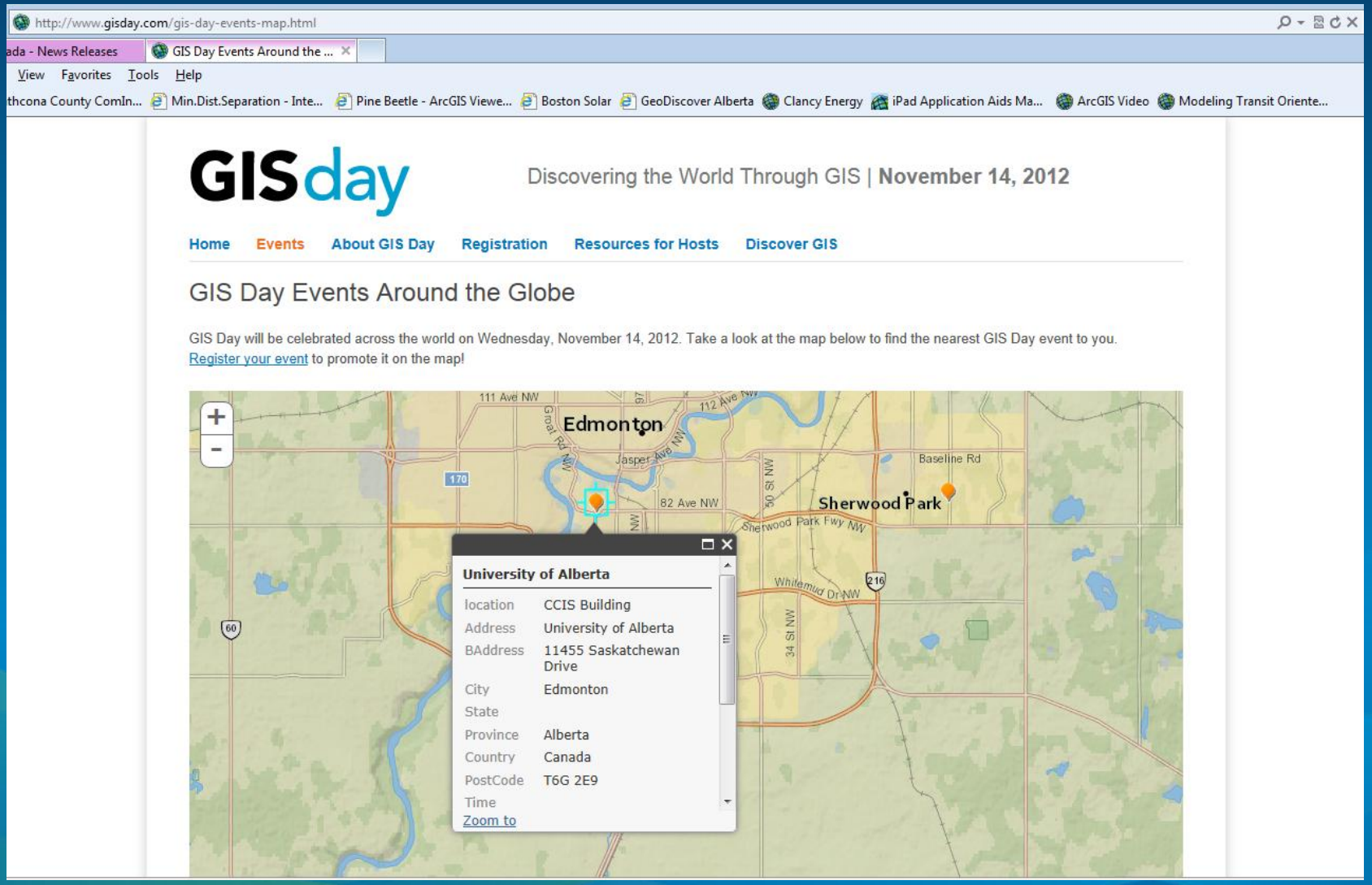
Welcome to

GIS day 2012

David Parry

esri Canada

University of Alberta



Join esri Canada and

Celebrate 50 years of GIS !

Esri supports geography in education everyday

Supporting Geoliteracy during Geography Awareness Week, November 12-16th

DISCOVERING THE WORLD THROUGH GIS

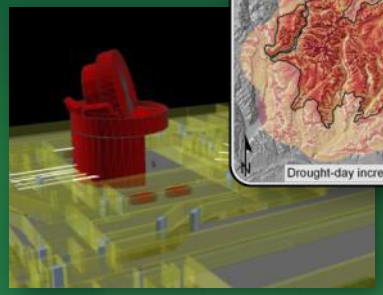
GISday

Monitoring Environmental Change

Threatened Species

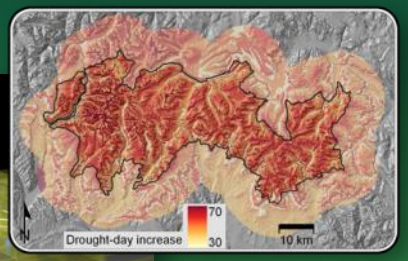
IUCN Red List Mapper

Radiation



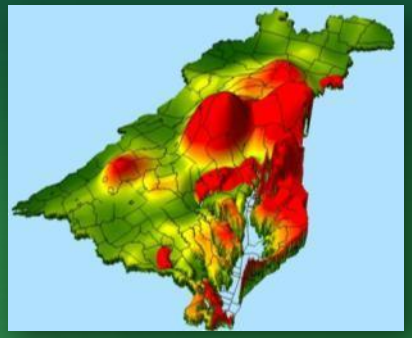
Chernobyl, Russia

Drought



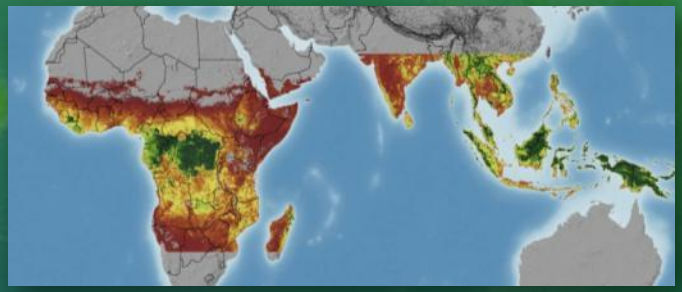
Colorado

Nutrient Pollution



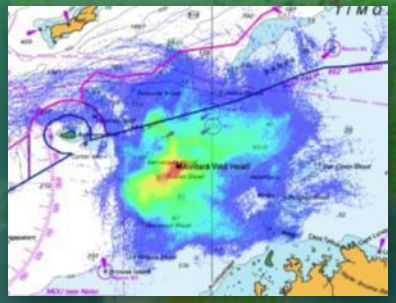
Chesapeake Bay

Biomass



Woods Hole Research Center

Oil Spill

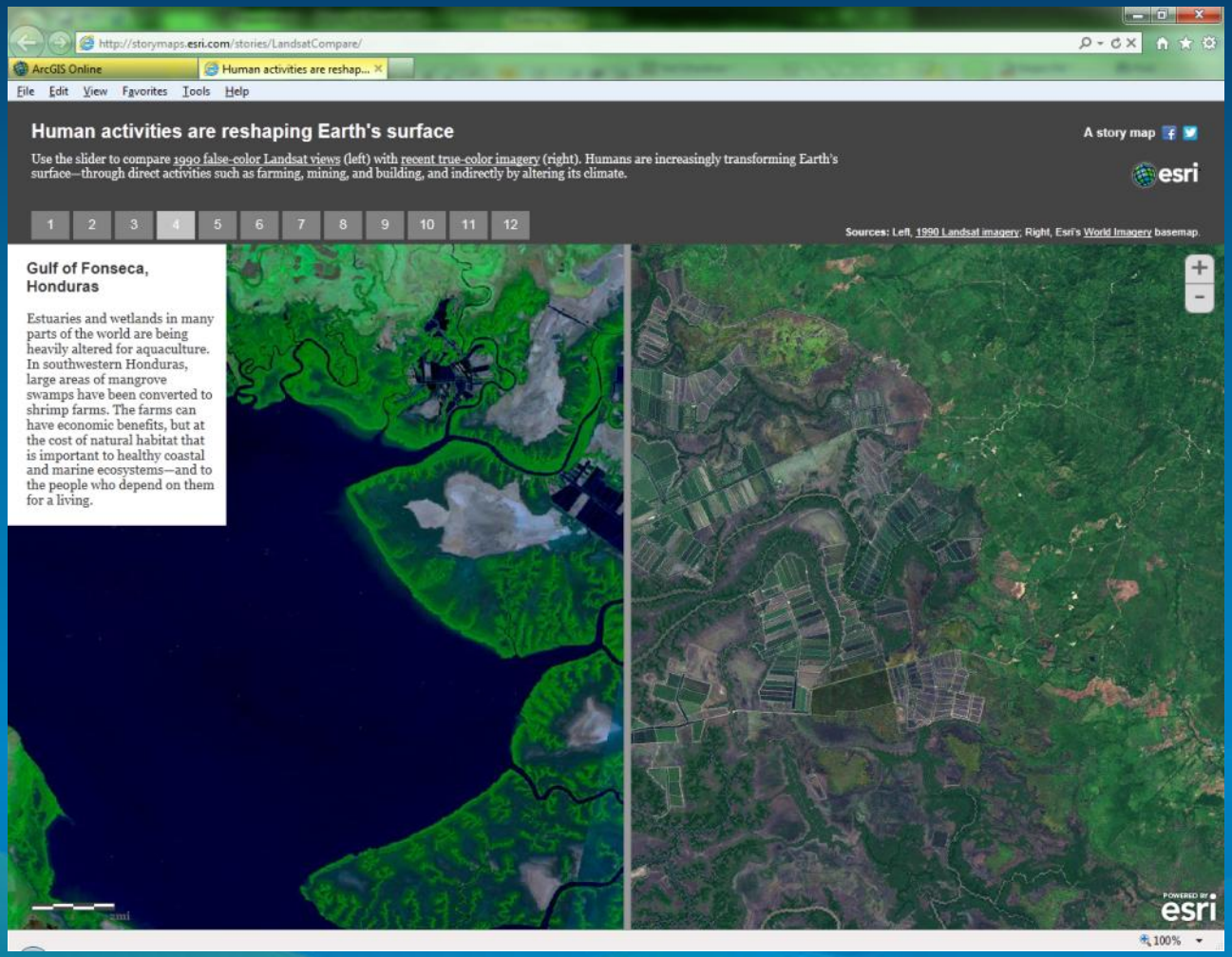


Timor Sea

Noise Assessment

Stuttgart, Germany

Change Detection / Remote Sensing



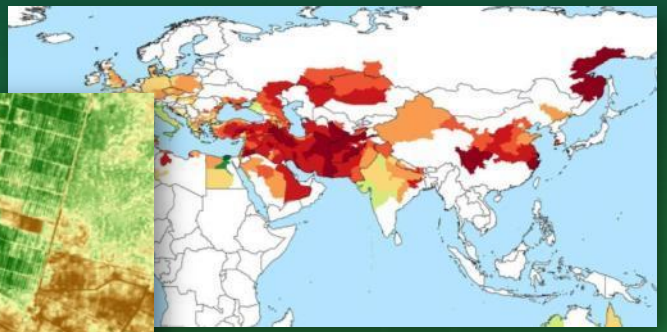
http://storymaps.esri.com/stories/LandsatCompare/ #3, #8

Managing Natural Resources

Oil and Gas Pipelines

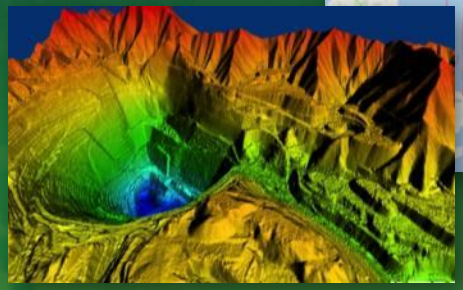
North Sea

Water Productivity for Agriculture



eLEAF

Open Pit Mining



Bingham Canyon, Utah

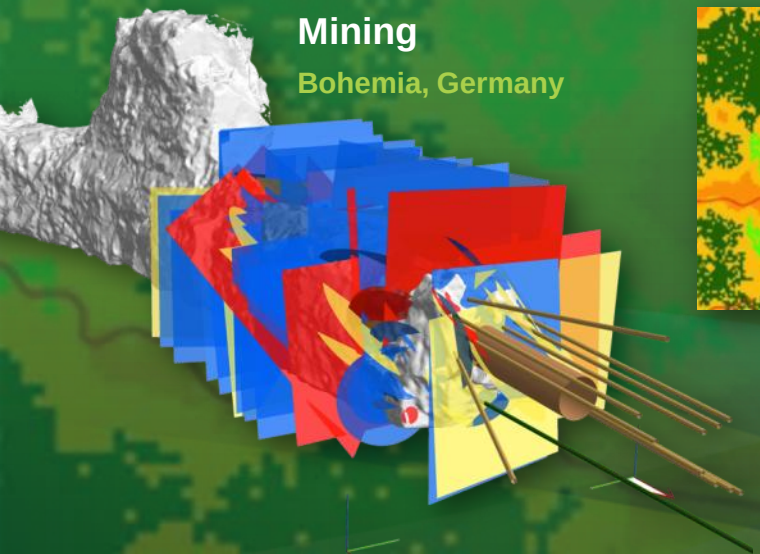
Segou, Mali

Tiger Habitat Conservation

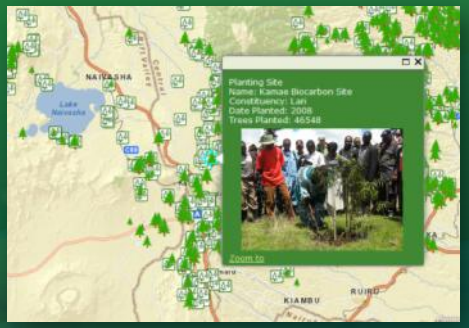
World Wildlife Fund, India

Mining

Bohemia, Germany



Reforestation

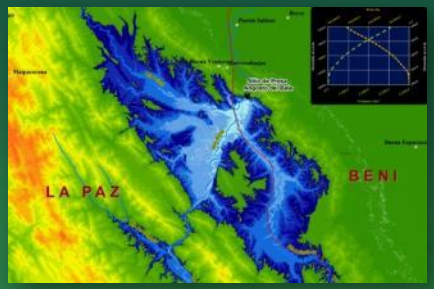


Green Belt Movement, Kenya

Developing Renewable Energy

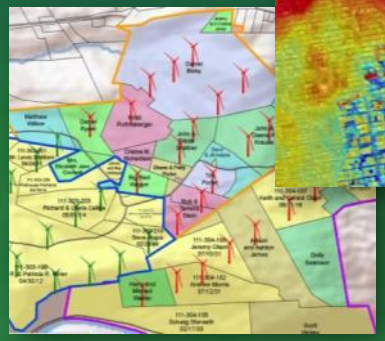
http://gis.cityofboston.gov/SolarBoston/#

Hydropower



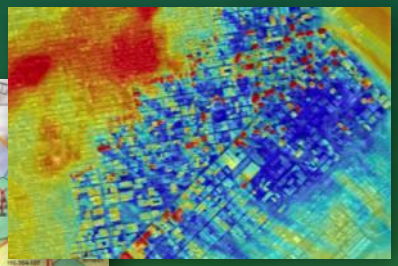
Bolivia

Wind Farm



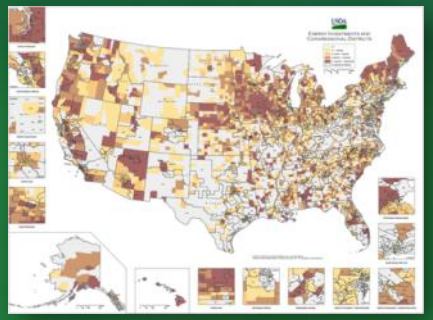
Pennsylvania

Wind Potential



San Francisco, California

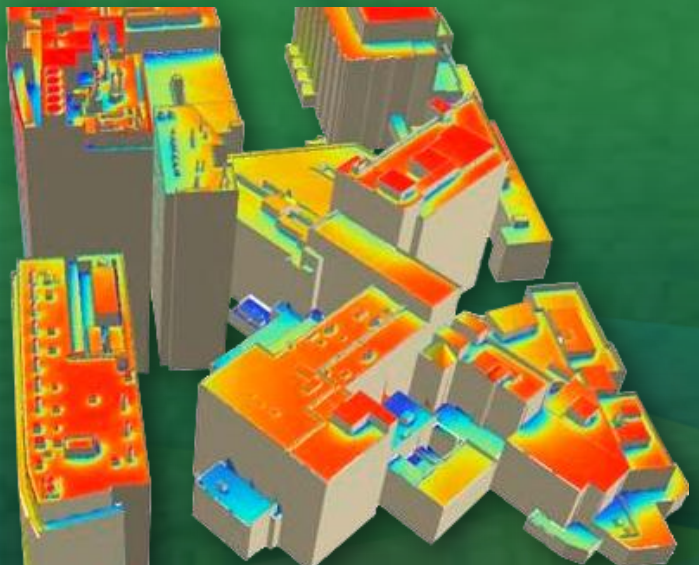
Energy Investment



USDA

Solar Potential

Harvard University



Tidal Energy

Southeast Massachusetts

Planning for the Future

Land Use/Zoning

Tyrol, Austria

Urban Design

Rochester, New York

Space Planning

South Carolina

Subway Planning

Vaughan, Oregon

Trails and Open Space

Rocky Mount, N. Carolina

School Districts

Hawaii

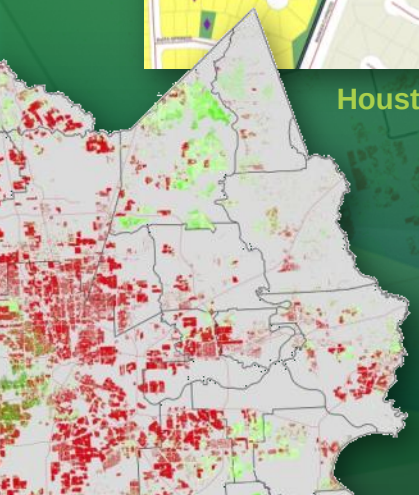
Streetscapes

Calgary, Canada

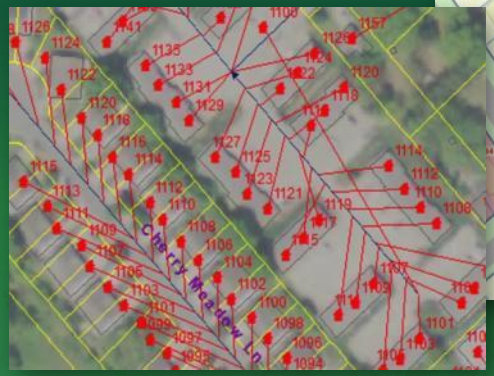
Managing Land Information

Property Value Change

Houston, Texas



Address Management

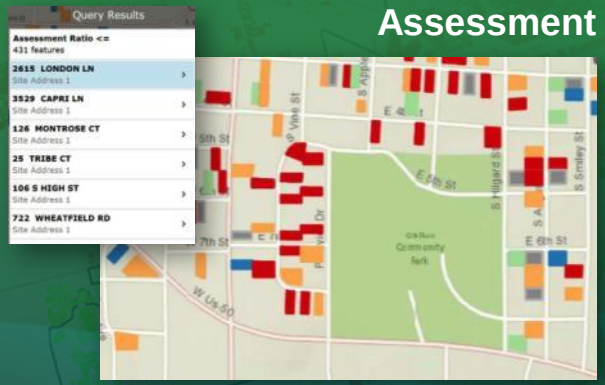


Rock Hill, South Carolina

Parcel Management

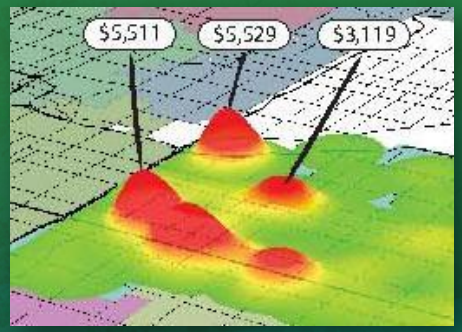
Kitchener, Canada

Assessment



O'Fallon, Illinois

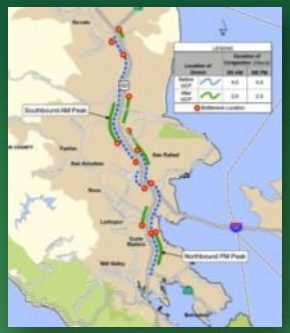
Changes in Tax Revenue



Mesa, Arizona

Managing Transportation

Traffic Congestion



California

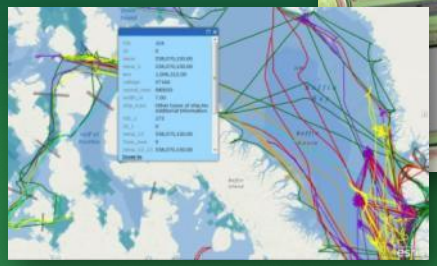
Walking School Bus

Knoxville, Tennessee

Airport Management

LAX

Ship Monitoring



Baffin Bay

Transit Rider Density

Northeastern Illinois

Bus Transit App

Yakima, Washington

Bus Routes

Israel

Rideshare

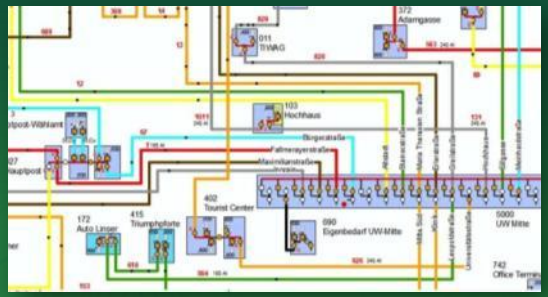
Los Angeles

Managing Utilities and Telecommunications

Sewer Overflows

Temple, Texas

Power Station Schematic



Germany

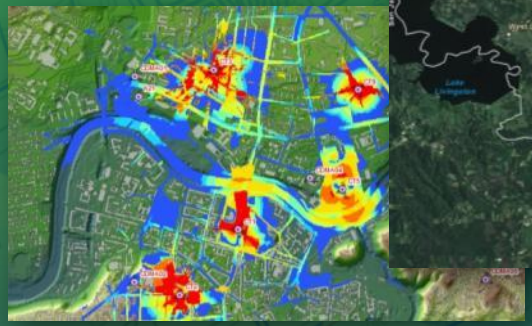
Energy Use

New York City, New York

Pipeline Planning

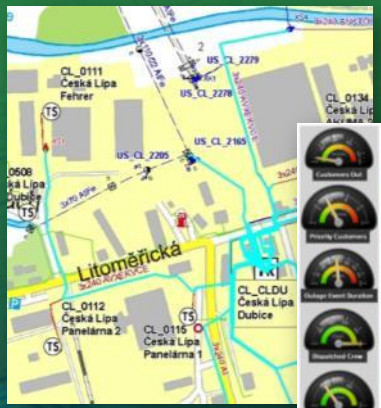
Texas

Cellular Network Planning



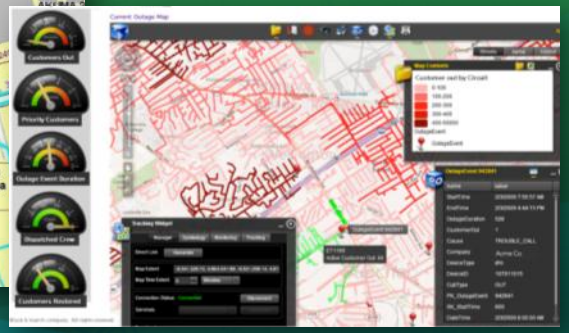
Lithuania

Electrical Modeling



Czech Republic

Electricity Outage

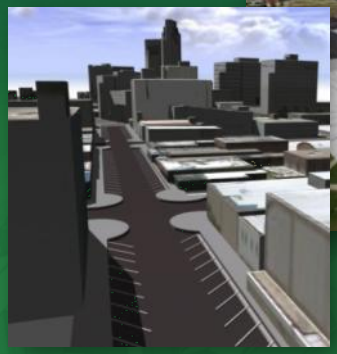


Visualizing and Managing Buildings

Public 3D Viewer

China

Cityscape



Corpus Christi, Texas

Campus Design

University of Rochester, New York

Urban Modeling

City of Paris, France

Apartment Complex

Indiana

Virtual City

Dubrovnik, Croatia

Providing Defense and National Security

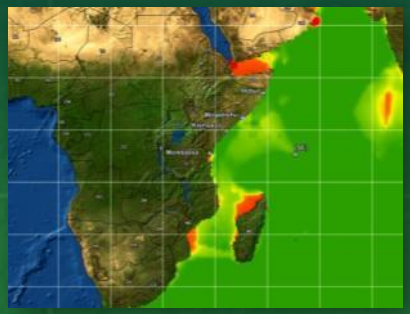
Conflict Mapping

Egypt

Incidence Density

Brazil

Piracy



NAVOCEANO

Security Visualization

Langley AFB

Situational Awareness

California

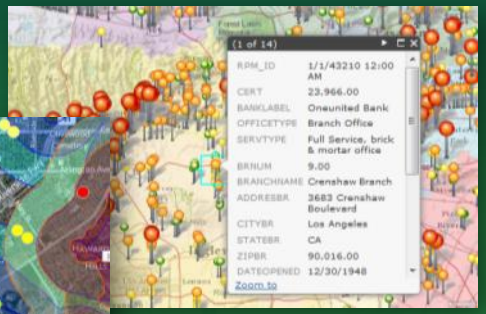
Basemaps

NGA

NATO

Improving Business Management

Bank Locations

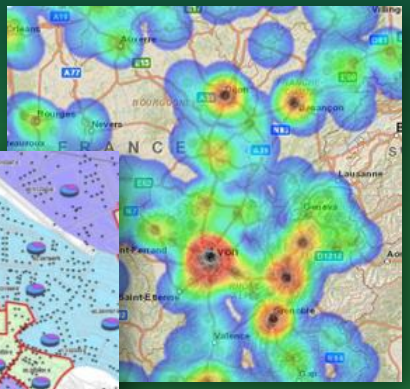


Los Angeles, California

Insurance

Riverside, California

Retail Market Potential

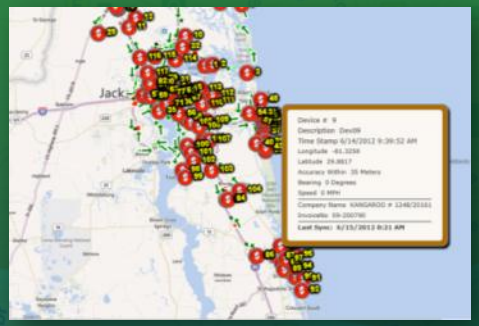


France

Market Analysis

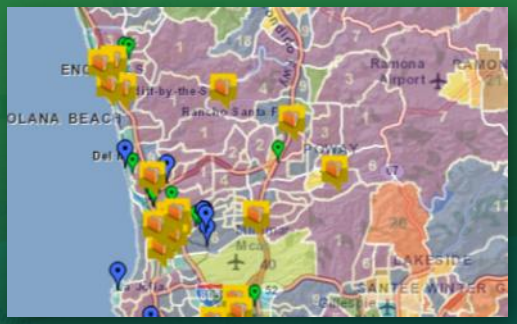
Spain

Transportation Dispatch

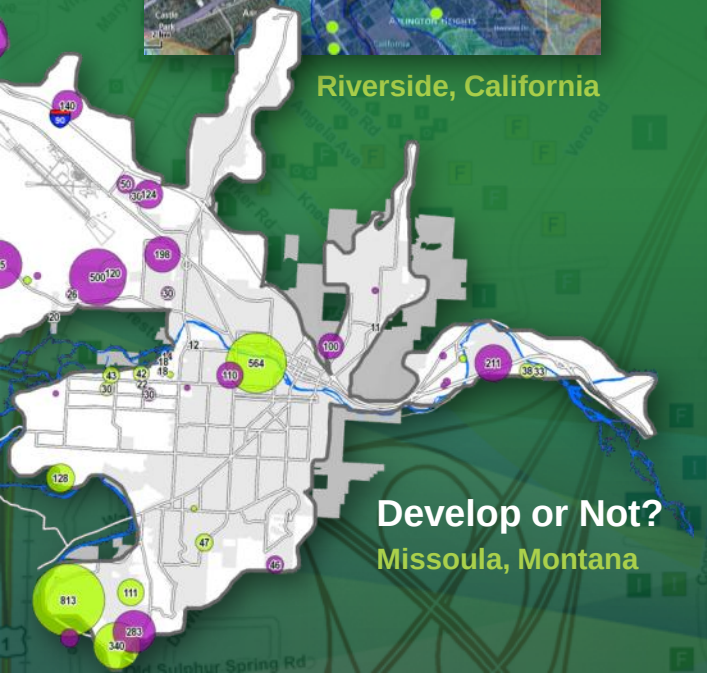


Jacksonville, Florida

Sales Management



Oceanside, California

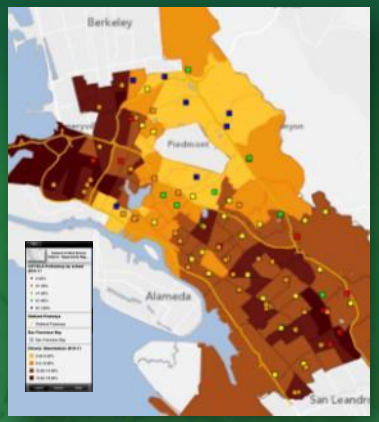


Develop or Not?

Missoula, Montana

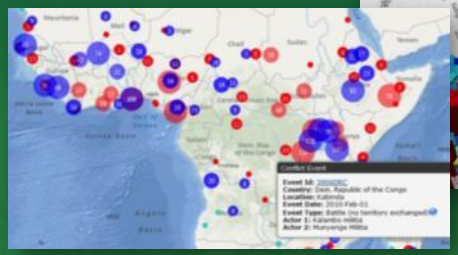
Understanding Demographics and Human Health

Chronic School Absenteeism



Oakland, California

Political Stability

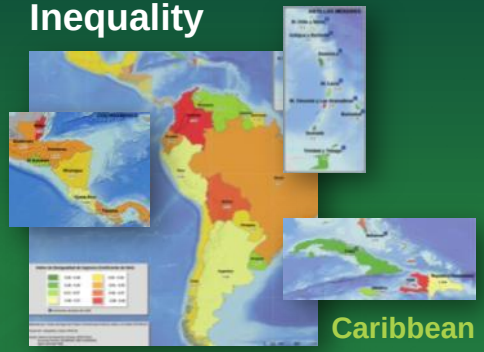


Africa

Population Density

Chesapeake Bay

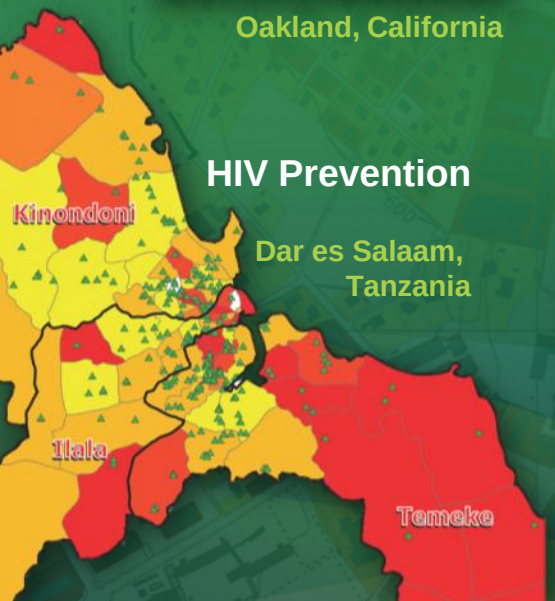
Income Inequality



Caribbean

Latin America

HIV Prevention



Dar es Salaam, Tanzania

Domestic Violence

Madrid, Spain

Chromosome Mapping

California

Lead Poisoning

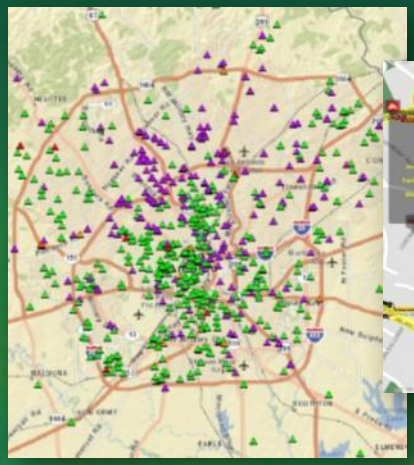
Detroit, Michigan

Empowering Law Enforcement and Public Safety

Incident Response

Kent County, Michigan

DWI Fugitives

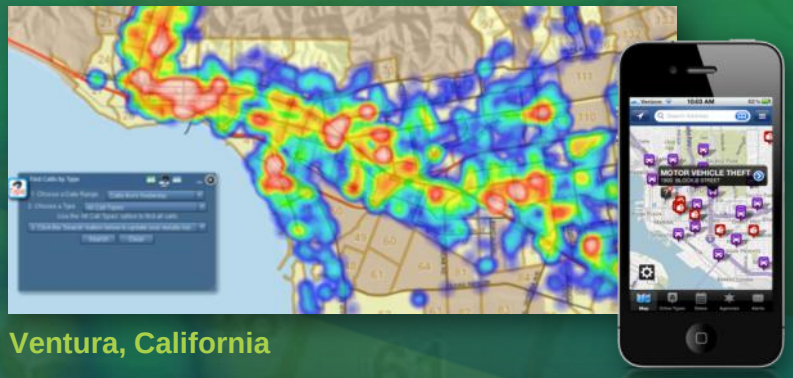


San Antonio, Texas

Crime Analysis

Kuala Lumpur

Call Density



Ventura, California

Crime Mapping

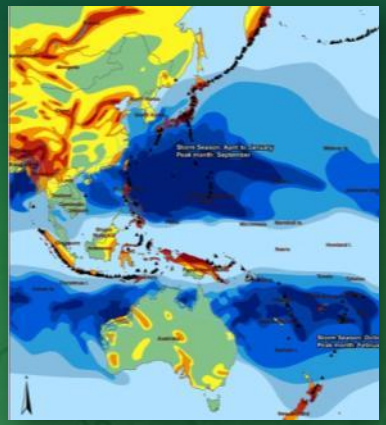
San Diego, California

Fire Station

France

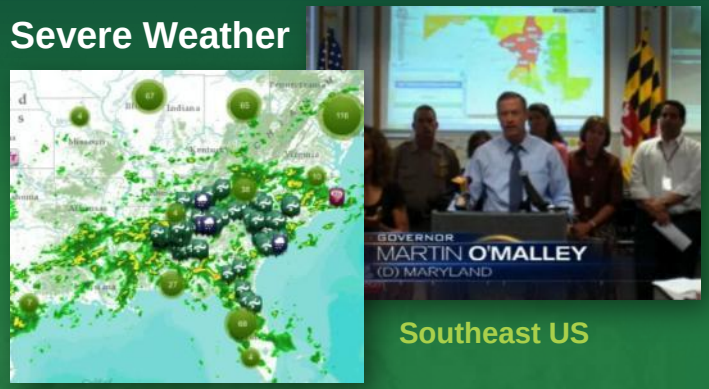
Planning for and Responding to Natural Disasters

Risk Areas



South Asia

Severe Weather

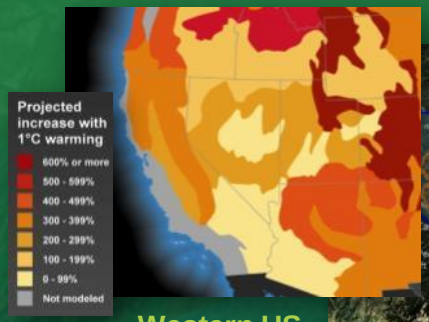


Southeast US

Volcanic Hazards

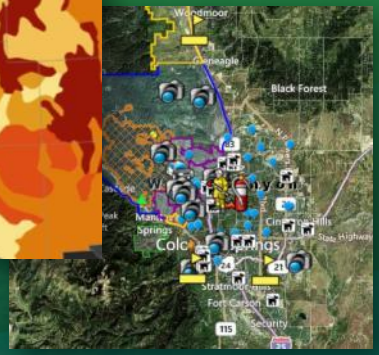
Mt. Hood, Oregon

Forecasted Wildfire



Western US

Waldo Fire



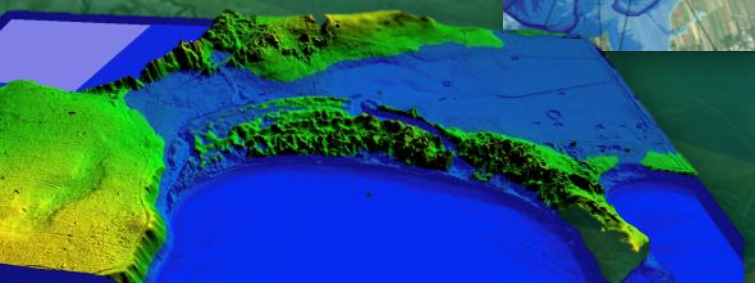
Colorado

Flood Hazards

Romania

Coastal Flooding

New South Wales, Australia



Humanitarian Support

Red Cross Facilities

Global

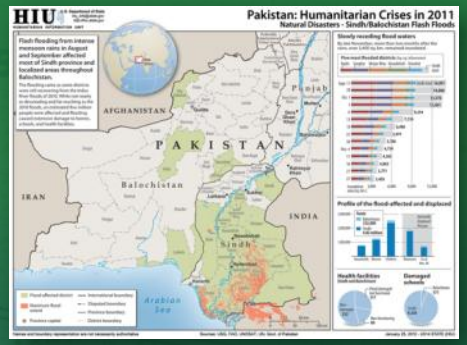
Tracking Projects

US Government

Shelter Concentrations

Somalia

Flood Response



Pakistan

Displaced Villages

Thailand & Burma

Climate Change, Conflict, and Aid

Africa

Cartography

Lidar Rendering

Winnebago County, Illinois

Aeronautical

US-FAA

Nautical Charting

US-NOAA

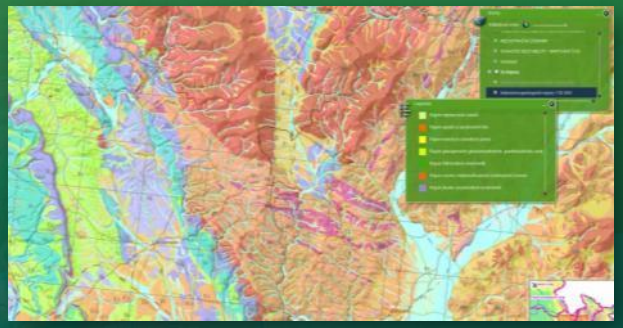
Topographic

Switzerland

Road Map

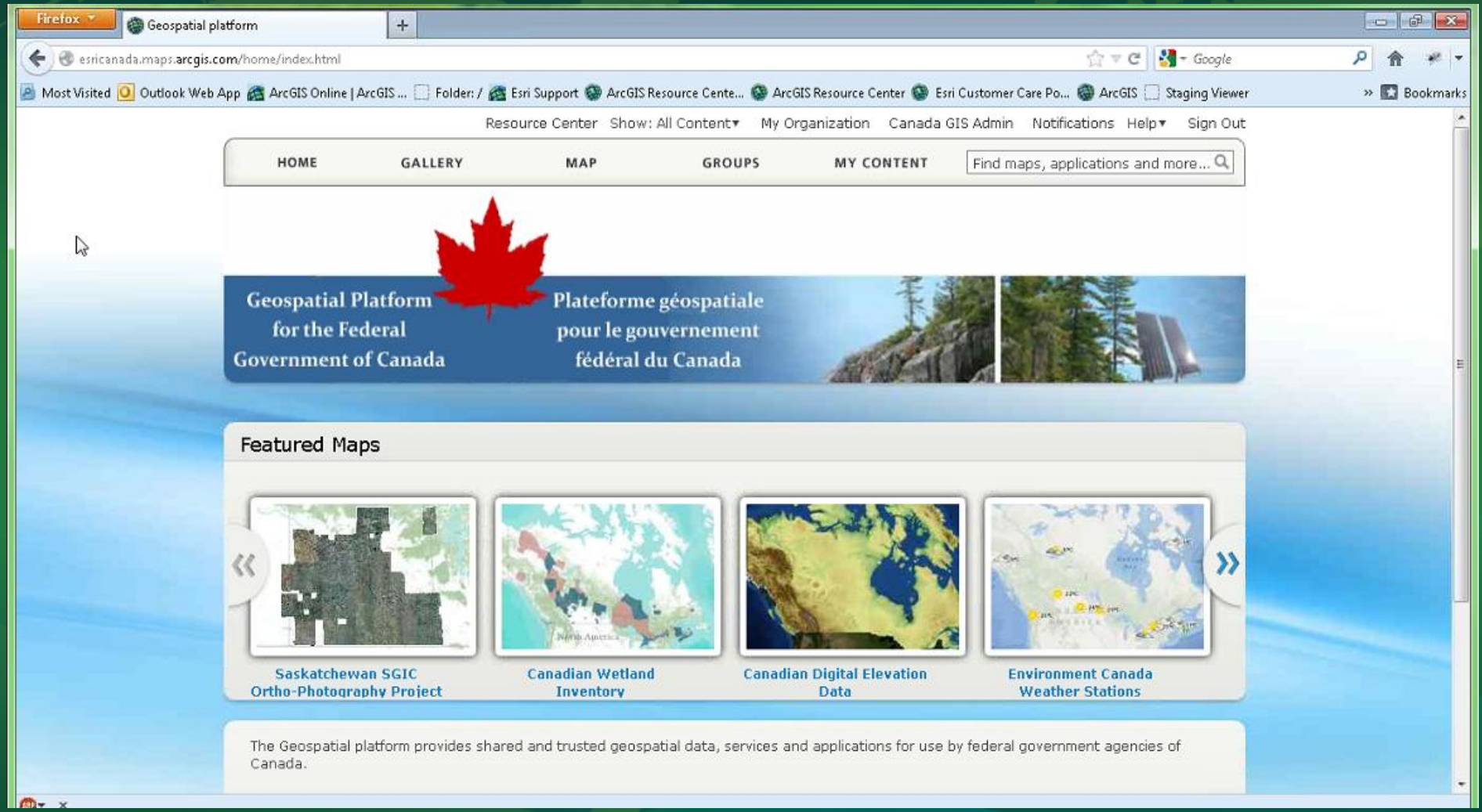
Michelin Guide Maps

Geology



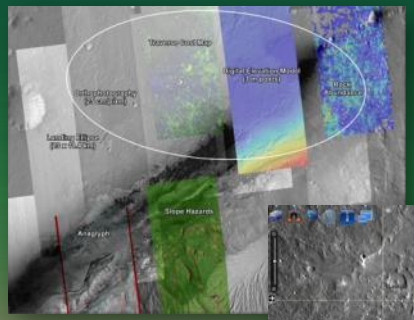
Czech Republic

Creating GIS Infrastructure



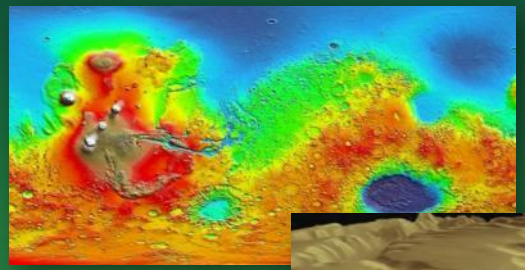
Exploring Remote Places

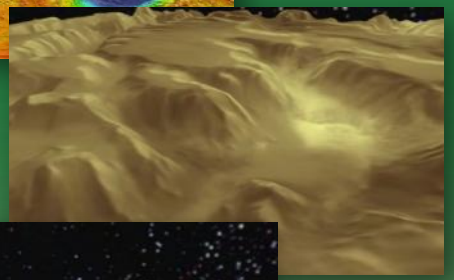
Mars Landing Site

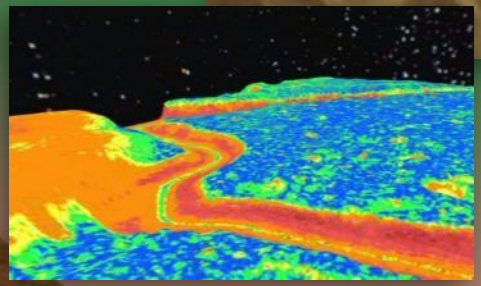


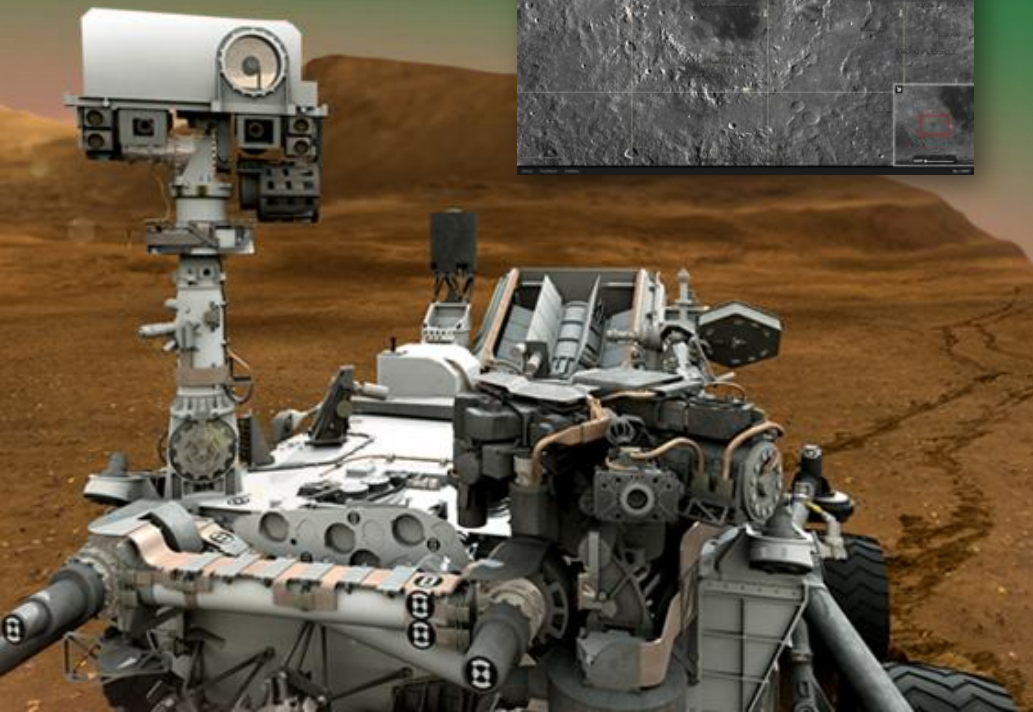
Lunar Mapping

Imagery









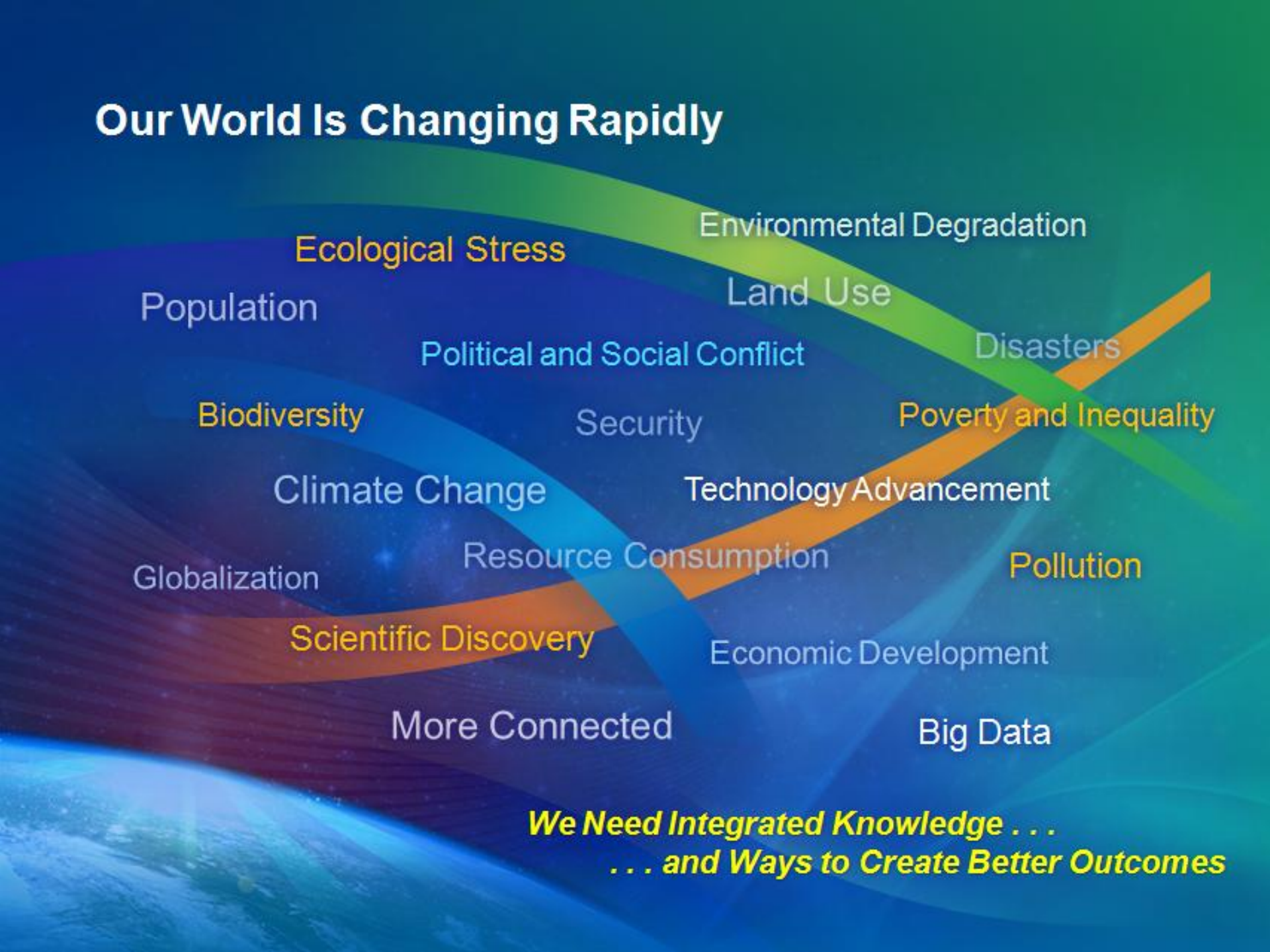
Jet Propulsion Laboratory
California Institute of Technology

Geographic Information

Climate Change
Natural Disasters
Utilities
Business
Environment
Science & Technology
Energy
Systems
Population Growth
Solving
Nature Conservation
Mapping
Pollution
Water Resources
Infrastructure
Defense & Security
Economic Recovery
Sharing
Government
Human Health
Social Conflicts
Education
Oceans
Urbanization & Development
Synthesis
Agriculture
Transportation

. . . Is deepening the understanding of Our World

Our World Is Changing Rapidly



We Need Integrated Knowledge . . .
. . . and Ways to Create Better Outcomes

GIS Technology is Advancing Very Rapidly

Leveraging Multiple Trends

Enabling Us to Reimagine Our World . . .

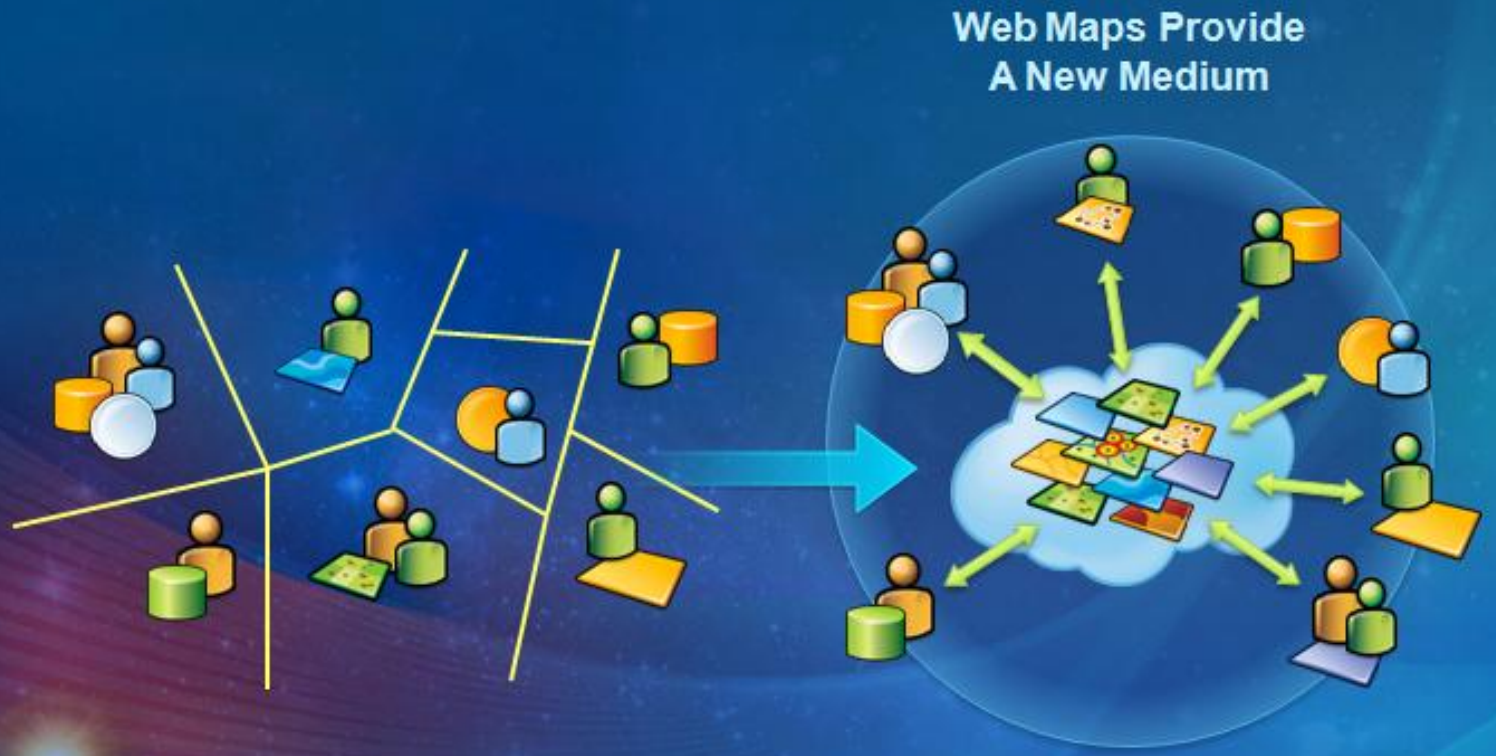
. . . Integrating Geographic Knowledge into Everything We Do

Cloud GIS is Integrating All Types of Geospatial Data

. . . Web Maps Make This Information Accessible Widely

Cloud GIS changes the way we Collaborate

Breaking Down Barriers Between Workflows, Disciplines and Cultures



Enabling Collaboration, Sharing and Holistic Approaches

Cloud GIS has enabled Pervasive Access

Integrating Traditional GIS with a Whole New World of Apps

Making What Has Been Scarce . . . Abundant
. . . Providing Geography as a Platform

Cloud GIS Is Now a Fundamental Part of ArcGIS

Providing

- Content Management
- Intuitive Mapping
- Sharing and Collaboration
- Web and Mobile Apps
- Enterprise Integration
- Open Interoperability

Integrating ArcGIS with Cloud Computing

The Mapping Platform for Your Organization

Create interactive maps and apps and share them with the rest of your organization. Realize new opportunities and gain insight into your data. Do this quickly and easily with nothing to install or setup.

30-DAY FREE TRIAL

Reach Your Users

Share your maps and data through blogs, social media, or custom apps. Learn more

Go Mobile

Your maps and information can be accessed from anywhere. Learn more

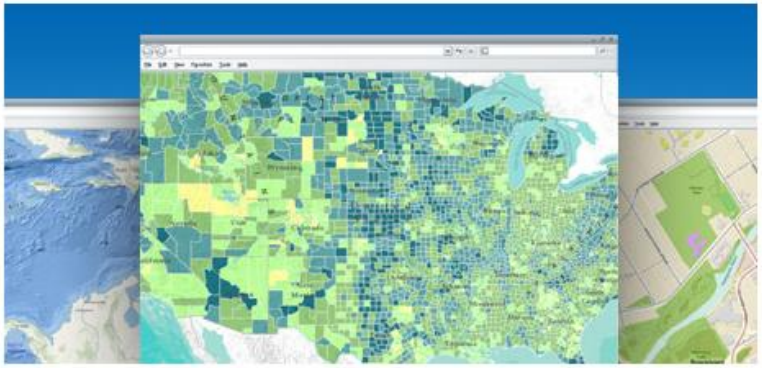
Ready-to-use Content

Choose from a variety of beautiful basemaps to kick-start your projects. Learn more

Maps for Personal Use

Discover useful maps, data, and other information. Home | Map | Gallery

http://www.arcgis.com/about/

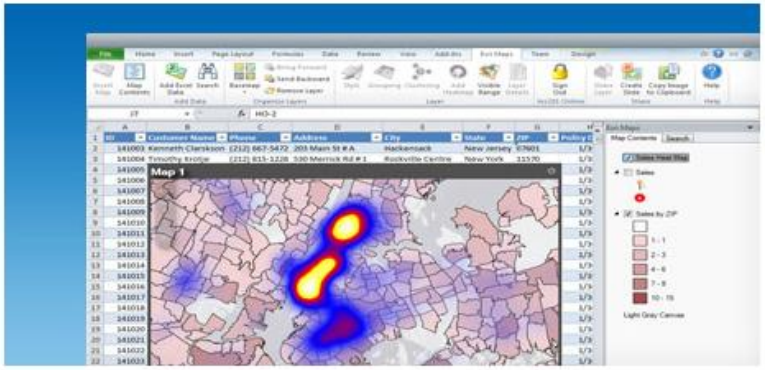


Ready-to-Use Content

Access a rich collection of basemaps, demographic maps, image services, and data. These maps are a great foundation for your work and are created only from the authoritative content from commercial data providers and the GIS user communities around the world.

Make Maps Directly in Excel

Create interactive maps of your data directly inside Excel with the Esri Maps for Office add-in. Quickly map addresses or locations and other geographic data such as sales by territory. Add the map you created in Excel as a slide to your PowerPoint presentation. Or publish and share your map in ArcGIS Online for others to use.



Easily Add Data

Turn your data into useful information by creating content-rich intelligent maps that tell your story. Add your data, create mashups with maps and data shared by other users. Add pop-ups to your map to highlight information including, photos or links to web pages.

Simplifies Authoring and Serving

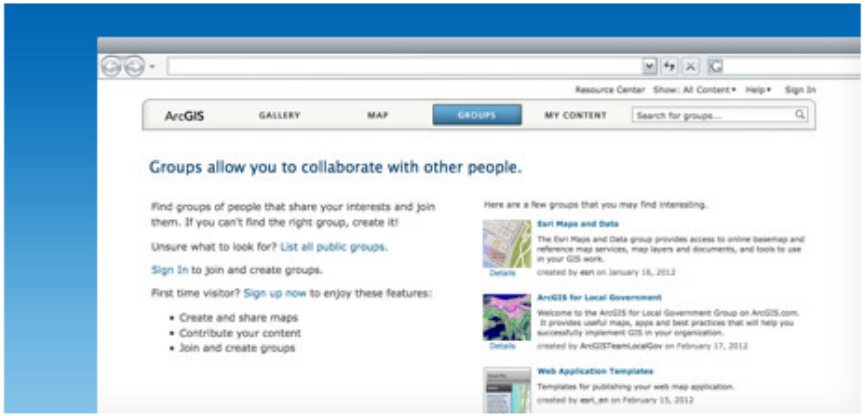
Automating the Process of Creating Services

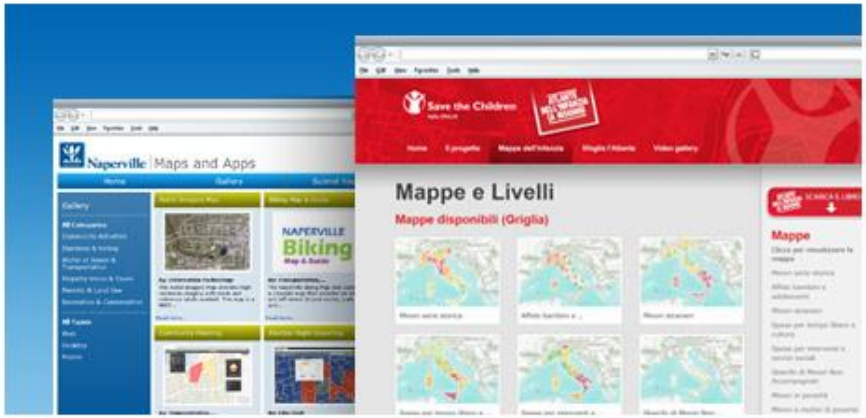
Making It Easier to Share

Collaborate in Private Groups or Share with Public

Collaboration Made Easy

ArcGIS Online gives you an easy-to-use and intuitive workspace for collaborating with others in your organization. Users can create groups and invite others to work together on projects of common interest. Groups can be either private or public, and group members can share maps, data, and other content with each other efficiently and quickly.





Reach Your Users

Effortlessly share your maps and data on blogs, web pages, and web applications, or to Facebook and Twitter.

Coming soon: Create maps in Microsoft Excel and share them through PowerPoint presentations or publish them to the ArcGIS System.

Once your Maps, Content is in ArcGIS Online you can make it accessible from smartphones & tablets

Go Mobile

With the free downloadable ArcGIS app for smartphones and tablets you and your organization can access your maps and information wherever you are, at any time. Or simply use the browser on your mobile device to discover content, collect and report data, and perform GIS analysis. All with no additional work.

Available on the App Store

for Windows Phone 7

ANDROID APP ON Google play

amazon apps Available at amazonappstore for Android

Go Mobile – download “ArcGIS for iOS”/ “ArcGIS for Android” or “ArcGIS for Windows Phone”

http://www.esri.com/software/arcgis/smartphones

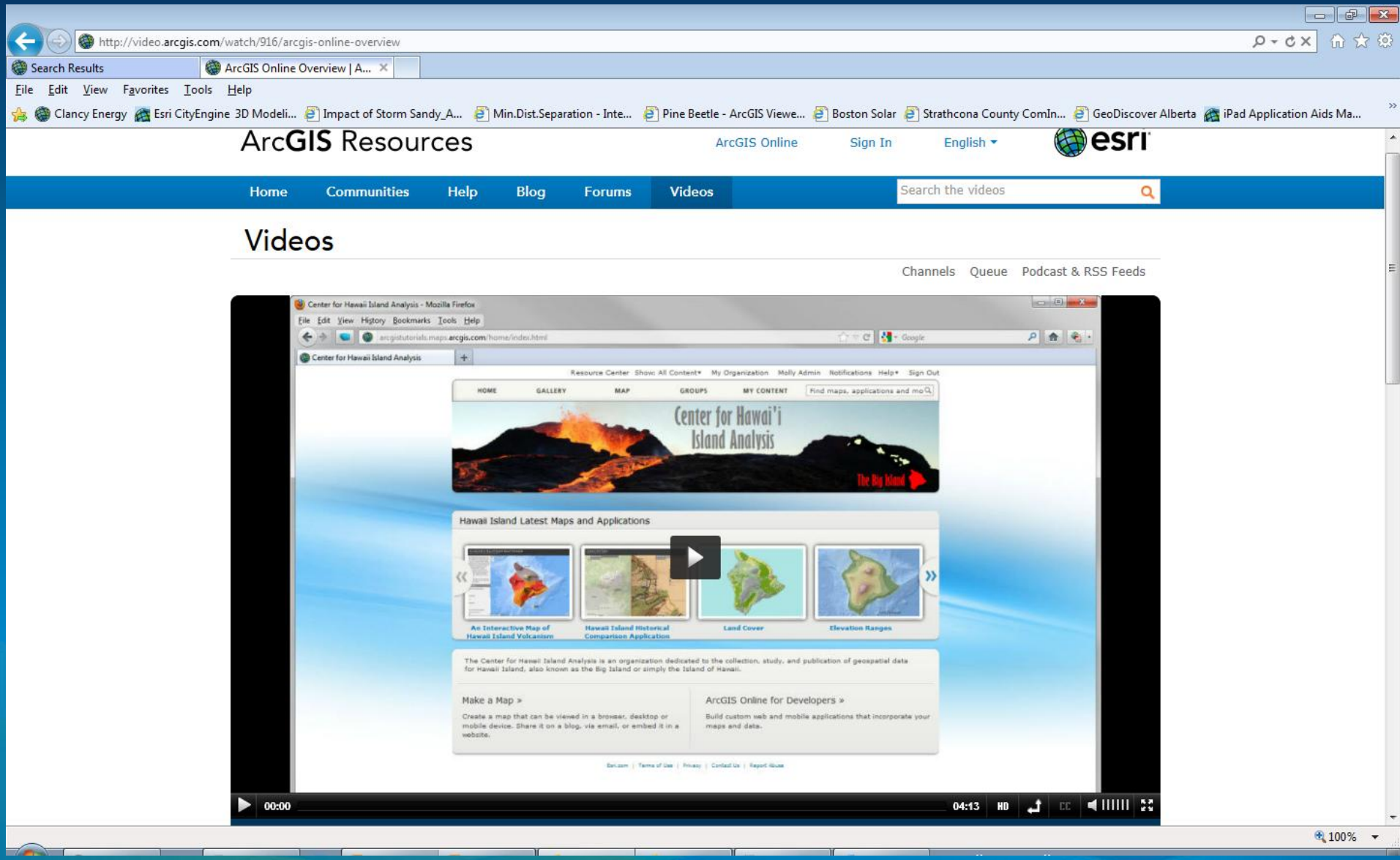
Organizations Are Rapidly Adopting This Pattern

Rio+20 Opening Up and Liberating Geospatial Data

http://www.uncsd2012.org/

. . . *Creating Geography as a Platform*

http://video.arcgis.com/watch/916/arcgis-online-overview



ArcGIS Now Works Within Microsoft Office

Providing Intuitive Mapping with Maps from AGOL for Organizations

Esri Maps for Office

. . . Extending the Reach of GIS

What's New in 10.1

Key updates from International User Conference, July 2012

A Better Desktop

Improving Mapping, Visualization, and Editing

Dynamic Legends

Streamlined Editing

QA/QC Tools

Edit Tracking

Workflow

Maplex Labeling

Generalization

Map Automation

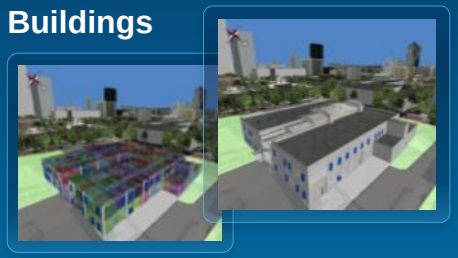
Saving Time and Increasing Productivity

Expands 3D Capabilities

Improving 3D Visualization and Analytics

- Faster
- Scalable

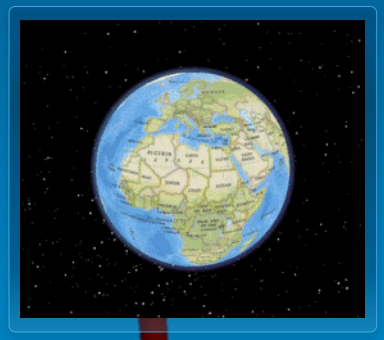
Buildings



Editing & Content Generation

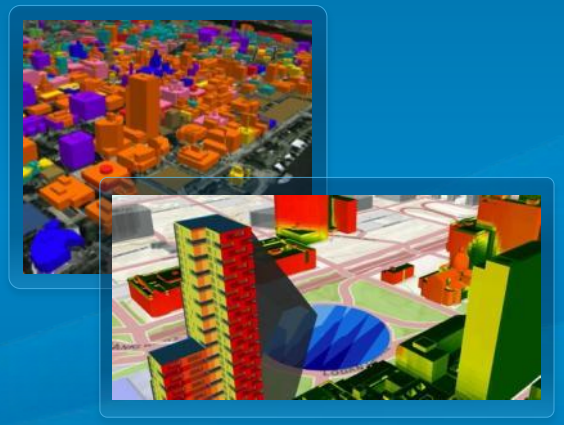
CityEngine

Globes



Landscapes

3D Analytics

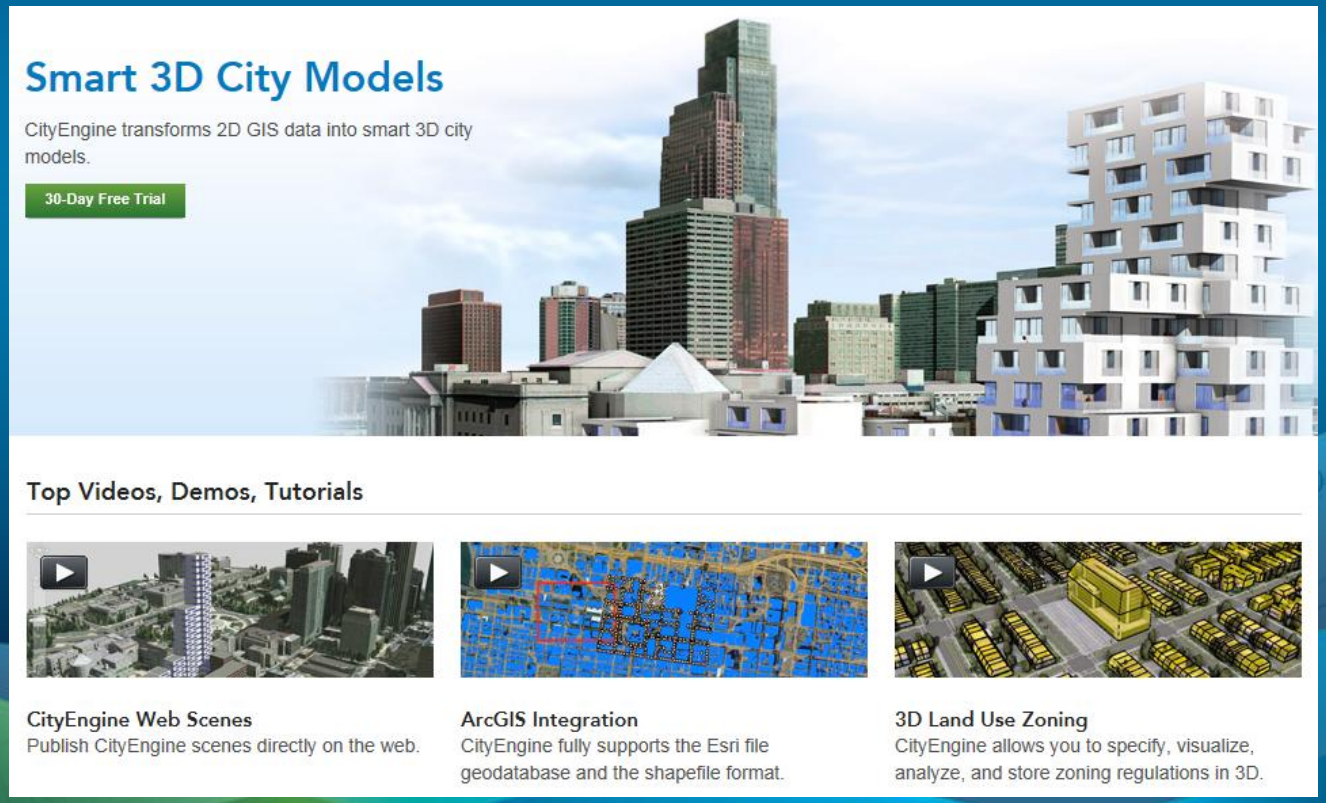


Virtual Cities

GeoDesign & CityEngine 2012

http://www.esri.com/technology-topics/geodesign/videos

http://www.esri.com/software/cityengine/

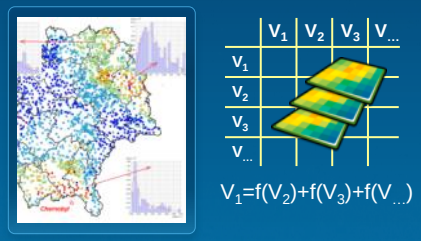


Advances in Analytics

Adding New Tools and Methods

- **Faster**
- **Simplified**

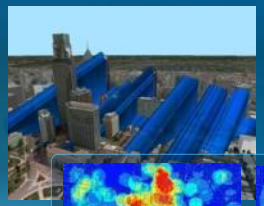
Exploratory Regression



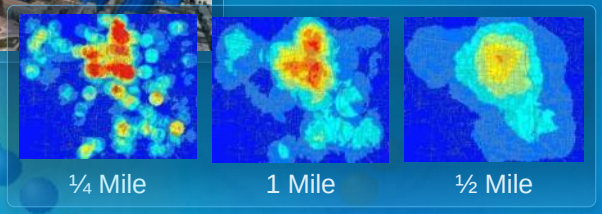
GPS Photos

Better Kriging

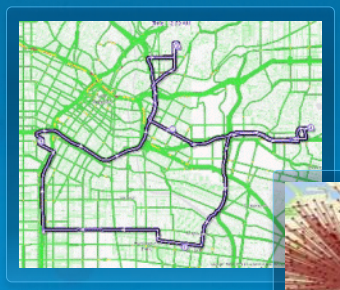
3D Analysis



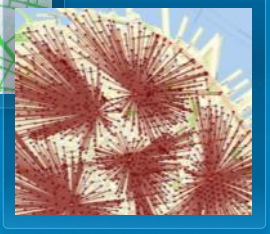
Cluster Analysis



Time Aware Routing



Fast Allocation

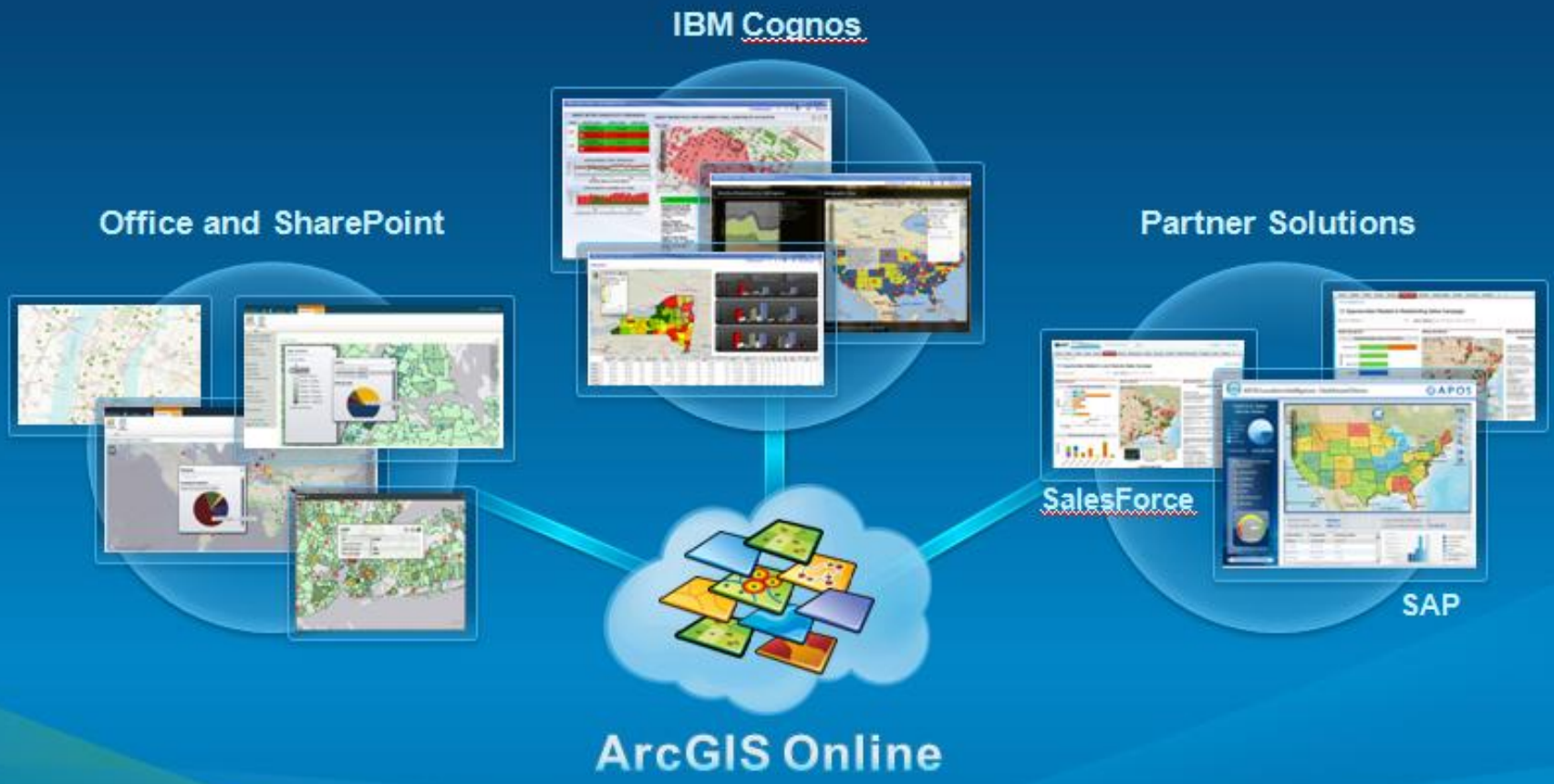


64-Bit Geoprocessing for the Desktop …with SP1

Advancing Geographic Science . . .
. . . Solving Complex Problems

Location Analytics

Geoenables Business Systems



Providing Geographic Insights for Business Intelligence

Unlocks Lidar Data

- Direct Read
- Fast Display
- Analytic Tools

Fully Integrates Image Processing

Supporting Many Common Tasks

Color Balance

Ortho-Rectification

Mosaicking

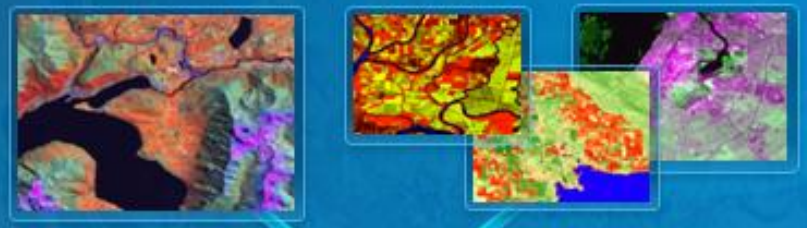
Pan Sharpen

Classification

Change Analysis

Full Motion Video (FMV)

Visualization and Analysis



3D Measurement

Automatic Alignment

Fast

Dynamic

Massively Scalable

Any Format

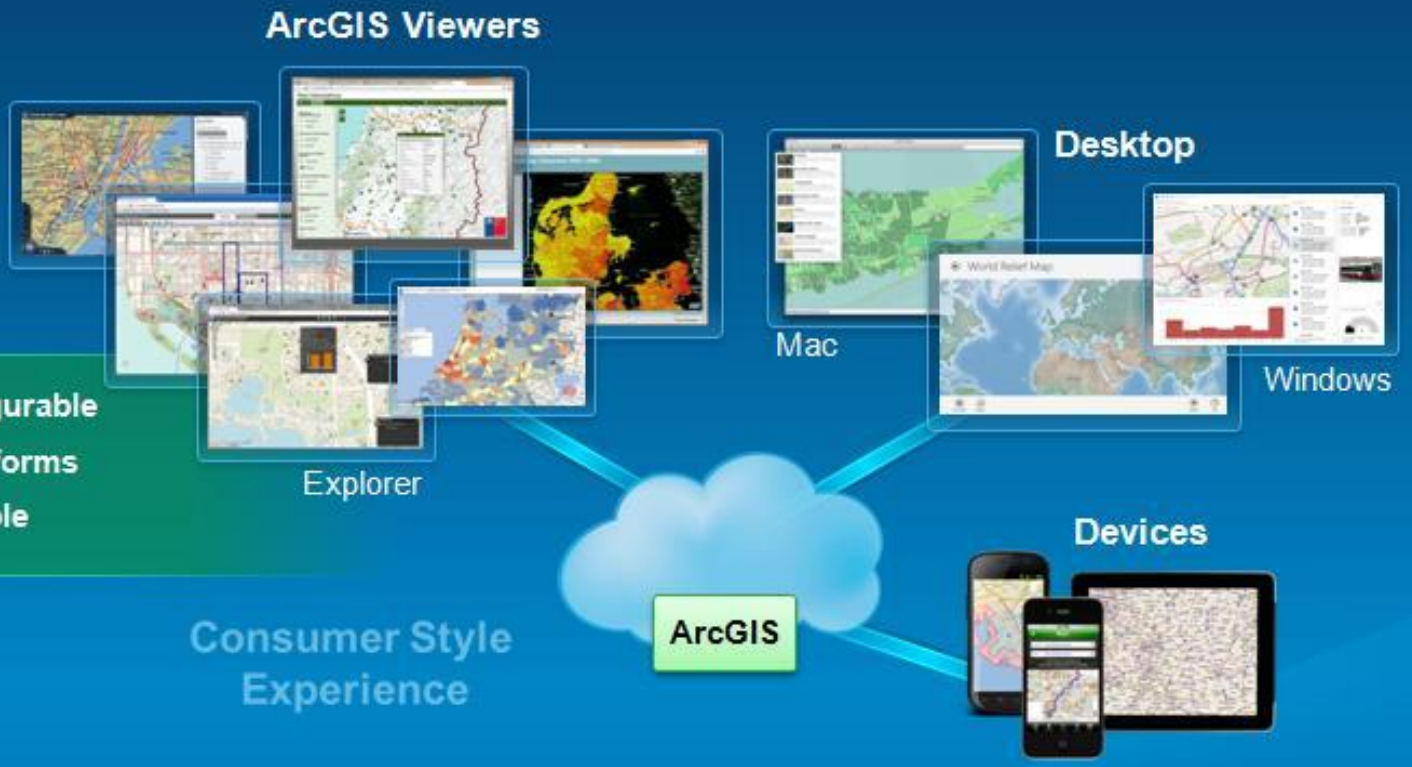
ArcGIS

Data Management and Serving

Open and Supported by Partners

ArcGIS Includes Many Ready-to-Use Lightweight "Apps"

Enabling Pervasive Access



- Easily Configurable
- Leading Platforms
- SDKs Available

. . . Extending the Power of Your System

ArcGIS Mobile Apps Run On All Popular Devices

Enabling Enterprise Mobility

Rich Functionality

Viewing

Editing

Crowdsourcing

Field Data Collection-ArcPad

Native Apps

Windows

iOS

Android

One Map

. . . Making Your GIS Accessible Everywhere

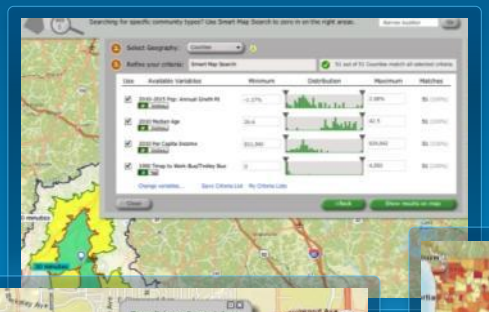
Business Analyst and Community Analyst

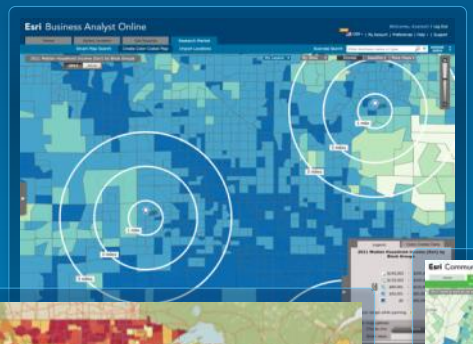
Provide Easy-to-Use Solutions for Business and Policy Analysis

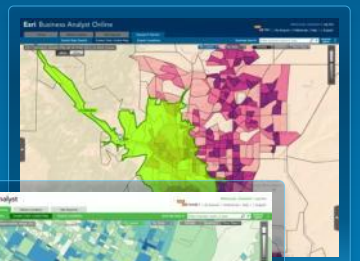
SaaS

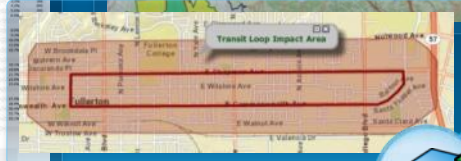
Analytics

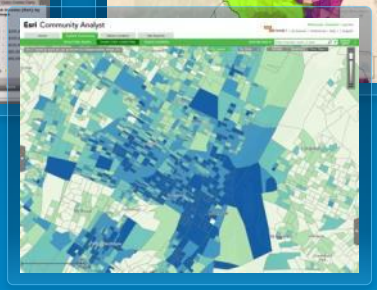
Extensive Data
(4,500+ variables)











ArcGIS
Online

Mapping

Reaching New Audiences . . .
. . . And Empowering GIS Professionals

What's Next?

Lidar 3D Content Real-Time
Tools for Design
Geoenrichment
Imagery Location Analytics
3D Volume Visualization Parcels Advanced Symbology
3D on Devices SaaS 64-Bit
Fast Multicore/Multithreaded
Cloud GIS Research Big Data
Easy
Analysis on Devices Geospatial Apps
Stream Processing
Multi-Dimensional

Incremental Updates (Fall/Spring)

- 64-Bit Desktop Geoprocessing
- Online Geoprocessing
- Disconnected Apps
- Mobile 3D
- Additional Content
- More Solution Templates . . .

Continued Improvements

- Full 64-Bit
- Fast Display
- Multiple Windows
- Integrated 2D/3D App
- Powerful Analytics
- Geodesign

ideas@esri.com

ArcGIS Is a Platform for Your Entire Organization

Integrating Everything . . .

. . . Enabling Everyone to Participate

Self Serve Apps that give answers quickly

Web Apps & ArcGIS Online

Examples:

http://www.devon.esri.ca/mdsii

http://tmappsevents.esri.com/website/pim_severe_weather/index.html

More examples:

http://gis.cityofboston.gov/SolarBoston

http://pug.maps.arcgis.com/home

www.esri.com/software/cityengine
(3 new videos)

http://video.arcgis.com/watch/916/arcgis-online-overview

Enjoy the Discovery

GISday