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# Fit for Purpose Technology for Land Administration

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# GIS is Evolving

Web GIS is a new pattern

## Applications

Collaborative

Mobile

Native

3D

Real-Time

Analytics

Configurable

Visualization

## Implementation

Configuration

Open

Agile

Web

Easier

Ready to Use

Standards

## Data

Lidar

Crowdsourcing

Drones

Sensors

Real-Time

Field Survey

Scientific Data

Remote Sensing

GPS

Social Media

UAVs

Web GIS

## Technology

Virtualization

Big Data

Location

Distributed Processing

Internet of Things

Smart Devices

Cloud

Faster Computing

Consumerization



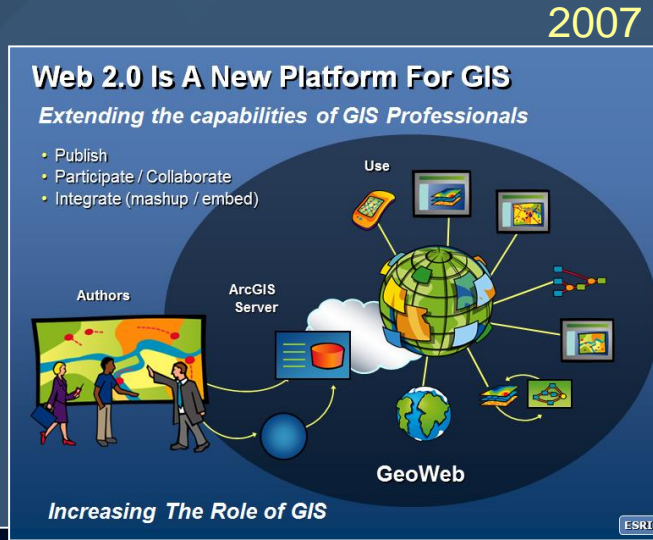
# GIS is Evolving

Web GIS is an evolving pattern

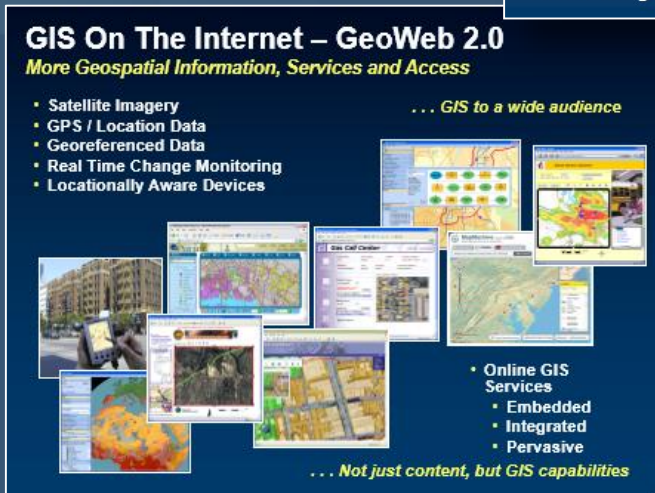
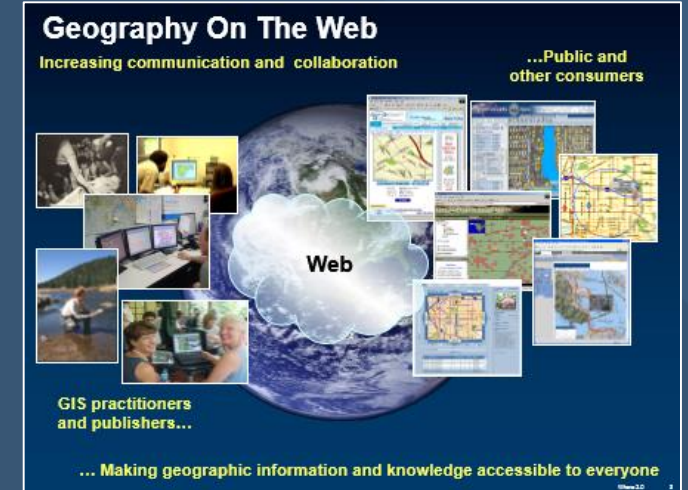
2009



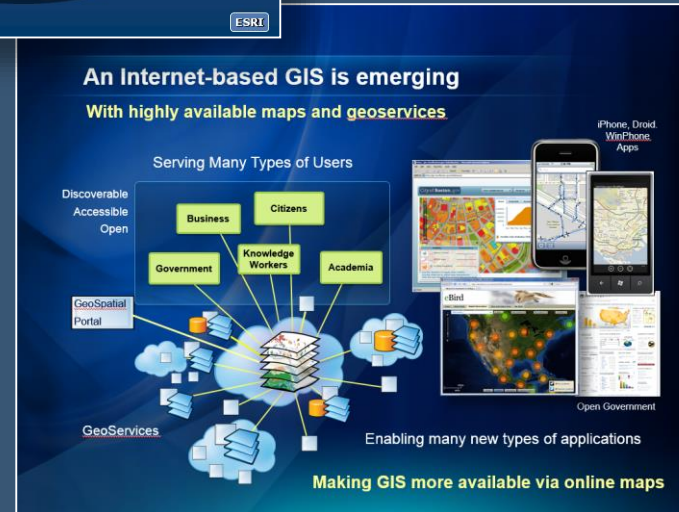
2005



2007



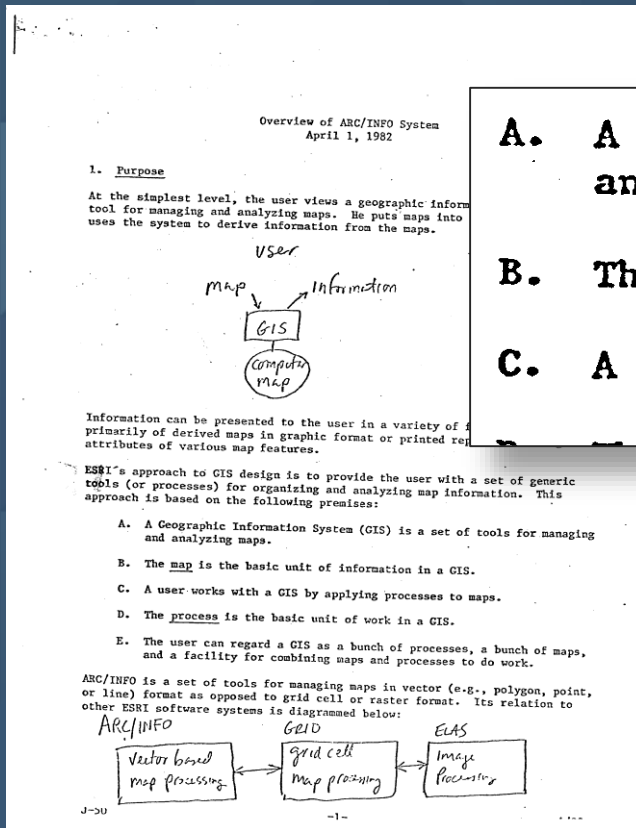
2006



2011

# The importance of a map

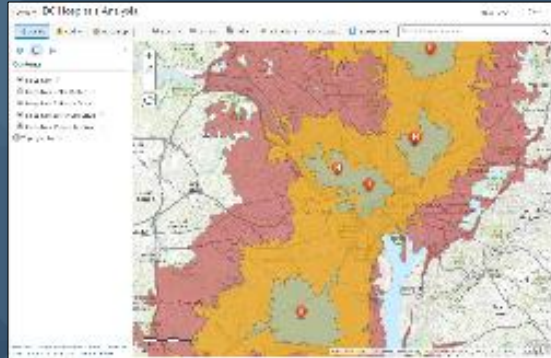
## A fundamental building block



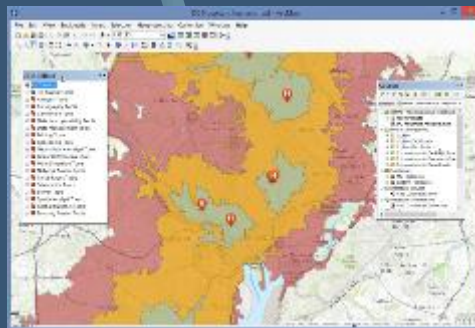
- A Geographic Information System (GIS) is a set of tools for managing and analyzing maps.
- The map is the basic unit of information in a GIS.
- A user works with a GIS by applying processes to maps.

# The importance of a web map

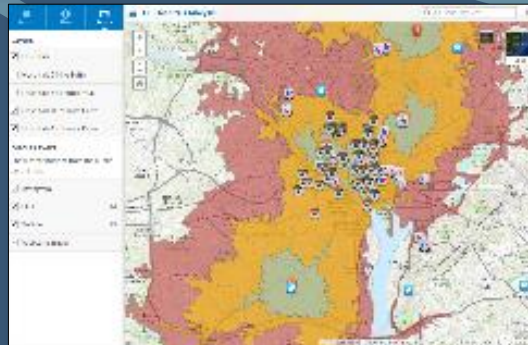
A fundamental building block of Web GIS



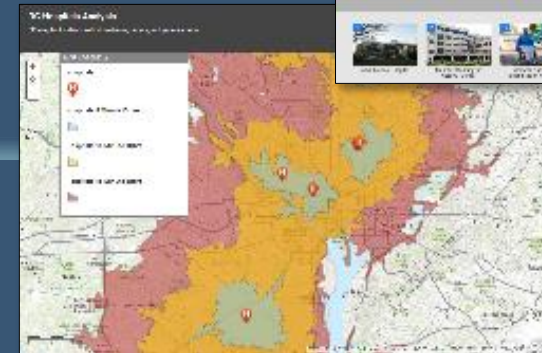
Map viewer  
(for authoring)



GIS Desktop



Public Information



Apps



Story Maps

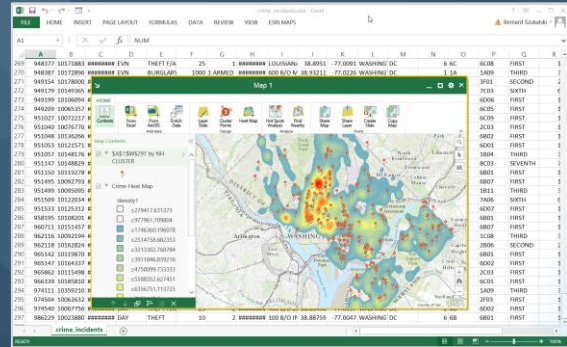


Devices

# Web Maps open GIS

Allow many types of users to participate, use, and view

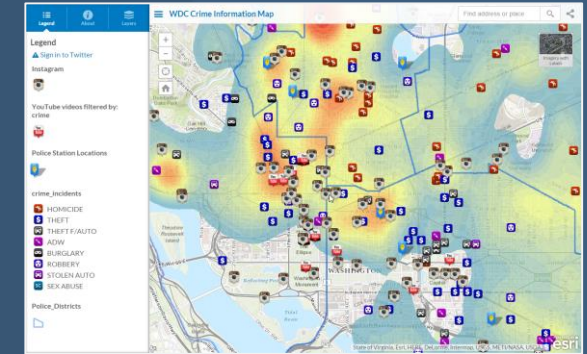
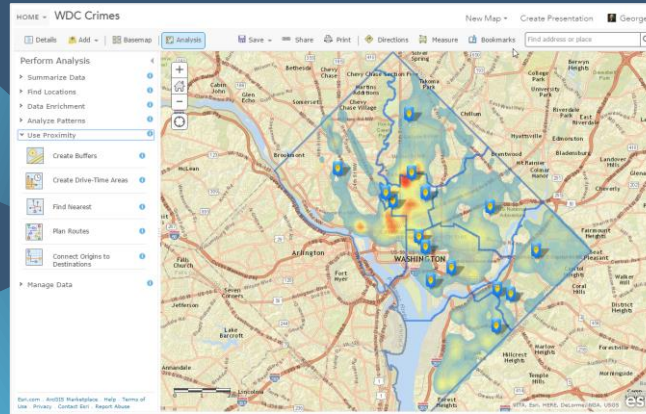
Apps



Office

GIS Desktop

Web Maps



Portal



Shapefiles  
Spreadsheets



GIS  
Server

# What is Web GIS?

## Foundation of a modern GIS

- A pattern, or architectural approach
- Based upon services
- Supports Identity
- Cloud, on premises, or both
- Uses a Portal

Services

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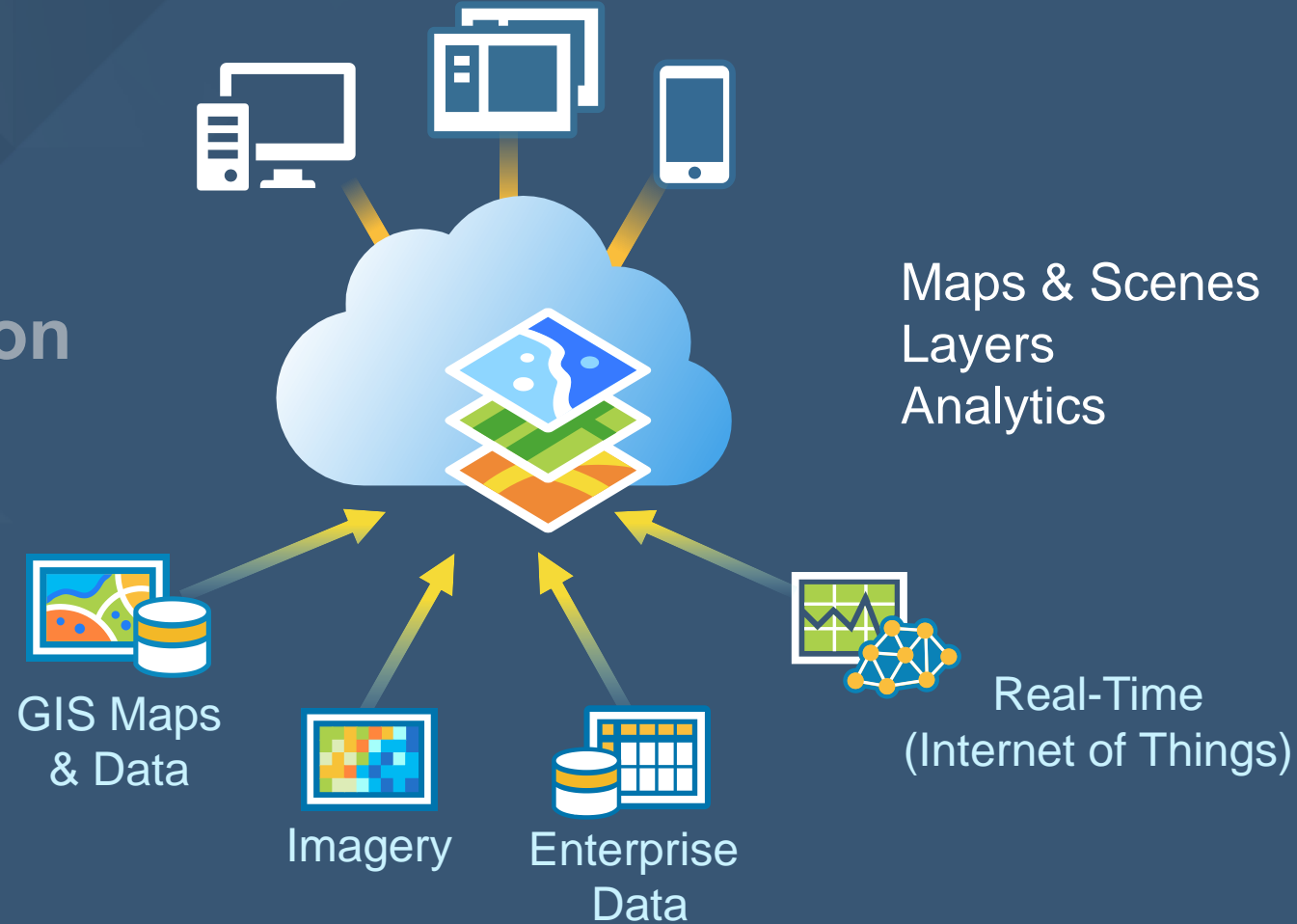




# GIS is a Web GIS platform

Abstracts and organizes all types of data

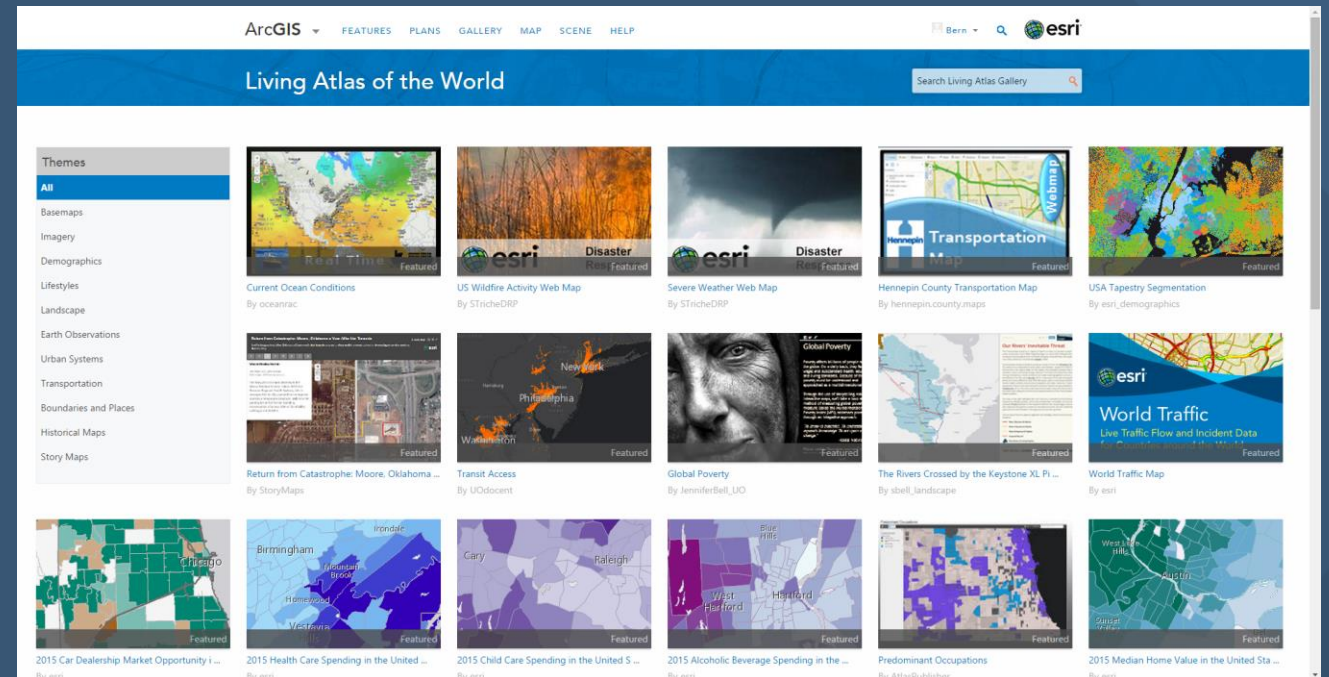
GeoInformation  
Model



# GIS Content

## Living Atlas

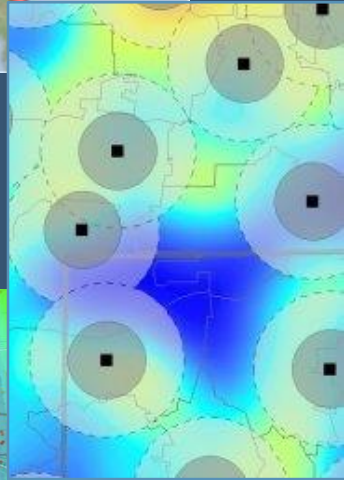
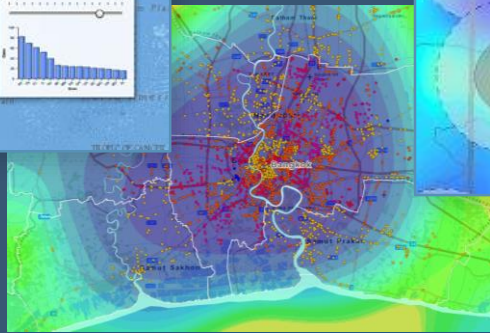
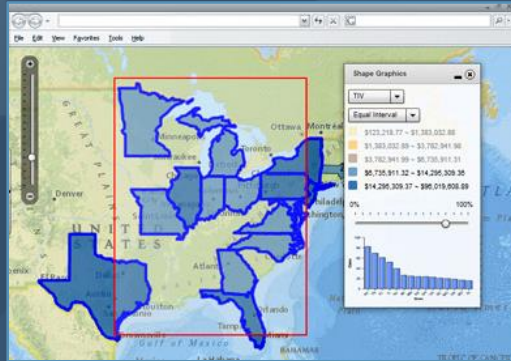
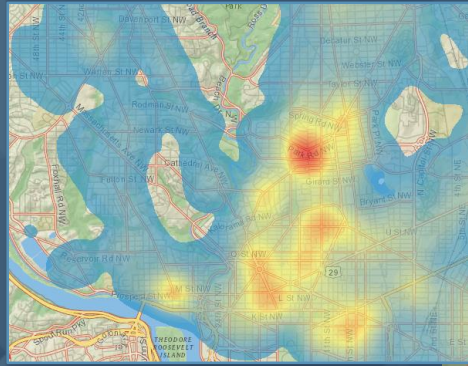
- Basemaps
- Demographics and Lifestyle
- Transportation
- Urban Systems
- Earth Observations
- Imagery
- Landscape
- More...



# Services

## GIS Services

Hosted publishing and analysis



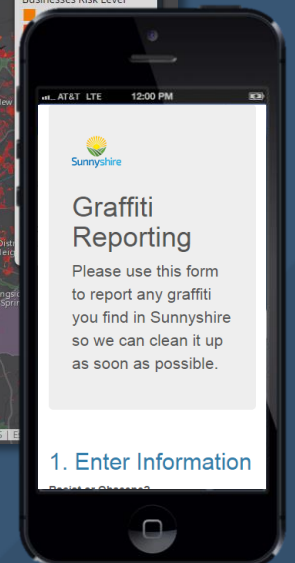
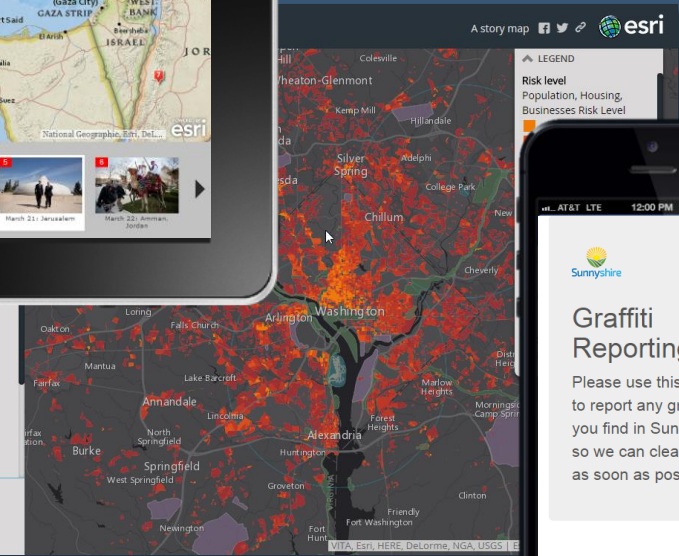
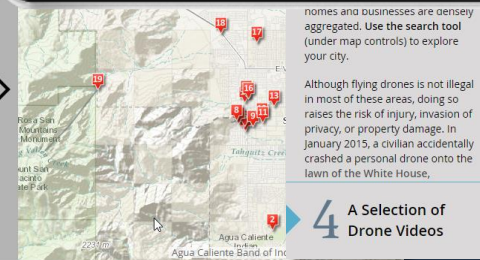
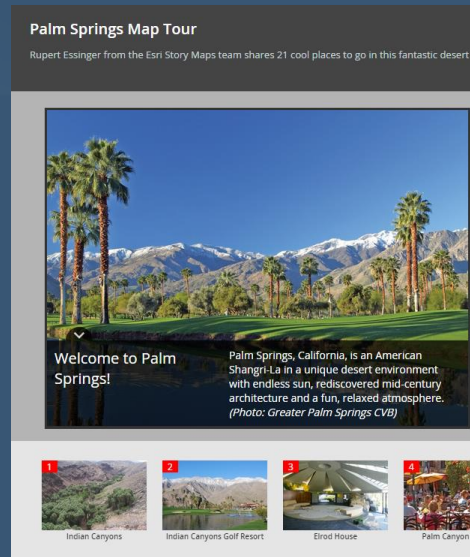
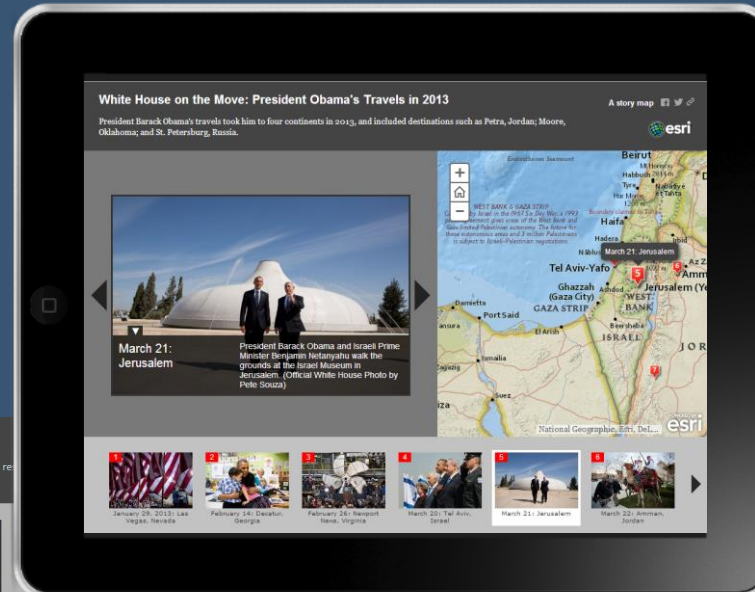
- Route
- Proximity
- Find Nearby
- Extract
- Buffer
- Pattern Analysis
- Drive Time Analysis
- Data Enrichment
- Intersect
- Aggregate Points
- Merge
- Dissolve Boundaries
- Union
- Summarize
- Watershed
- Field Calculator
- Find Hot Spots

# Apps

## GIS Apps

Configurable, Hosted, no programming required

- Configurable app gallery
- Story Maps
- Web AppBuilder
- AppStudio

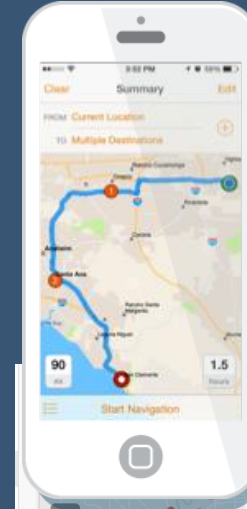
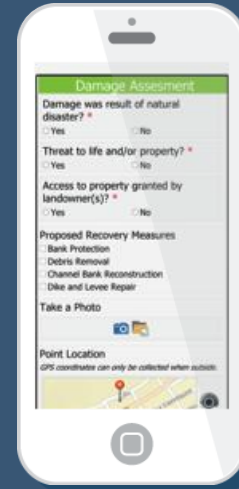


# Apps

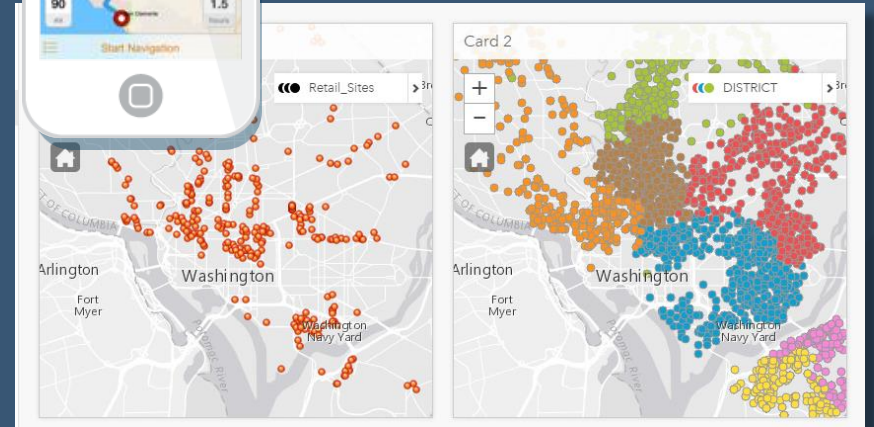
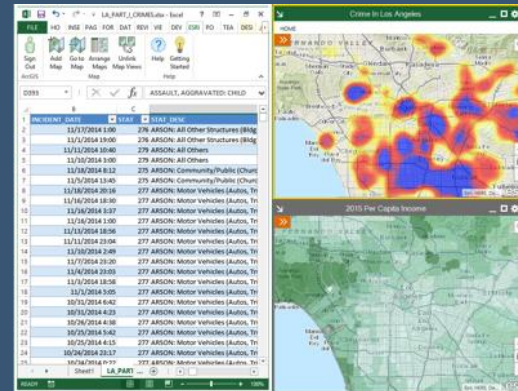
## GIS Apps

Support your workforce and workflows

- Maps for Office
- Collector
- Operations Dashboard
- Explorer
- Navigator
- Workforce Manager
- Drone2Map
- Insights
- Earth



Maps for Office



Insights

# ArcGIS Online

## Cloud-based Web GIS

- Hosted publishing and analytics
- Hosted apps
- Hosted content (Living Atlas)
- Sharing and collaboration
- Public ecosystem
- Integration with on-premises Web GIS



# Web GIS transforms what we do

Changes how we work, integrate, share



System of Record



System of Engagement

System of Insight



# Collaboration in Colombia

Partners, standards, security.....



- IGAC – National Mapping Agency
- Kadaster International
- Trimble
- Esri
- Esri Colombia



**ISO 19152:2012** <sup>®</sup>

Geographic information -- Land Administration Domain Model (LADM)

**FISMA** Authorization & Accreditation

**TRUSTe**  
CERTIFIED PRIVACY

**FedRAMP**

Ensuring secure cloud computing for the Federal Government



 **esri**

 **esri** Colombia

 **Trimble** <sup>®</sup>



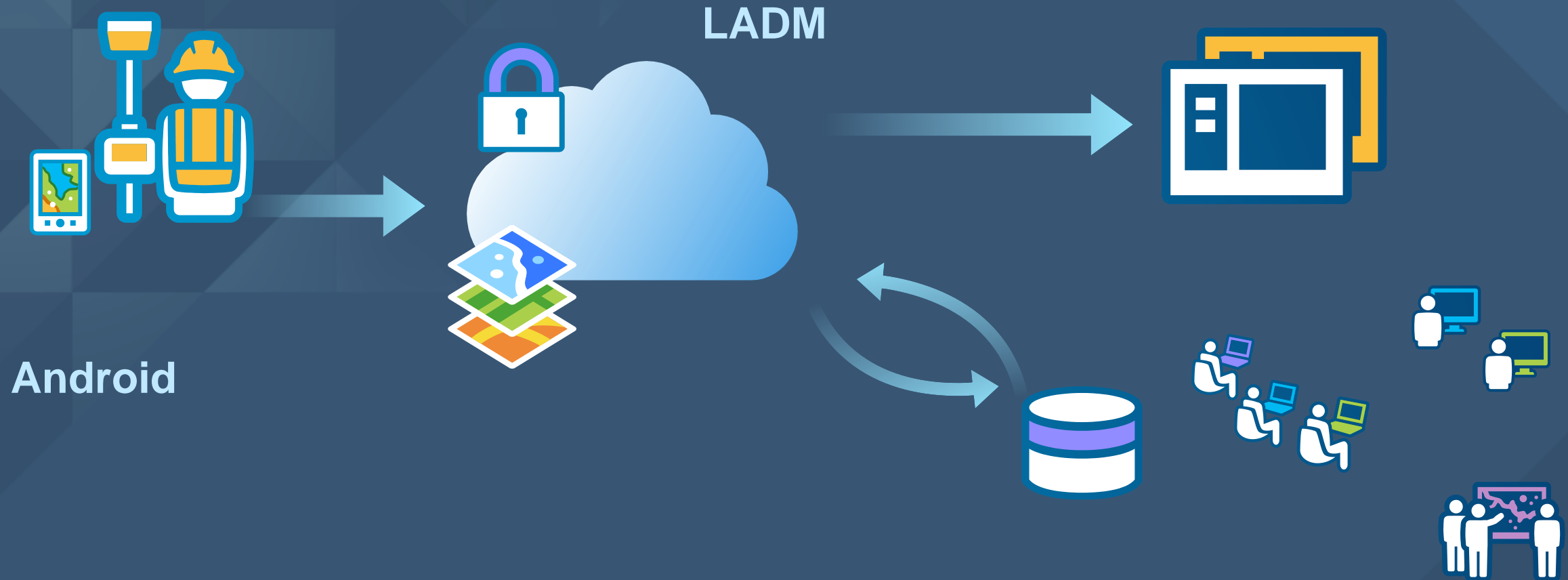
# Why this Approach?

FFP in a couple of weeks.....

- **Fast-to-Implement**
- **Standards-based**
- **Low Cost**
- **Accurate**
- **No Software Development**
- **Secure**
- **Leverages External Data**
- **Uses Many Devices**
- **Future Proof**
- **Scalable**
- **Repeatable**
- **Works Disconnected**

# Leveraging Modern Approaches

FFP processes with FFP technology





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