What’s New in ArcGIS ?

John Sharrard, Esri Solutions Engineer, jsharrard@esri.com

John’s notes about this presentation

- Just the “cherry picked” topics from the recent Q4 Esri internal “Tech Refresh”
- Very small percentage of what was covered during October 4-8 2021 sessions
- Please note any topics that you would like to have a more in-depth review
- Please excuse the mix of different Powerpoint slides.
- John will prepare a PDF version of the Powerpoint , but it not include links to video content

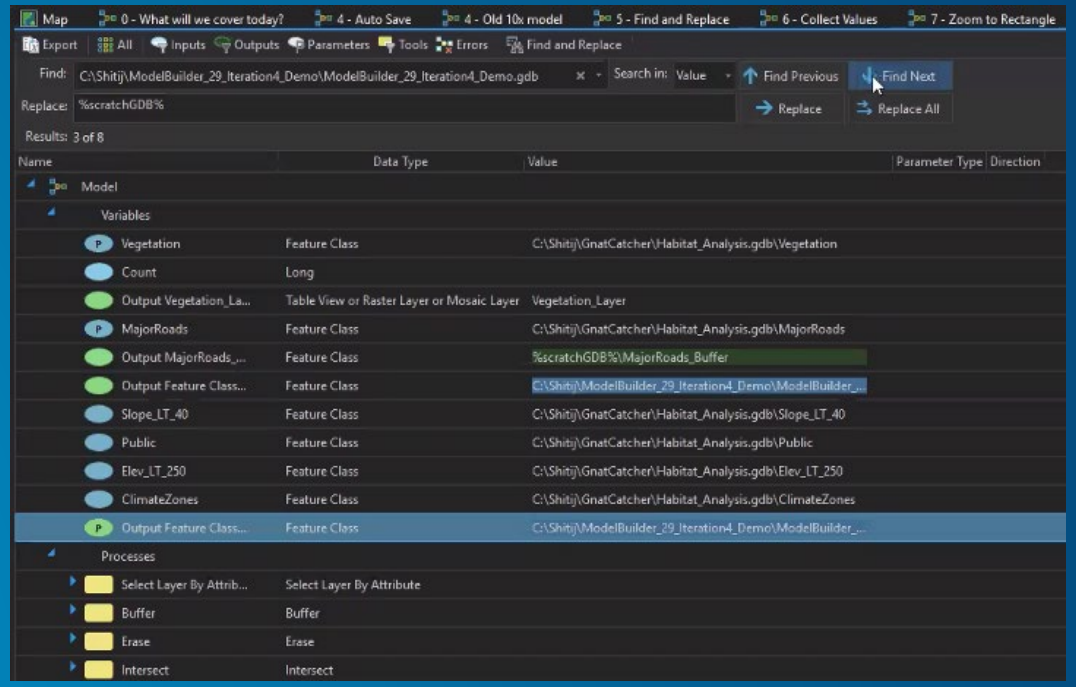
ArcGIS 2021 Q4

ArcGIS Pro 2.9 Highlights

Performance and Productivity

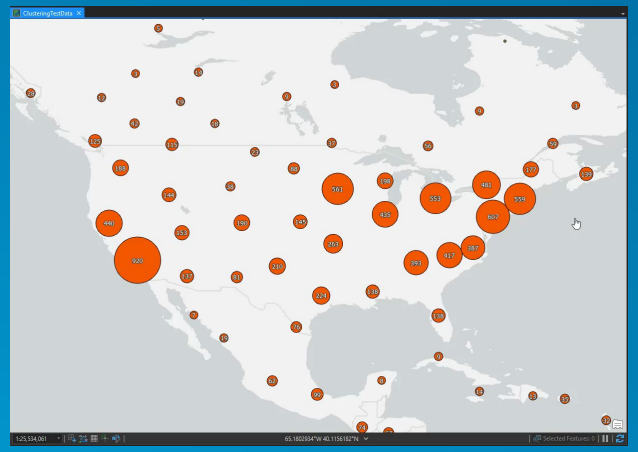
ArcGIS Pro 2.9 continues with the themes of Performance and Productivity

- Feature Services
- CAD/BIM
- Geodatabase
- Sharing
- Geoprocessing
- Annotation/Labeling
- Content Management



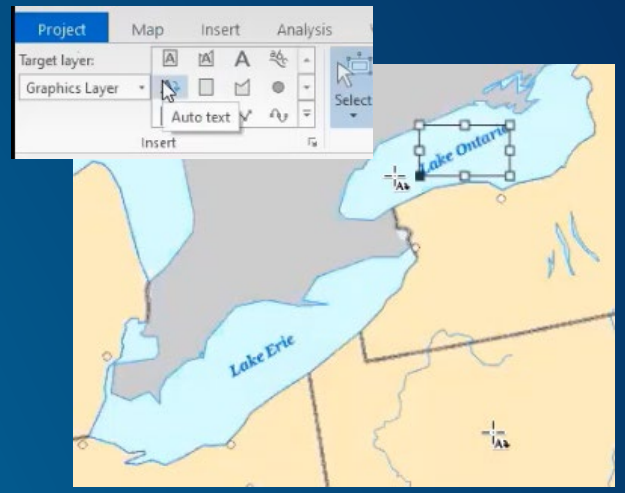
Model Builder Find & Replace

ArcGIS Pro 2.9 Highlights

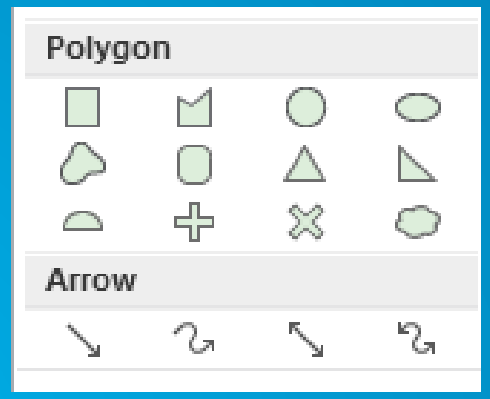


Dynamic Feature Clustering

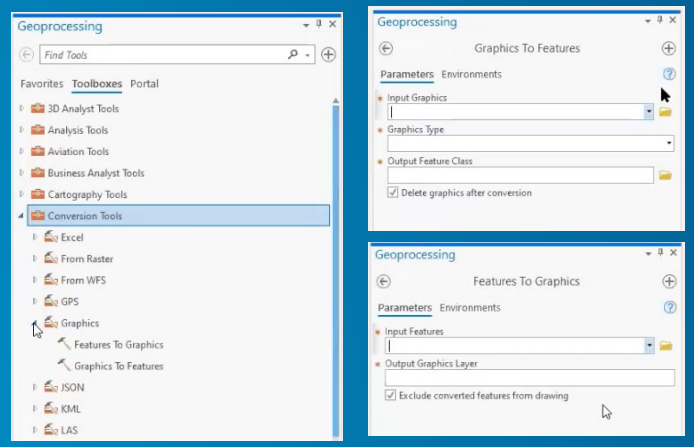
Animated Symbology



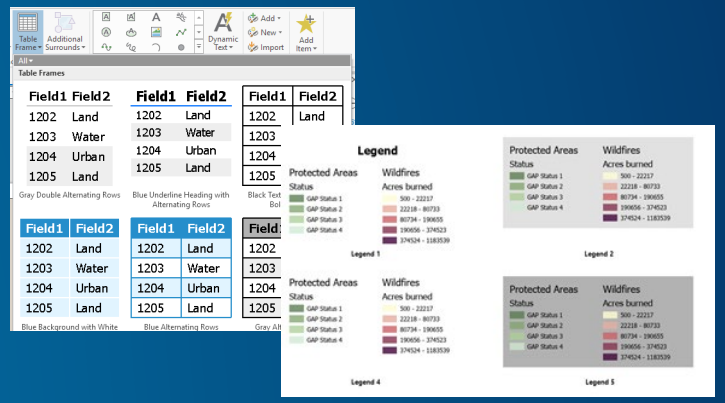
Auto Text Tool



Insert Graphic Shapes

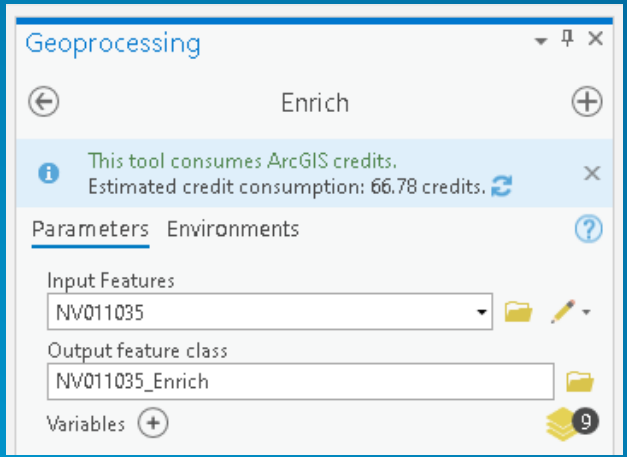


Graphics to Features / Features to Graphics

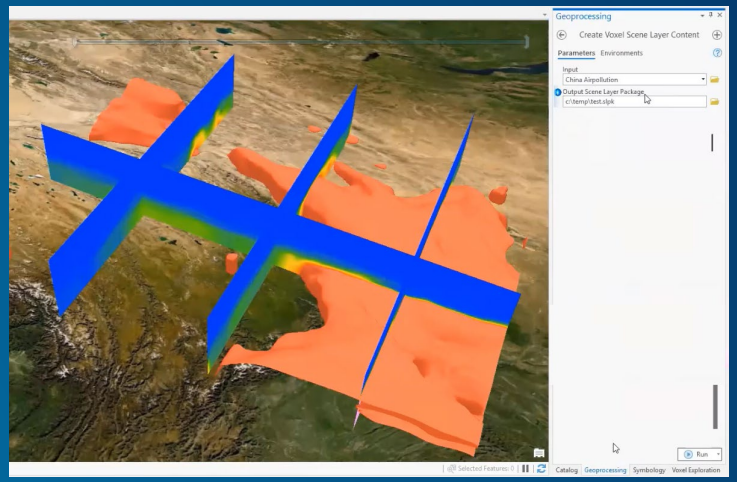


Legend & Table Styles

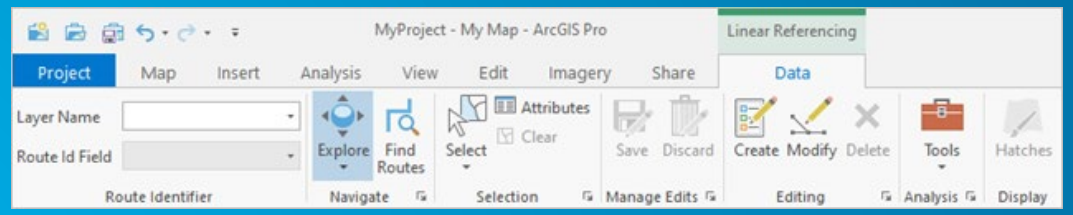
ArcGIS Pro 2.9 Highlights



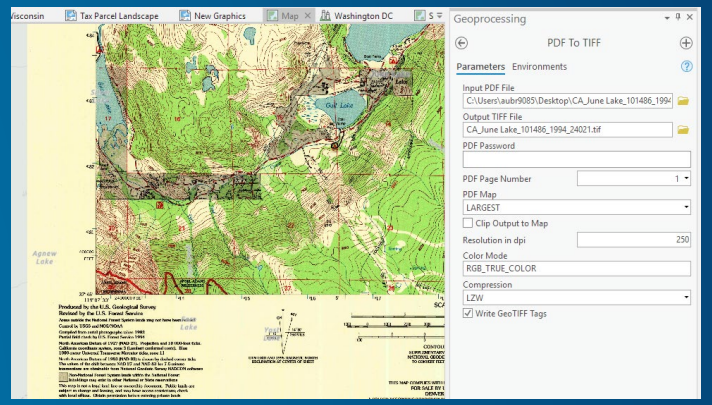
Business Analyst Credit Estimation
(Enrich and Summary Reports)



Share Voxel Scene Layers

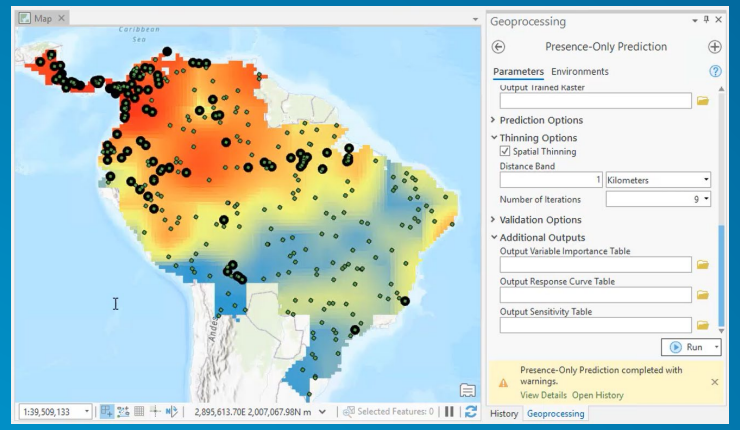


Linear Referencing UI



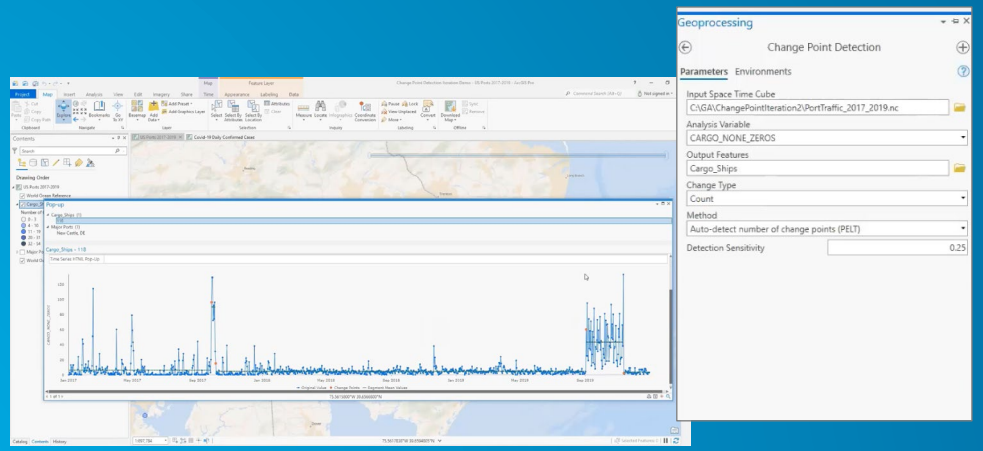
PDF to TIFF Tool

ArcGIS Pro 2.9 Highlights

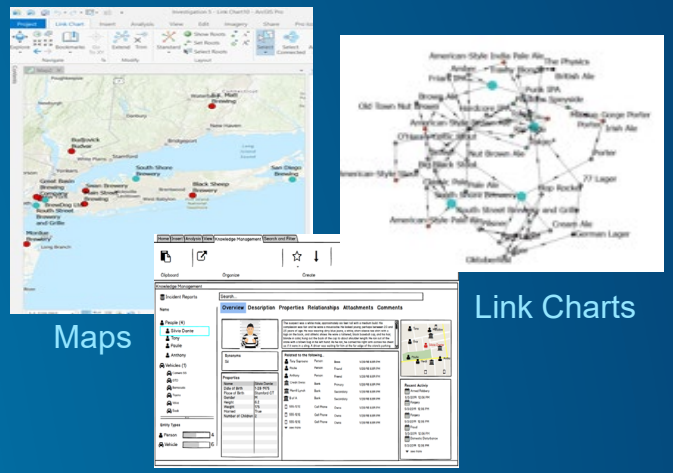


Presence-only Prediction

Cloud Data Warehouses



Change Point Detection



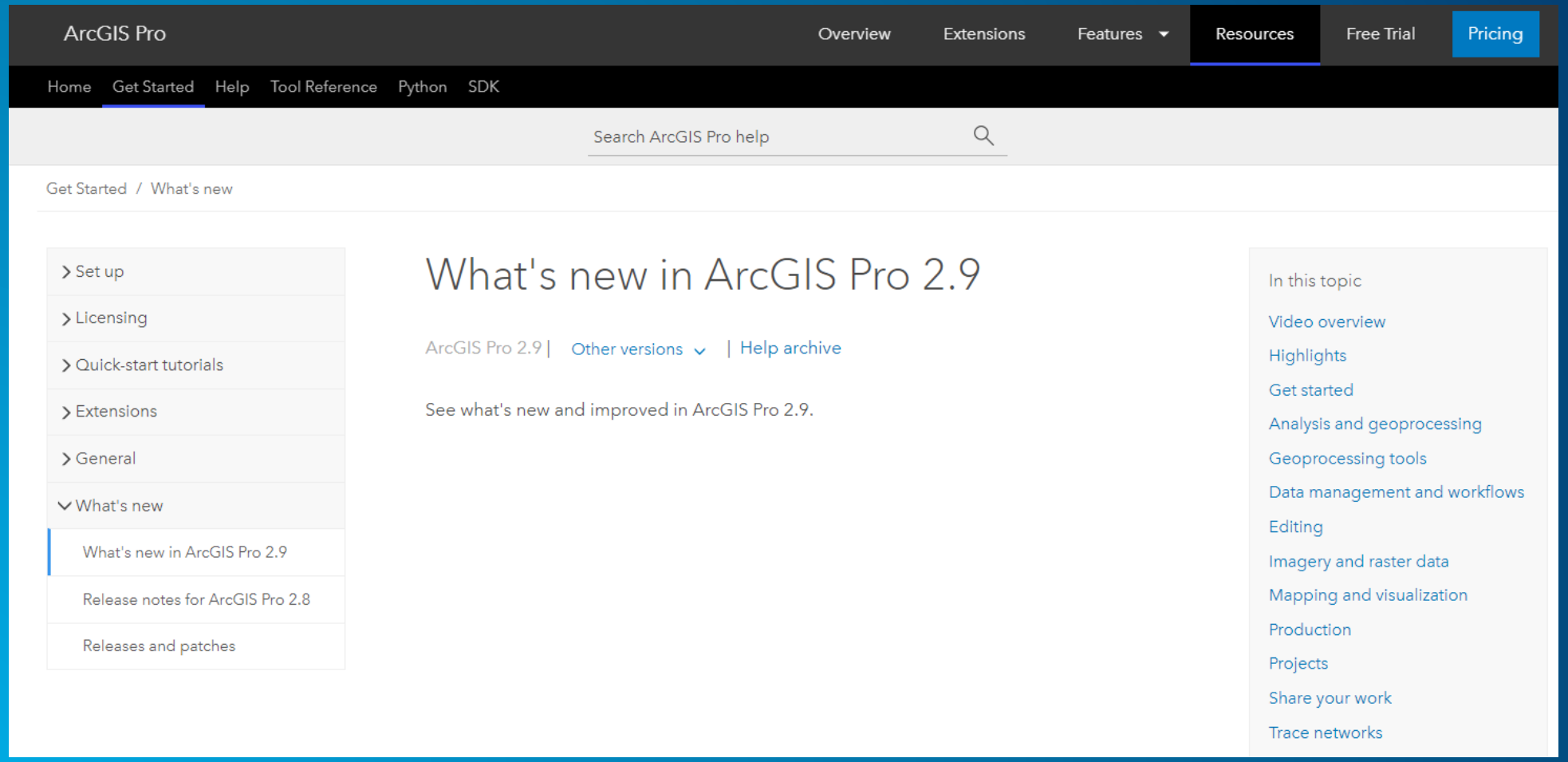
Maps

Link Charts

Entity cards

Knowledge Graphs

What’s new in ArcGIS Pro 2.9



Geodatabases in Pro 2.9

New Features:

Geodatabases in Pro 2.9

New Features:

- **ArcMap Equivalency**
  - **Linear Referencing**
  - **Disconnected Editing**

Geodatabases in Pro 2.9

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- ArcMap Equivalency
  - Linear Referencing
  - Disconnected Editing
- Cloud Data Warehouse support
  - Updates to the query layers UX/UI
  - Covered in the Enterprise Database and Sharing sessions

snowflake® Google BigQuery amazon REDSHIFT

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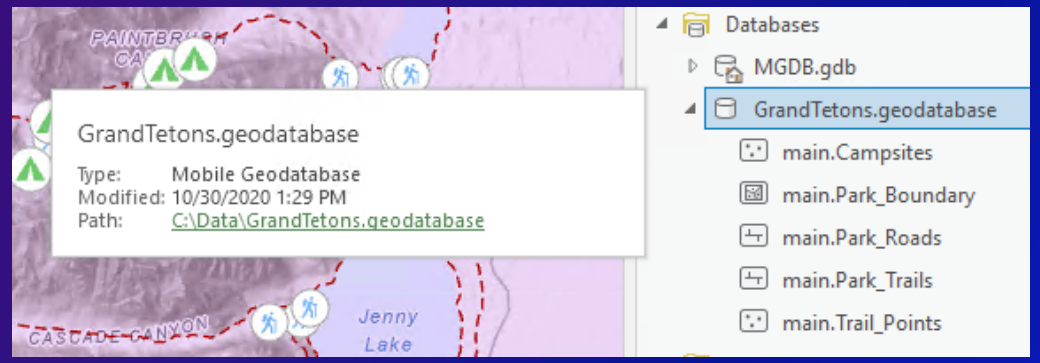
- Manage UI
  - New UX/UI to manage geodatabase functionality on datasets
- Bug fixes and quality of life improvements

Mobile Geodatabases

What is it?

- Geodatabase offered on SQLite
- .geodatabase file extension, single file on disk



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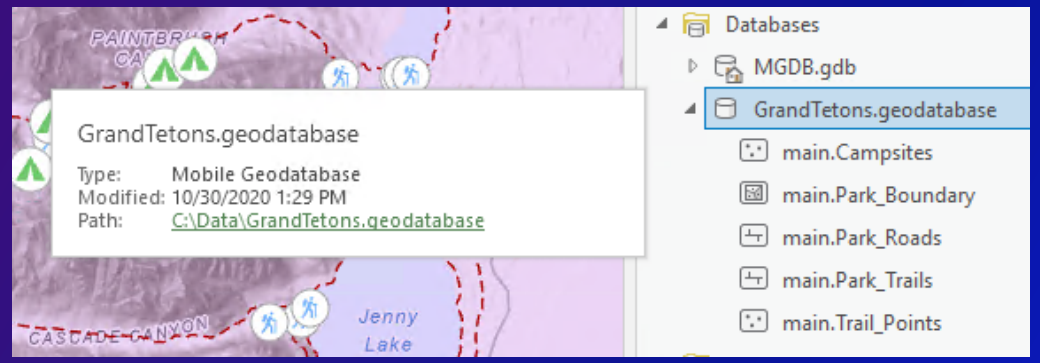
- Simple features: points, lines, polygons



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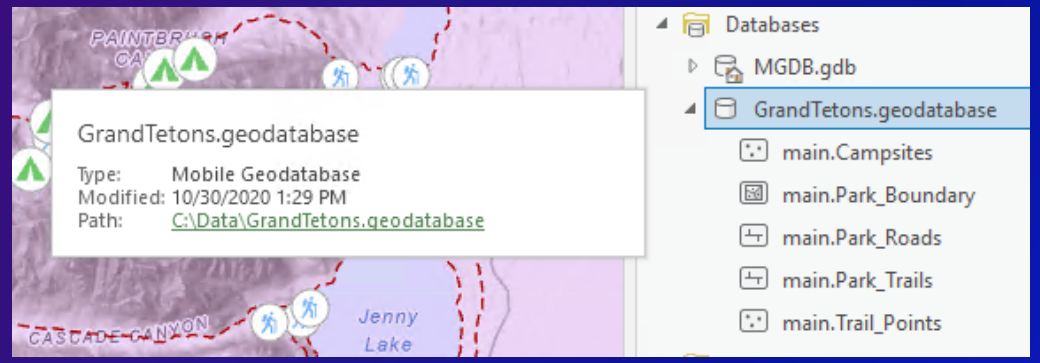

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Pro 2.9

- Extend the core geodatabase data model
  - Topologies, Parcel Fabrics, Utility networks, Trace networks
- Non-versioned archiving
  - Support runtime and offline workflows

What’s New from Content Management in Pro 2.9

- Geoprocessing history in item metadata
  - Administrator control
  - Delete using ArcPy when allowed
- Metadata editing – INSPIRE 2.0.1
- Data management – rename for all file-based items
- Projects and browsing
  - Catalog views – remember last locations
  - Folder connections – display full paths and provide aliases
  - Browse dialog box – ignore last location in the

Roadmap

ArcGIS® Pro Roadmap

Near-term

- Upgrade Python Environment
- Knowledge Graphs
- Projects in the Enterprise
- Roof Editing in Stereo
- Dynamic Feature Clustering
- Animated Symbols
- Big Data Analytic Warehouses
- Indoor Positioning
- Presence-only Prediction
- Change Point Detection
- Geoprocessing Credit Estimator
- Suitability Modeler Sharing
- Parcel Fabric 3D Cadaster
- Voxel Layer Sharing
- Reality Mapping Extension
- Linear Referencing UI

Mid-term

- Catalog Layers
- Point Cloud Scene Layer Data Management
- Simulation Modeling
- Presentations
- Spatio-temporal Density Analysis
- Multiscale GWR
- Scientific Data Ingestion
- Parcel Lineage Visualization
- Parcel Fabric Coordinate Based Cadaster
- Managed Indoor Data Pipeline
- ENC Chart Viewing
- Enhanced Radar data support

Long-term

- Terrain Editing
- Materials Authoring
- High Fidelity Rendering
- 3D Mesh as Ground
- Integrated Mesh Scene Layer Data Management
- 64-Bit Object ID
- New Data Types (BigInteger, Timestamp with Time zone)

May 2021

ArcGIS® Pro Roadmap

* ArcGIS Pro 2.9

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May 2021

What’s New in ArcGIS Enterprise

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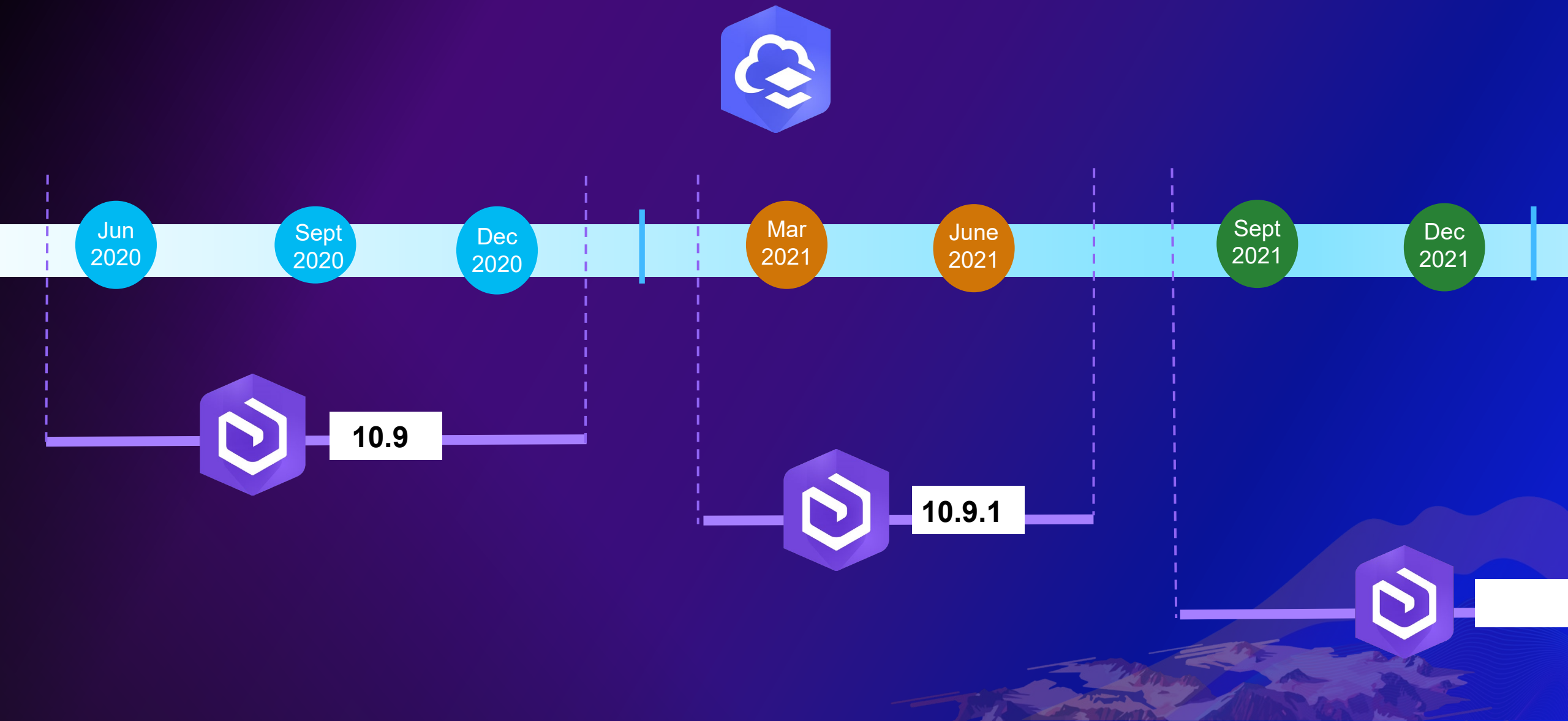
ArcGIS Enterprise portal and ArcGIS Online Release Alignment



New features in ArcGIS Enterprise portal 10.9.1

New
Map Viewer

Add content
experience

Add
cloud data stores

Edit feature layer
data in
Scene Viewer

Create elevation
profile charts in
Scene Viewer

Create apps
experience

ArcGIS
Instant Apps

Add member
CSV template

ArcGIS
Dashboards

Living Atlas
content

Home page
customizations

GeoBIM

Big data file shares
interface

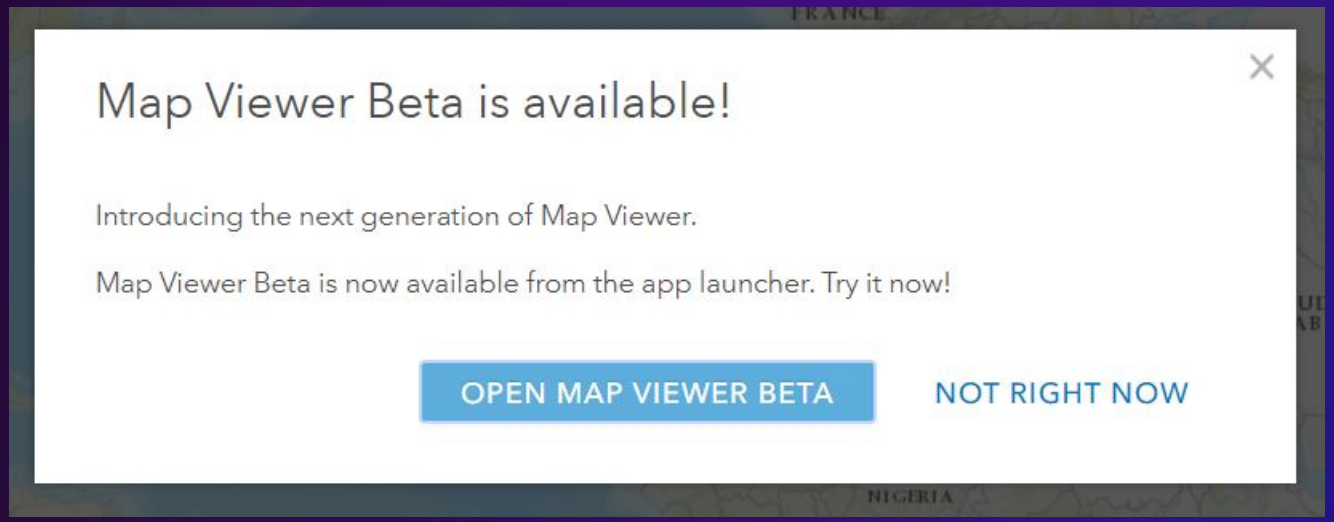
ArcGIS
Solutions

New
administrative emails

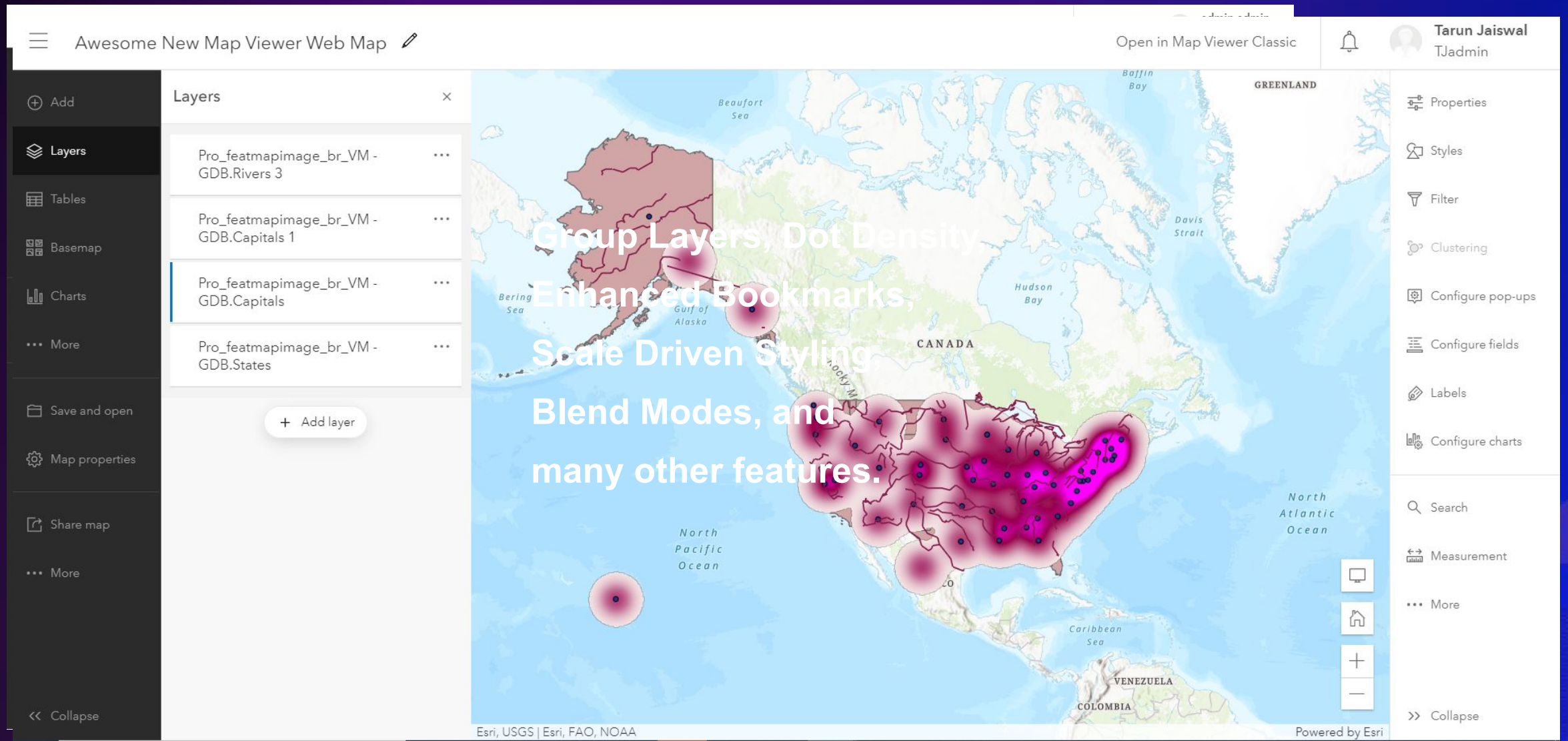
Map Viewer

Map Viewer

- Next generation map making tool in ArcGIS Enterprise 10.9.1
- Improved interface, functionality, and exciting new capabilities to build compelling web maps
- Enabled by ArcGIS API for JavaScript 4.x
- Formerly known as Map Viewer beta (in ArcGIS Enterprise 10.8.1 and 10.9)



Map Viewer Capabilities



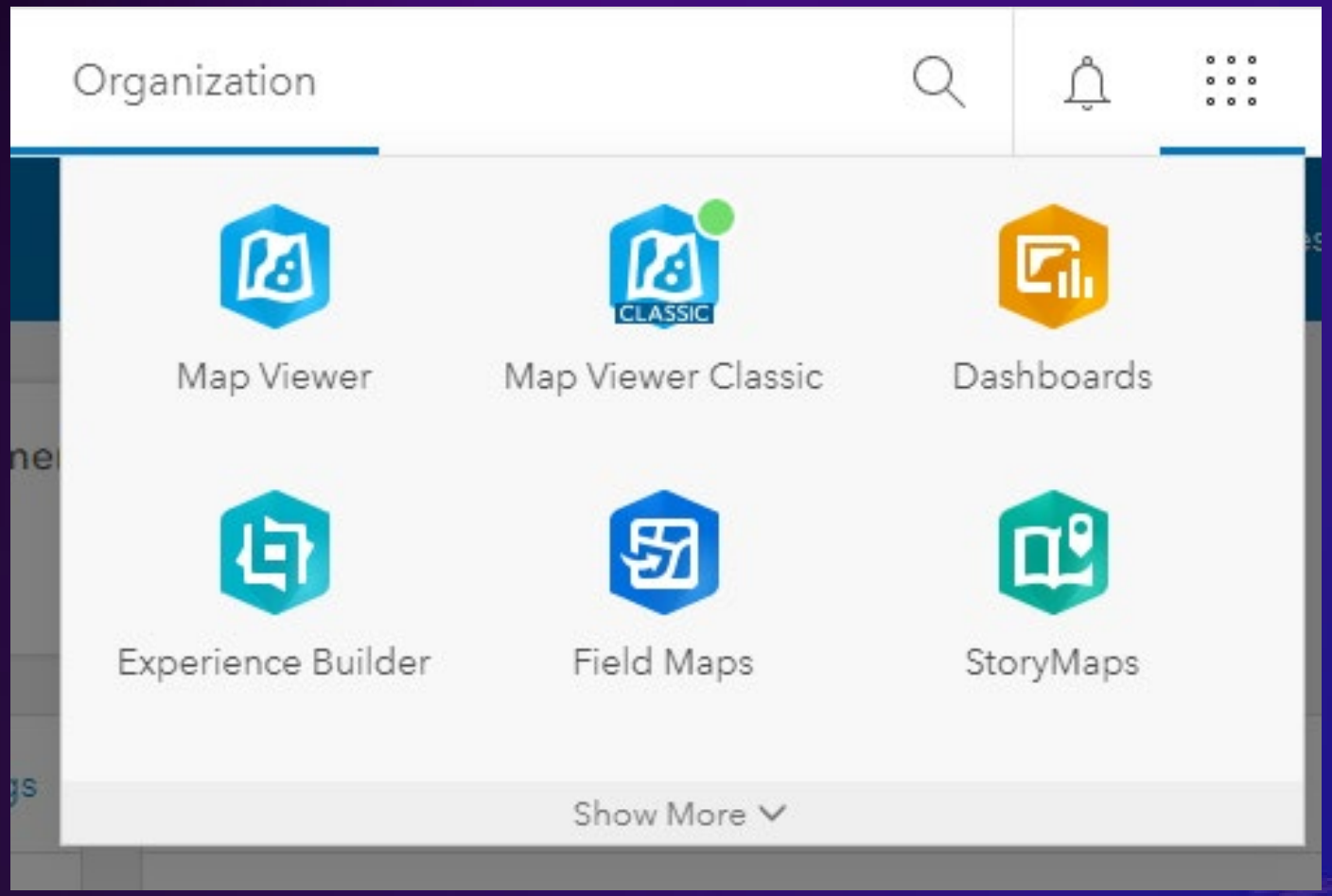
Map Viewer Status

- Map Viewer is no longer in Beta
  - Had a separate setup in ArcGIS Enterprise 10.8.1 and 10.9
  - Now an embedded application in Portal for ArcGIS 10.9.1 setups

- ArcGIS Enterprise 10.9.1 will include all the functionality shipped with ArcGIS Online June 2021 release (ArcGIS Online 9.2)

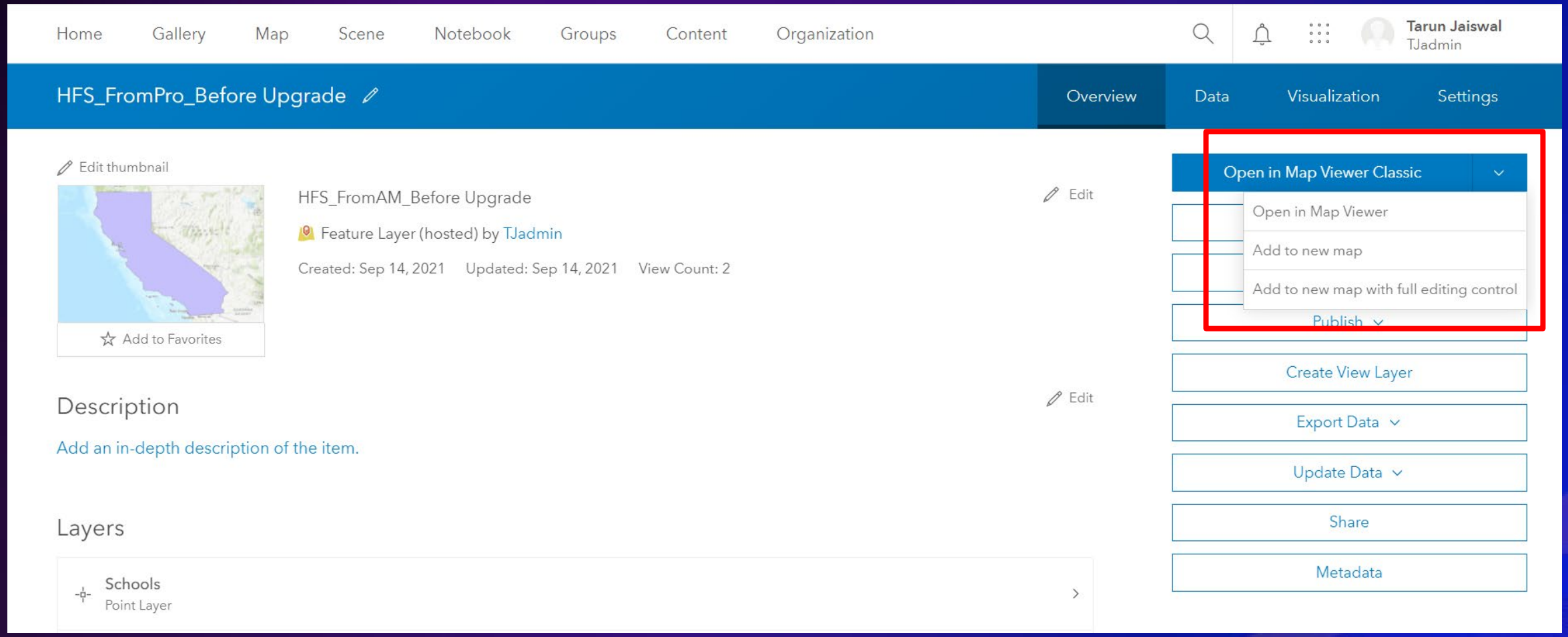
Existing Map Viewer Status

- It is still very much the part of ArcGIS Enterprise 10.9.1
- Now called as **Map Viewer Classic**

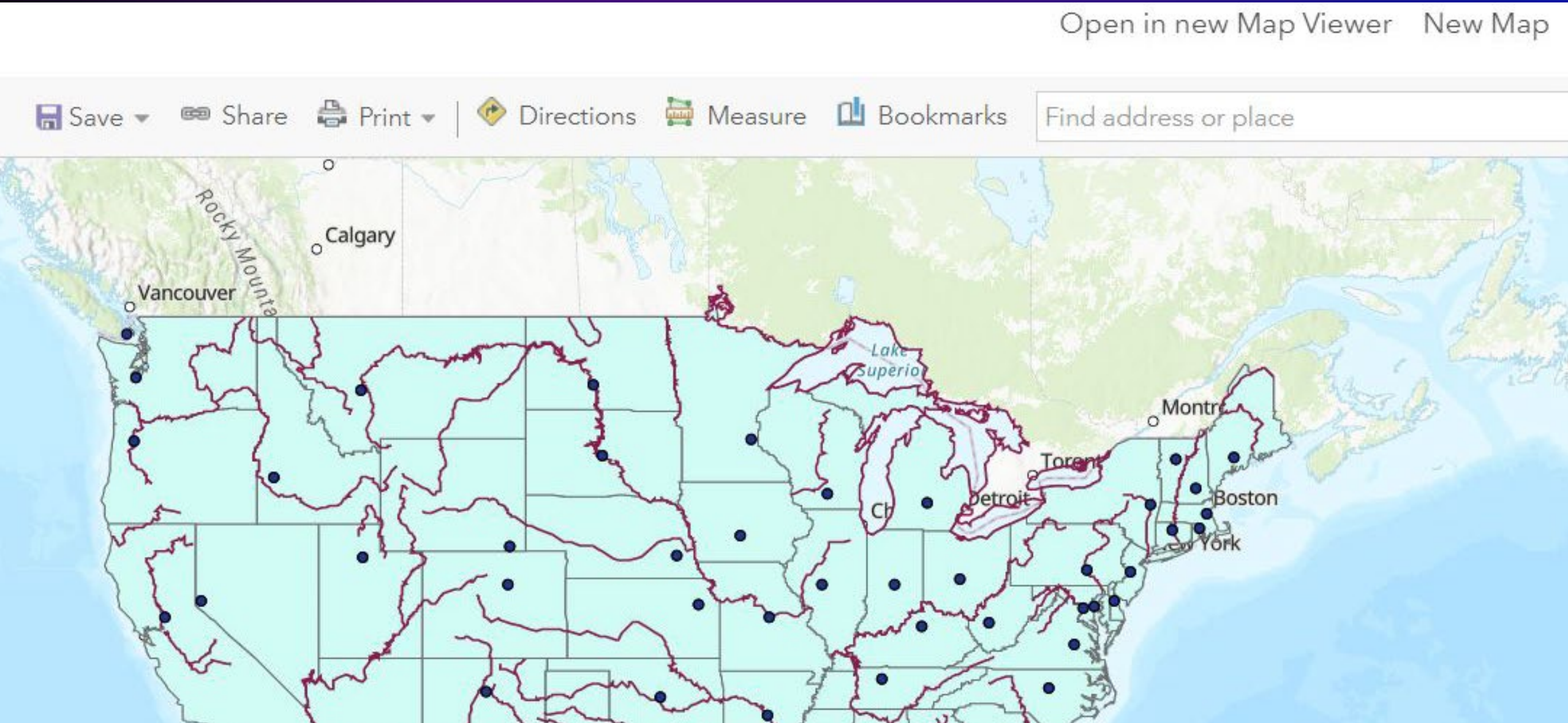


- Default primary map viewer (in new and upgraded ArcGIS Enterprise 10.9.1 Environments)

Item Details Page Options



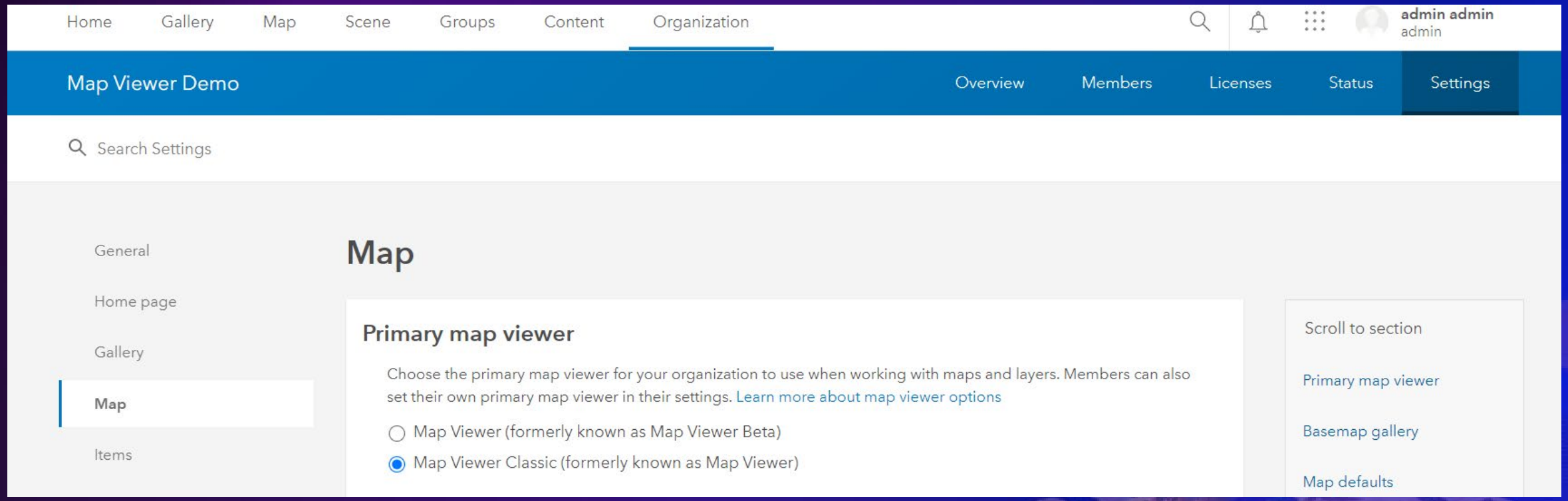
Switching Between Map Viewers



Organization Level Settings

Organization administrators can select the primary map viewer for their organization to use when working with maps and layers

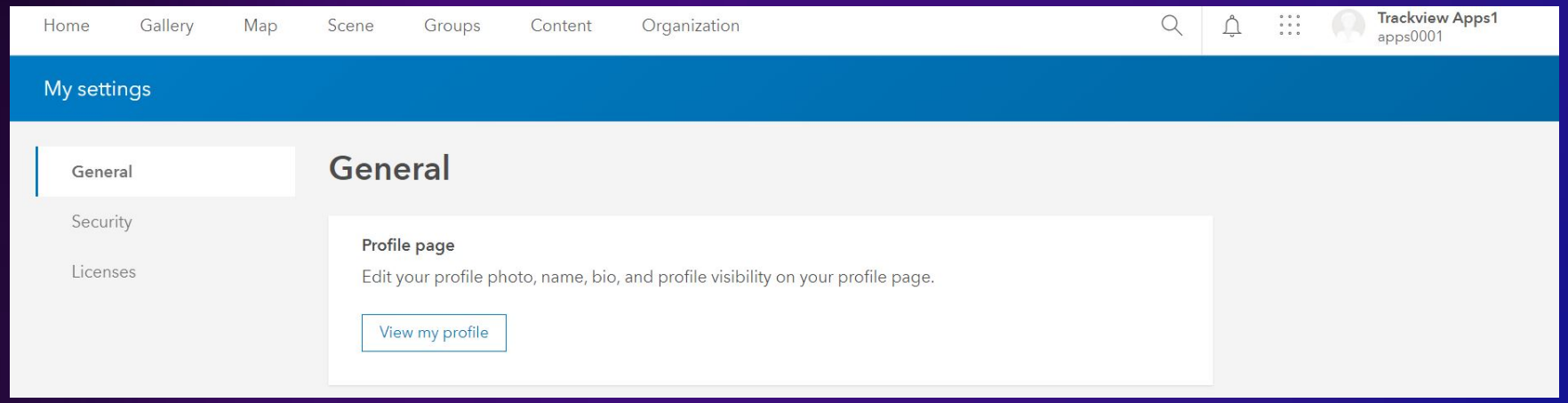
Organization > Settings > Map > Primary map viewer

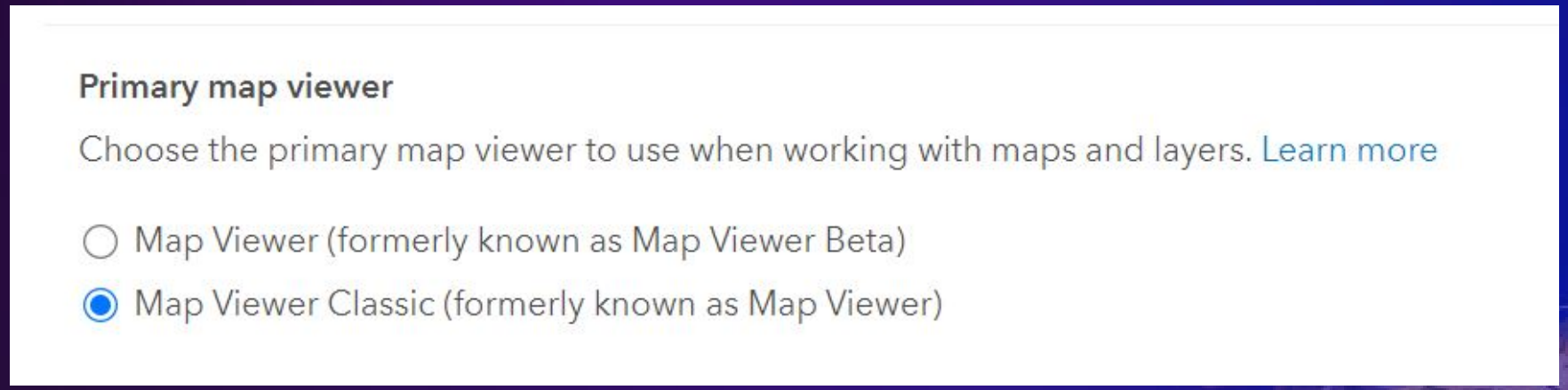


User Level Settings

User can also set a different primary map viewer then the default setting in their organization

User Profile > My settings > General > Primary map viewer





Reasons to Upgrade to ArcGIS Enterprise 10.9.1

- Access to all the new greatest and latest features
  - Map Viewer
- Optional ArcMap service runtime and Python 2.x installation
- Migrate services to the ArcGIS Pro service runtime
- Last release to include StoryMaps Classic
- Enhancement to installers

Road Ahead

- We will support both Map Viewer Classic and Map Viewer into the near future
- Development efforts will be focused on Map Viewer
- Long term plan is to end support for Map Viewer Classic
  - Requires functional equivalency and updating of many resources
  - No planned release on when Map Viewer Classic will be unsupported

Email support in ArcGIS Enterprise portal

NEW

10.8.1

- Support email notifications
- Configuration via Portal Admin app
- Notification events
  - Member forgot their password
  - Admin updated password policy
  - Admins notified of approaching license expiration

10.9

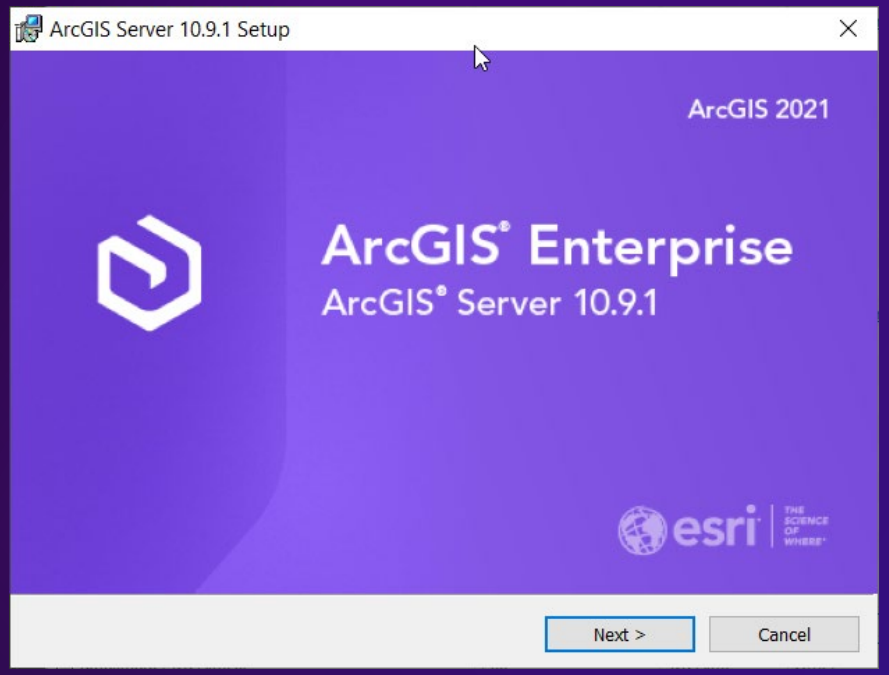
- Home app UI for configuration
- Notification events
  - Admin reset of members password
  - Item owner notified of comments Member profile updates
  - Multifactor authentication emails
  - Admins notified of low available disk space *on portal*

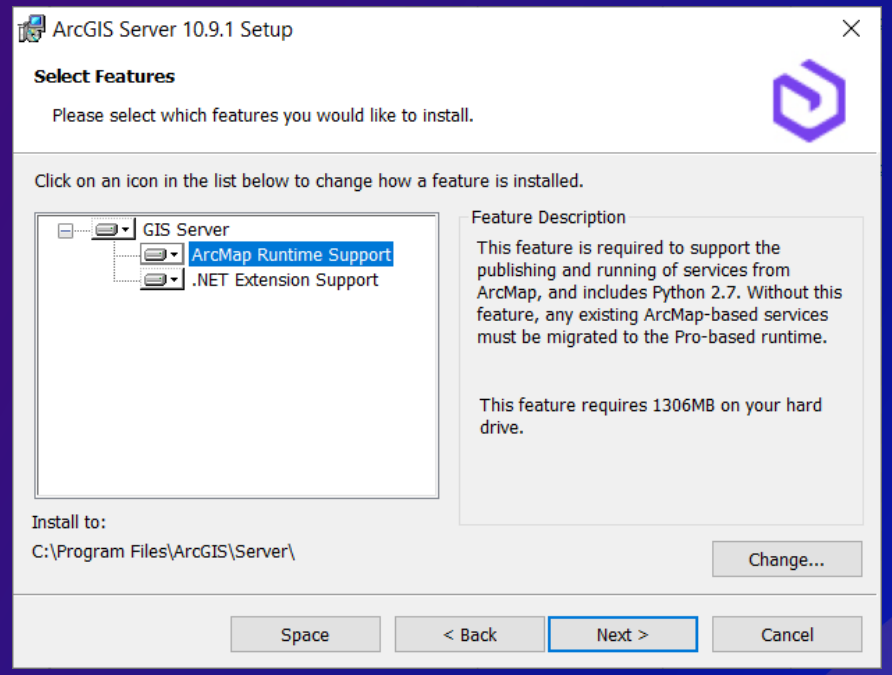
10.9.1

- Notification events
  - Admins notified of low disk space on *federated ArcGIS Servers* and *ArcGIS Data Store* machines
  - Admins notified when ArcGIS Data Stores are stopped or put in read-only mode

Installing ArcGIS Enterprise 10.9.1

- **The ArcGIS Server 10.9.1 setup will have a new optional component called *ArcMap Runtime Support***





- **The optional component will be *enabled* by default: no breaking changes.**

Install, upgrade, and patch time challenges on previous releases

- Tests done using daily builds of the Portal for ArcGIS 10.9.1 setups on Windows.
  - Physical machine with 4 core Intel Xeon E5-1620, 24 GB RAM, and an SSD
  - The OS and the setup files were themselves located on the SSD.

	SSD w/o optimization	SSD w/optimization	
Install	1 hour 40 minutes	15 minutes	**1 hour 25 minutes faster**
Uninstall	1 hour 21 minutes	11 minutes	**1 hour 10 minutes faster**

- Installing patches on top of Portal for ArcGIS 10.9.1 are expected to see similar significant speed increases.

Resources

- ArcGIS Enterprise portal – What's new
  - https://enterprise.arcgis.com/en/portal/latest/administer/windows/what-s-new-in-portal-for-arcgis.htm
- ArcGIS Enterprise Blogs
  - https://www.esri.com/arcgis-blog/arcgis-enterprise

September 2021

What's new in Survey123

(September 2021)

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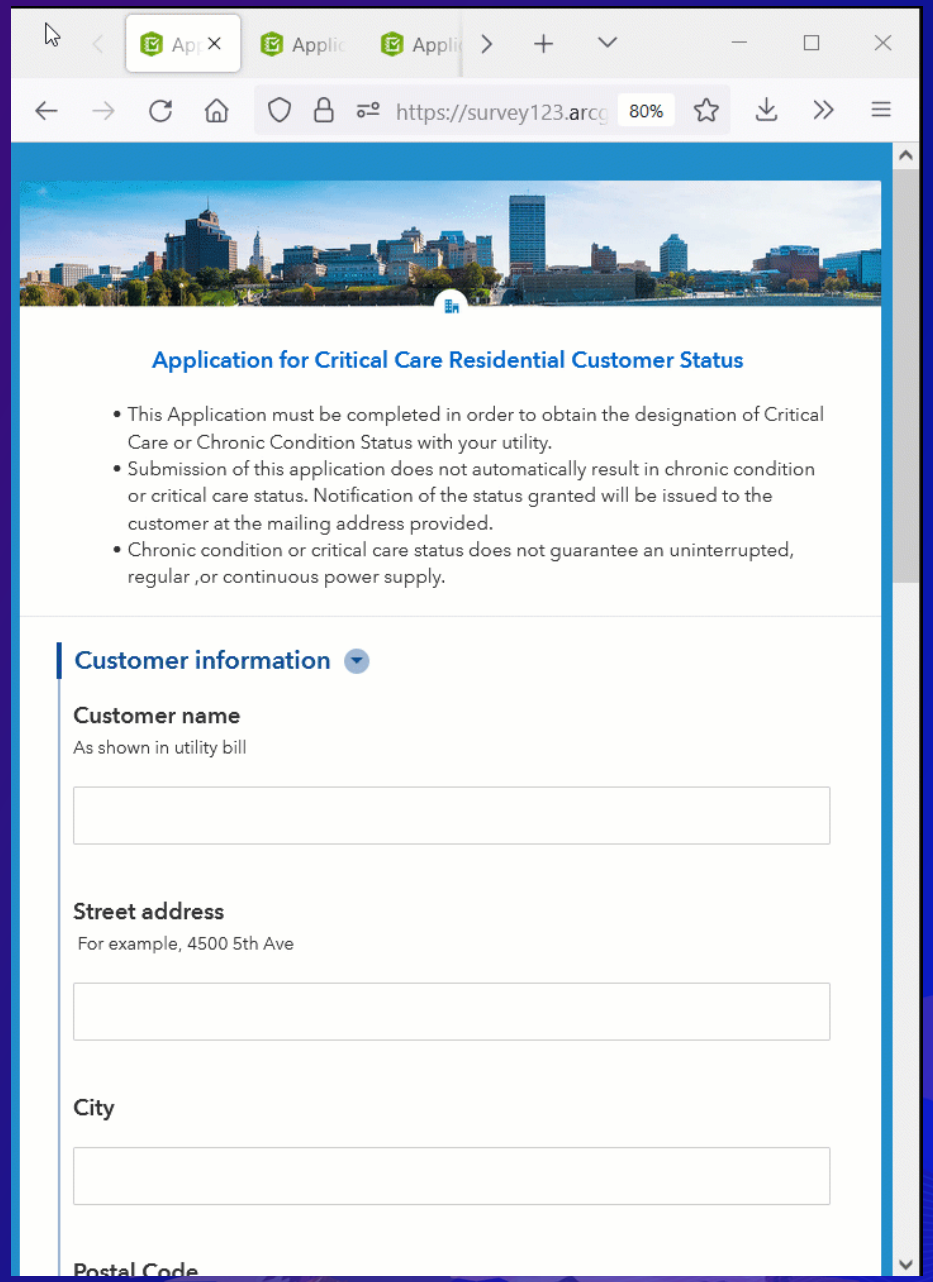
About this update

- **Available since September 16, 2021. Version 3.13**
- **Highlights:**
  - **Smart form features:**
    - New address question
    - Dynamic lists
    - More flexible conditional visibility rules
  - **Field data collection:**
    - Image support in the inbox
    - Better annotation tools
  - **Online surveys:**
    - Web accessibility enhancements
    - Calculations and hidden questions in the web designer
  - **Developers**
    - More Python and JavaScript resources

About addresses

- **Entering an address is the most common way to define the location of something**
- **For most people, typing an address is easier than pinpointing a location on a map**
- **But working with addresses has its own challenges:**
  - Typos
  - Inconsistencies
  - Mapping



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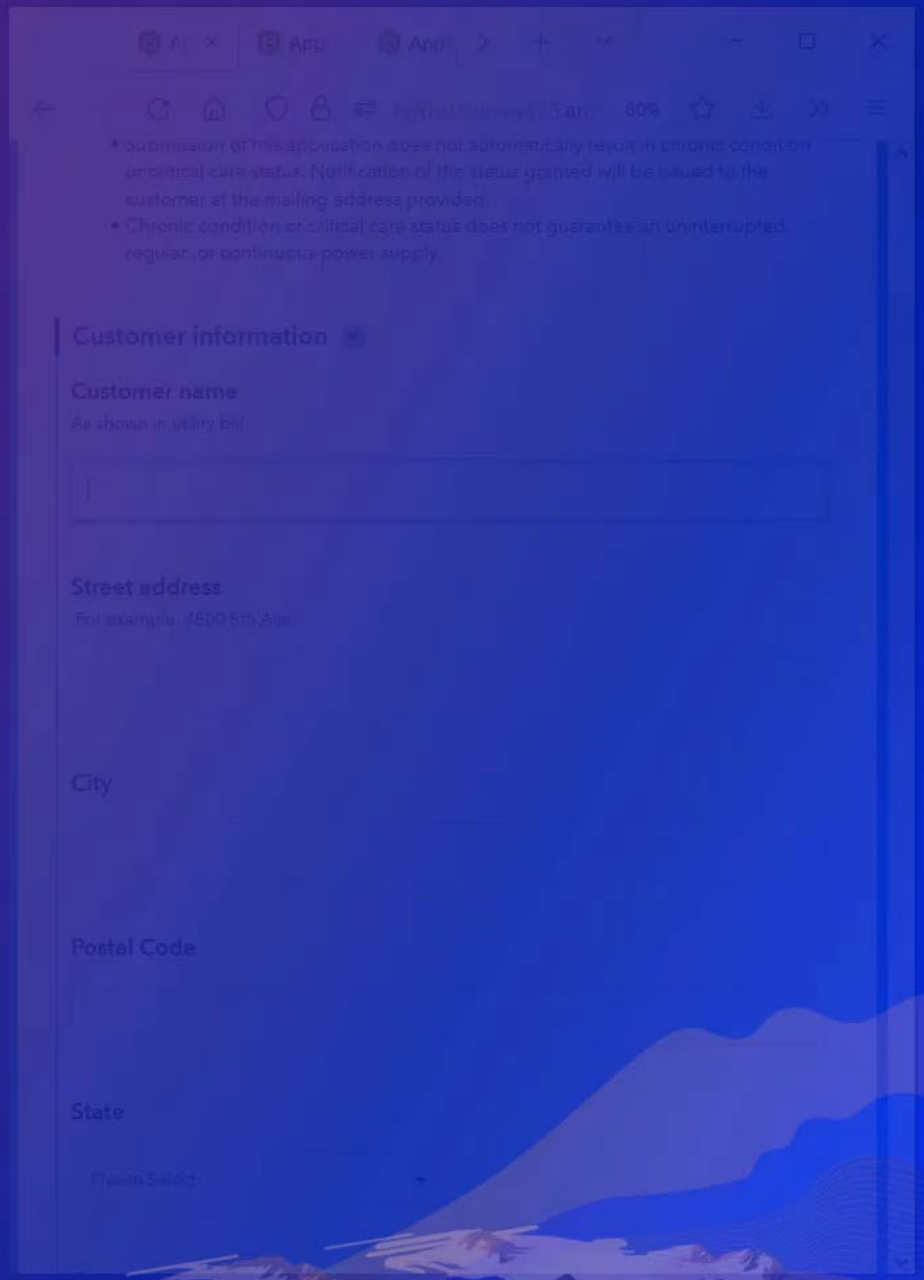

ArcGIS Image for ArcGIS Online

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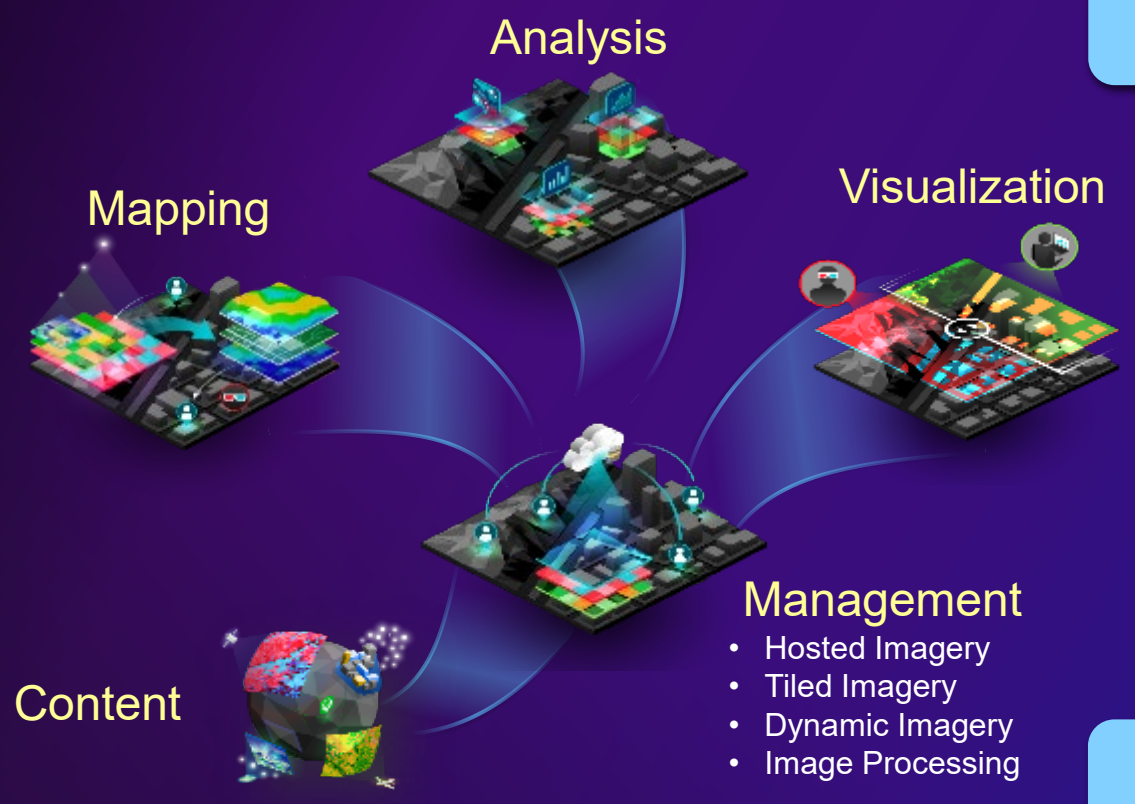
ArcGIS Image

Extends ArcGIS to manage, visualize and analyze imagery collections on your desktop, on-premises, or in the cloud



Current Deployments

Desktop
ArcGIS Pro
ArcGIS Image Analyst for ArcGIS Pro

Enterprise
ArcGIS Enterprise
ArcGIS Image Server for ArcGIS Enterprise

New Deployments

SaaS
ArcGIS Online
ArcGIS Image for ArcGIS Online

Managed SaaS
Dedicated
ArcGIS Image Dedicated

ArcGIS Image for ArcGIS Online

Simplify Image Management & Scale Raster Analytics as a SaaS

Your imagery,
partner content,
and our vast collections

Satellite

Aerial

Drone

Ortho mosaics

Radar

Terrain

Bathymetry

Image Cubes

Multidimensional

Host

Analyze

Stream

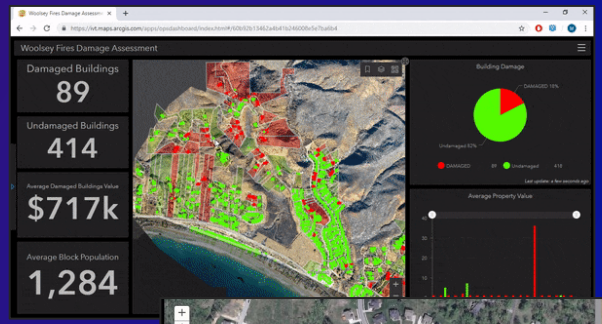
Derived Products

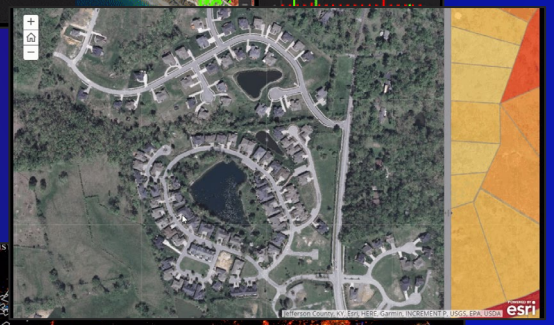
Dashboards

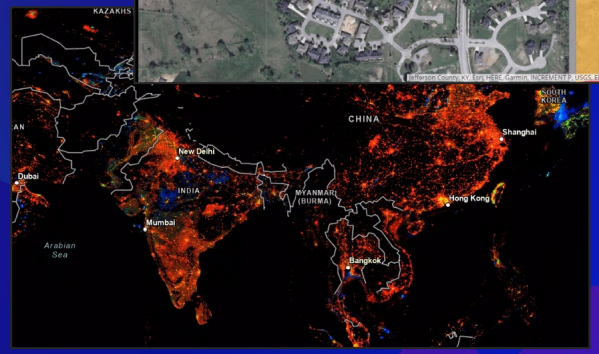
Story Maps

Reports

Apps







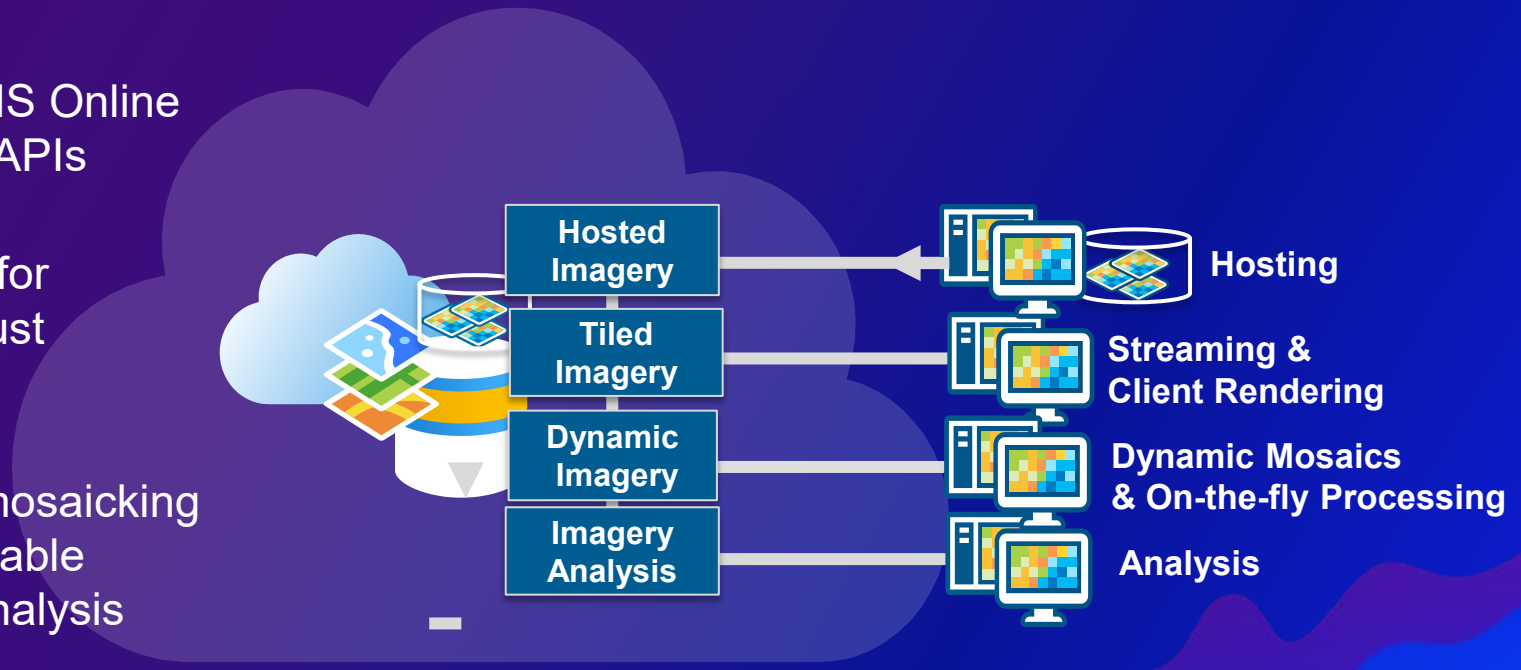
Directly integrate imagery into
all your geospatial workflows

ArcGIS Image for ArcGIS Online

A SaaS offering that empowers you to manage, visualize, and analyze imagery collections without the need for infrastructure.

Image Management Capabilities:

- **Hosted Imagery**
  - Upload your imagery into ArcGIS Online via a web browser or provided APIs
- **Tiled Imagery**
  - Create fast streaming imagery for processing and analytics, not just visualization
- **Dynamic Imagery**
  - Create imagery with dynamic mosaicking and on-the-fly processing to enable interactive interpretation and analysis
- **Imagery Analysis**
  - Enable advanced processing and analysis



Oriented Imagery

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Oriented Imagery

Access imagery at any angle for any location

Manage, explore, and exploit images that aren't pointing straight down at the ground

1. Manage imagery as an oriented imagery catalog
2. Publish oriented imagery catalog to ArcGIS Online or Enterprise
3. View the oriented imagery catalog in the Oriented Imagery viewer:
   - Experience Builder app
   - Sample web app
   - ArcGIS Pro add-in
4. Explore images, add labels, collect features, take measurements, and more

Oblique / Aerial

Street-side

Panorama

Close-range inspection

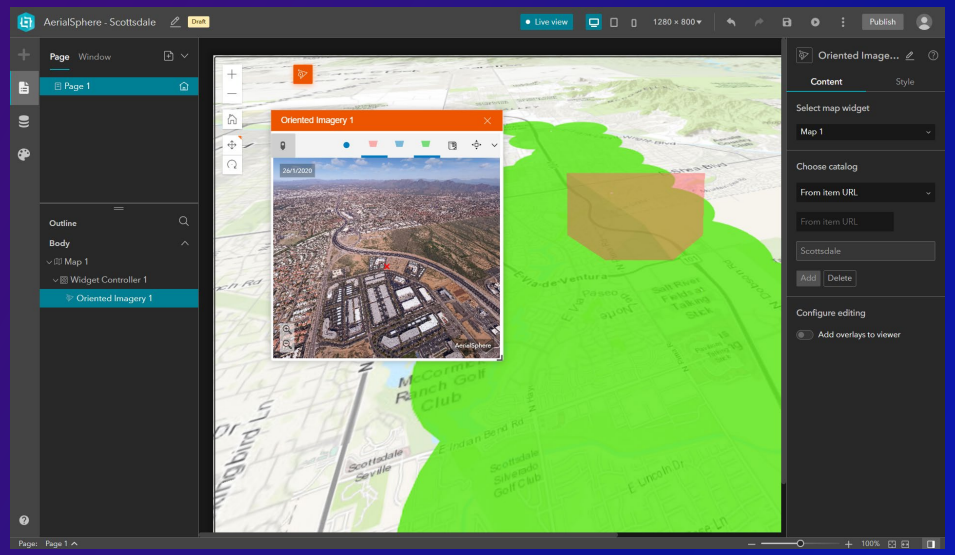
Video

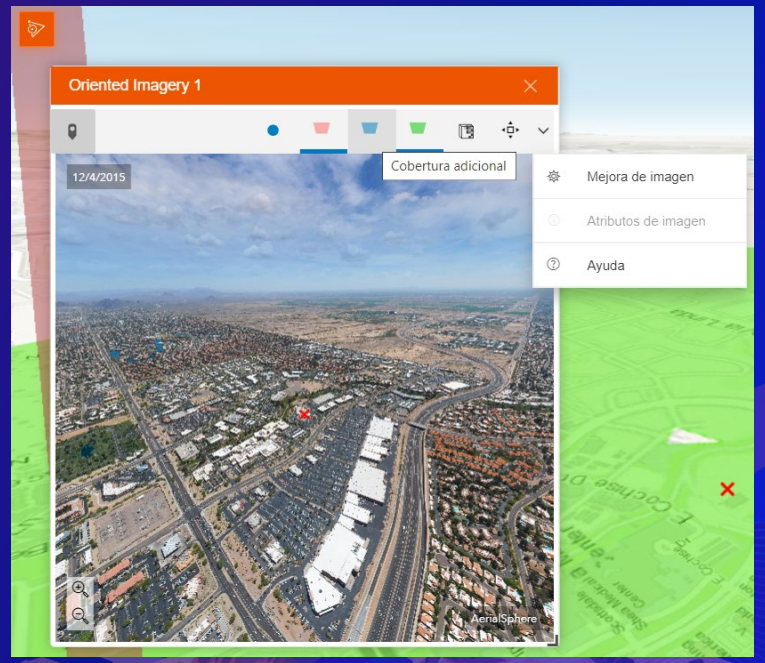
360 Image

Wide-angle / Fisheye

Oriented Imagery 2.8 – Sept 2021 release

- ArcGIS Experience Builder widget added to ArcGIS Online
- Internationalization support added to the Oriented Imagery API
- Quality improvements for the Oriented Imagery Management Tools
  - None type ID and permissions errors when publishing – fixed
  - “Check for update” feature is more reliable
  - GP tools can now be called from a script
- Quality improvements for the Oriented Imagery API
  - Better handling for cubemap 360-degree images
  - Distance & area tools now activate when depth image and accuracy are defined

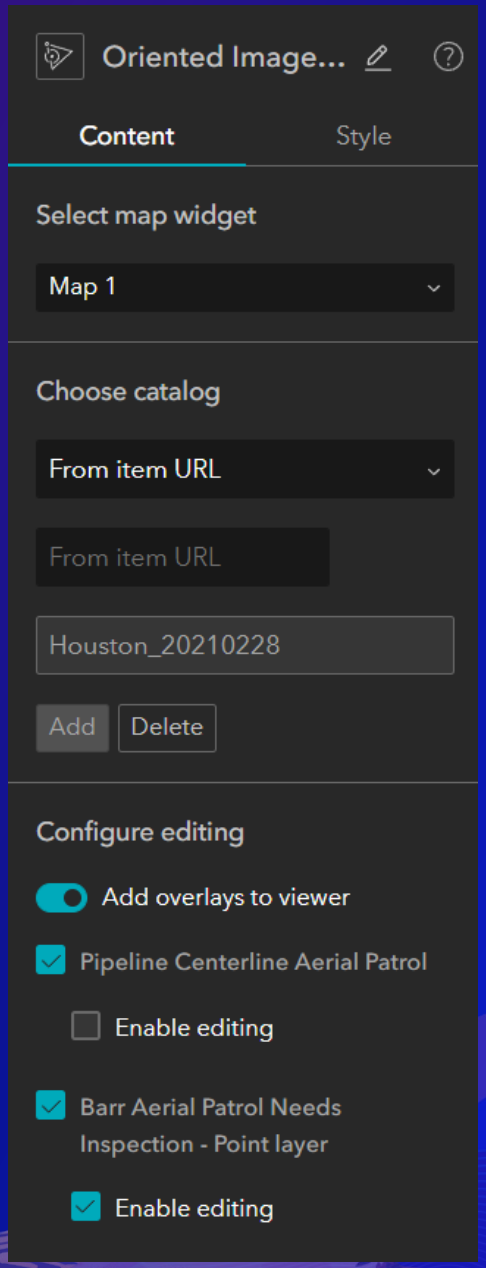




Oriented Imagery widget for ArcGIS Experience Builder

Build and share an app to visualize and exploit oriented images in a 2D map or 3D scene

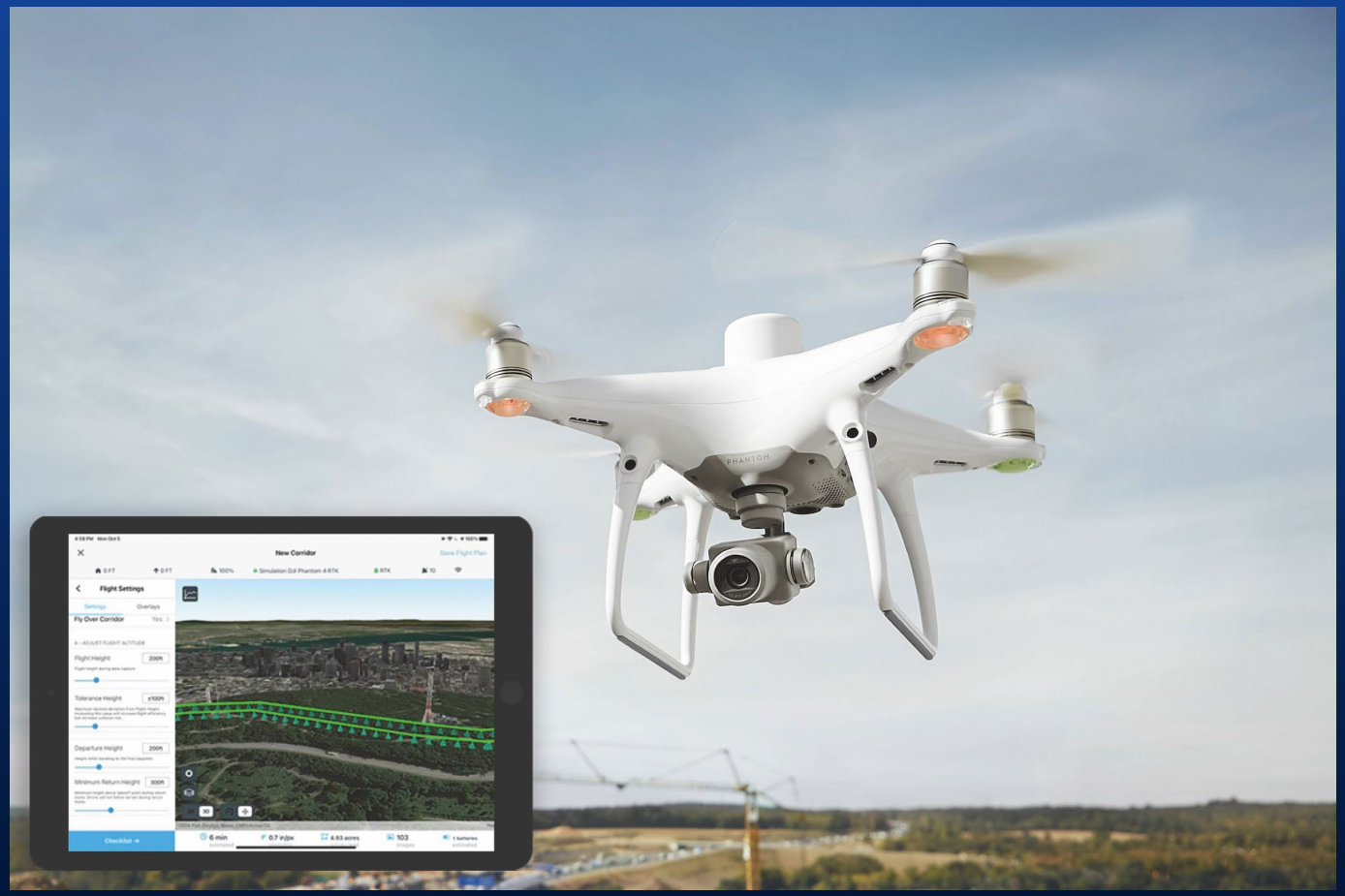
1. Log in to experience.arcgis.com
2. Select a template (map-centric templates work best)
3. Configure the map widget with a web map or web scene (optional)
4. Add and configure the Oriented Imagery widget
   - Select a map widget
   - Add a published oriented imagery catalog
   - Configure overlays
5. Save, publish, and share your app



Field data collection meets UAV

Field data collection with Site Scan and QuickCapture

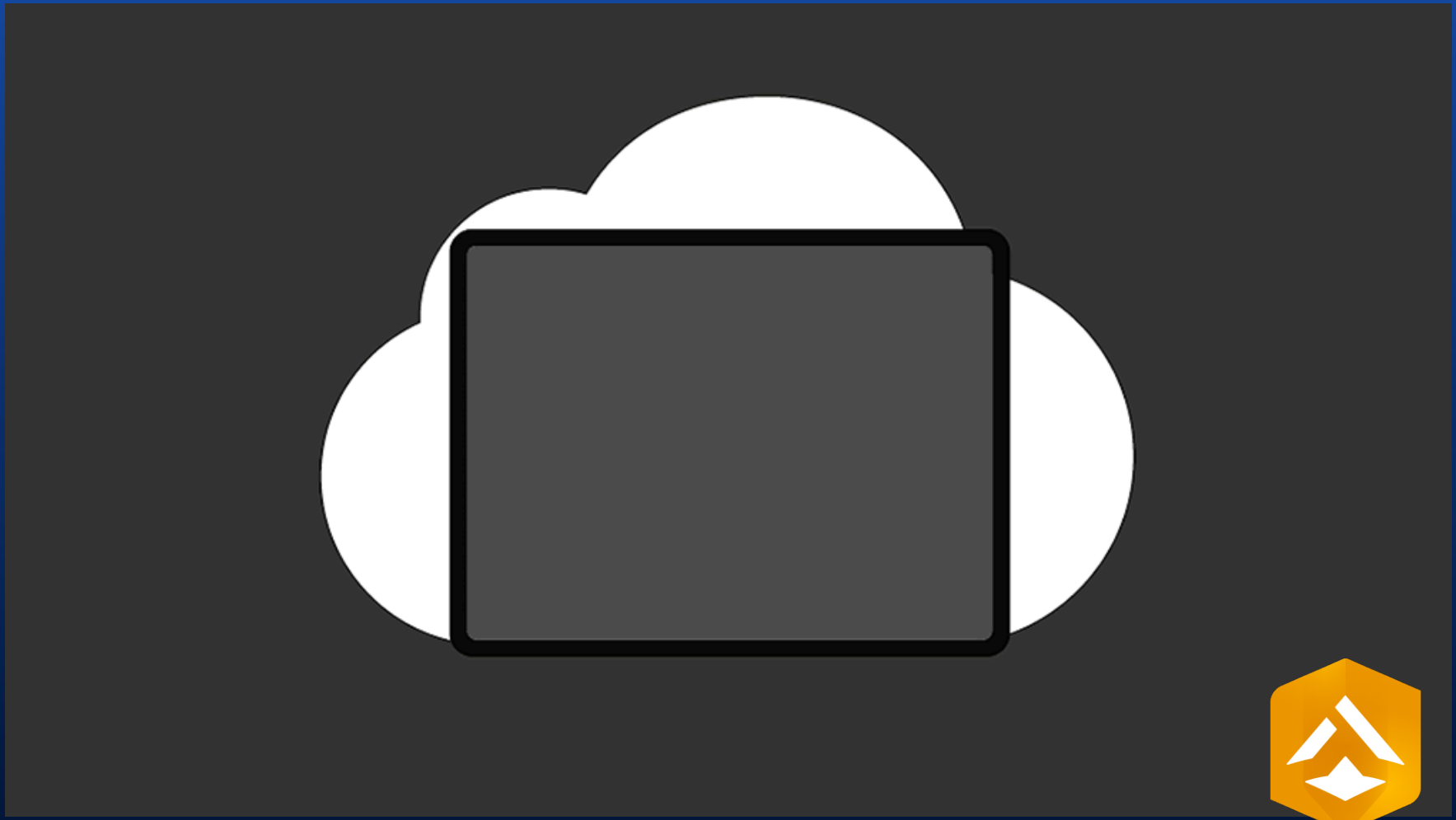
Accelerated field data collection with UAV



Introducing Site Scan for ArcGIS

End to end imagery workflow

- Acquiring and processing drone imagery.
- Working with resulting data products
- Managing drone assets



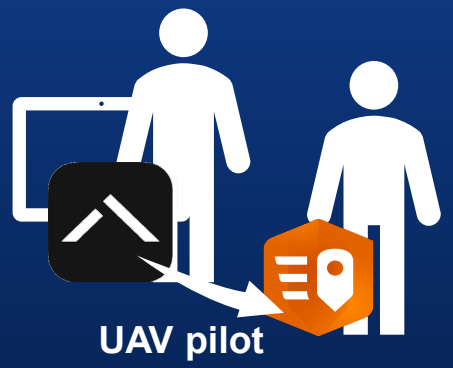
Eyes in the sky

Fly and quickly markup a map so anyone knows what to do

Imagery

Telemetry

Use Site Scan live drone imagery display
to identify relevant events



UAV pilot

QuickCapture
operator

Use ArcGIS QuickCapture to
Instantly push observations into
a map everyone can use

Dashboards

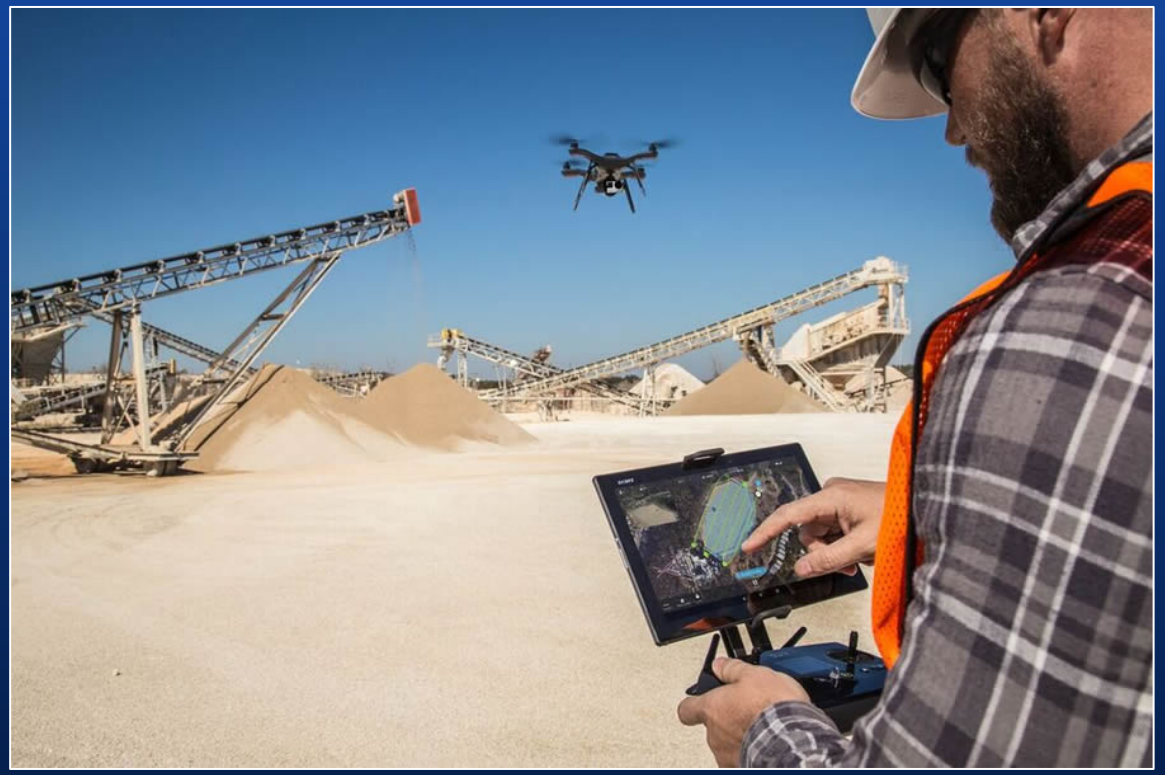
Field Workers

Analysts

Applications and use cases

Real-time collaborative workflows

- Accelerate field data collection with UAV
- Quick field observations:
  - Search & Rescue and Emergency response
  - Powerline and pipeline inspections
  - Right of Way patrols
  - Agriculture
  - Airfield Inspections
  - …



ArcGIS Hub

An online **engagement platform** that helps organizations work more effectively with their **communities.**

Capability Summary

Community Org.

ArcGIS Hub Premium

Additional Fee

Initiatives

Community Identities

Events

Dashboards

Followers

Teams

Template Builder

Feedback

ArcGIS Online

ArcGIS Hub Basic

Incl. in ArcGIS Online

Sites & Pages

Open & Private Data

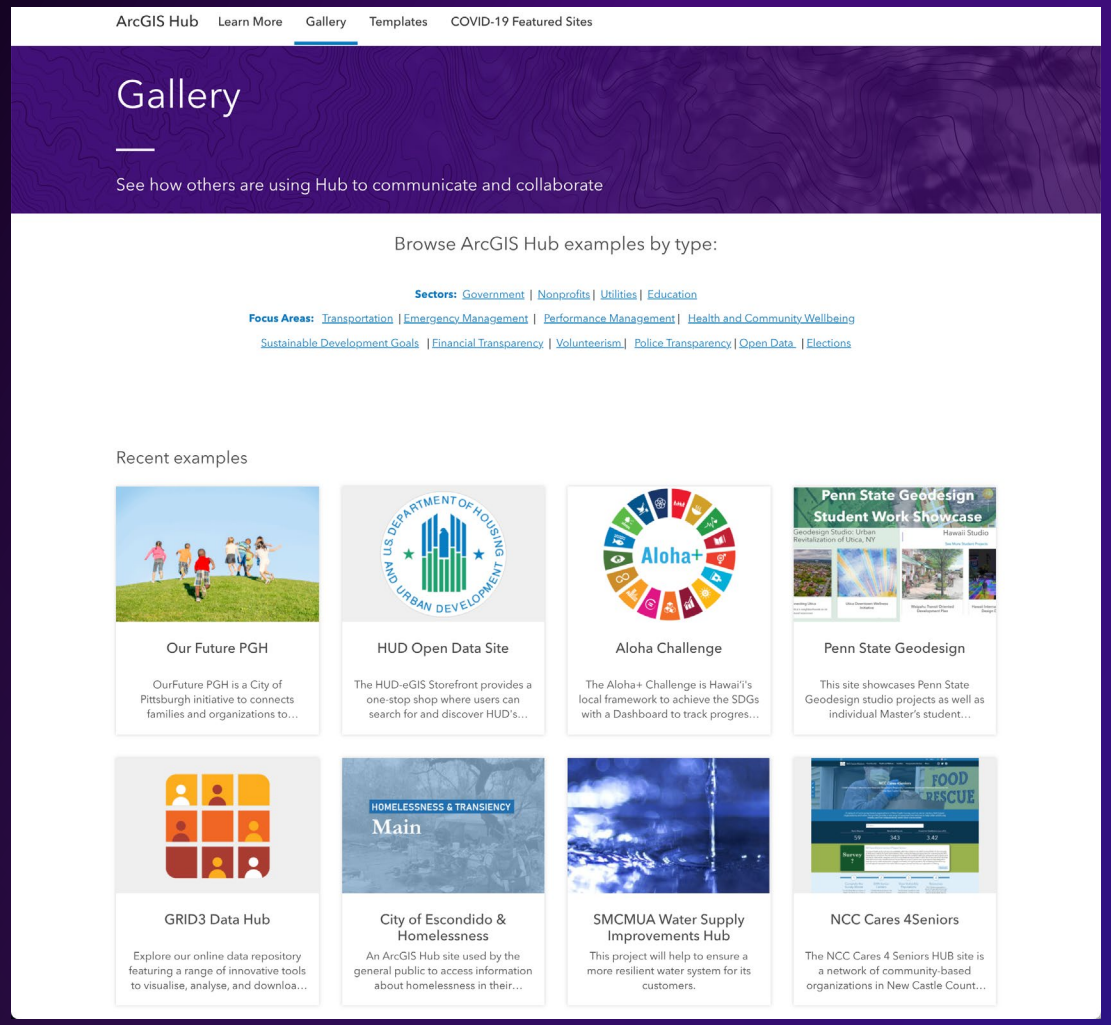
Enterprise

ArcGIS Enterprise Sites

Sites & Pages

Open & Private Data

Hubs We Love



Check out the Hub Gallery for some of our favorite examples of Hubs

https://hub.arcgis.com/pages/gallery

Know a great Hub that should be featured here? Let us know!

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