



# Web GIS: An Introduction

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**GIS  
INSPIRING  
WHAT'S  
NEXT**

When we talk about Web GIS we are talking about an end-to-end experience – not *just* a REST service.



ArcGIS Enterprise

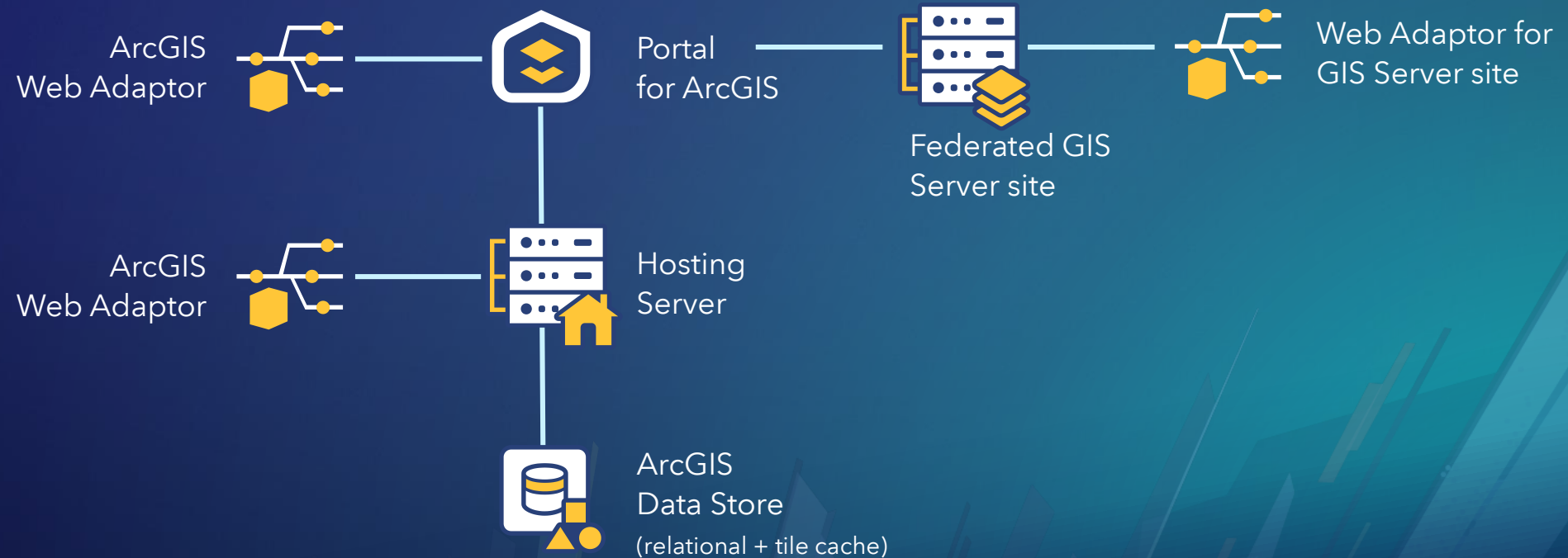


ArcGIS Online

# Web GIS with ArcGIS Enterprise

## Essential knowledge

- Before you get started your organization will need to install and configure the software
  - Standard configuration = base ArcGIS Enterprise deployment
  - You can also federate additional servers to your ArcGIS Enterprise deployment



# Web GIS with ArcGIS Enterprise

Essential knowledge

- Use the ArcGIS Data Store to store hosted data
  - Hosted data = data you copy to ArcGIS Enterprise and the data output of analysis tools run within the Enterprise portal

## ArcGIS Pro | Share as web layer pane

Share As Web Layer

Sharing Search Capital Cities As A Web...

General | Configuration | Content | Messages

Name:

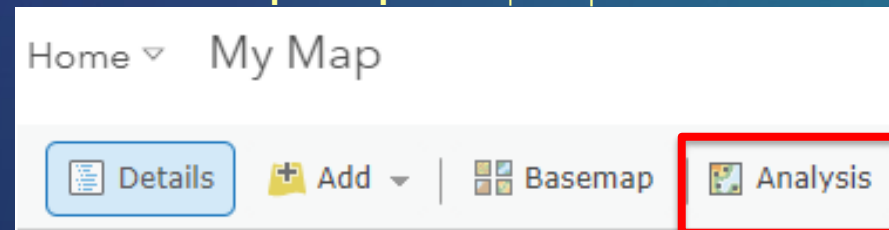
Search\_Capital\_Cities

Data ⓘ

Reference registered data

Copy all data

## ArcGIS Enterprise portal | Map Viewer

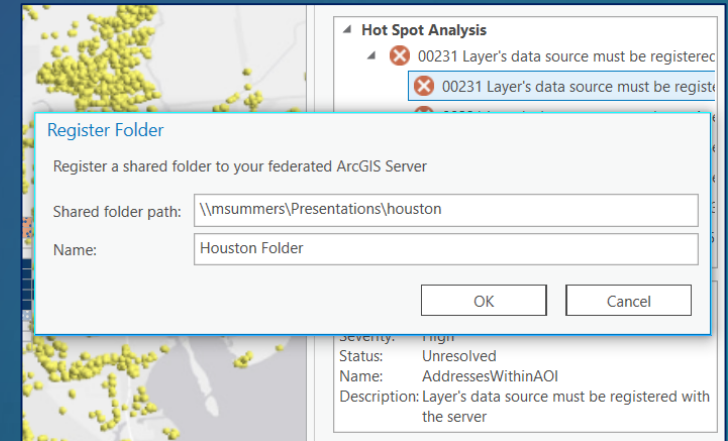
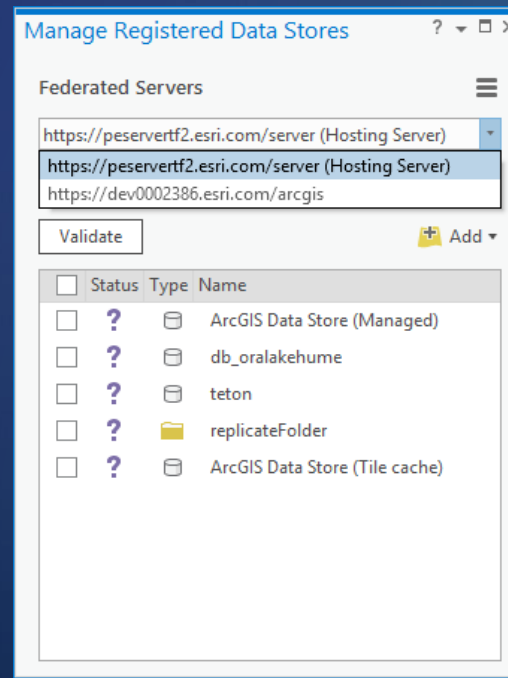
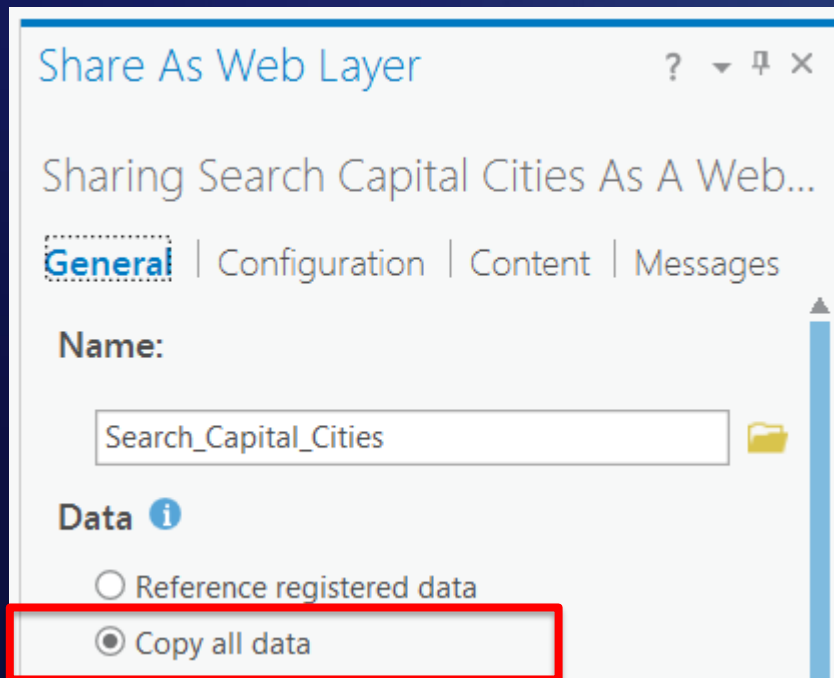


# Web GIS with ArcGIS Enterprise

Essential knowledge

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  - You can also register data from databases, cloud stores, folders, big data file shares, and raster stores

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## ArcGIS Server Manager | Site → Data Stores

Register: Database

- Database
- Managed Database
- Folder
- Big Data File Share
- Cloud Store
- Raster Store

# Web GIS with ArcGIS Enterprise

## Essential knowledge

- As an administrator the Enterprise portal is your main command center, but you will still need to engage with your servers via ArcGIS Server Manager
  - Use the Enterprise portal to set security, share content, add/manage users, create groups, etc.
- Deploy ArcGIS Enterprise on-premises **or in the cloud**
- Viewers (Level 1 Members) are included with ArcGIS Enterprise Standard and Advanced – get as many as you want/need at no additional cost

# Web GIS in the Cloud

"The Cloud" Provides Customers with Opportunity

- Cloud benefits (what we hear)
  - **Scalability** - adapts to fluctuations in demand (cost stays the same)
  - **Pay for what you use** and leverage without permanent cost increases
  - **Location independence** - anytime, anywhere, any device
  - **Security & reliability** - "We have fewer security incidents"
    - "It's more available and reliable"
  - **Speed and responsiveness** in creating information products



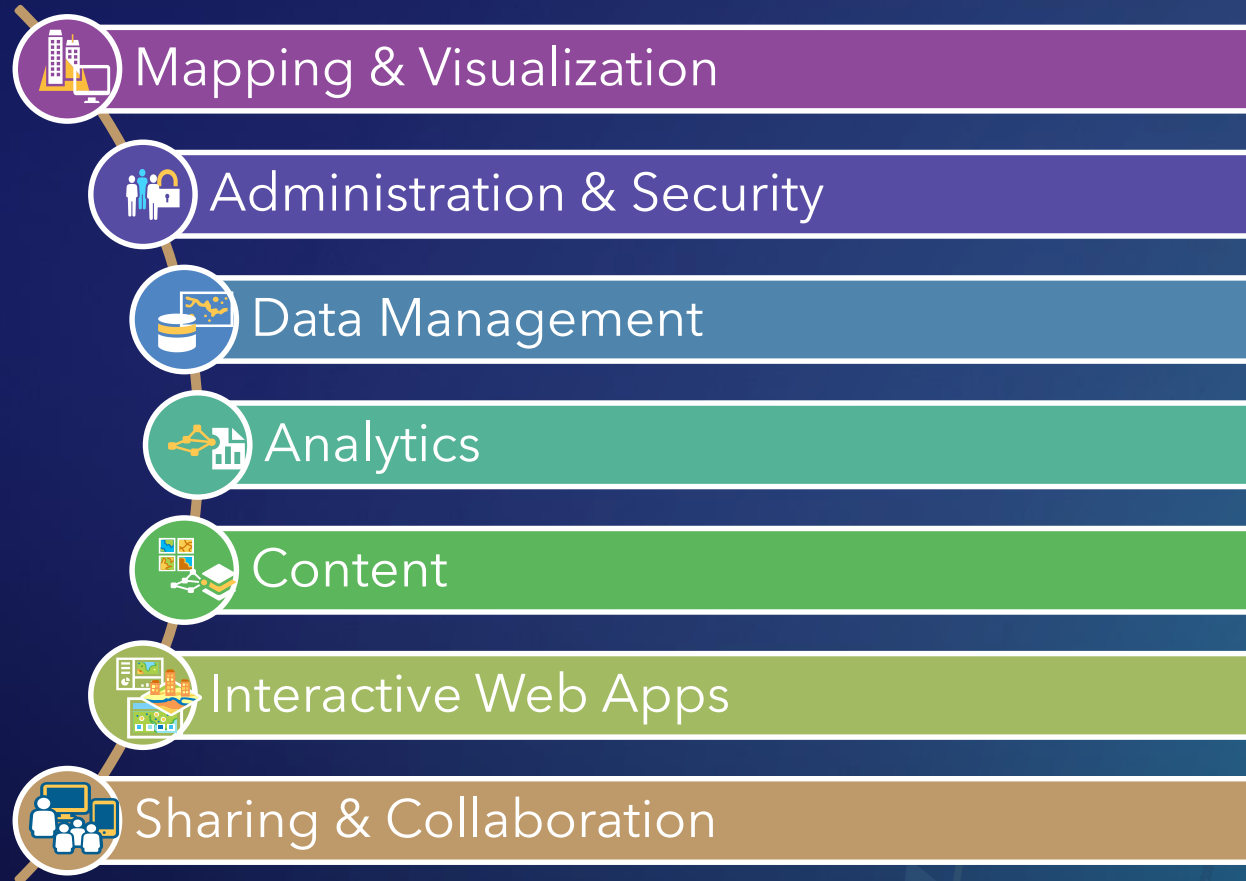
# Web GIS with ArcGIS Online

## Essential Knowledge

- Software as a Service
  - ArcGIS Online organizations are hosted and managed by Esri through Esri's cloud
  - Auto-Scales to meet need when Apps and data are under heavy load
  - Easily activated, can be up and running in minutes
  - New functionality and upgrades are automatically available when updates occur
- Integrates with Enterprise environments
  - Supports Enterprise logins and group creation with SAML 2.0
  - Distributed Collaboration enables data synchronization between environments
- The ArcGIS Online Ecosystem
  - Access to Esri Content, Customer Content and Marketplace content

# Shared WebGIS concepts

Concepts that apply equally to ArcGIS Enterprise and ArcGIS Online



# Shared concepts

Concepts that apply equally to ArcGIS Enterprise and ArcGIS Online

- Identity as the basis for access and security
  - Privileges and roles
  - Member levels
  - Credits\*



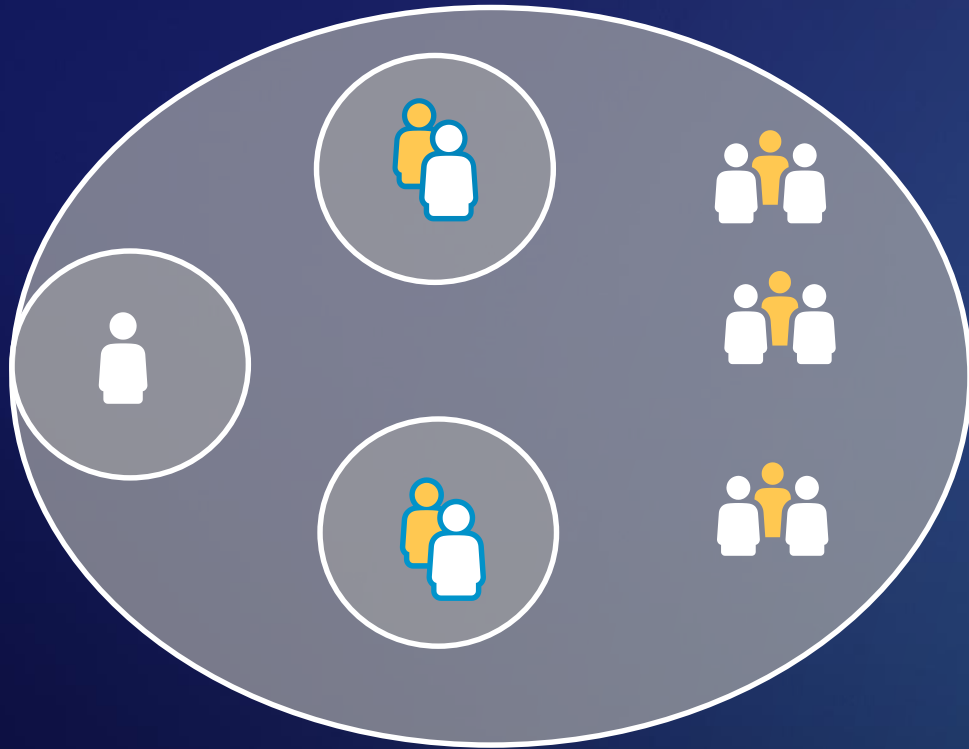
# Sharing Model - Collaborating with Authenticated Users

## Groups



# Sharing Model - Creating Organization Content

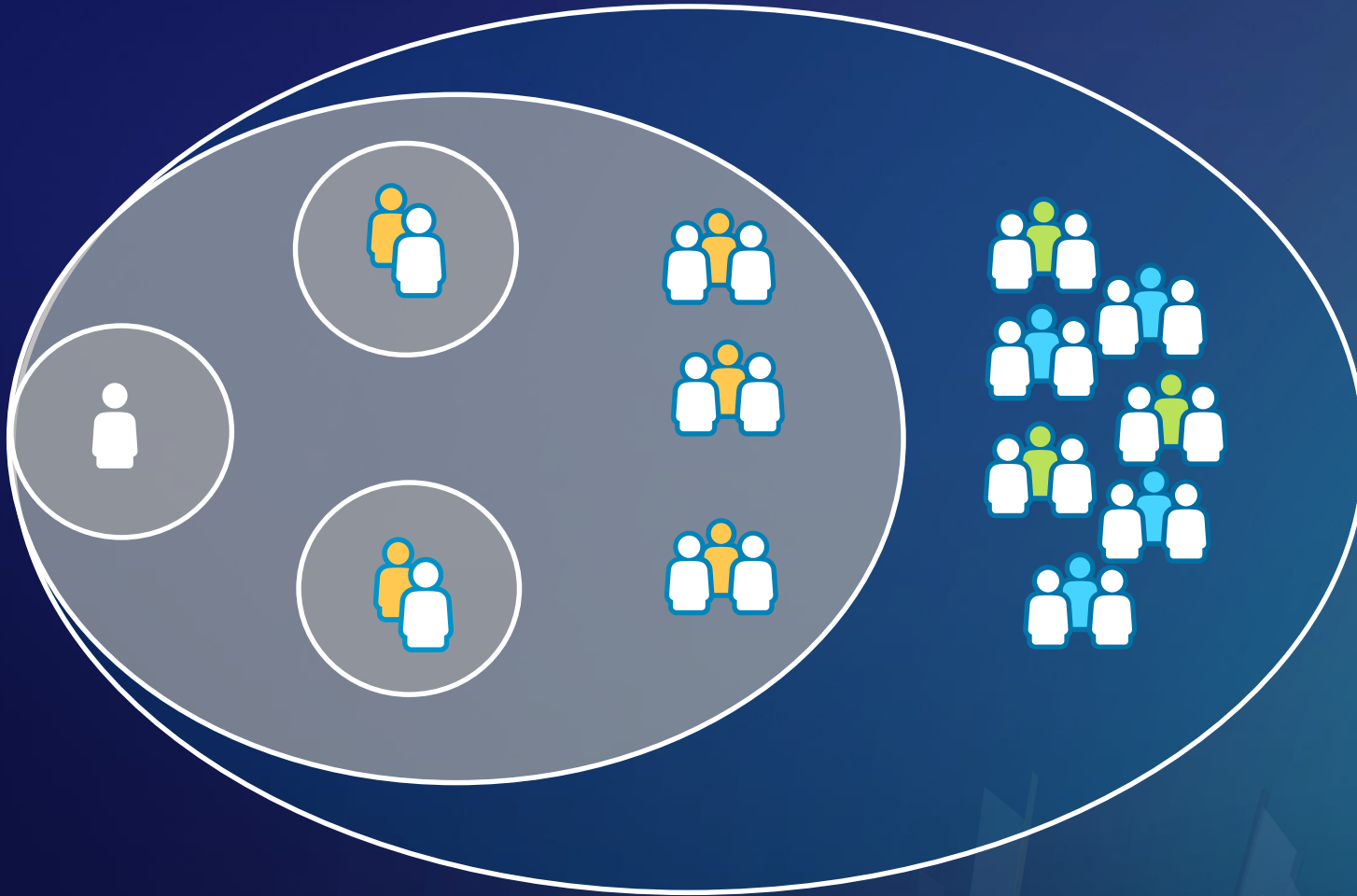
## Organization



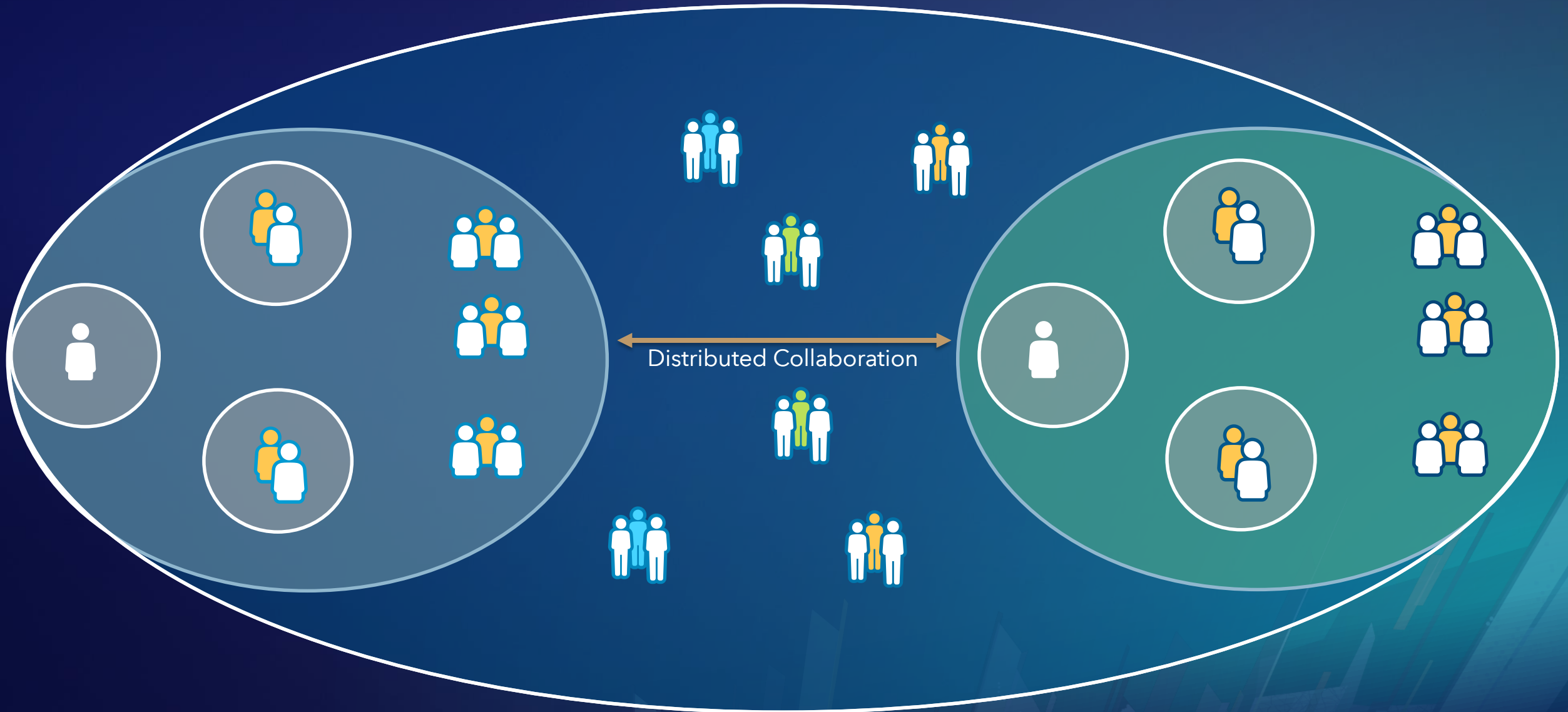


# Sharing Model - Creating Content for Public Consumption

Everyone



# Sharing Model - Sharing Between Infrastructure



## Now you know:

- What ArcGIS Enterprise is
- What ArcGIS Online is
- Shared concepts

**How do you choose?**

# Deciding between ArcGIS Enterprise and ArcGIS Online

What is the best Web GIS strategy for your organization?



ArcGIS Enterprise

- You need to manage the infrastructure yourself
- You need an internal geospatial system of record
  - Enterprise geodatabases
- Your workflows require specific analytics
  - Raster analytics (Image Server)
  - Big data analysis (GeoAnalytics Server)
  - Real-time/IoT analysis (GeoEvent Server)
- You need the ability to customize your Web GIS functionality
  - Custom widgets
  - Web tools
  - SOEs/SOIs
- You need to work completely disconnected from the open internet



ArcGIS Online

- You don't want/have the resources to manage the infrastructure
- You want infrastructure that is massively scalable without your intervention
- You can connect to the internet (with some options to go offline)

# Choosing both

Using ArcGIS Enterprise and ArcGIS Online together

## Key Benefit:

- Take advantage of the strengths of each offering
  - Scalability for external uses
  - Security for internal systems/data

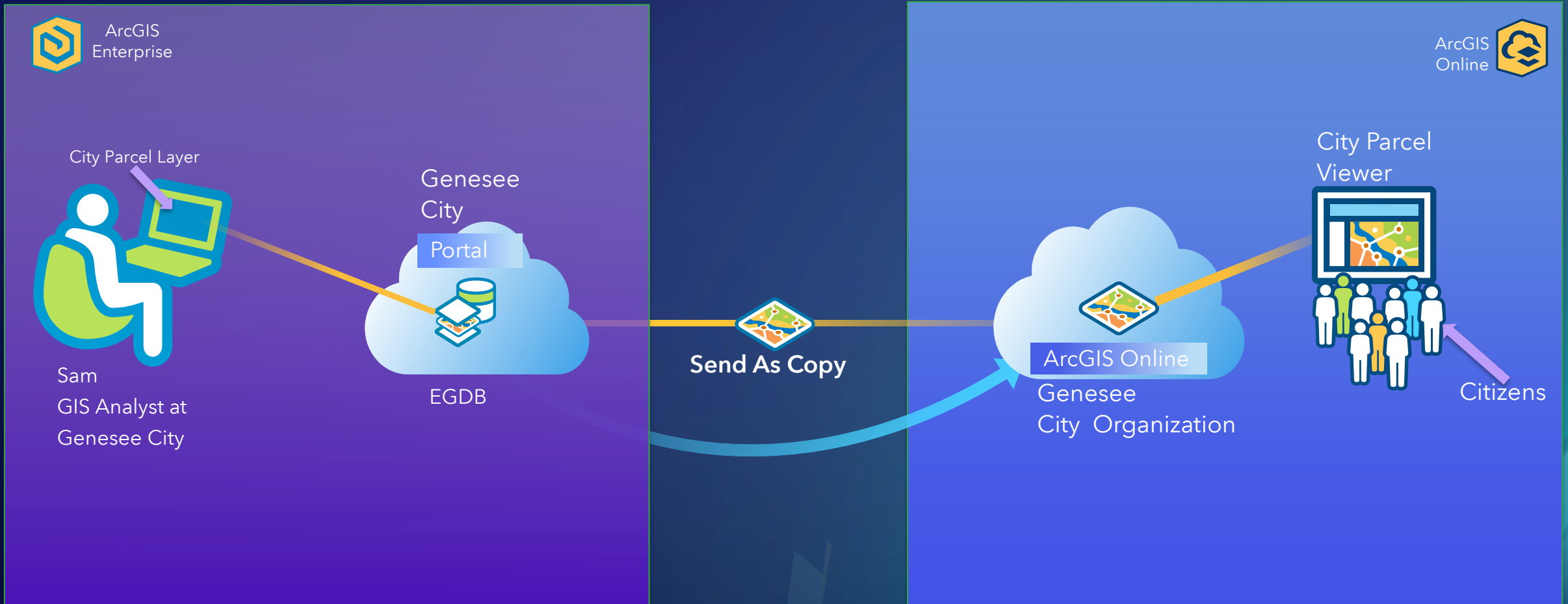
## Key Consideration:

- Requires ArcGIS Online accounts and ArcGIS Enterprise accounts are not interchangeable. Users who need access to both will require 2 sets of identities.
  - Security



# Distributed Collaboration

A streamlined way to use ArcGIS Online and ArcGIS Enterprise together



# Automating Web GIS Workflows

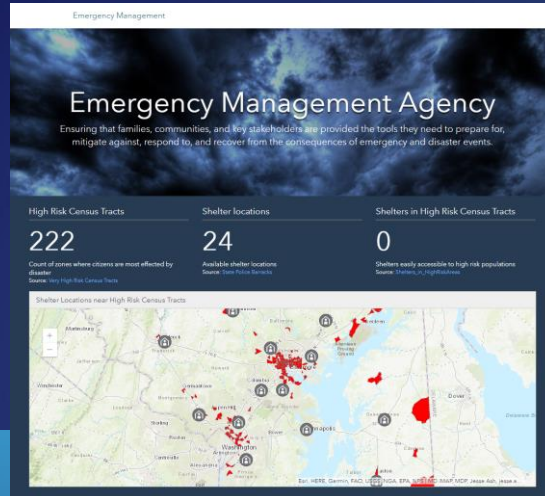
Using the ArcGIS API for Python with ArcGIS Enterprise and ArcGIS Online

- Use Python scripts for administrative and analytical tasks
  - Can use the API in a “raw” Python script or within a notebook (Jupyter)
- **Administrative automation** – script repetitive analytical tasks and tasks that are tedious to do manually
  - For example – creating groups, moving content between users, etc.
- **Analytical scripts** - Rerun the script to automate the workflow, notebooks can document a full analysis project, use external libraries side-by-side with GIS libraries, extend your GIS work into the data science space.
- Road ahead sneak peek – A Python scripting environment integrated into your Web GIS.

# ArcGIS Enterprise Sites and ArcGIS Open Data

## Sites

- ArcGIS Enterprise
- Items do not need to be shared with everyone
- 10.6.1



## Open Data

- ArcGIS Online
- Items need to be shared with everyone
- Ability to create open data sites with private data is planned for a future release of ArcGIS Online.

## Sites and Open Data - Tips

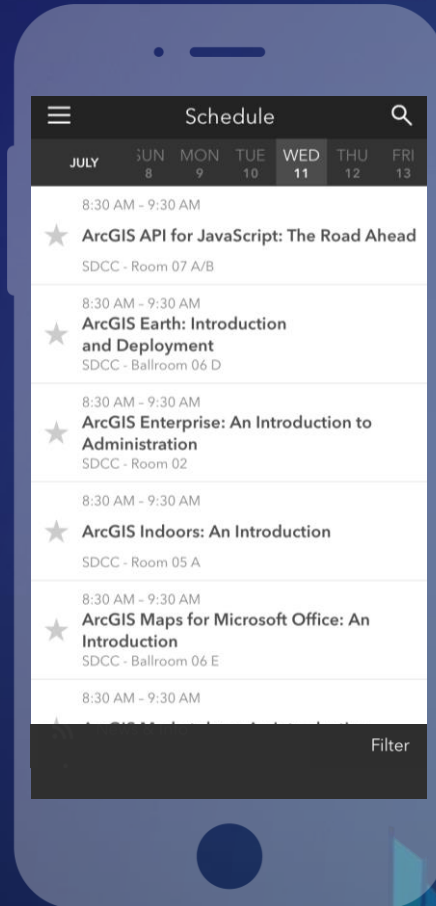
- Think about the people who will use the site
  - What do they need to see
  - Why do they need to see it
  - When/How are they going to use it
- Plan your content and sketch your site
- Test all your buttons and links
  - Don't always test as the admin
- Site building is an iterative process - work in small bursts
- Consider how you will share the site

# Please Take Our Survey on the App

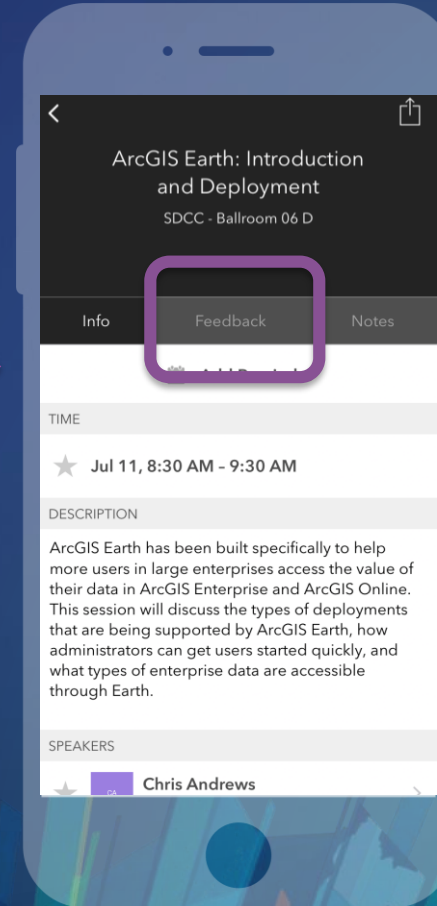
Download the Esri Events app and find your event



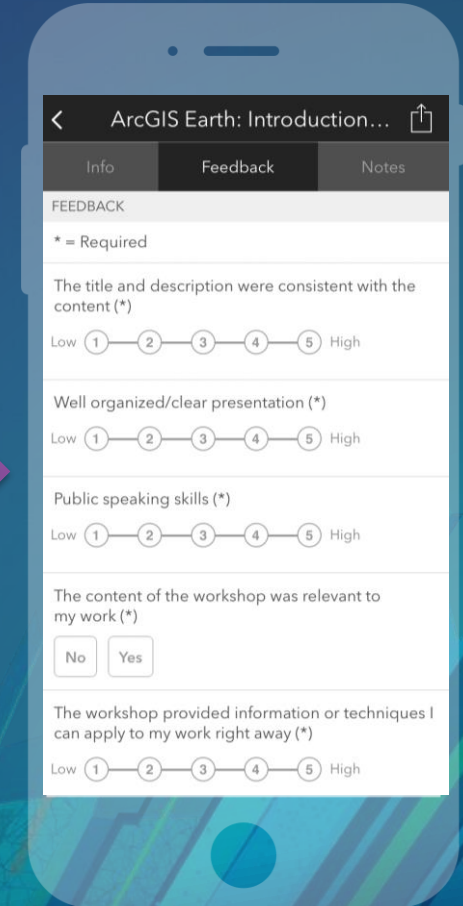
Select the session you attended



Scroll down to find the feedback section



Complete answers and select "Submit"







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