



Introduction to ArcGIS Online

Technical workshop 8 April 2014

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**GIS for the United Nations and the
International Community Conference**





A Global Network of GIS Professionals

Humanitarian &
Food Aid

Industrial Development

Telecommunication

Agriculture &
Development

Nuclear Power

Health

Demining

Refugees

Our World Is Facing Serious Challenges

- Collectively We Need to Create a Better Future



GIS Is Already Helping Us Understand

Integrative

Visual

Quantitative

Systematic

Comprehensive



*Providing the Practical Means
for Transforming Our World*

“Technology does not have a mind of its own. It has to be directed and put to its most effective use “

US Ambassador for the UN Betty King @ the GIS for the UN Conference 2012

GIS Changes How We Think and Act

- Integrating Geographic Science into What We Do



- We Need to Embrace This Approach . . . Making It Pervasive
- Involving Our Organizations and All of Us

GIS Is Being Transformed - (r)Evolution

- Into a Web GIS



- Making GIS Easier, Always Available, and More Social

"Geo-spatial systems are helping us understand our world" by turning information into action.

Earth Observation Satellites:
high resolution Imagery



Advanced Interoperable & Easy to use
GIS technology



GPS Satellite constellation



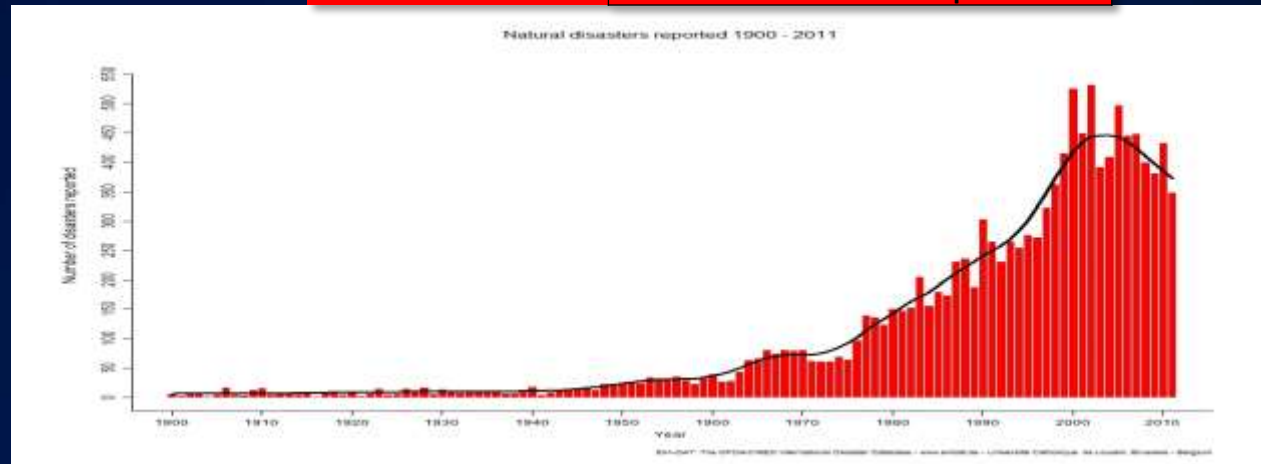
6.8 Billion people with Mobile devices



Type of disasters	Total n. of people affected in 10 years	%
Complex Disasters	10'853'900	0.39%
Drought	906'264'297	32.39%
Earthquake (seismic activity)	77'758'949	2.78%
Epidemic	6'549'892	0.23%
Extreme temperature	87'738'697	3.14%
Flood	1'261'413'080	45.08%
Industrial Accident	1'002'080	0.04%
Mass movement wet	3'548'145	0.13%
Miscellaneous accident	133'684	0.00%
Storm	439'072'596	15.69%
Transport Accident	47'257	0.00%
Volcano	1'550'534	0.06%
Wildfire	2'139'269	0.08%
Total	2'798'072'380	100.00%

In the last 10 years 1/3 of the world population has been affected by hazards

1	India
2	China P Rep
3	Ethiopia
4	Thailand
5	Kenya
6	Niger
7	South Africa
8	Somalia
9	Zimbabwe
10	Malawi
11	Sudan
12	Tanzania Uni Rep



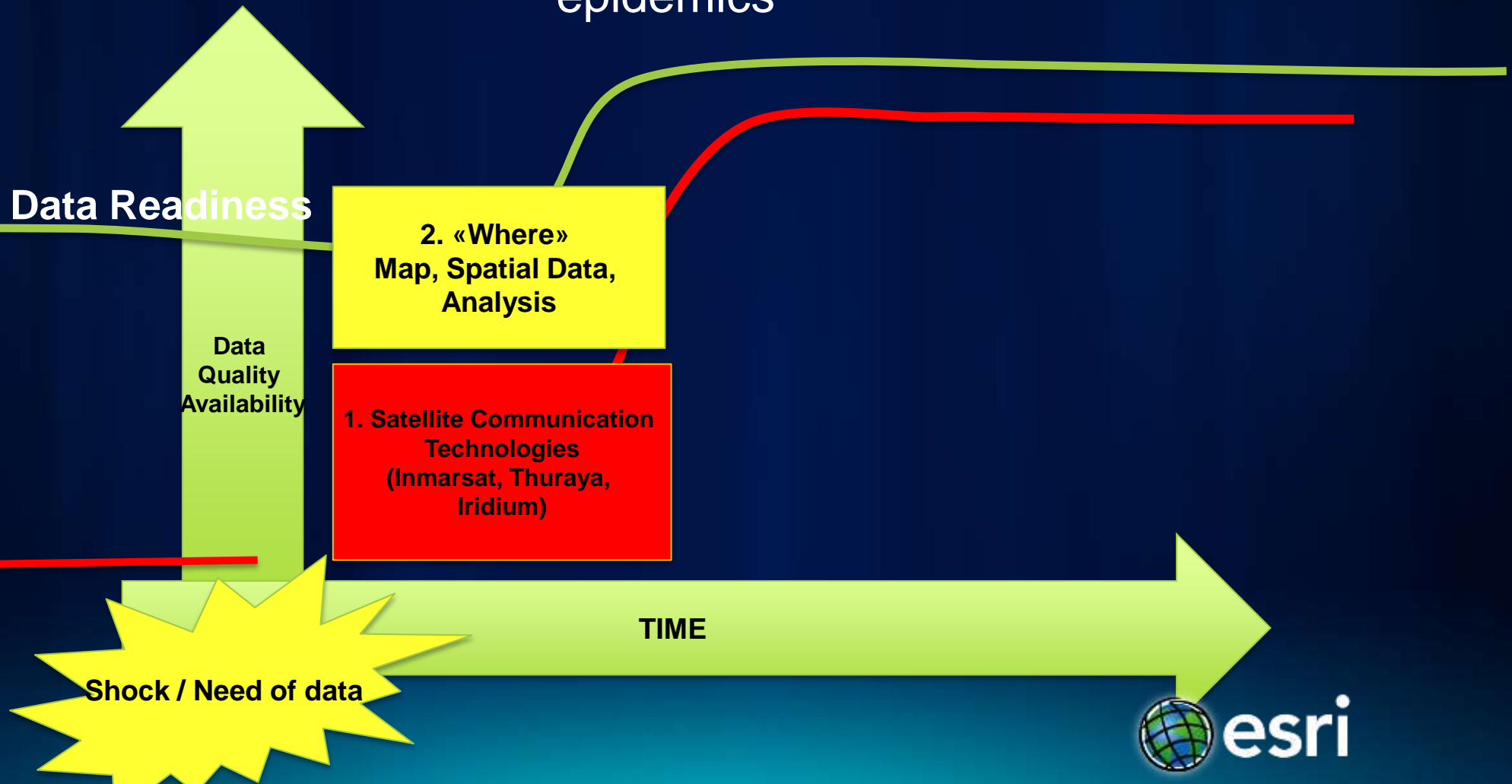
When disaster strikes the most important information to know is **where** the disaster has happened, **how many people** have been affected and **what have been the consequences and impact** of the given hazard over the local population, livelihoods and infrastructure.

These information need to be **accurately acquired and timely communicated** to the decision makers and to the humanitarian community for planning of appropriate humanitarian responses both in .

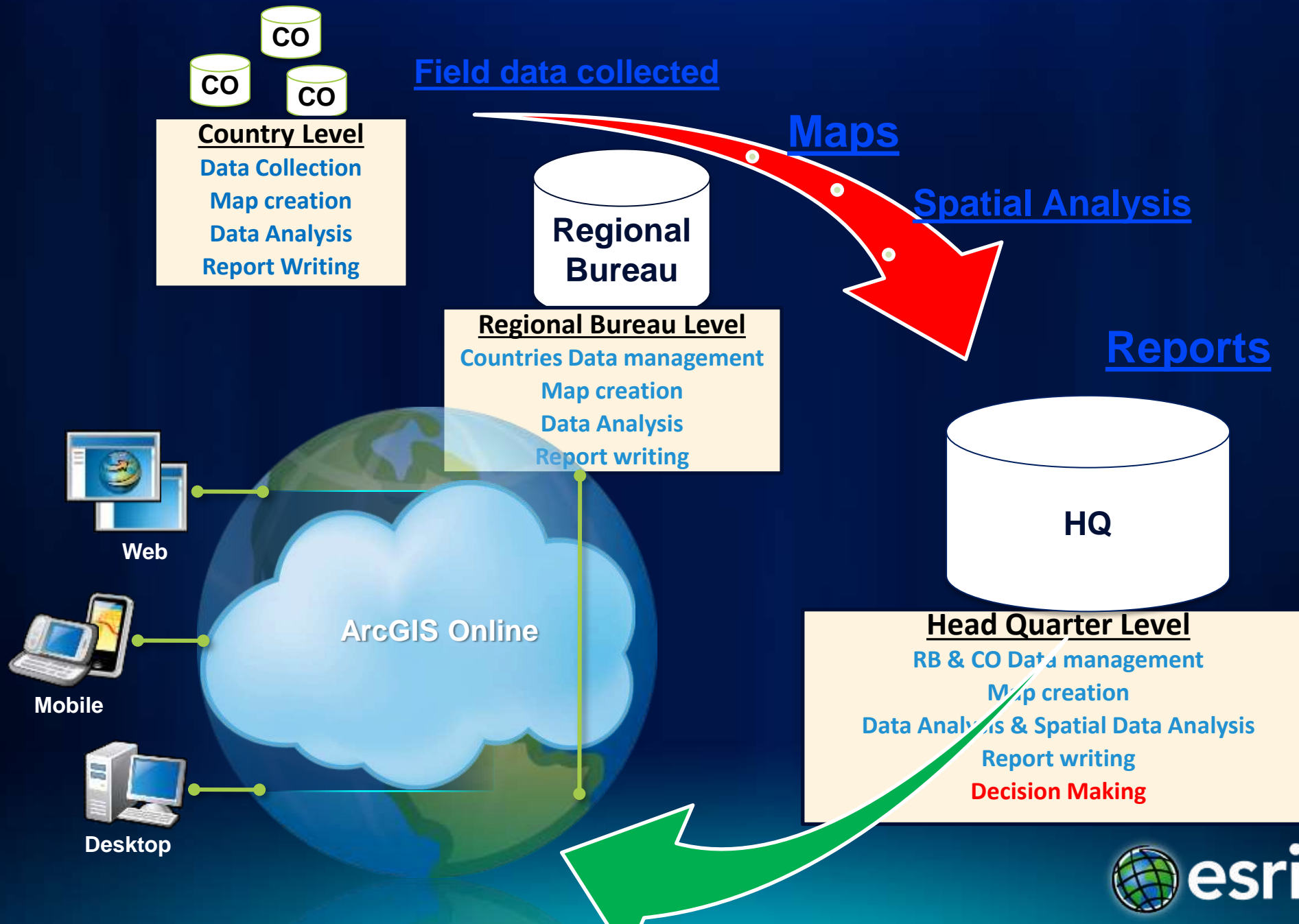
SLOW Onset Disasters and Rapid Onset disasters

Real time spatial information is critical for
all UN interventions fields:

Disaster management, food security, health, migration, conflicts,
epidemics



Challenges of Geospatial data management from the field to Decision makers



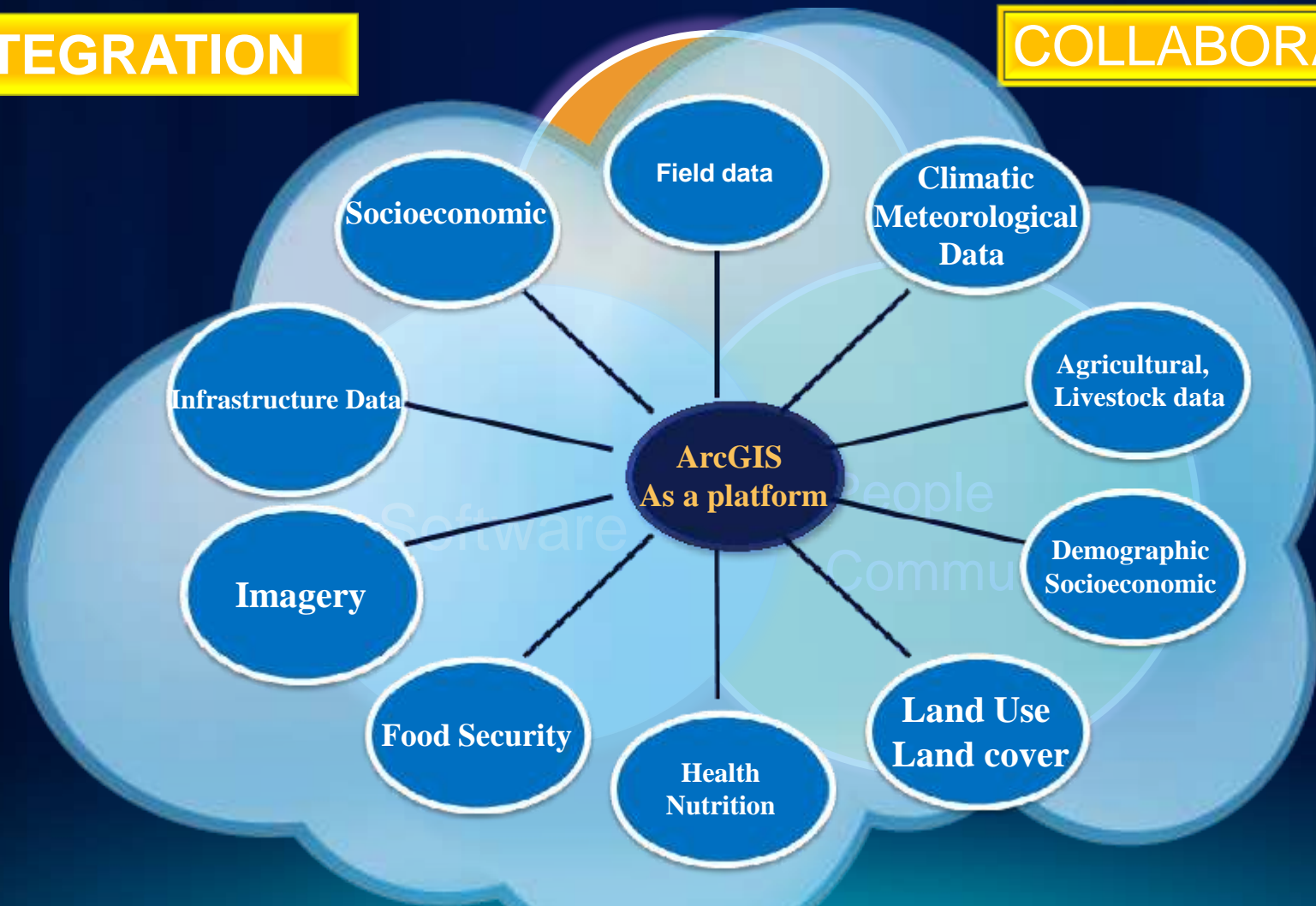


ArcGIS is a Complete System with a cloud component

ACCESSIBILITY

INTEGRATION

COLLABORATION



ArcGIS is a Complete System with a cloud component

Managing and working with geographic information



GIS has evolved fast over time towards
a collaborative approach.

Web GIS Can Represent All Data Types

- As Web Maps and Web Services



- Providing a New Medium for GIS

Web GIS Can Integrate Anything

- Linking and Combining Information

Dynamic Linking



Visual Overlay



Spatial Analysis



- Helping to Discover Patterns and Relationships

Web GIS Also Integrates Organizations and People

- **Breaking Down the Barriers**



- **Sharing Resources . . .**
- **. . . Supporting Collaborative Approaches**

ArcGIS – A Web GIS

- For Mapping, Analyzing, and Managing Geographic Information

Simple
Integrated
Open



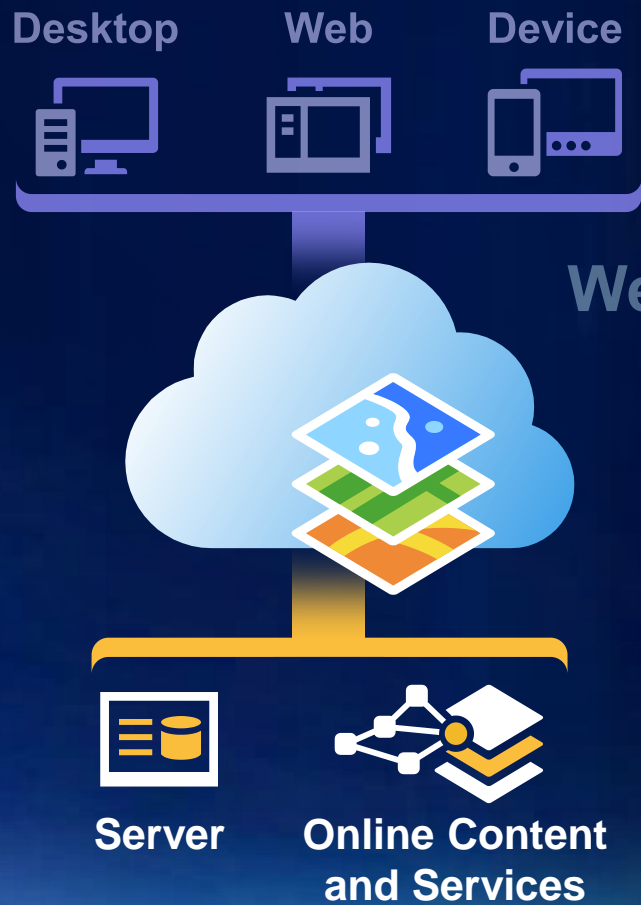
ArcGIS – Accessible from Any Client

Simple
Integrated
Open



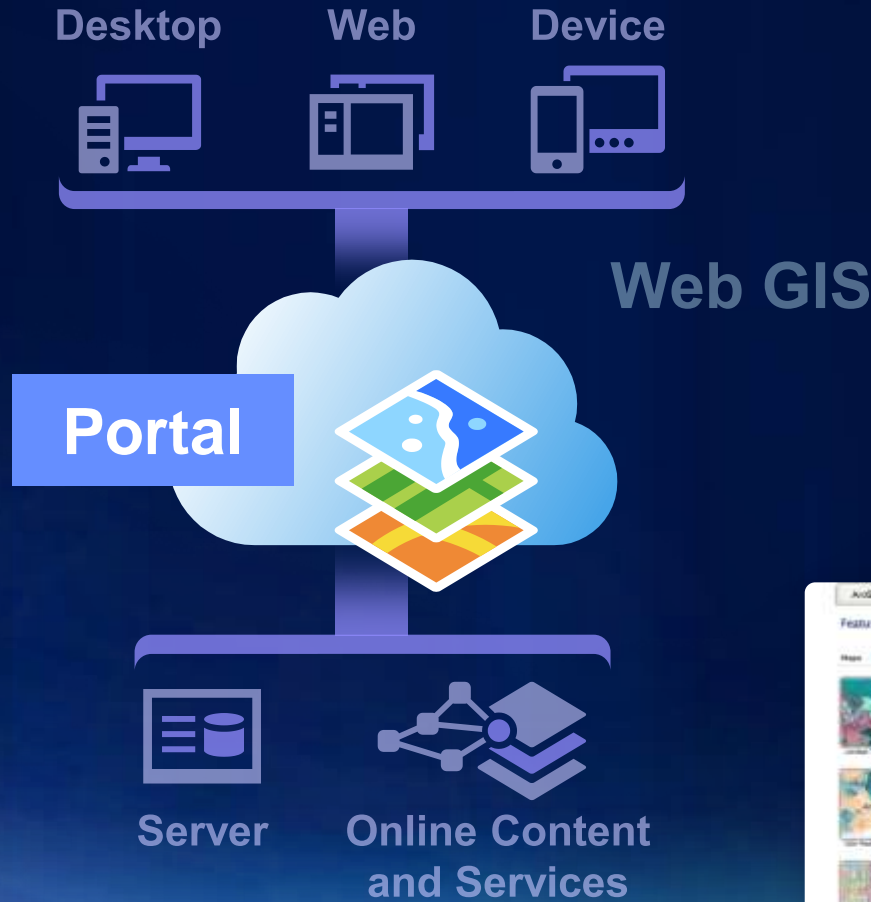
ArcGIS – Powered by Services

Simple
Integrated
Open



ArcGIS – Organizes Content and Manages Access

Simple
Integrated
Open



ArcGIS Is a Platform

- Enabling Web GIS Everywhere

Simple
Integrated
Open



- Available in the Cloud . . .
. . . and On-Premises

ArcGIS Supports Multiple Implementation Patterns

- Leveraging Common Computing Architecture



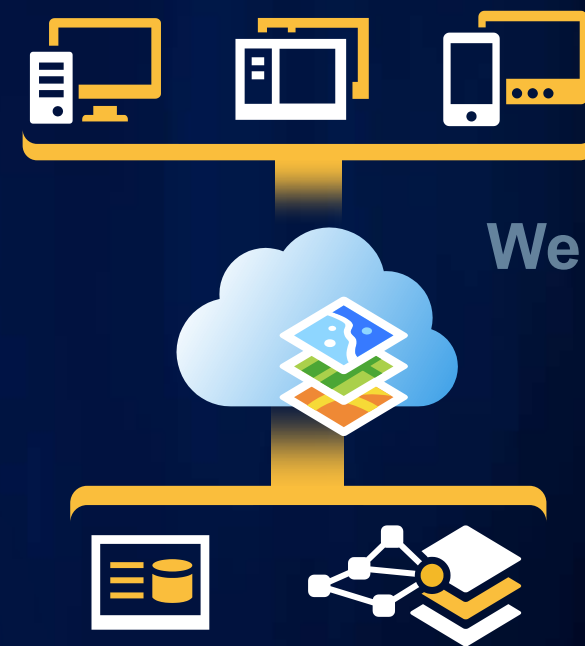
File Based



Database Centric



Server Centric



Web Centric

ArcGIS Supports the Enterprise



Transforming the Role of GIS

ArcGIS Provides Content – A Living Atlas

Ready to Use

Best Available

Global



Households by Income

Income Range	Households
\$0 - \$10,000	100
\$10,000 - \$20,000	200
\$20,000 - \$30,000	300
\$30,000 - \$40,000	400
\$40,000 - \$50,000	500
\$50,000 - \$60,000	600
\$60,000 - \$70,000	700
\$70,000 - \$80,000	800
\$80,000 - \$90,000	900
\$90,000 - \$100,000	1000



Wetlands: Freshwater Emergent Wetland

Area (Acres): 260.74

Wetland Type: Freshwater Emergent Wetland

Show to

ArcGIS Basemaps

Oceans

Topographic

Canvas

Imagery

Terrain



ArcGIS Landscape Content

Physical Geography

- Watersheds
- Elevation
- Slope
- Aspect
- NHD+
- Soils
- Landforms
- Faults
- Wetlands
- Evapotranspiration

Bio-Geography

- Critical Habitat
- Ecological Systems
- Land Cover

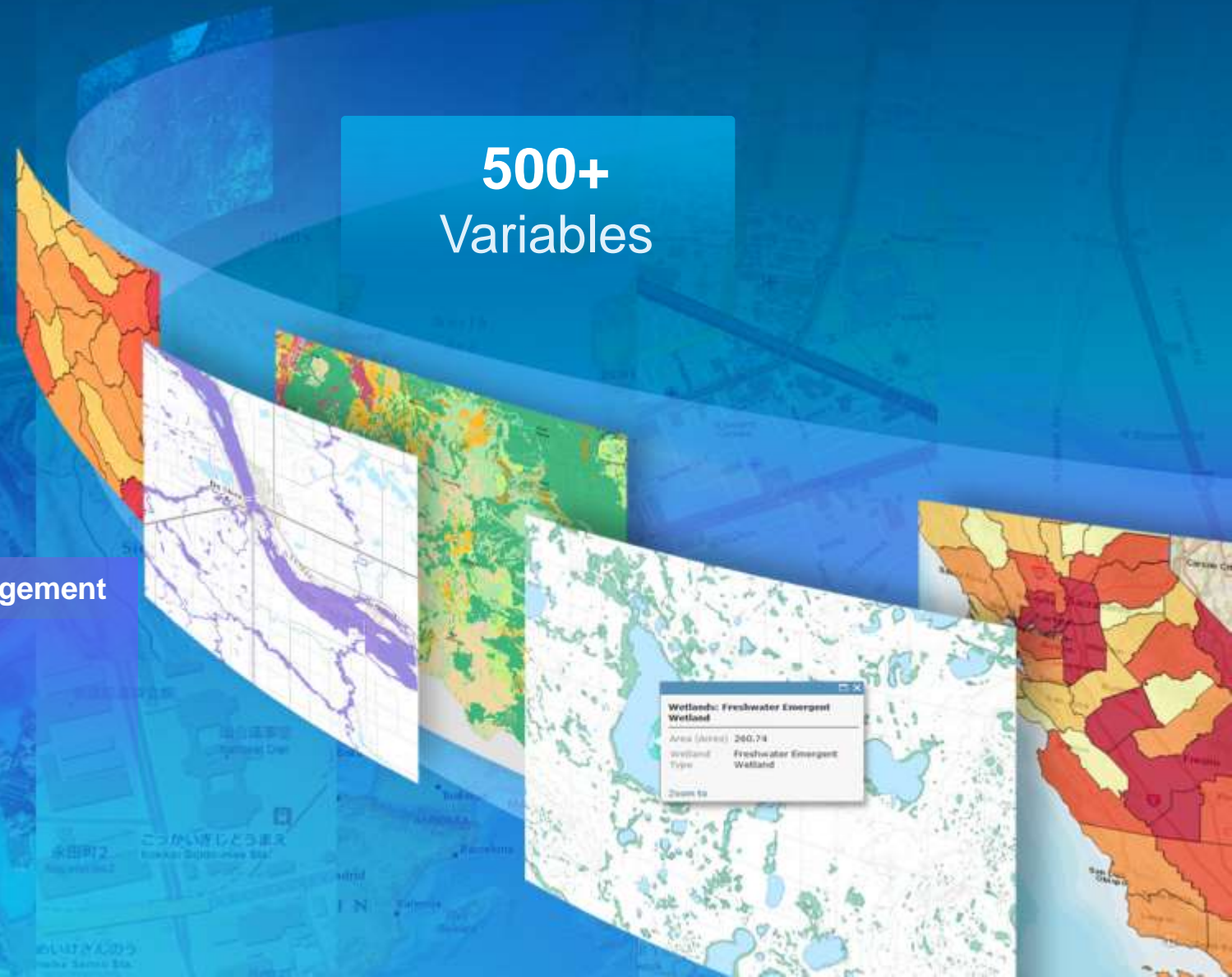
Cultural Geography

- Roads
- Rail
- Flood Risk
- Historic Sites
- Transmission Lines
- Pipelines
- Oil Shale Basins
- Coal Bed Methane Basins
- Earthquake Risks

Land Management

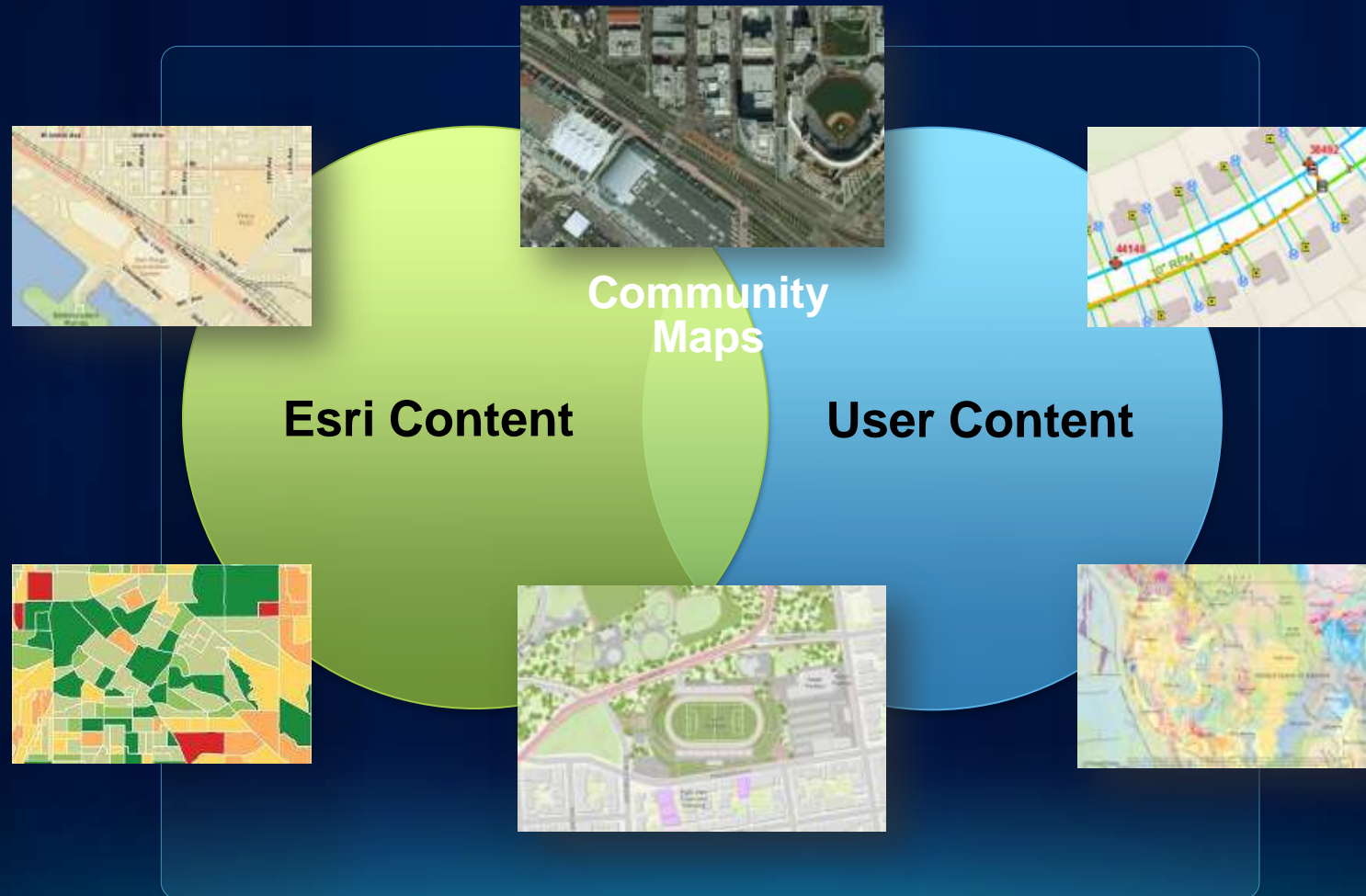
- Federal Land
- Native Land

500+
Variables



Content is Published by Esri and Users

- Built by and for ArcGIS User Community



Supporting Humanitarian Missions

Disaster Response



Direct Relief

Shelter Monitoring



UNITAR/UNOSAT

Water Risk Atlas



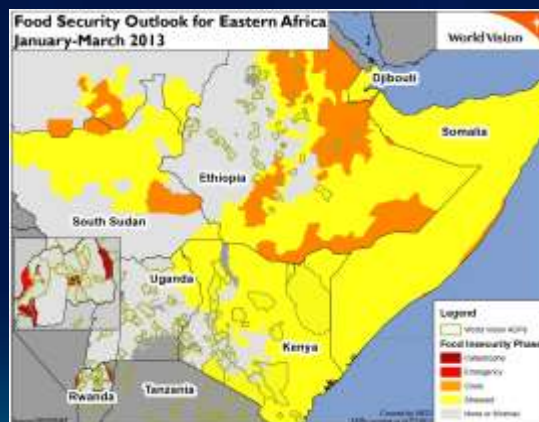
World Bank/Blue Raster

Threats to Journalists



Broadcasting Board of Governors

Food Security



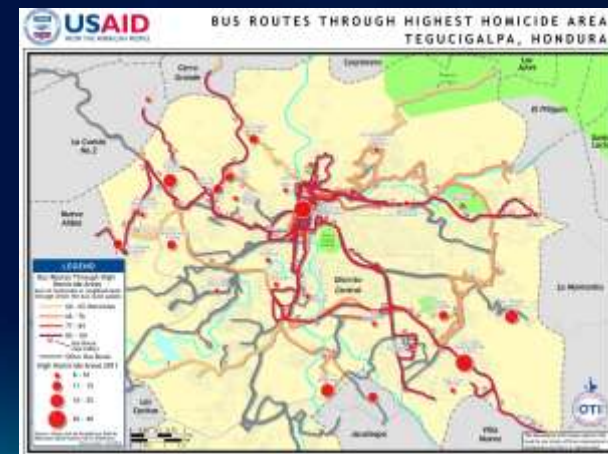
World Vision

Aid Project Information



World Bank/Blue Raster

Safety



USAID

Understanding Human Health

Medicare Costs



National and Regional US

Homeless Population



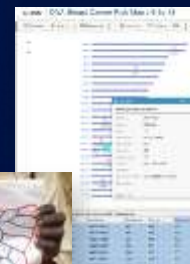
Washington, DC

Polio Eradication



Gates Foundation

Breast Cancer



DNA Guide

Malaria



Swaziland

Lifesaving Surgery



Direct Relief

Nutrition Priorities



Ethiopia

Food Security



World Vision East Africa

MS & UV Exposure



Simon Fraser University

Tracking Disease



Philippines

Web-Based Analytics Are Now Part of ArcGIS

- Leverage Cloud Infrastructure

Find Hot Spots

Summarize Within

Extract Data

Field Calculator

Overlay Layers

Merge Layers

Dissolve Boundaries

Find Nearest

Drive-Time Areas

Enrich Layer

Create Buffers

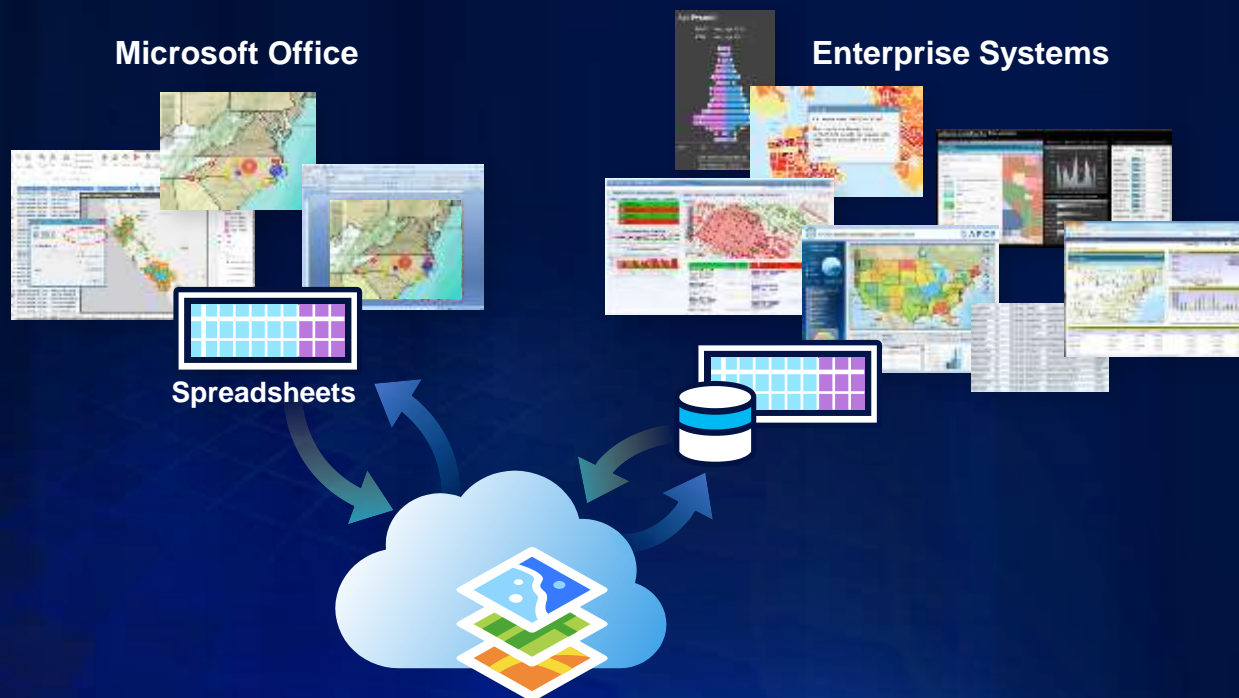
Aggregate Points

Summarize Nearby

- Enabling New Approaches

ArcGIS GeoEnables Business Systems

- Providing Mapping, Spatial Analysis, and Reporting



- Supporting Location Analytics Everywhere

Esri Maps for . . .

- Office
- IBM Cognos
- SharePoint
- MicroStrategy
- SAP
- Salesforce
- Dynamics

Solution Templates

- Provide Apps, Maps, Data Models, and Tools

- Free to Users

- Easily Configured

- Fully Supported

- Open Source



Military / Security

Utilities

Government

Emergency Management

- Improving Productivity and Leveraging Best Practices

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. . . and On-Premises

www.arcgis.com