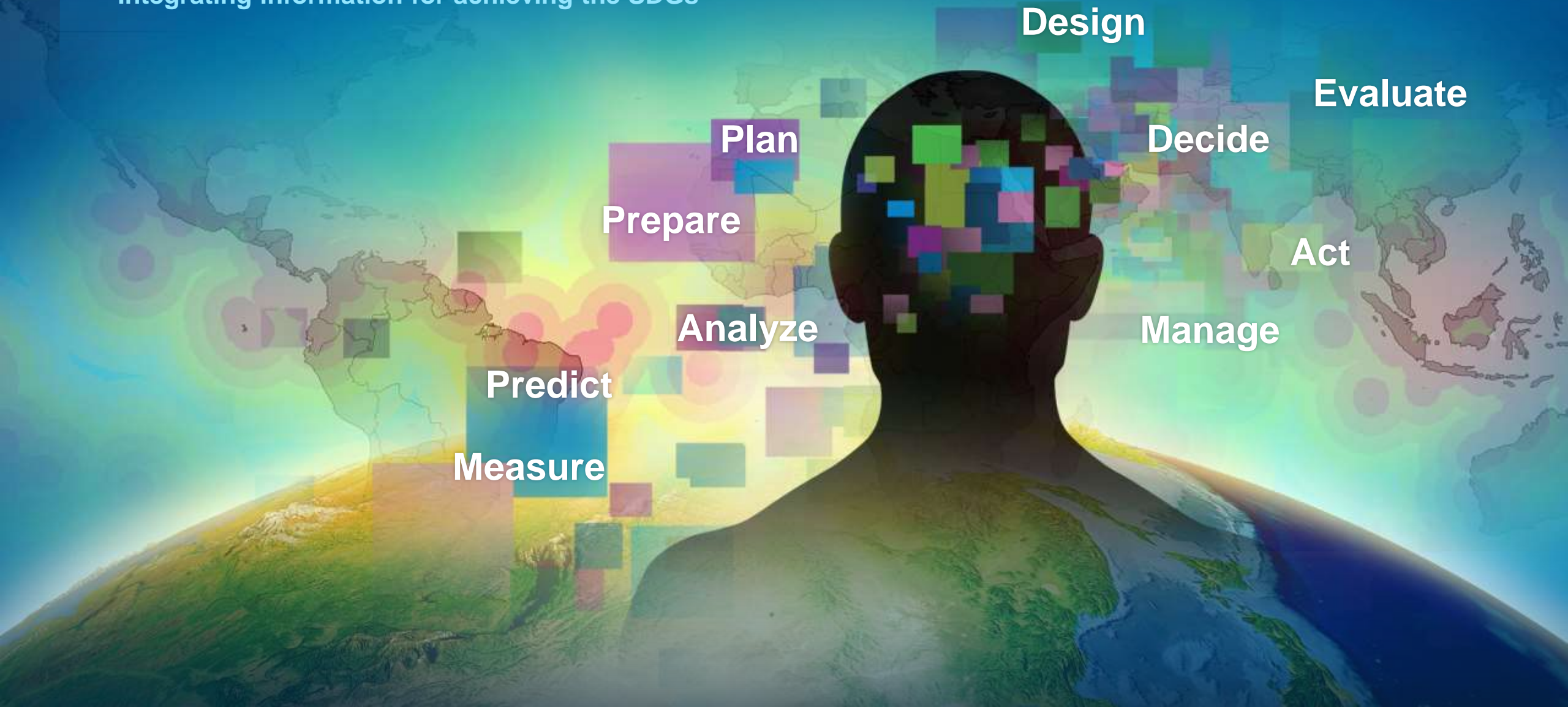


Required data:

- Population
- Demographics
- Transportation Infrastructure
- Disaster Risk
- Ecosystem Services
- Social Infrastructure
- Crime Statistics
- Labor Statistics
- Housing
- Waste Management
- Water Quality
- ...

GIS - a Platform for Action

Integrating information for achieving the SDGs



GIS

Monitoring and Predicting

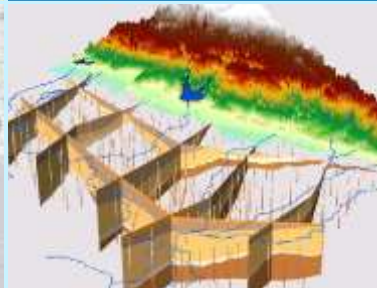
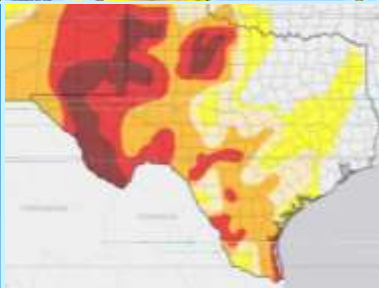
Climate Change



Flooding



Sea-level Rise



Groundwater

Soil Moisture



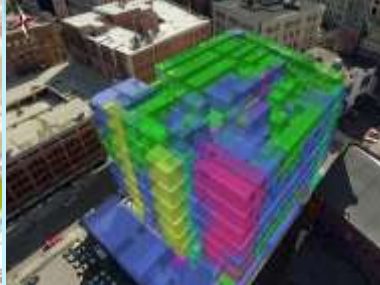
Economic Impacts



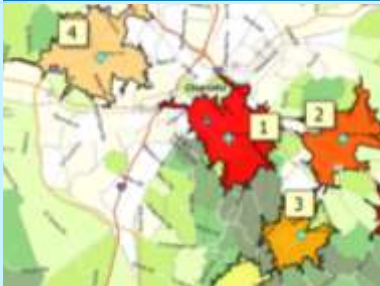
GIS

Planning and Designing

Urban Design



Green Building



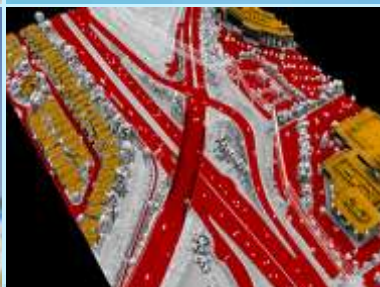
Healthy Food
Accessibility



Mitigating
Risk



Solar
Potential



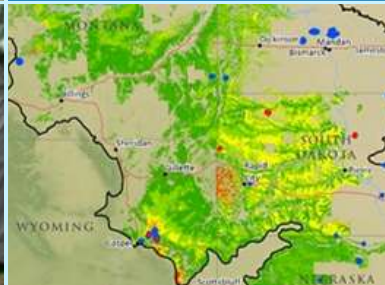
GIS

Managing and Taking Action

Transportation



Disaster Response



Natural Resources



Renewable Energy

GIS

Collaborating and Communicating



**Public
Transportation**



Heat Impact



Volunteerism



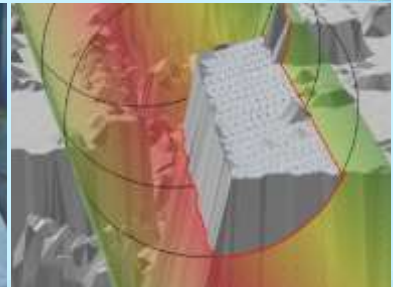
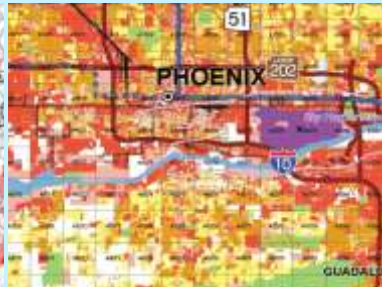
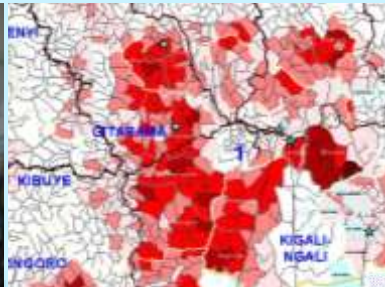
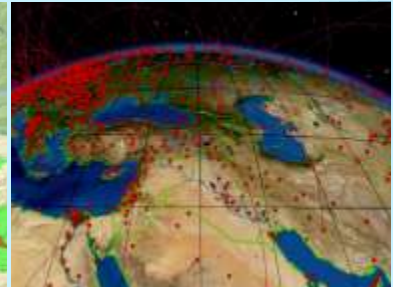
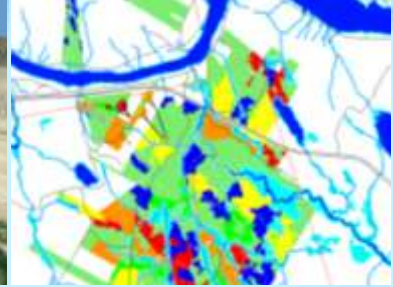
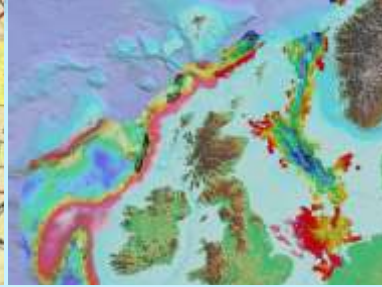
**Reporting
Status**



**Social
Networks**

GIS

Delivering Results



Improving Efficiency, Communication and Decision Making

National Information Infrastructure | Requirements



Quick



Efficient



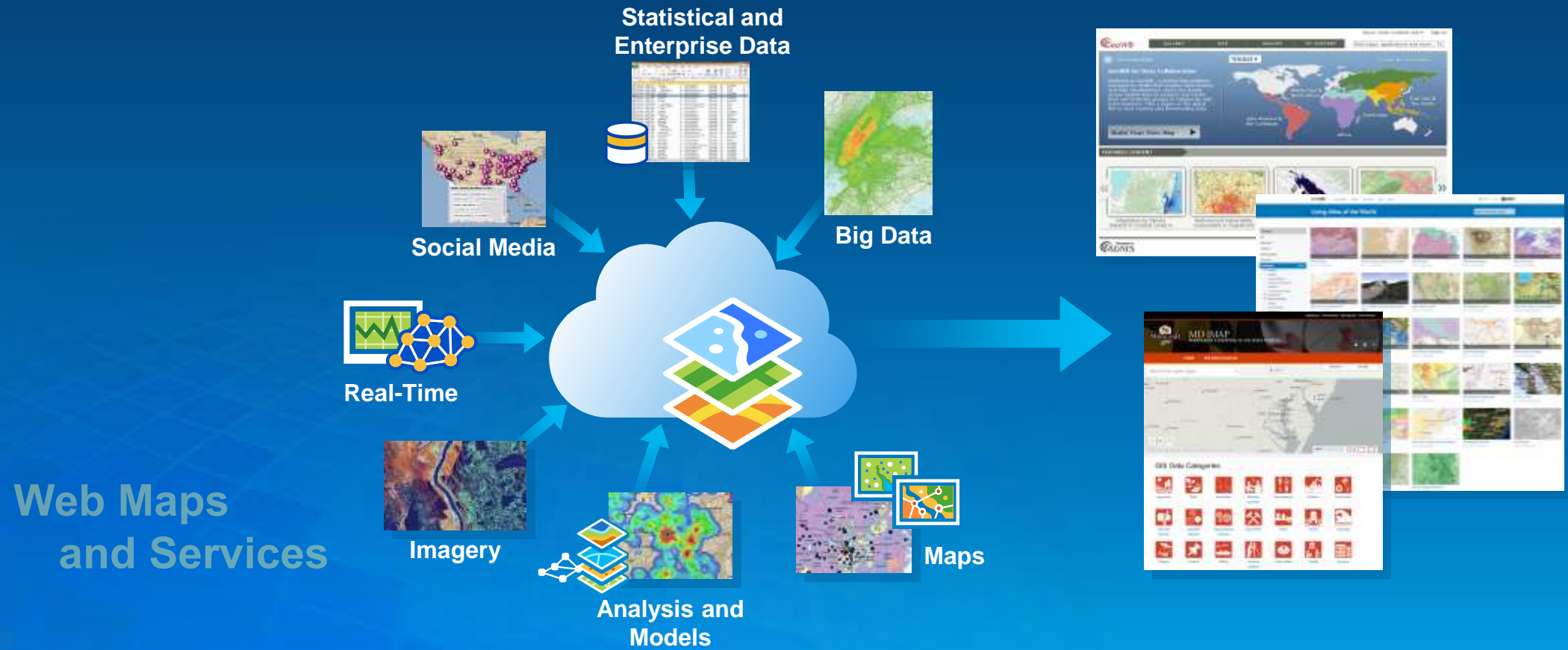
Economical

National Information Infrastructure | Platform Vision



Web GIS integrates All Types of Information

Organizing and Sharing Your Work



MyCOE Home | Read Help | Connect to MyCOE Community | See Other Youth Projects

1 Ask a Question | 2 Ask for an Observe | 3 Analyze | 4 Develop your own Solution | 5 Share It!

Resource Center | Show: All Content | Help | Sign In

HOME | GALLERY | MAP | GROUPS

My Community, our world
MyCOE
 geographic learning for sustainable development

MyCOE Featured Maps

GeoWB | GALLERY | MAP | GROUPS | MY CONTENT | Show: Web Content Only | Sign In

Find maps, applications and more...

THE WORLD BANK
 GeoWB for Data Collaboration

Global | Europe & Central Asia | Middle East & North Africa | East Asia & The Pacific | Latin America & the Caribbean | South Asia | Africa

Monitoring of Water Quality in the Lake Tazovsk Basin | Assessing Vulnerability in the Metropolitan Area of Rio de Janeiro

SDGIS Home | GeoWB Help | Contact Us

USAID FROM THE AMERICAN PEOPLE | OFFICE OF SCIENCE & TECHNOLOGY
GEOCENTER

GeoCenter: Featured Content

Map Gallery: Typhoon Haiyan (Yolanda) | USAID: Where We Work Interactive Map | Foreign Assistance Dashboard | Harvest Choice

The United States has a long history of extending a helping hand to people overseas struggling to make a better life. It is a tradition that both reflects the American people's compassion and support of human dignity as well as advances U.S. foreign policy.

In order to support these goals, President John F. Kennedy created the United States Agency for International Development executive order in 1961. Learn more about USAID and where we work.

In November 2011, USAID launched a new GeoCenter to establish in-house geospatial expertise for the Agency. With a full-time staff dedicated to applying geospatial tools and data for development, the GeoCenter helps USAID professionals work better understanding geographic relationships between people in developing countries and their environments, and then analyze the spatial impact created by USAID project activities. With this improved analytical ability, the GeoCenter augments the Agency's capacity to plan, monitor, evaluate, and communicate USAID's development programs. Ultimately, the overarching objective of the GeoC is to lead to more efficient and effective development investments.

CGIAR-CSI
 Constitute for Spatial Information

HOME | GALLERY | MAP | GROUPS | MY CONTENT | Find maps, applications and more... | Sign In

CGIAR-CSI - Latest Maps, Apps, and Tools

Irrigation and Farming Systems | Benin, Ghana, and Côte D'ivoire | SRTM 90m Digital Elevation Database v4.1 | CCAP's Damascus GCM Data Portal

The CGIAR is a global partnership dedicated to reducing poverty and hunger, improving human health and nutrition, and enhancing ecosystem resilience through advanced agricultural research. The Consortium for Spatial Information (CGIAR-CSI) consistently promotes and practices the application of spatial science to achieving these goals most effectively.

FEMA | FEMA.gov

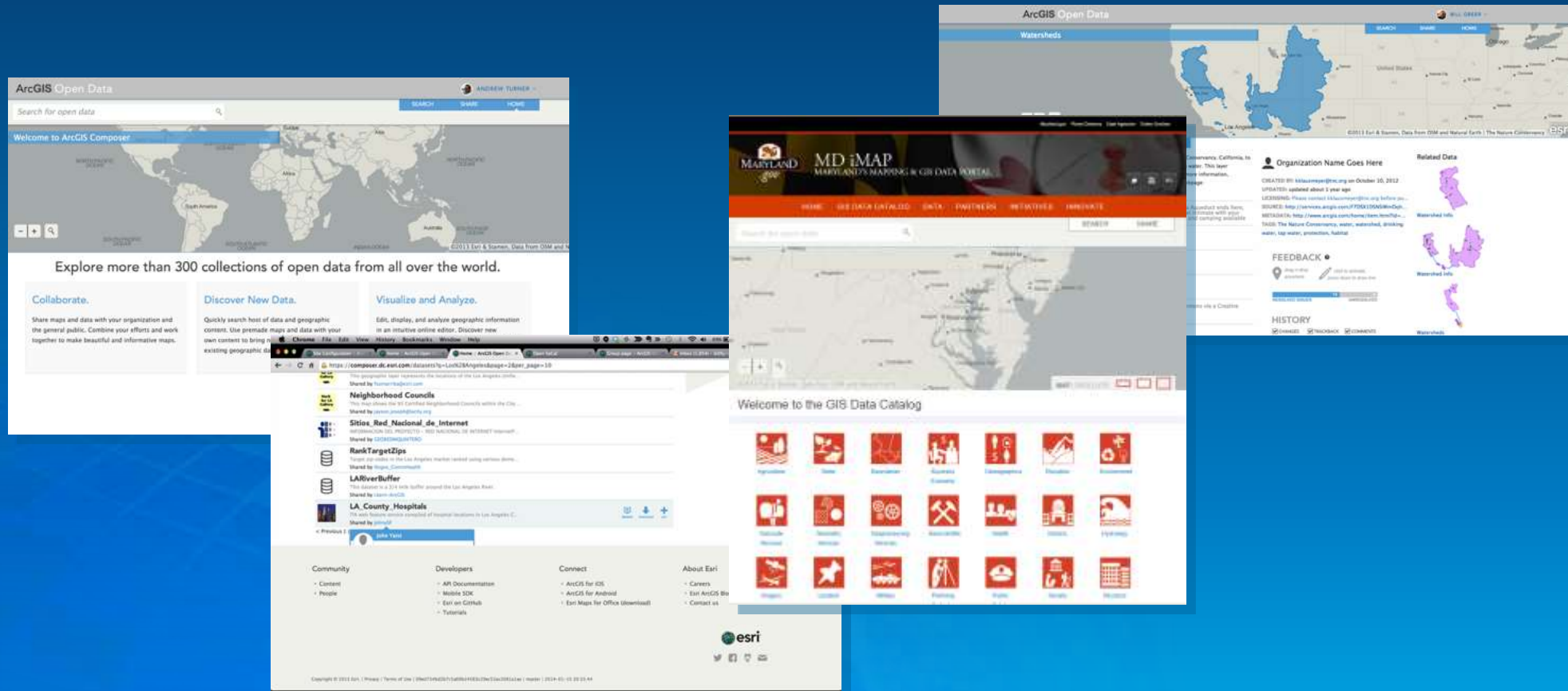
FEMA GeoPlatform
 Providing geospatial data and analytics in support of emergency management

Water Storms | Hurricanes | Earthquakes | Floods

FEMA is a partner of the FGDC's National Geospatial Platform. Visit: www.geoplatform.gov

Portals of Open Data

Easy Dissemination of Geospatial and Tabular Data



Providing Multi-format Delivery

App Revolution

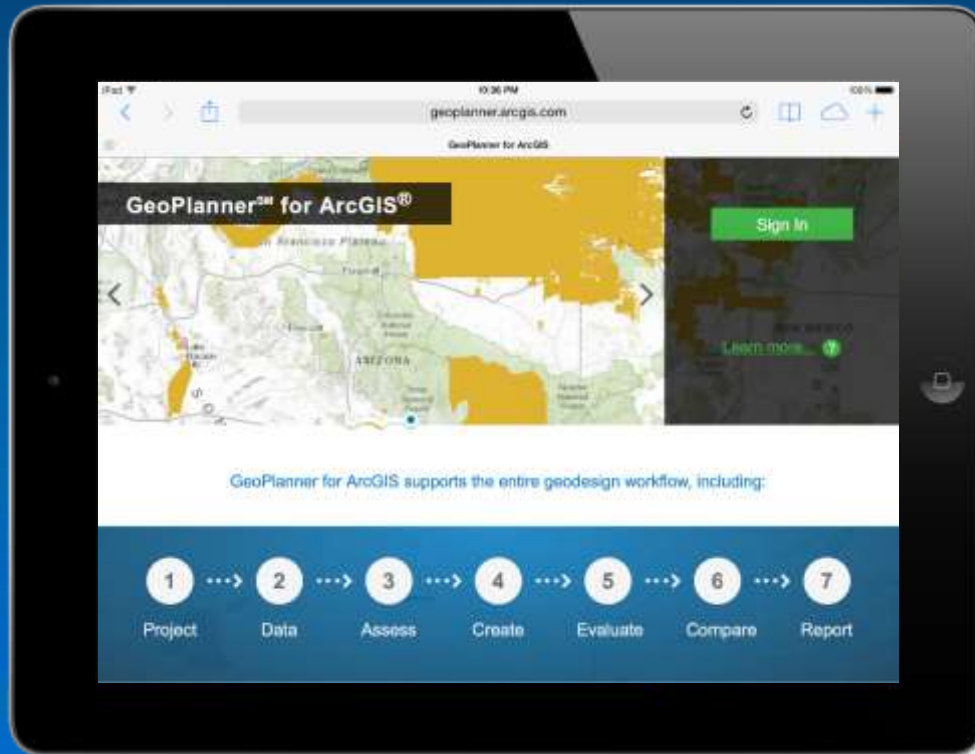
Pervasive access to WebGIS from any device



Apps for a Purpose

Dashboards for Monitoring Progress

Browser-based



Touch-enabled



Online Content

Ready-to-Use
Web Maps and Layers

Earth Observation

Lifestyles

Landscape

Transportation

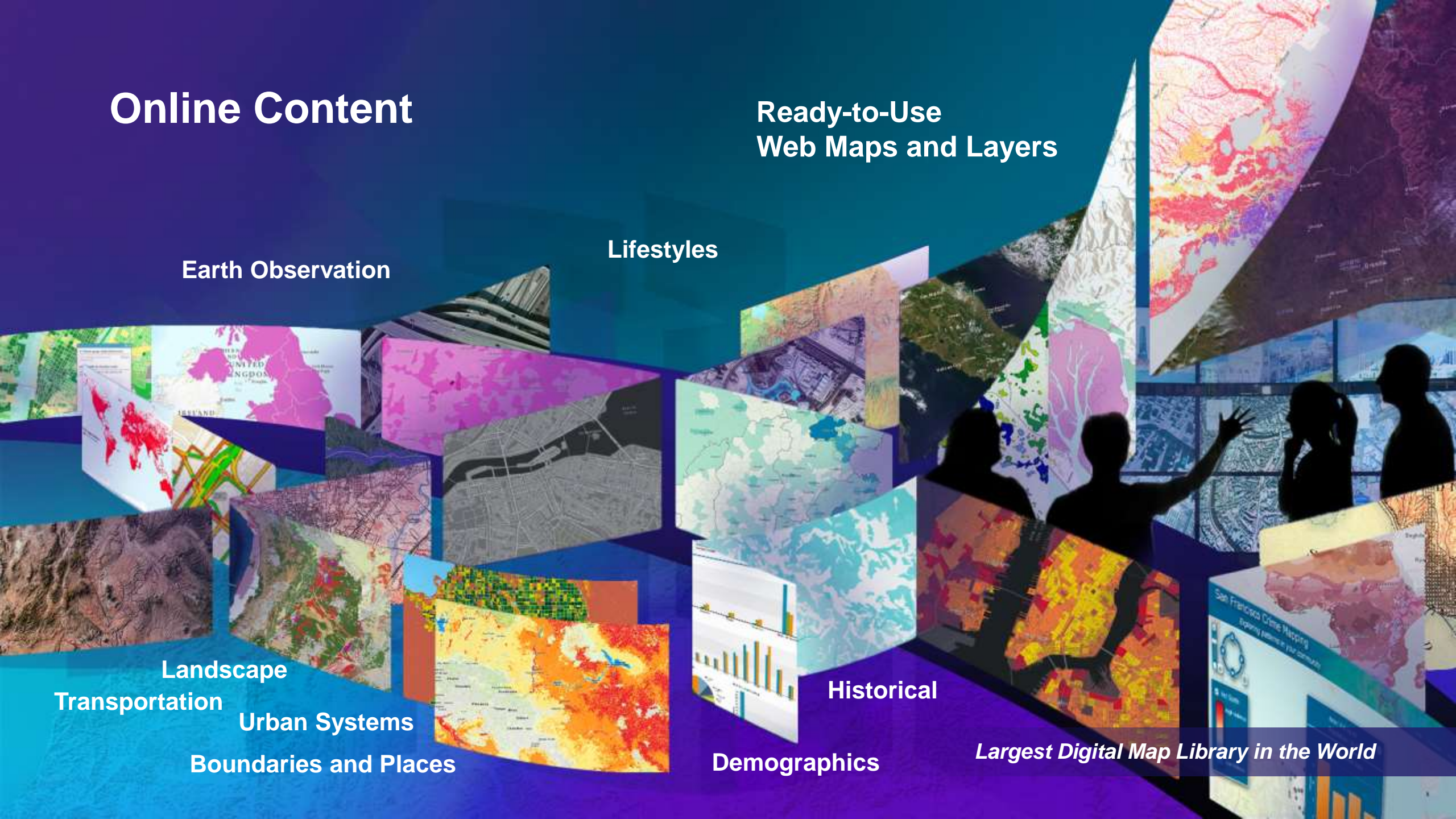
Urban Systems

Boundaries and Places

Historical

Demographics

Largest Digital Map Library in the World





















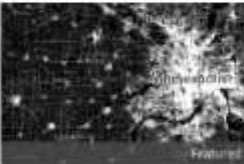





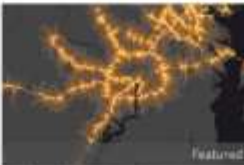

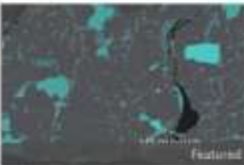


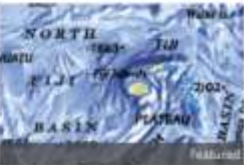
Living Atlas

ArcGIS | FEATURES | PLANS | GALLERY | MAP | HELP | Sign In | esri

Living Atlas of the World

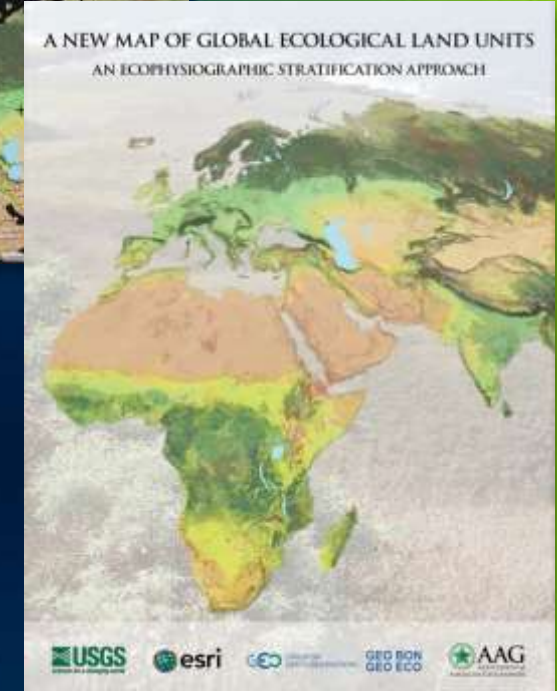
Search Living Atlas Gallery

- Themes
- All
- Basemaps
- Imagery
- Demographics
- Lifestyles
- Landscape
- Earth Observations
- Urban Systems
- Transportation
- Boundaries and Places
- Historical Maps
- Story Maps

 <p>2 ft Sea Level Rise: Inundation Map Around the World</p> <p>By esri_Landscape</p>	 <p>Severe Weather Web Map</p> <p>By esri_Disaster</p>	 <p>US Wildfire Activity Web Map</p> <p>By esri_Disaster</p>	 <p>Johannesburg, South Africa 3D City Base</p> <p>By esri_Landscape</p>	 <p>USA Flood Map</p> <p>By esri_Landscape</p>	 <p>Africa Climate</p> <p>By esri_Landscape</p>	 <p>USA Soil Erosion Hazard Forest Roads</p> <p>By esri_Landscape</p>	
 <p>USA Wetlands</p> <p>By esri_Landscape</p>	 <p>USA Woody Biomass</p> <p>By esri_Landscape</p>	 <p>Landsat Shaded Basemap</p> <p>By esri_Imagery</p>	 <p>USA Forest Type</p> <p>By esri_Landscape</p>	 <p>USA Insect and Disease Risk</p> <p>By esri_Landscape</p>	 <p>USA Land Cover 2011</p> <p>By esri_Landscape</p>	 <p>USA Wilderness Areas</p> <p>By esri_Landscape</p>	
 <p>USA Croplands</p> <p>By esri_Landscape</p>	 <p>South America Bioclimates</p> <p>By esri_Landscape</p>	 <p>USA Polluted Waters</p> <p>By esri_Landscape</p>	 <p>Africa Surface Lithology</p> <p>By esri_Landscape</p>	 <p>USA Road Density</p> <p>By esri_Landscape</p>	 <p>USA All Federal Lands</p> <p>By esri_Landscape</p>	 <p>USA Fire Potential</p> <p>By esri_Landscape</p>	 <p>USA Hazardous Waste Sites</p> <p>By esri_Landscape</p>
 <p>USA Permitted Point Source Water Pollution</p> <p>By esri_Landscape</p>	 <p>Housing with Mortgages</p> <p>By AtlasPublisher</p>	 <p>Highway Access in North America</p> <p>By AtlasPublisher</p>	 <p>Europe Classic Map</p> <p>By NationalGeographic</p>	 <p>Hamburg Open Space</p> <p>By AtlasPublisher</p>	 <p>Highway Access in Middle East and Africa</p> <p>By AtlasPublisher</p>	 <p>Predominant Occupations</p> <p>By AtlasPublisher</p>	 <p>Pacific Ocean Floor Map</p> <p>By NationalGeographic</p>

Global Ecological Land Units

by Roger Sayre, PhD / U.S. Geological Survey



National Information Infrastructure | Components



Applications



Content



Portal



Cloud Resources

How Will Your Data Impact Their Lives?



Source: World Resources Institute



Source: Robert Ford

Thank You!

