

Empowering Tribal Sovereignty through GIS

Victoria Anderson
Manu Kaur



Agenda

Section 1 *(10:30 am – 11:15 am) 45 min*

- Introductions
- Esri Tribal Program Overview
- Introduction to GIS
- Data Management, Sovereignty, & Security
- Data to Decision Making
- GIS in Action

Section 2 *(11:15 am – 12:00 pm) 45 min*

- Hands on Workshop

Charge / Grab your laptops or find a buddy!



Introductions



Victoria Anderson
she/her
Sr. Solution Engineer
VAnderson@esri.com



Manu Kaur
she/her
Solution Engineer
MKaur@esri.com

A world map with a dark blue background and a grid. Numerous glowing points in shades of purple, blue, and yellow are scattered across the map, representing users and partners. The points are most densely clustered in North America, Europe, and Asia.

esri

World Leader in Geographic Information Systems (GIS)

Over 10 Million Users

Growing, Strong and Impactful

33,000+ Businesses

12,000+ Colleges & Universities

8,600+ Utilities

12,600+ NGOs

1,200+ National Government Agencies

12,000+ States & Tribal Governments

30,800+ Cities & Local Governments



esri

Mission

- Build Leading GIS Technology
 - Software, SaaS & PaaS
- Support Users – Projects & Systems
 - User Community
 - Training & Education
 - Technical Support
 - Professional Services
- Support Partners

... Advance Spatial Literacy,
Science, Education & Conservation

... Creating a More Sustainable World

GIS

Helping to Address
the World's Challenges...

RESILIENCY



EQUITY



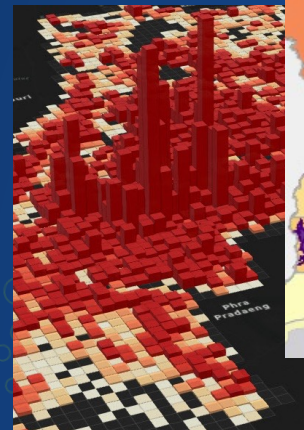
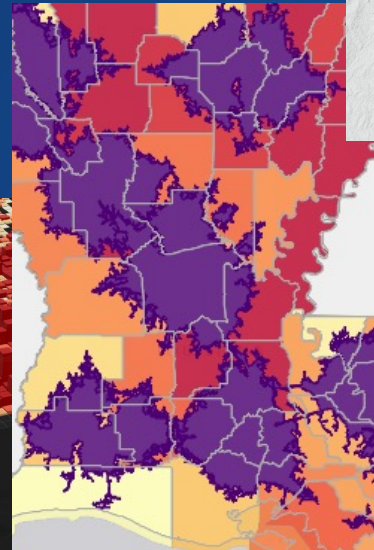
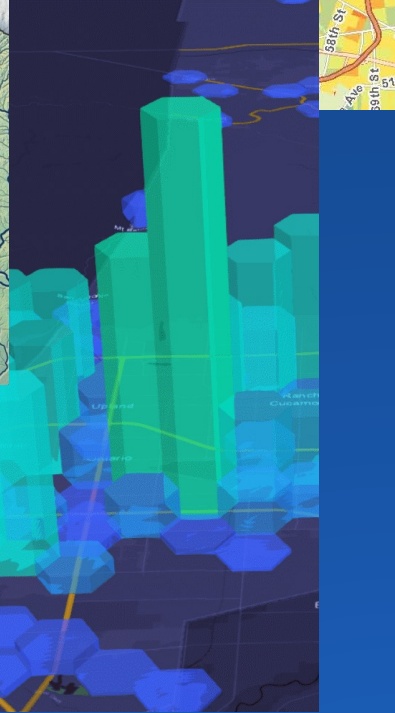
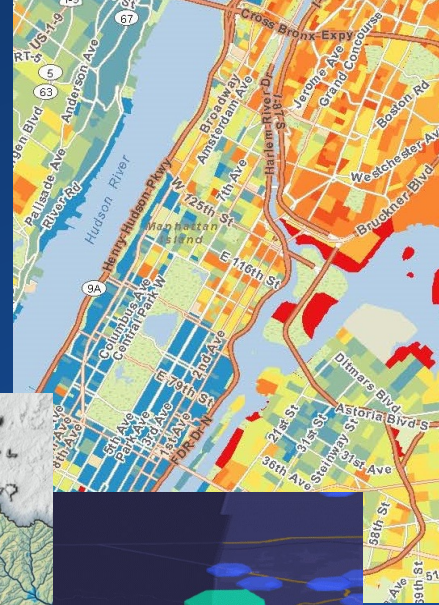
SUSTAINABILITY



EFFICIENCY



GROWTH



Dept. of Interior / Esri Enterprise Agreement

Overview	Includes	Not Included
<ul style="list-style-type: none">• Established in 2003• Streamlines software acquisition• Based on Esri GSA• Covers:<ul style="list-style-type: none">• All of DOI• Federally Recognized Tribes, through Bureau of Indian Affairs (BIA)		



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ArcGIS Online Access

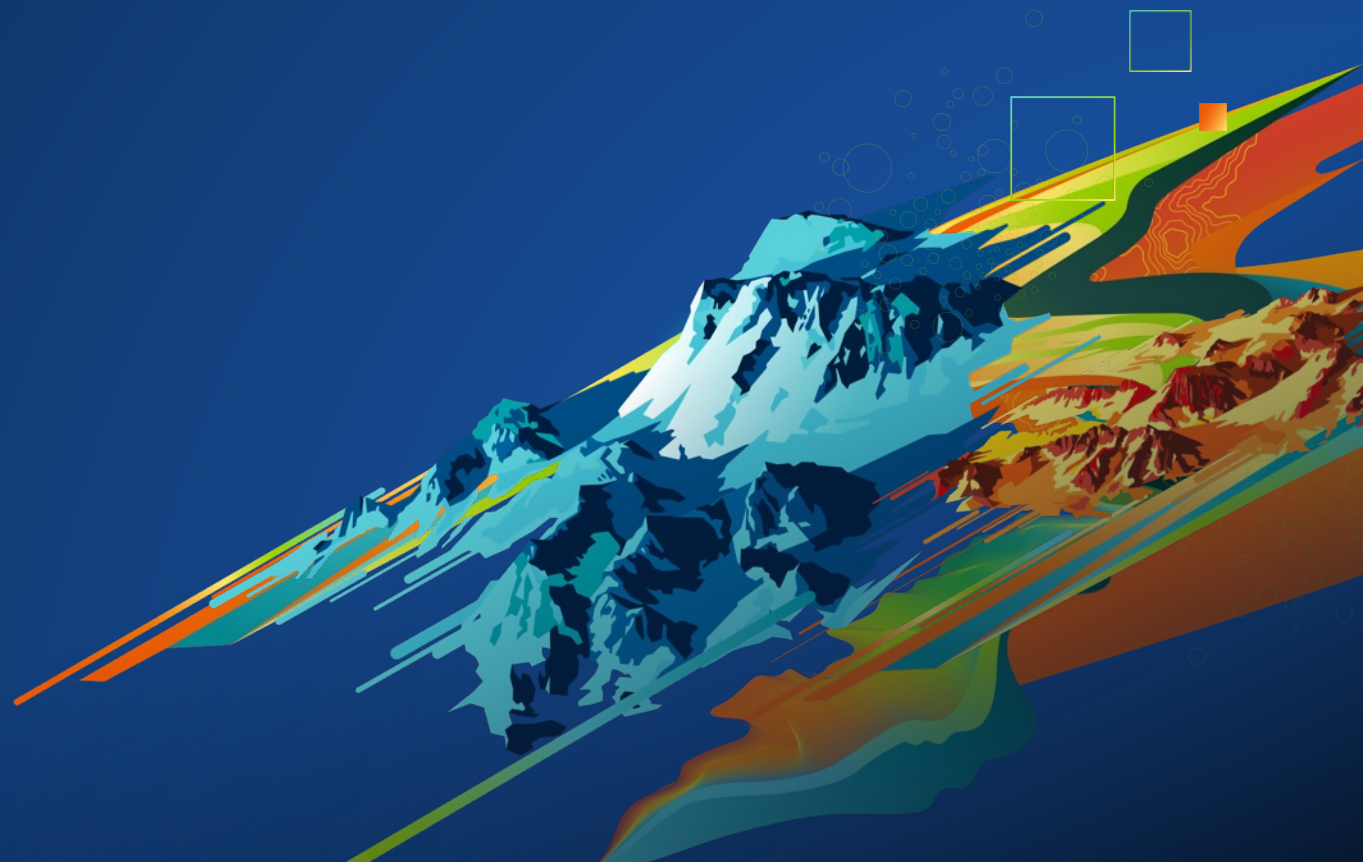
Purchase Through Esri

- GSA Pricing
- Once 5 have been purchased, any more are free

National Tribal GIS

- Request Access at no cost
- Shared Organizations
- Ideal for up to 5 users

What is GIS?



What is a GIS?

A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data.

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What Can We Do With GIS?



What Can We Do With GIS?



Perform Forecasting



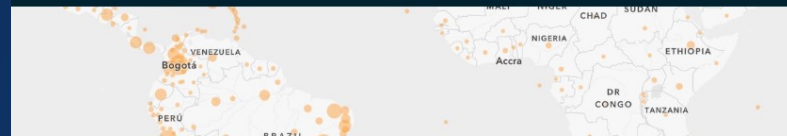
What Can We Do With GIS?



Perform Forecasting



Manage & Respond to Event



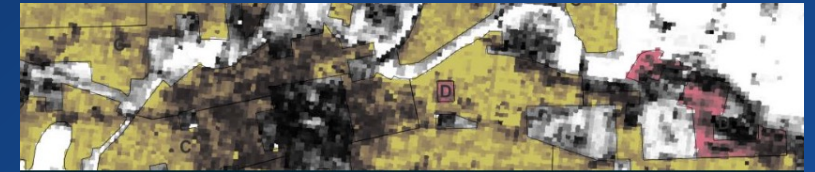
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Identify Problems



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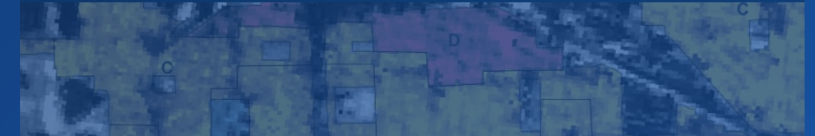
Perform Forecasting



Manage & Respond to Event



Identify Problems



Set Priorities



What Can We Do With GIS?



Perform Forecasting



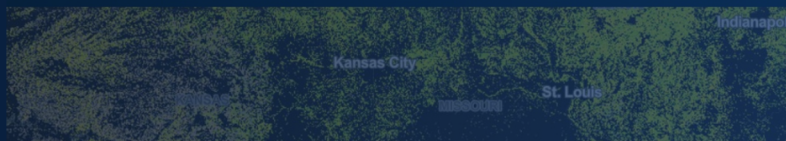
Manage & Respond to Event



Identify Problems



Set Priorities



Monitor Change



What Can We Do With GIS?



Perform Forecasting



Manage & Respond to Event



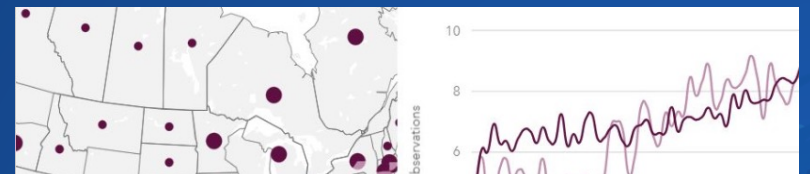
Identify Problems



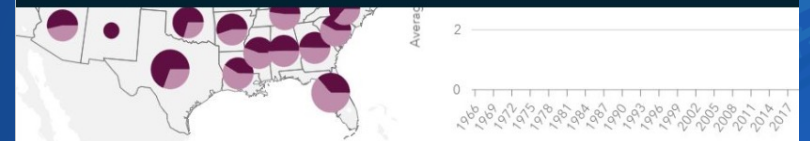
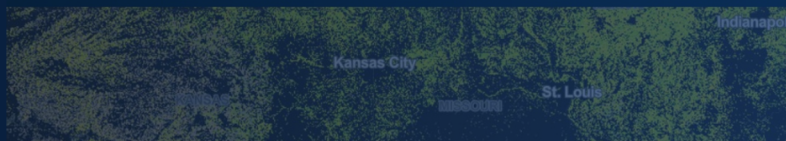
Set Priorities



Monitor Change



Understand Trends

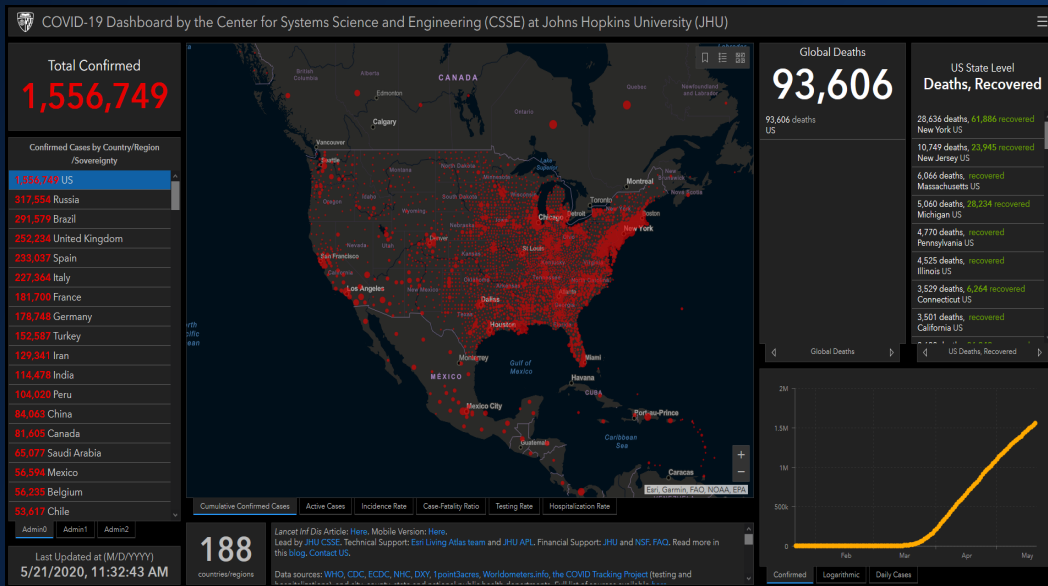


Who Uses GIS?

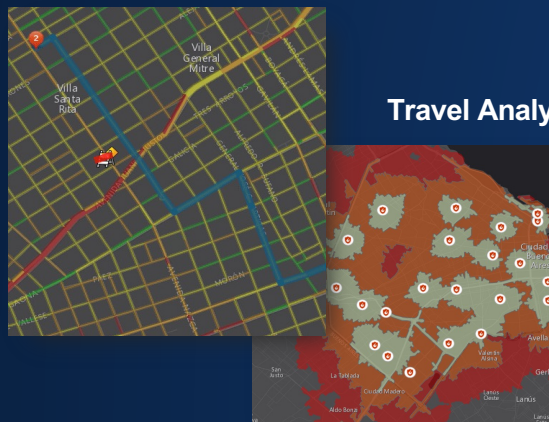


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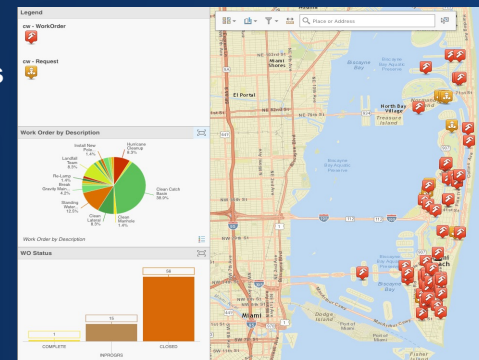
COVID-19 JHU Dashboard



Emergency Routing

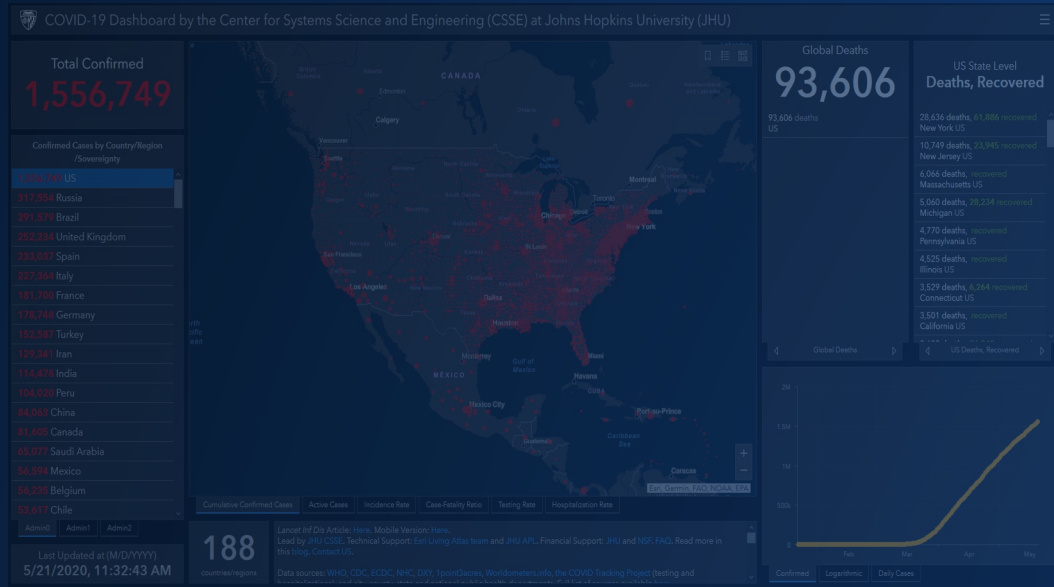


Hurricane Irma Response Management Team

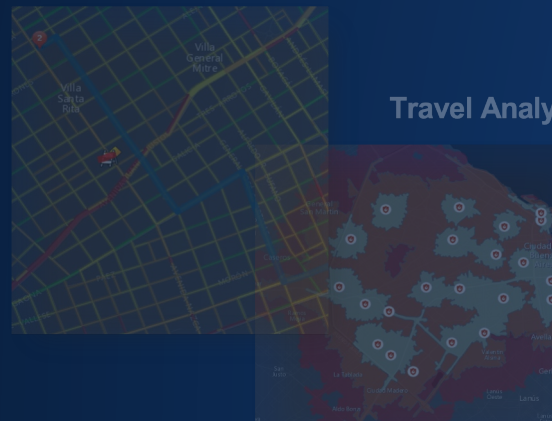


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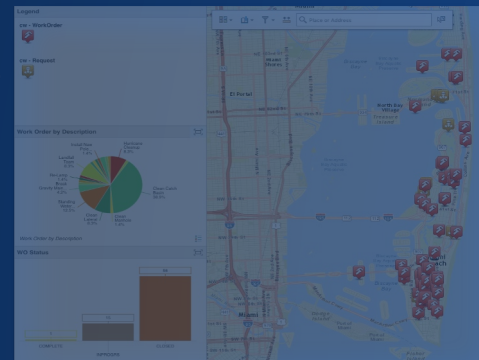
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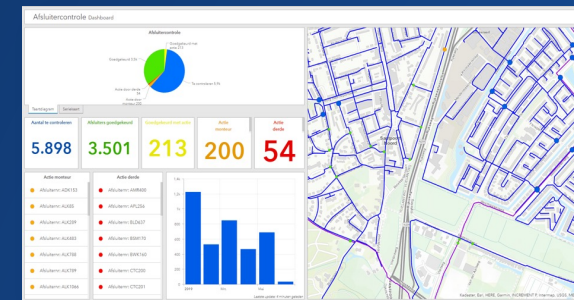
Hurricane Irma Response Management Team



Insurance Risk Portal



Urban Planners: Water Management

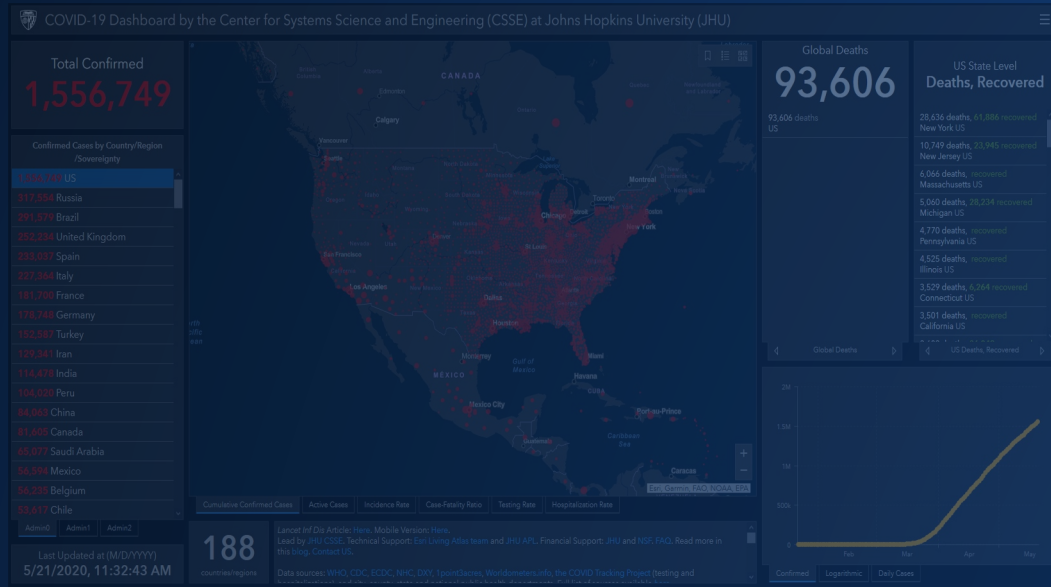


Sidewalk Ramp Status

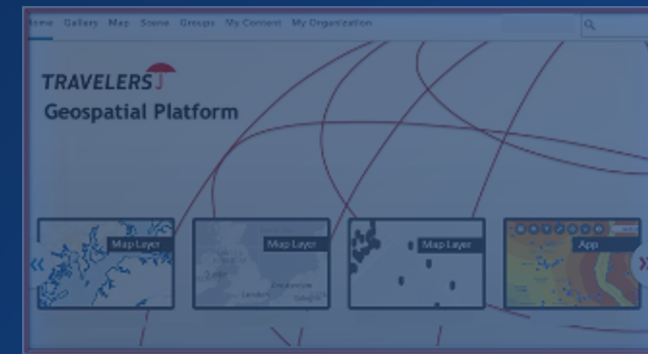


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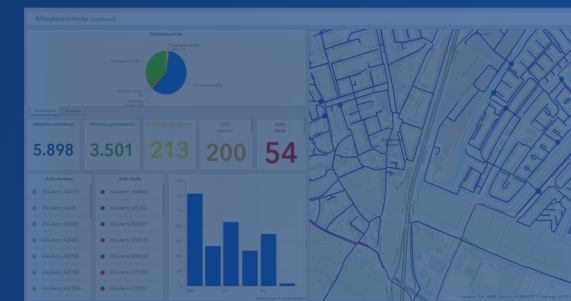
Insurance Risk Portal



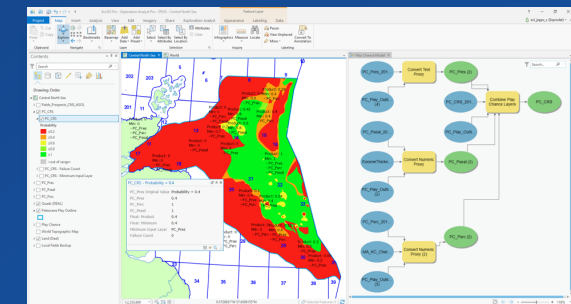
Tree Inventory



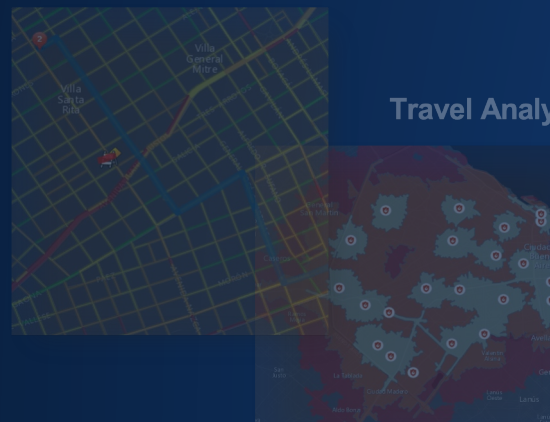
Water Management



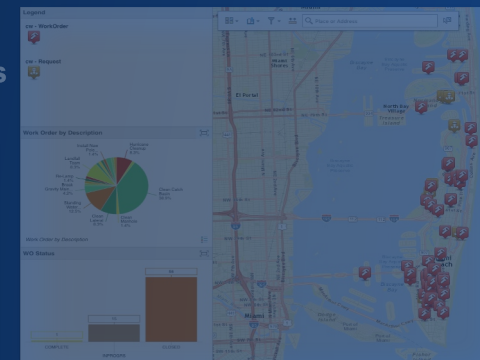
Exploration Analysis



Emergency Routing



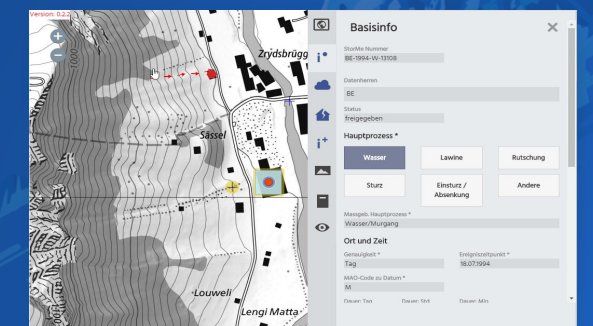
Hurricane Irma Response Management Team



Sidewalk Ramp Status



Landslide Modeling



GIS Interconnects & Integrates

Creating Relationships and Streamlining Workflows



GIS Interconnects & Integrates

Creating Relationships and Streamlining Workflows

01 Data Capture & Integration

GIS



GIS Interconnects & Integrates

Creating Relationships and Streamlining Workflows

01 Data Capture & Integration

02 Visualize & Real Time

GIS



GIS Interconnects & Integrates

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03 Analyze & Predict

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GIS Interconnects & Integrates

Creating Relationships and Streamlining Workflows

01 Data Capture & Integration

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03 Analyze & Predict

04 Share & Collaborate



ArcGIS System



The ArcGIS System

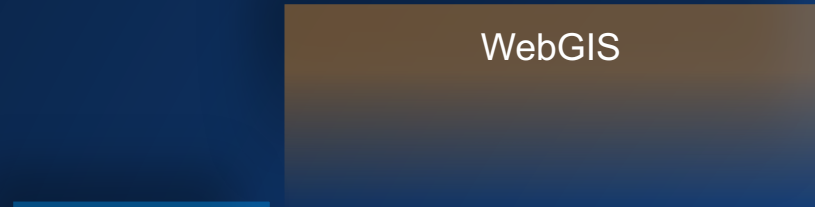


The ArcGIS System

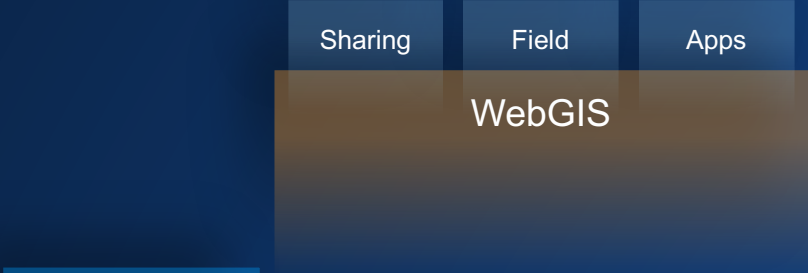
ArcGIS Pro



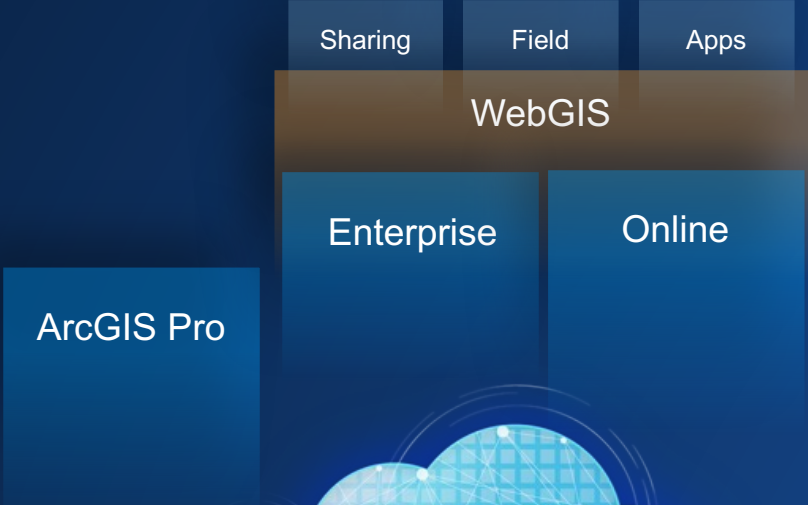
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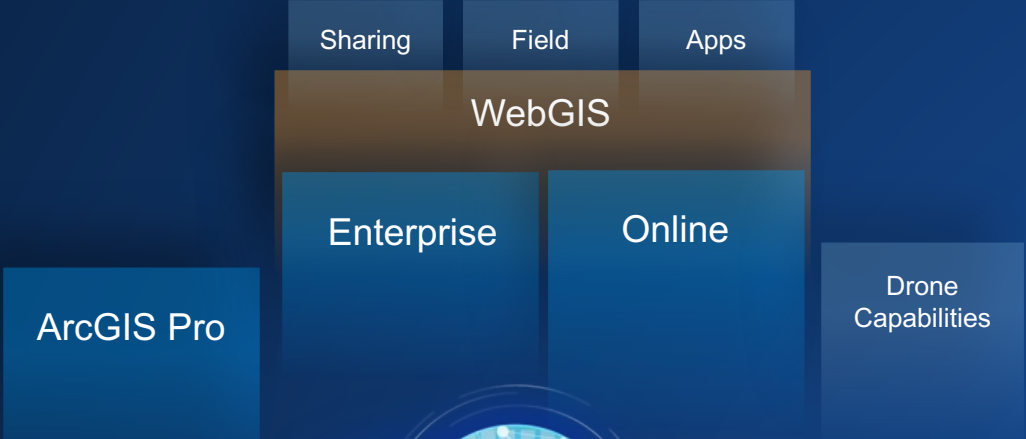
The ArcGIS System



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The ArcGIS System



ArcGIS Pro

A desktop application for the GIS Professional

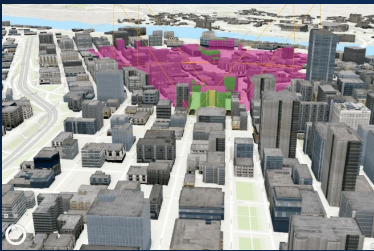


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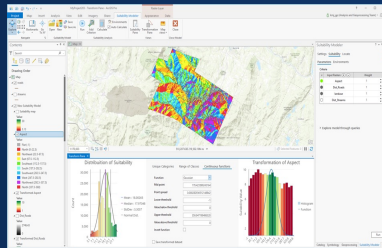
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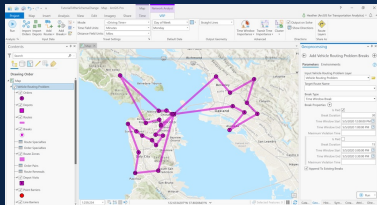
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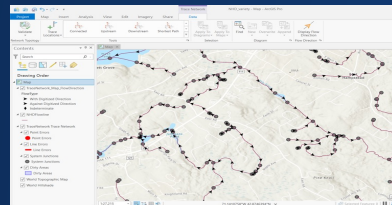
3D layers



Interactive Suitability Analysis



Vehicle Routing Problem (VRP)



Trace Network

ArcGIS Pro

A desktop application for the GIS Professional



ArcGIS Pro



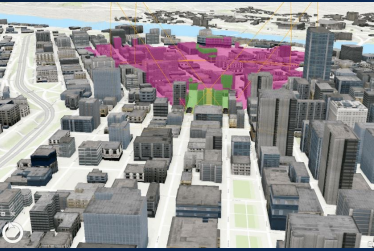
ArcGIS Enterprise



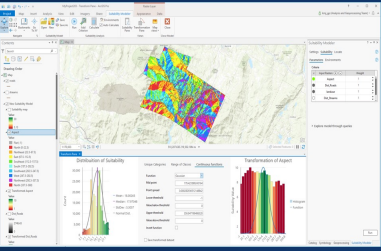
ArcGIS Online



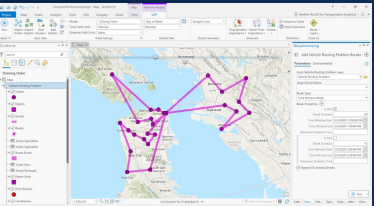
Shared GIS portal in web browser



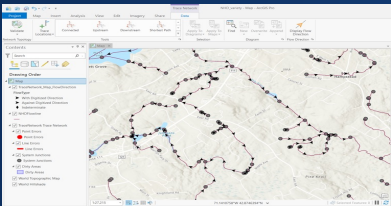
3D layers



Interactive Suitability Analysis



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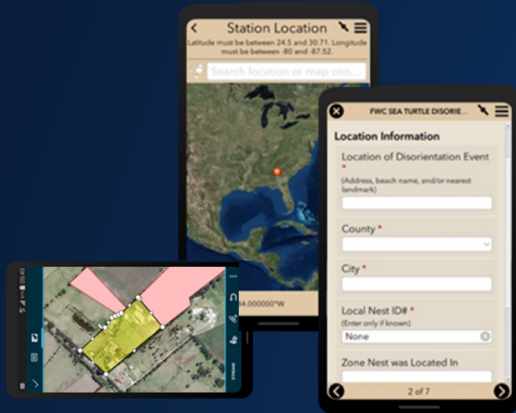
Web GIS

A cloud-based mapping and analysis solution



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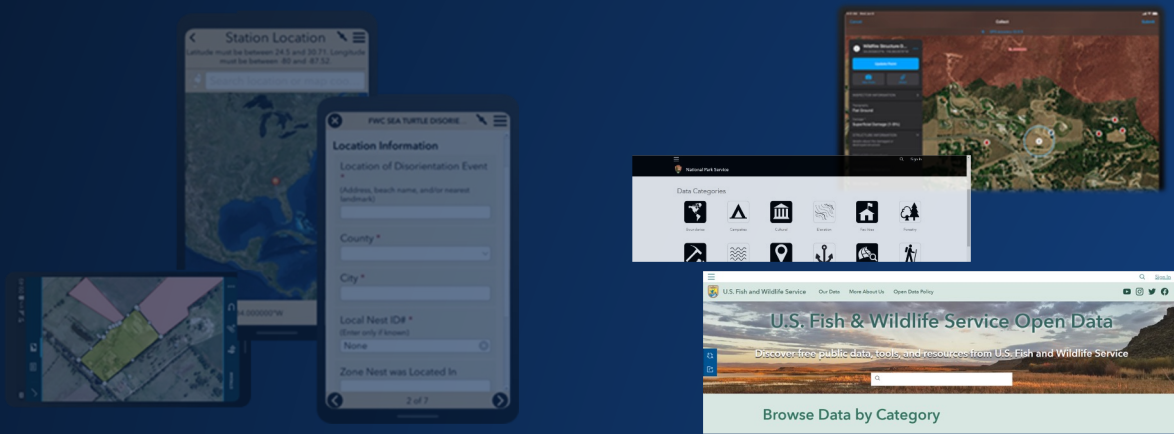


Securely create, organize, and
manage geographic information



Web GIS

A cloud-based mapping and analysis solution



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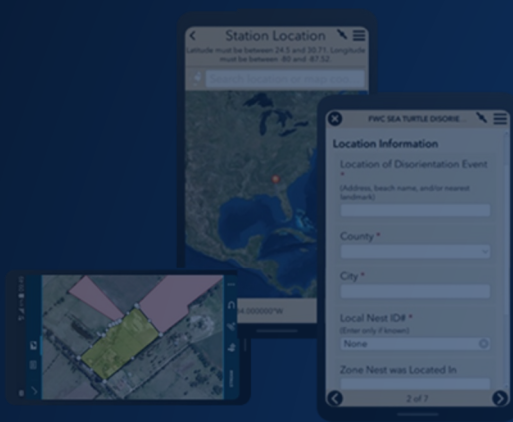


Leverage ready to use data from multiple authoritative sources

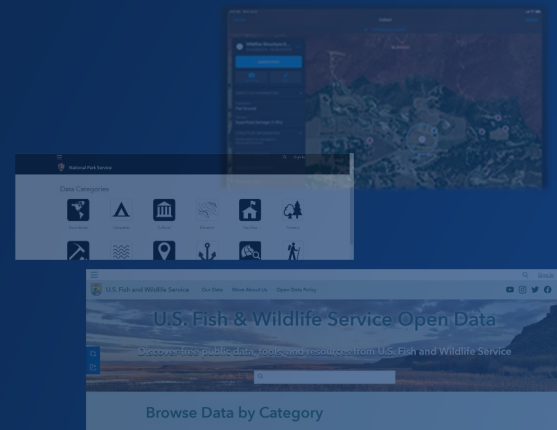


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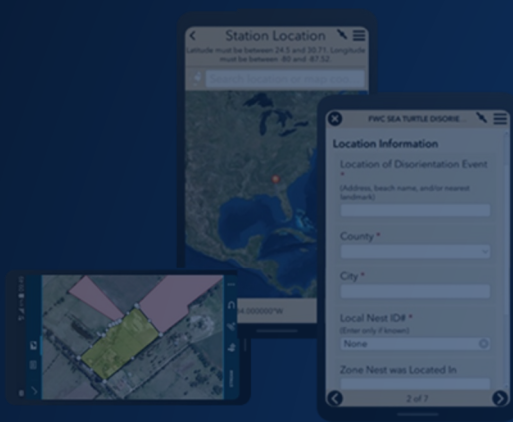


Build engaging and interactive information products

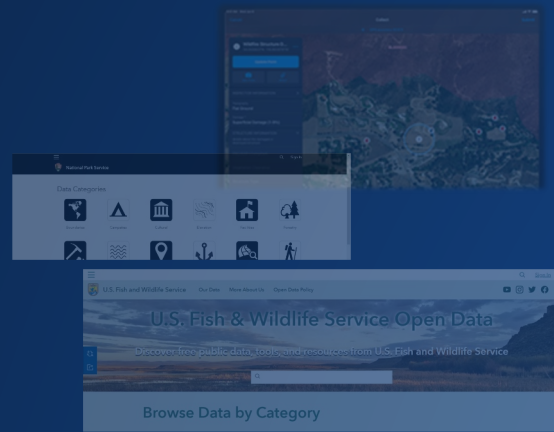


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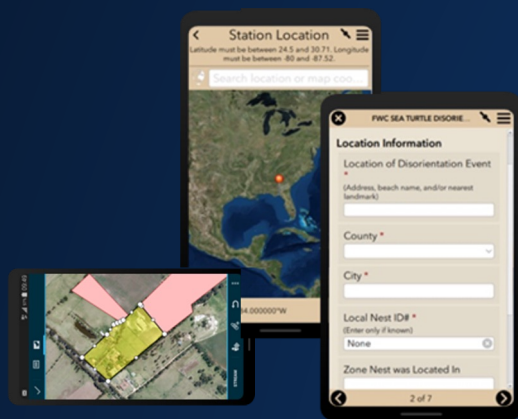


Collaborate and share information with internal and external stakeholders

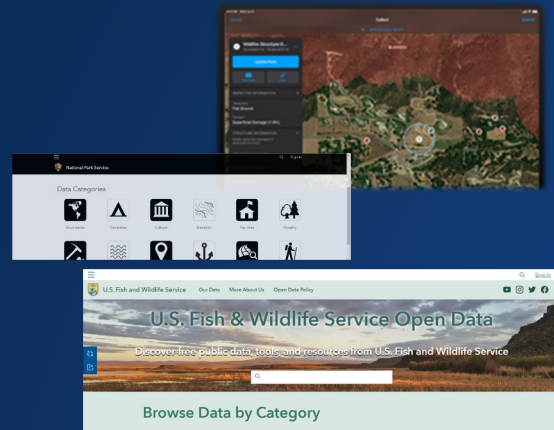


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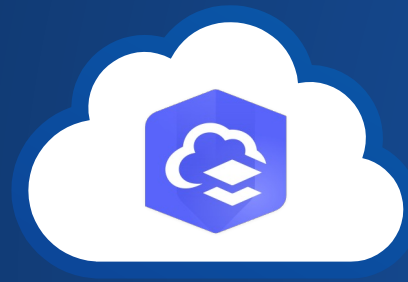
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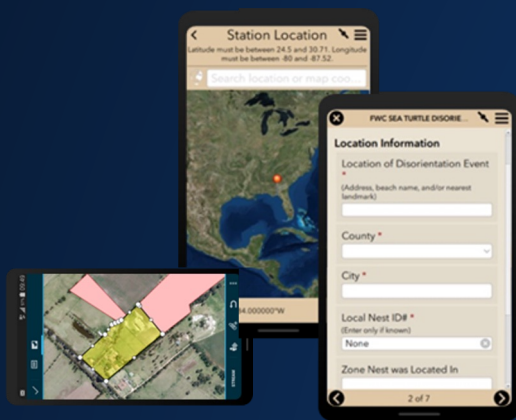


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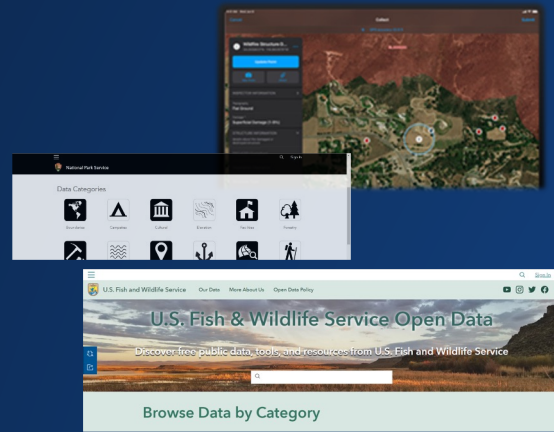


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ArcGIS Enterprise

The Geographic Approach

Providing a Process
and Framework . . .

. . . For Applying Geographic
Knowledge



The Geographic Approach



The Geographic Approach

Applied to Disaster Resilience



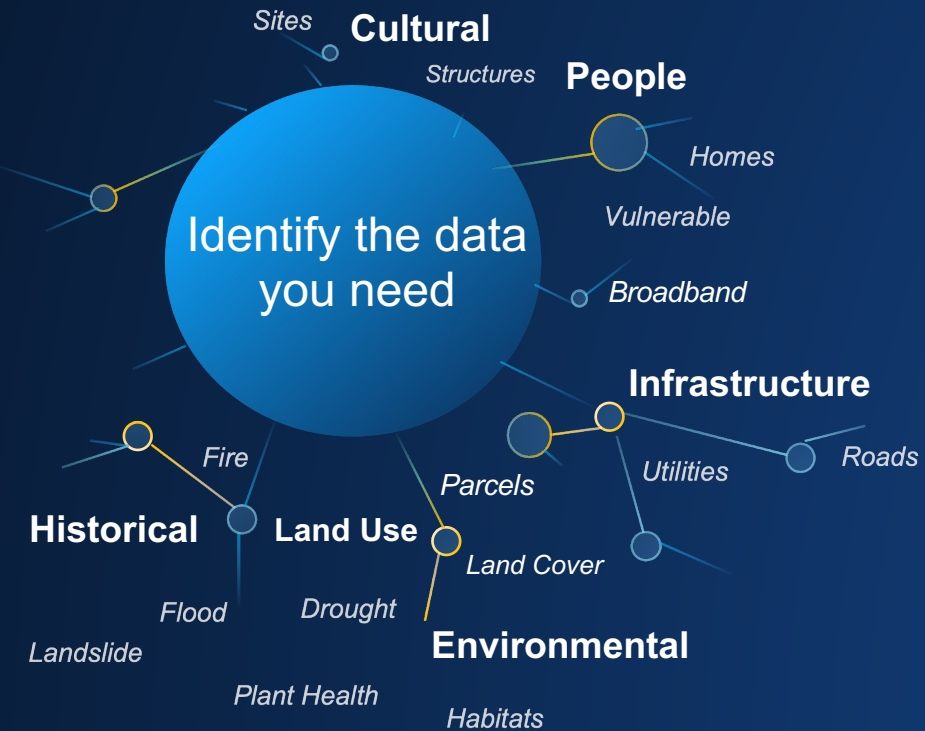
The Geographic Approach

Applied to Disaster Resilience



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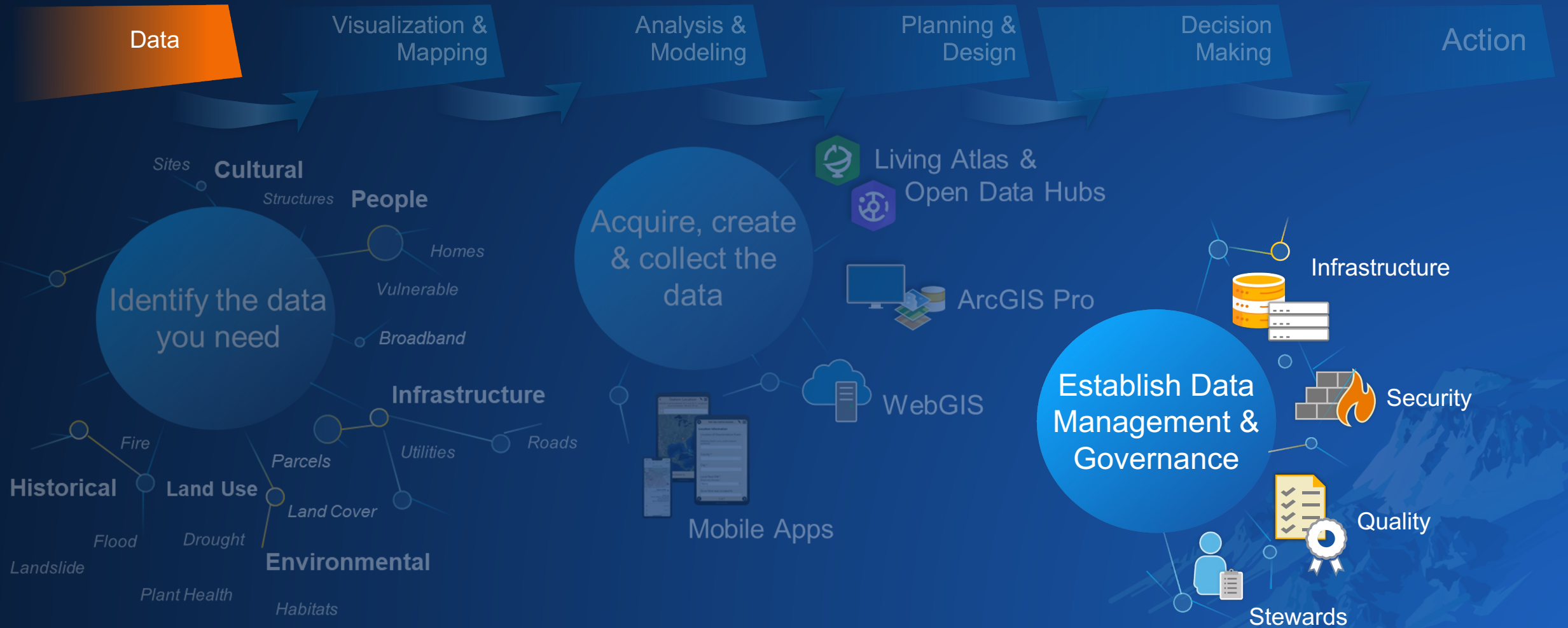
The Geographic Approach

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The Geographic Approach

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The Geographic Approach

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WHAT INFORMATION

do you need to convey?



WHAT QUESTIONS

do you need to answer?



WHO

will be viewing this information?



HOW

will they interact with it?



The Geographic Approach

Applied to Disaster Resilience

Data

Visualization &
Mapping

Analysis &
Modeling

Planning &
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Decision
Making

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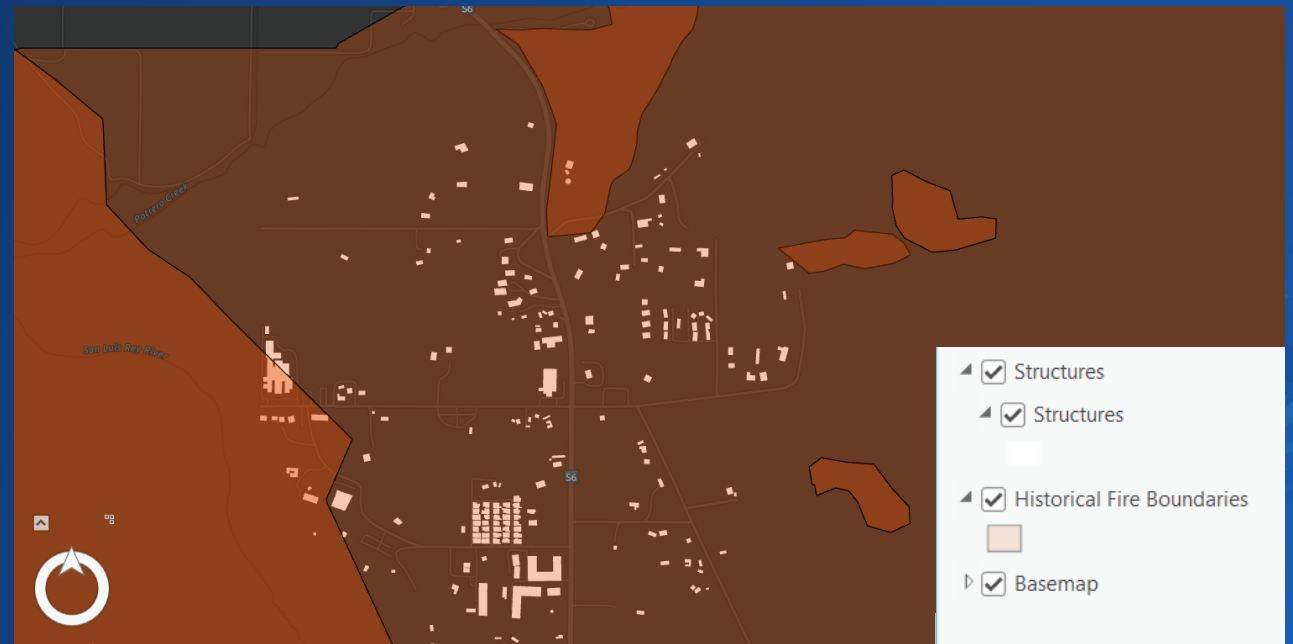
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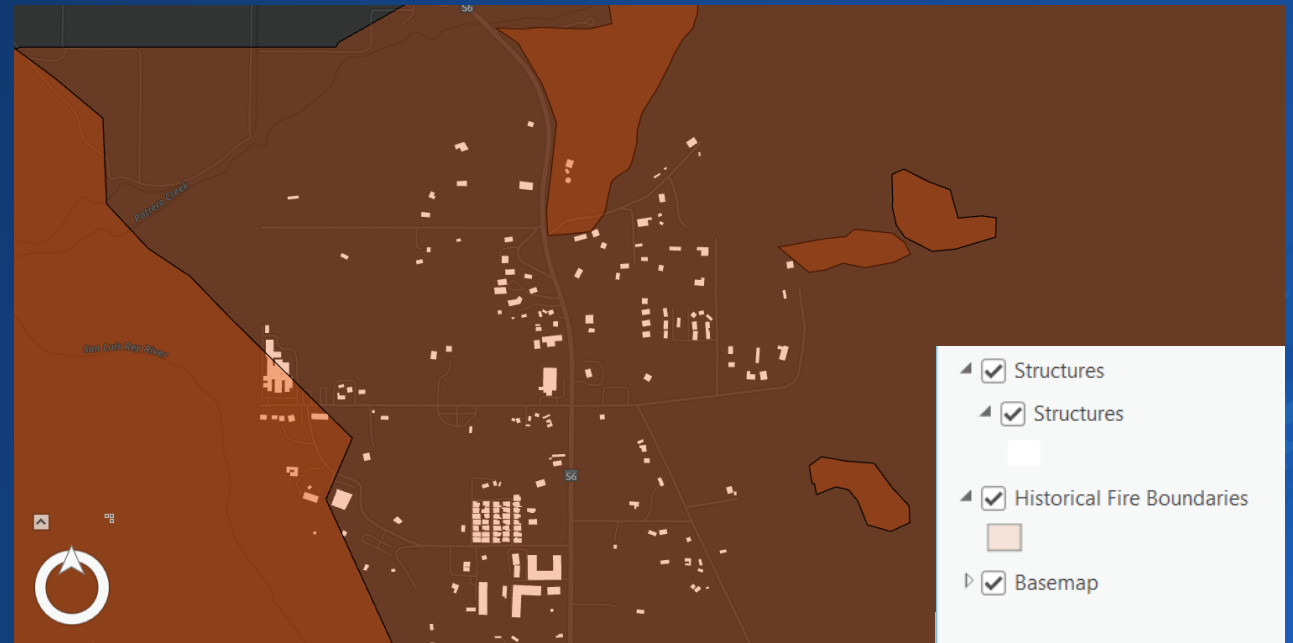
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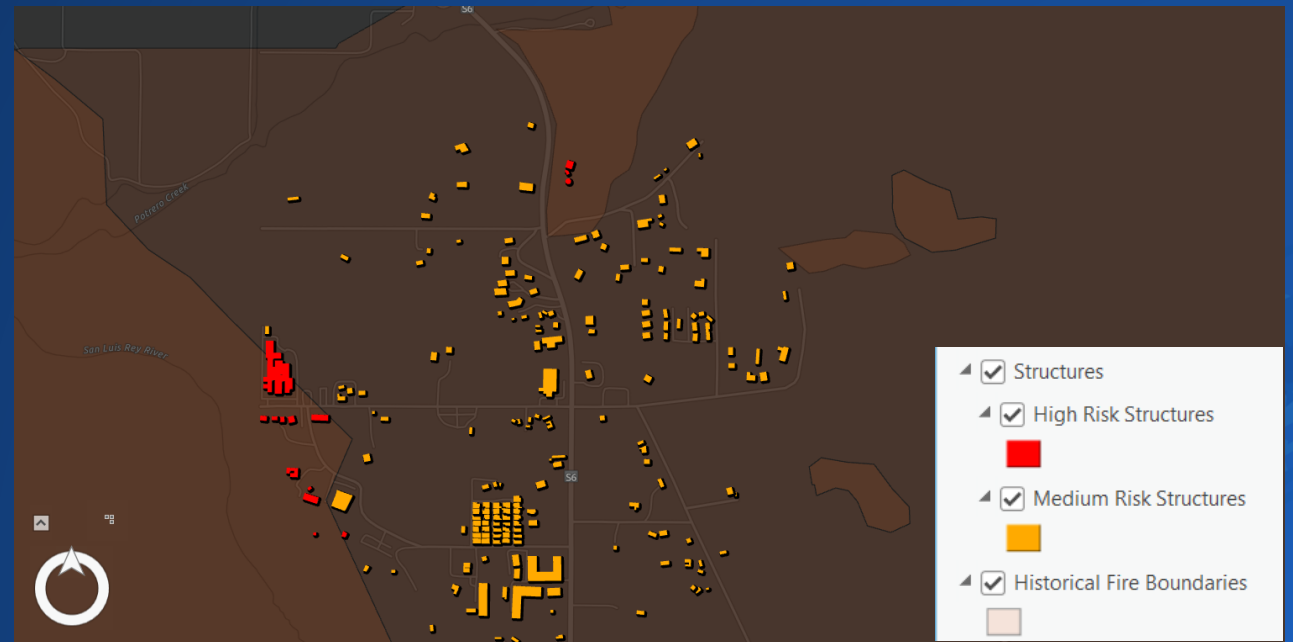
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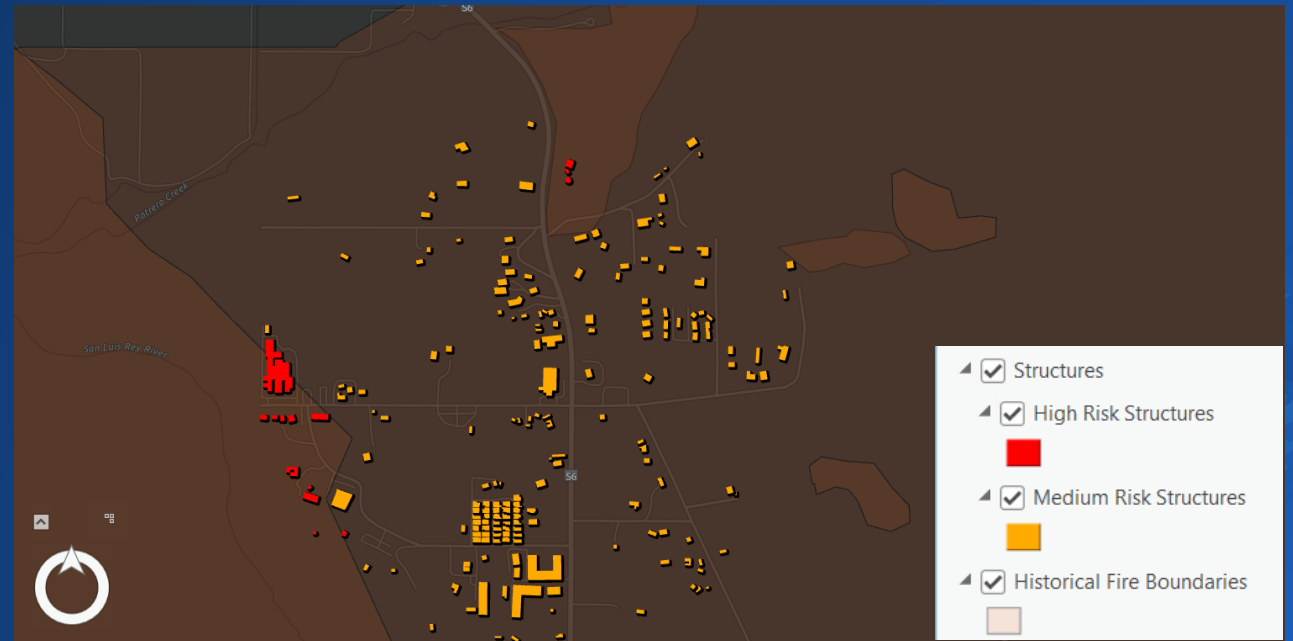
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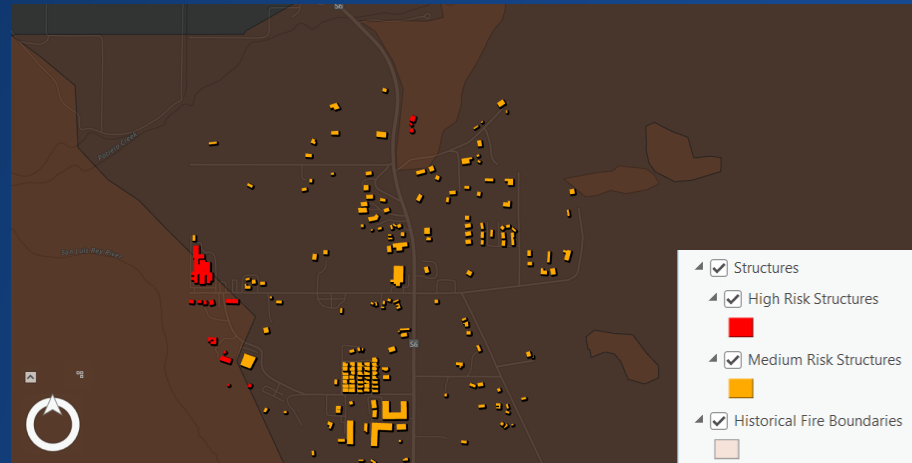
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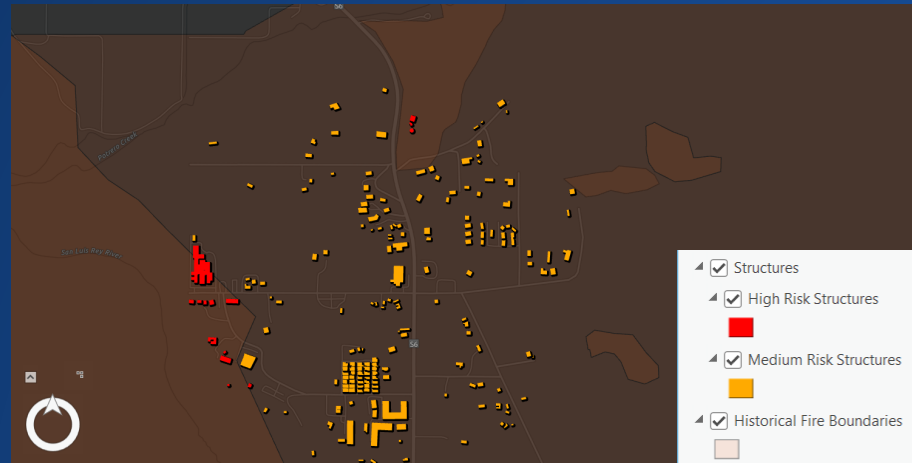
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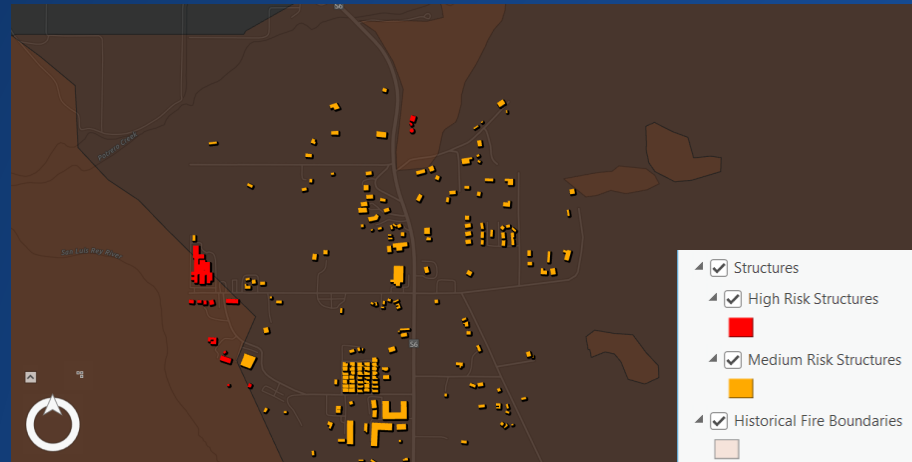
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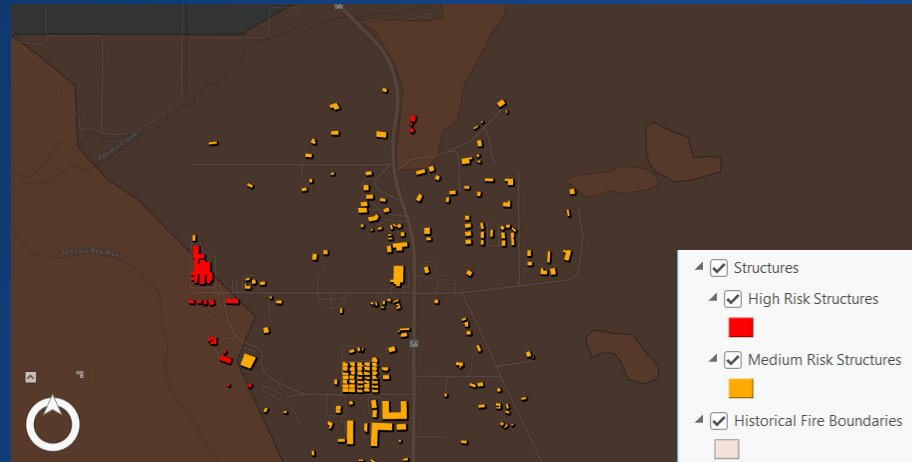
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will they interact with it?



The Geographic Approach

Applied to Disaster Resilience

Data

Visualization &
Mapping

Analysis &
Modeling

Planning &
Design

Decision
Making

Action

WHAT INFORMATION

do you need to convey?



WHAT QUESTIONS

do you need to answer?



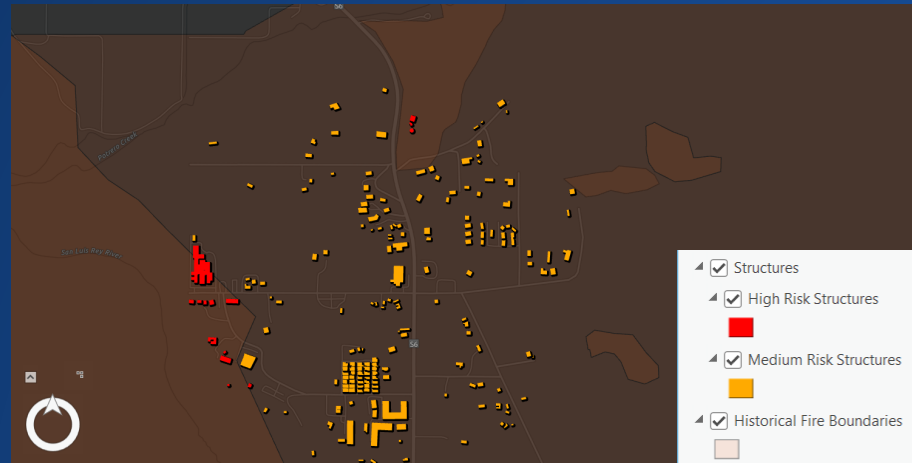
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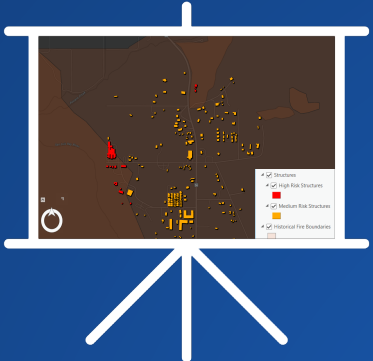
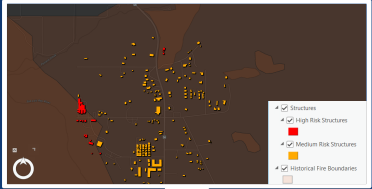
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The Geographic Approach

Applied to Disaster Resilience



The Geographic Approach

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understanding

WHERE



measuring

SIZE, SHAPE, & DISTRIBUTION



finding

BEST LOCATIONS & PATHS



determining

HOW PLACES ARE RELATED



detecting & quantifying

PATTERNS



making

PREDICTIONS

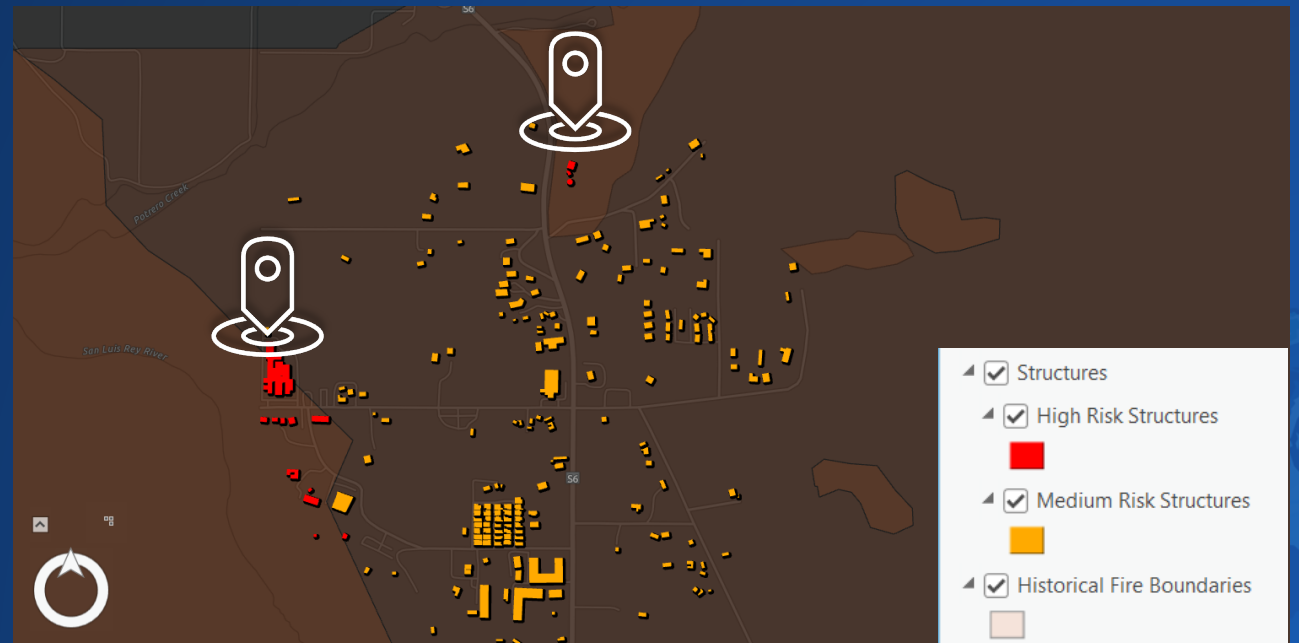


The Geographic Approach

Applied to Disaster Resilience



understanding WHERE	
measuring SIZE, SHAPE, & DISTRIBUTION	
finding BEST LOCATIONS & PATHS	
determining HOW PLACES ARE RELATED	
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making PREDICTIONS	



The Geographic Approach

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understanding WHERE	
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finding BEST LOCATIONS & PATHS	
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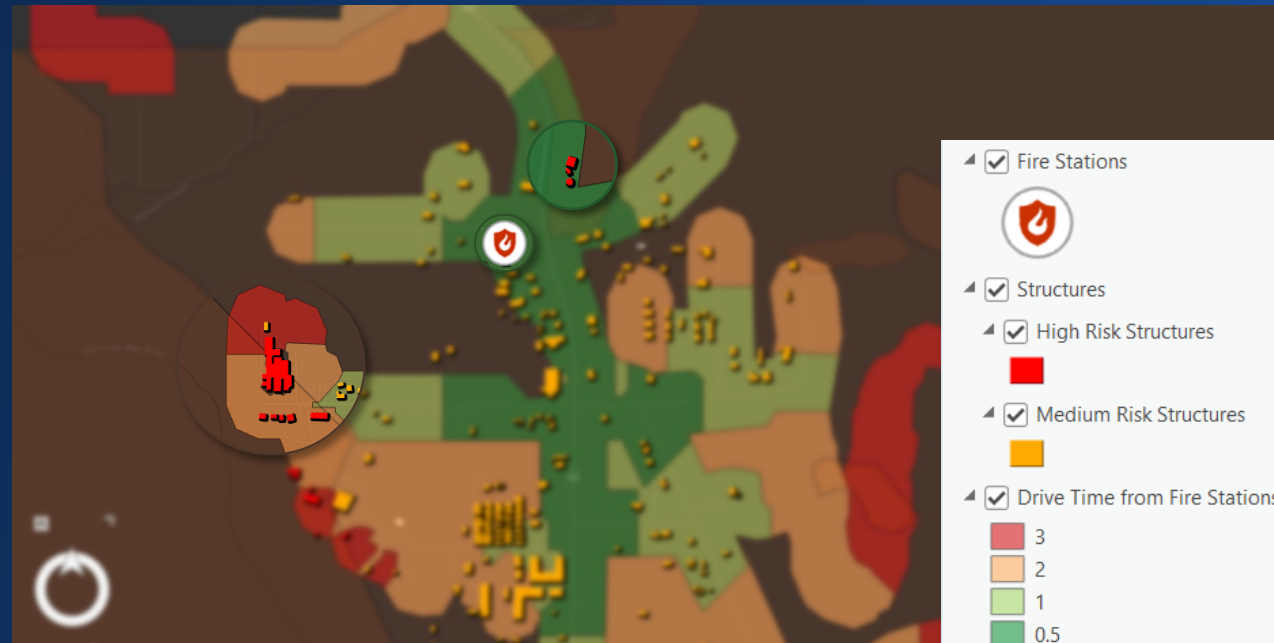
The Geographic Approach

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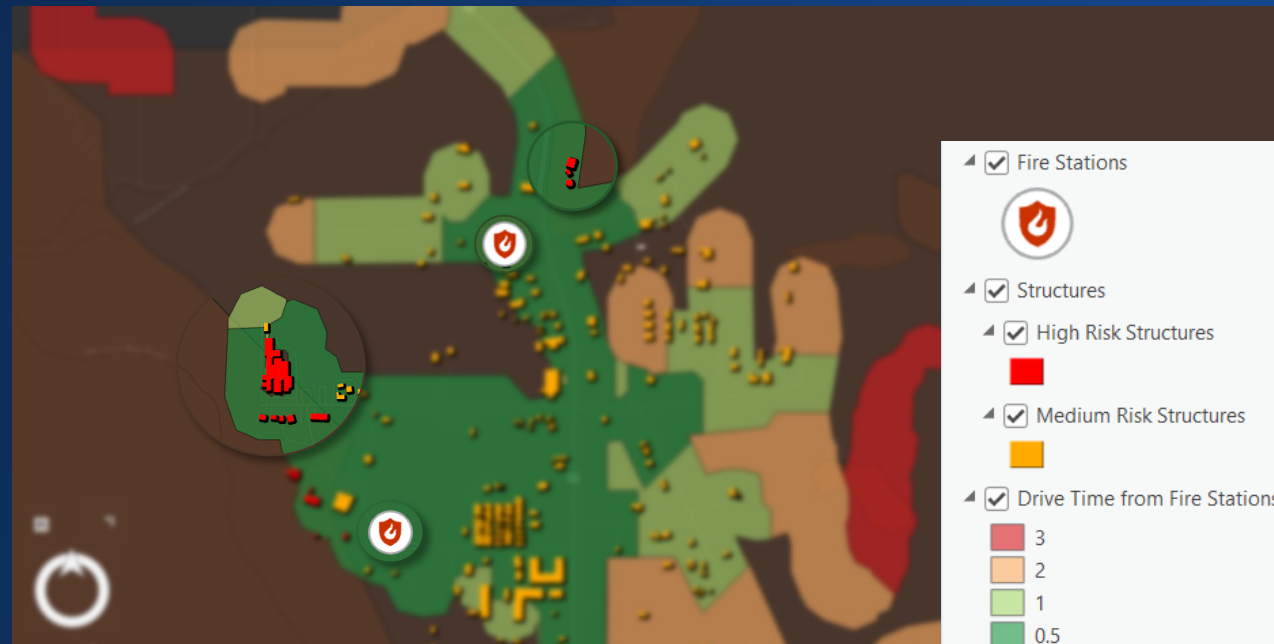
The Geographic Approach

Applied to Disaster Resilience



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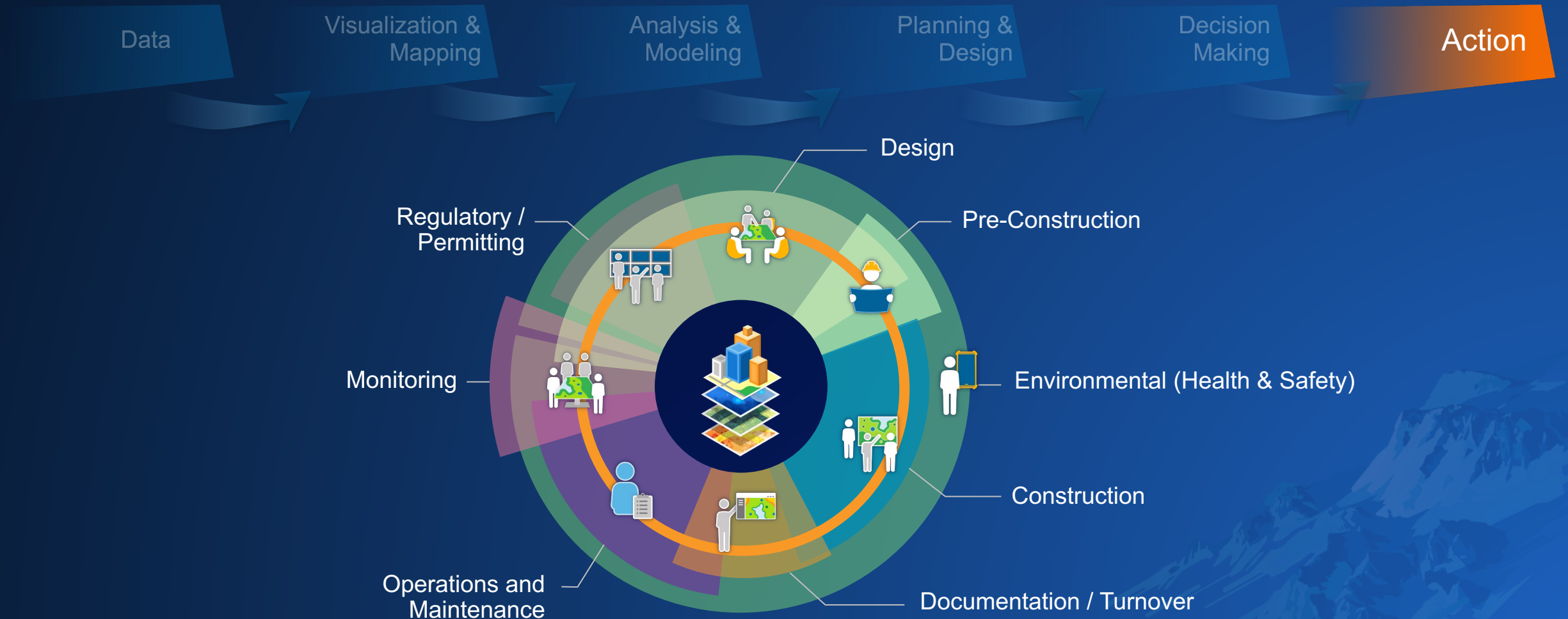
The Geographic Approach

Applied to Disaster Resilience



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The Geographic Approach

Applied to Disaster Resilience

Data

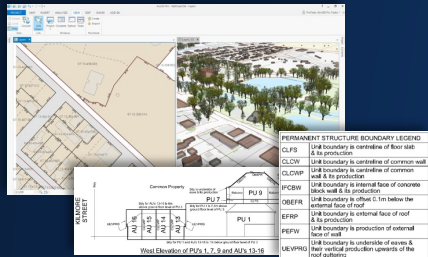
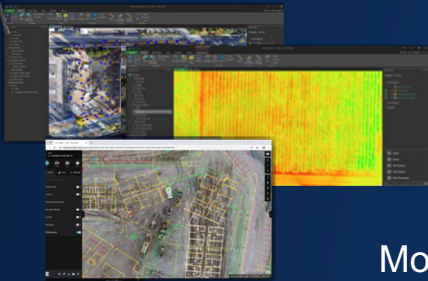
Visualization & Mapping

Analysis & Modeling

Planning & Design

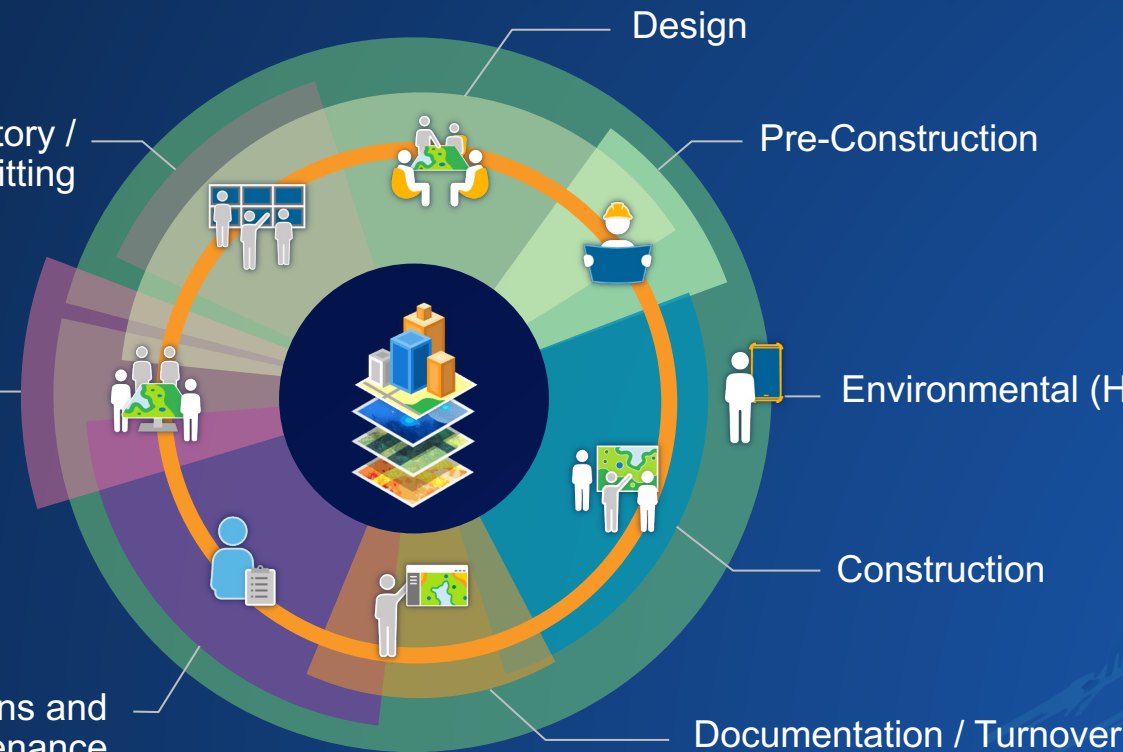
Decision Making

Action



Monitoring

Operations and Maintenance



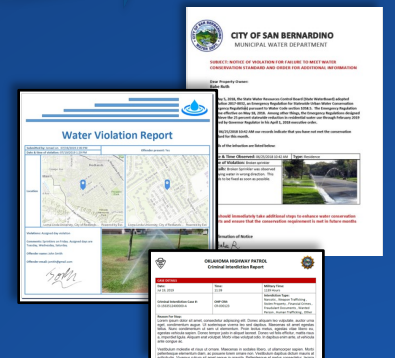
Design

Pre-Construction

Environmental (Health & Safety)

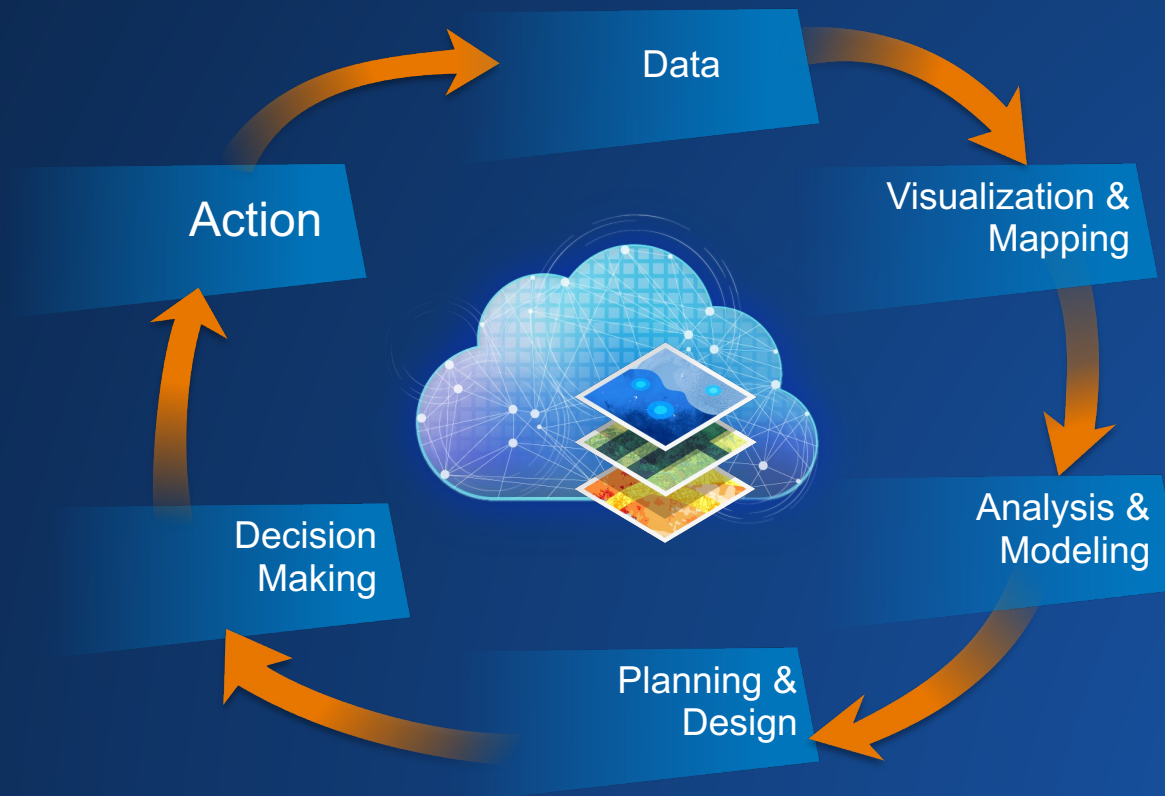
Construction

Documentation / Turnover



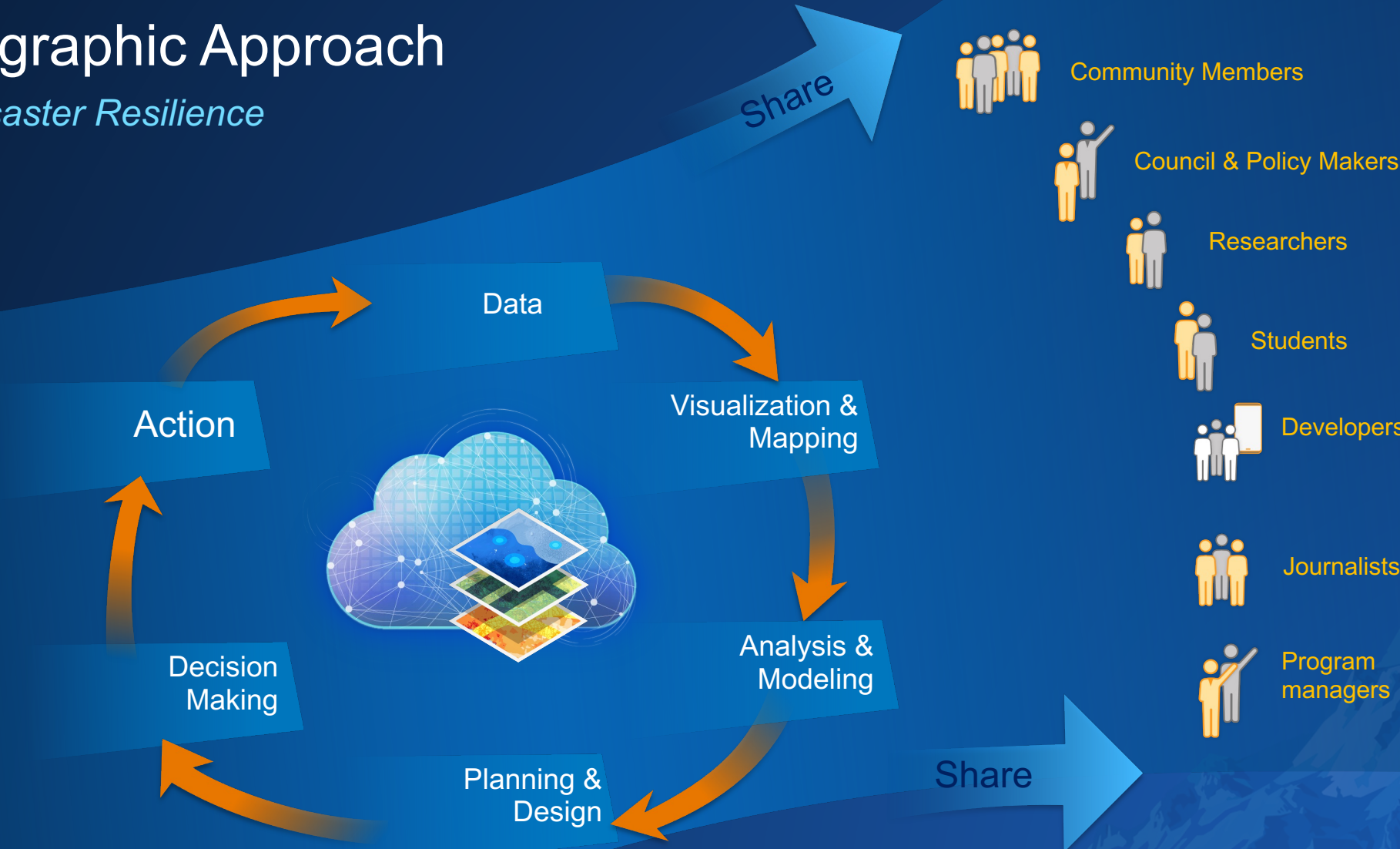
The Geographic Approach

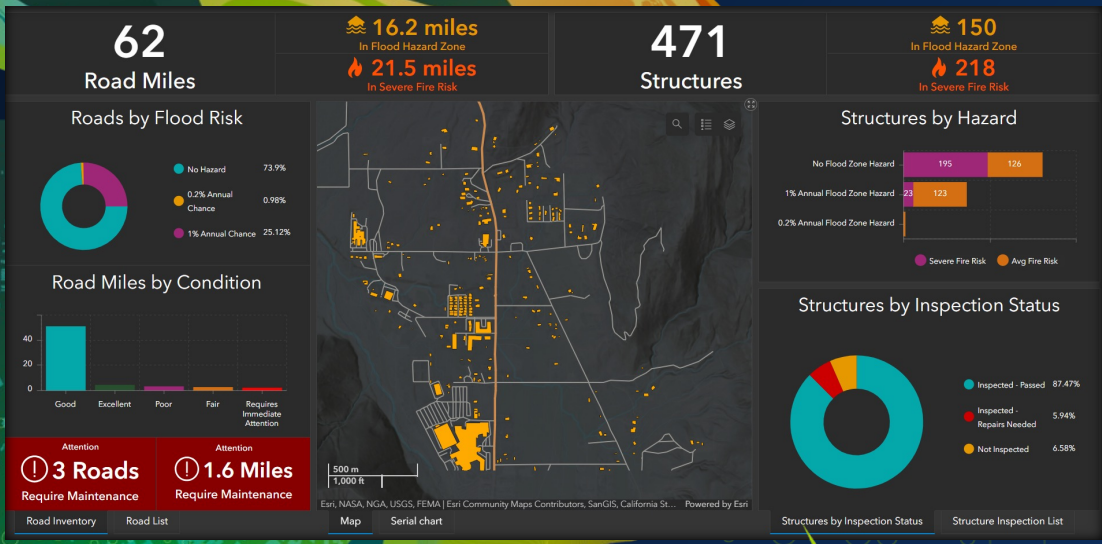
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The Geographic Approach

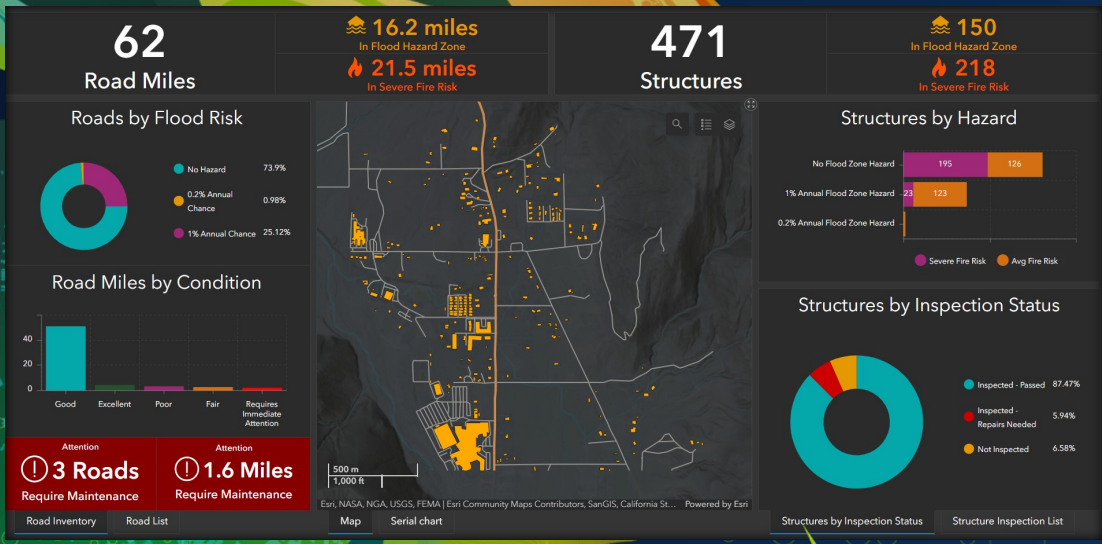
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Geographic Approach In Action

Victoria



Hands On Workshop

Upcoming Events

Drone Mapping User
Meeting for Native Nations

April 16th, 2024 (8 am – 5 pm)

Olympia, WA

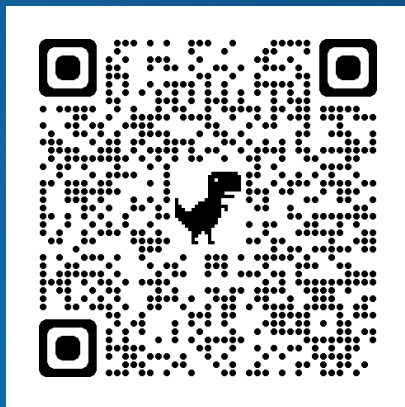


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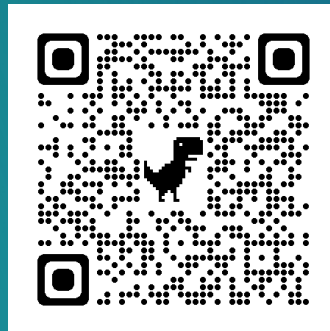


Esri User Conference

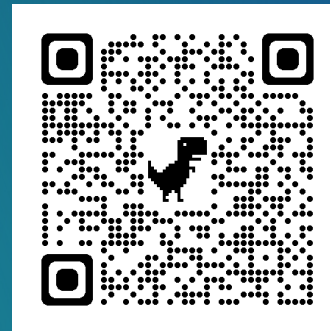
July 15–19, 2024

San Diego, CA

Info



Request Pass



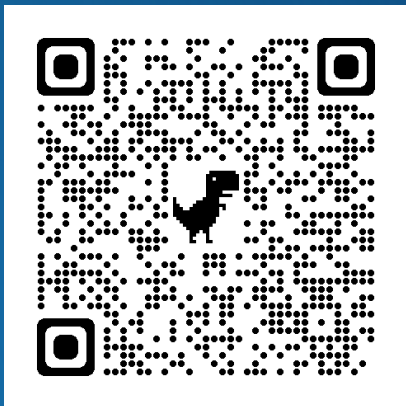
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Upcoming Events

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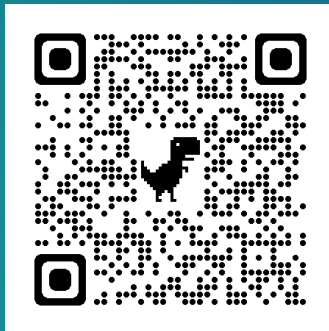


Esri User Conference

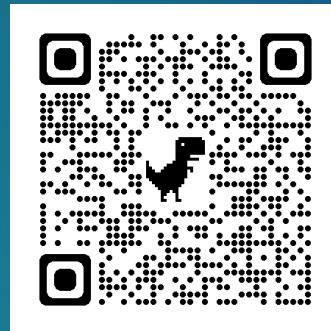
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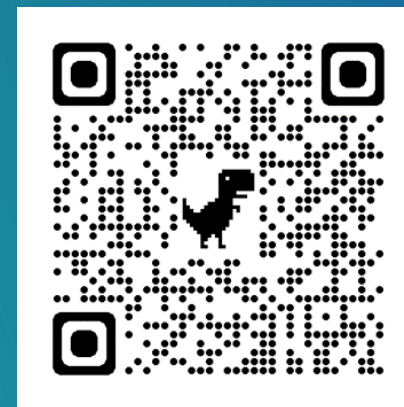
Request Pass



Native Nations Summit

July 17, 2024

San Diego, CA



<https://arcg.is/1LSfGW0>