

# ArcGIS: What's New at ESRI

Mid-Willamette Valley User Group – August 3 2022

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### Agenda: "What's New"

- ArcGIS Pro
- ArcGIS Enterprise
- ArcGIS Online
- ArcGIS Field Maps
- ArcGIS Survey123
- ArcGIS Survey123
- ArcGIS for Microsoft 365
- Q&A



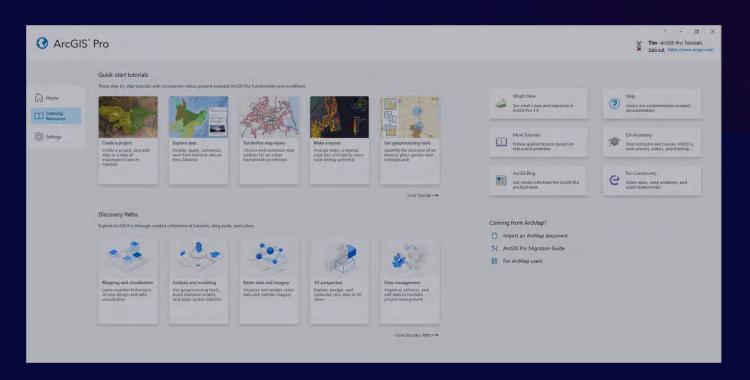
ArcGIS Pro: What's New

### ArcGIS Pro 3.0 Is a Major Release

- Not Compatible with Previous Versions
  - Projects and Documents Saved in 3.0 Don't Open in 2.x (Use Packages)
- SDK
  - ArcGIS Pro Has Moved from .NET 4.8 Framework to .NET 6
  - Update Add-ins with 3.0 APIs and Recompile

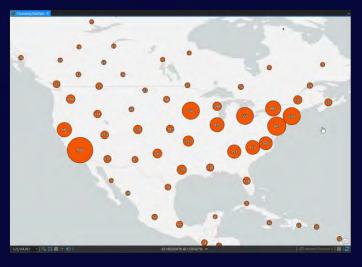
# Start Page

- Tabs for Home, Learning Resources, and Settings
- Work with the Recent Projects List
  - Sort and Filter
  - Context Menu Options



### Mapping & Visualization

- Dynamic Feature Clustering
- Animated Symbology
- Insert Graphic Shapes
- Apply Color Scheme to Symbol Subset





### Scenes

- OpenStreetMap 3D Layers
  - Buildings
  - Thematic and Realistic Trees
- Visual and Postprocessing Effects





San Francisco buildings courtesy of Precision Light Works (PSW)

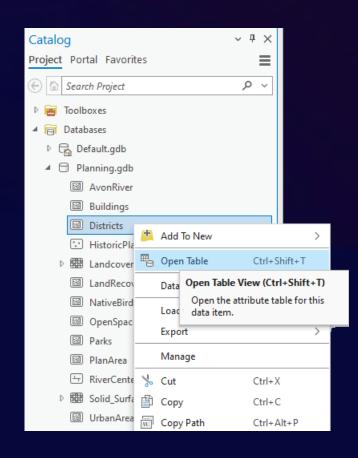
### Visual Accessibility

- Color Vision Deficiency Simulator
- Accessibility Tags for Layout Exports
- User Interface Scaling



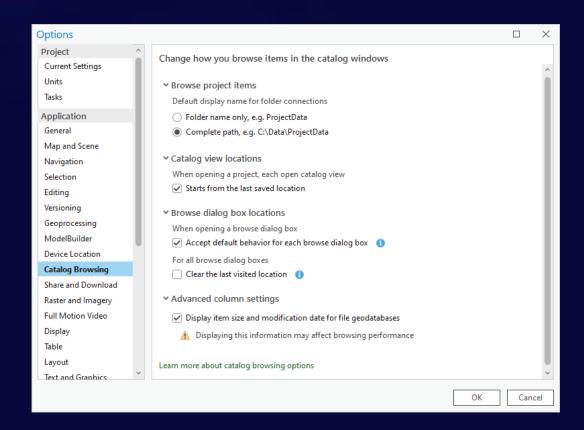
### Data Management

- Open Tables from Catalog Pane or Catalog View
- Add Stand-alone Tables to Group Layers
- Save Stand-alone Tables As Layer Files (.lyrx)
- Refresh Excel Tables in ArcGIS Pro
  - Install Excel Drivers
- Set Mobile Geodatabase as Default Geodatabase
- Share Mobile Geodatabase Data to Your Portal



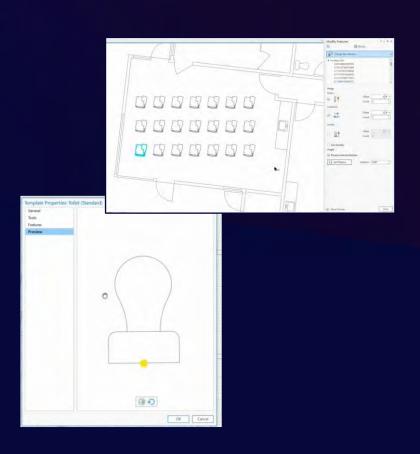
### **Catalog Browsing**

- Copy and Move Enhancements
  - Context Menu Commands, Drag and Drop
- Show in File Explorer Command
- Folder Connection Aliases
- File Geodatabase Item Size and Modification Date
- Keyboard Shortcuts on Context Menus



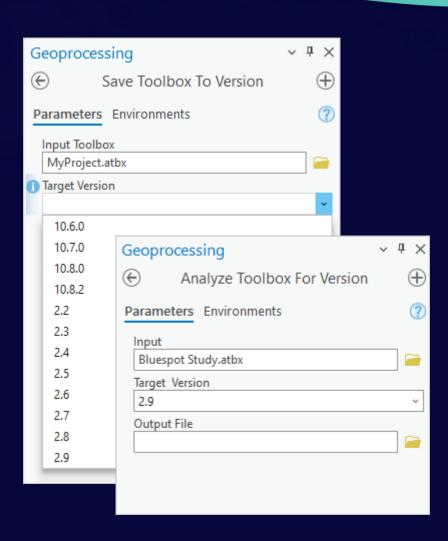
## Editing

- Array Tool
  - Array Features by Rotation Angle
- Link Cursors
  - Displays and Syncs Mouse Pointer in All Views
- Divide Tool
  - New Behavior to Streamline Repeated Varying Line Distances
- Preset Templates
  - Now Supports Secondary Insertion Anchor



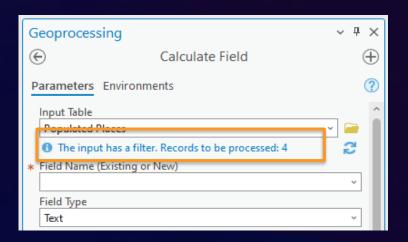
### **Toolboxes**

- New Format (.atbx) at 2.9 Is Default at 3.0
  - Performance and Scalability Advantages
  - Legacy Toolboxes (.tbx) Supported but Can't Be Created in 3.0
- Geoprocessing Tools for Backwards Compatibility
  - Analyze Toolbox For Version
  - Save Toolbox To Version



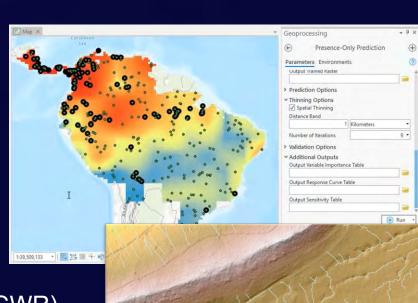
### Analysis & Geoprocessing Enhancements

- Selection and Filtered Input Notification
- Spatial Join Without Creating a New Feature Class
- Tool Parameter Memory/Autofill
- Save Tools to My Favorites
- ModelBuilder
  - Autosave
  - Find and Replace



### Analysis & Geoprocessing

- Graphics To Features / Features To Graphics
- New Hydrology Analysis Tools
- New GeoAl Toolbox
- Spatial Stats Tools
  - Presence-Only Prediction
  - Change Point Detection
  - Multiscale Geographically Weighted Regression (MGWR)
- Export Features / Export Table
  - Define Output Schema with Field Mapping



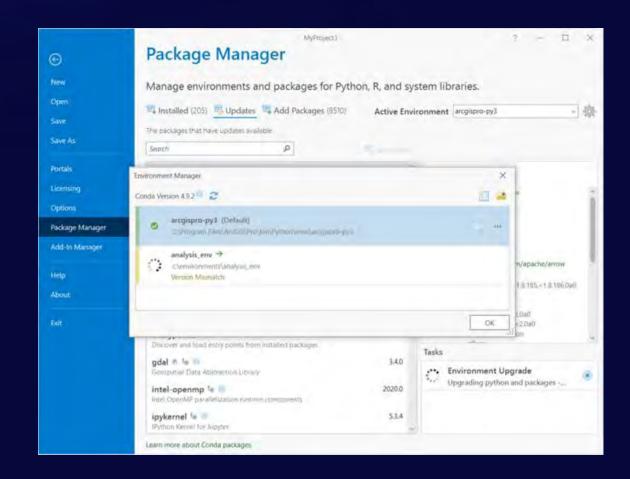
### **Cloud Data Warehouses**

- Support for Three Cloud Data Warehouses:
  - Google BigQuery
  - Amazon Redshift
  - Snowflake
- Create Query Layer
- Feature Binning



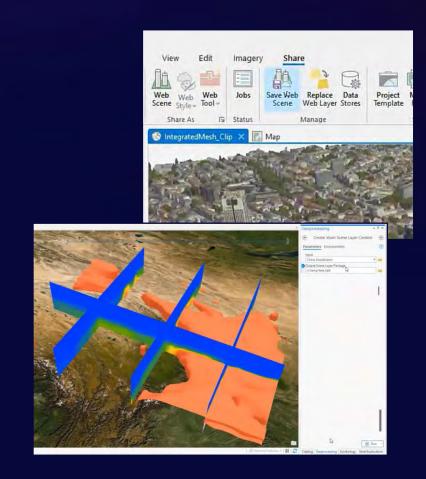
### Python

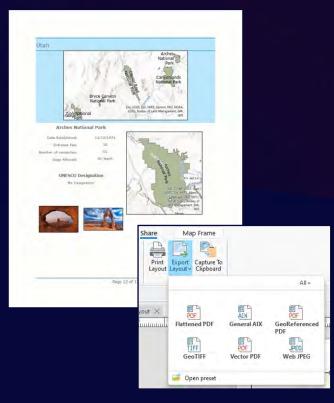
- Redesigned Package Manager
- Python Version Is 3.9.11



# Sharing

- Maps in Reports
- Export Presets
- · Save Web Scene
- Share Voxel Scene Layers
  - To Enterprise 11.0 and Later
- PDF To TIFF Tool





### Resources

- What's New in ArcGIS Pro
- ArcGIS Blog
- Esri Community
  - ArcGIS Pro Blog
  - ArcGIS Pro Ideas
  - ArcGIS Pro Roadmap
- Accessibility in ArcGIS Pro
- Migration from ArcGIS Pro 2.x to 3.0
- ProConcepts 3.0 Migration Guide





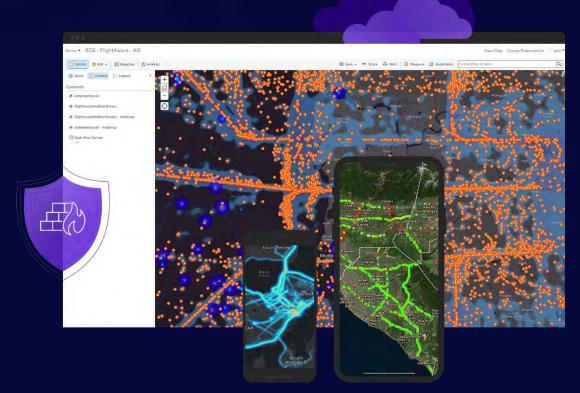
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# What's new in ArcGIS Enterprise

ArcGIS Enterprise is the foundational system for mapping and visualization, data management, spatial analysis, and application building.

It's installed on infrastructure you control, whether in the cloud or on-premises, and scalable to meet your needs.

It's the backbone for your GIS workflows and integrates with ArcGIS Pro, ArcGIS Online, and Esri's suite of applications.



# What's New Highlights



ArcMap Runtime Support optional installation

ArcGIS Enterprise Portal installer

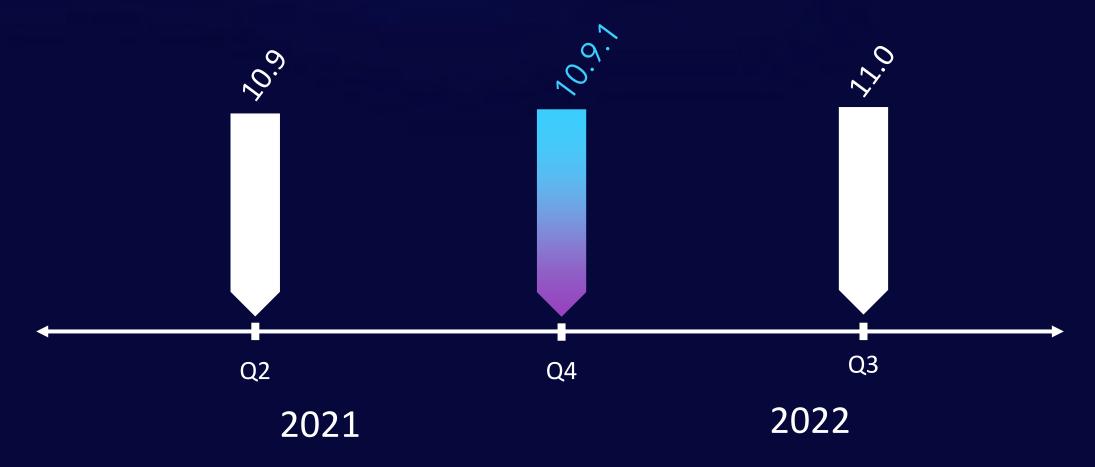
**ArcGIS Enterprise on Kubernetes** 

Support for cloud data warehouses

**ArcGIS Enterprise 11.0** 

# ArcGIS Enterprise Release Schedule





# ArcGIS Enterprise Portal Updates

# ArcGIS Enterprise Portal Highlights



User templates for adding users

Additional webhook functionality

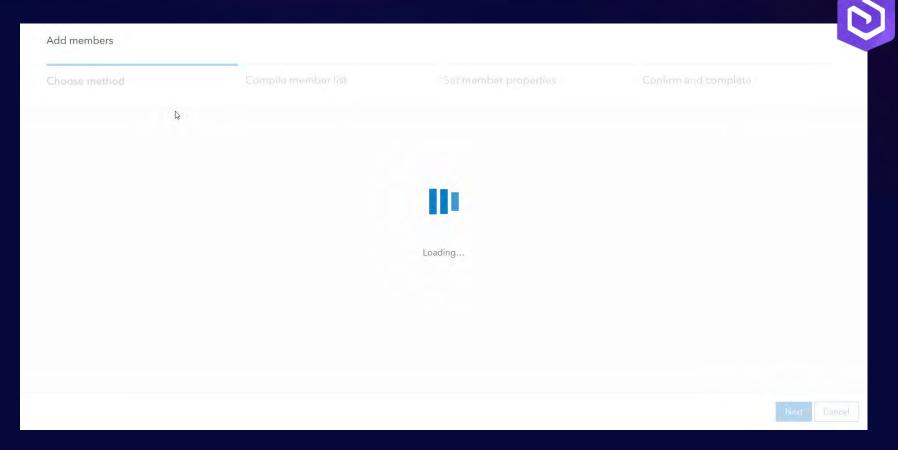
Release of the Map Viewer

New Scene Viewer functionality

**Faster Installation** 

# ArcGIS Enterprise Portal New User Template

ArcGIS Enterprise Portal now provides the ability to download a .csv template. Making it easier to add additional users.



### Additional Webhook Functionality

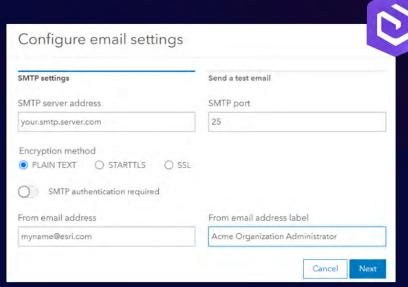
Webhooks can now be used to run an ArcGIS Notebook Server notebooks for specific events.

Administrators can now be notified when ArcGIS Data Store enters read-only mode.

Ability to notify administrators of low disk space:

- ArcGIS Server
- ArcGIS Data Store





# Map Viewer

Included by default with Portal for ArcGIS 10.9.1

New more intuitive modern interface and layout.



# Map Viewer

Draw features and place markers on the map with the new sketch tool.

Ability to provide feedback without directly editing a feature layer.

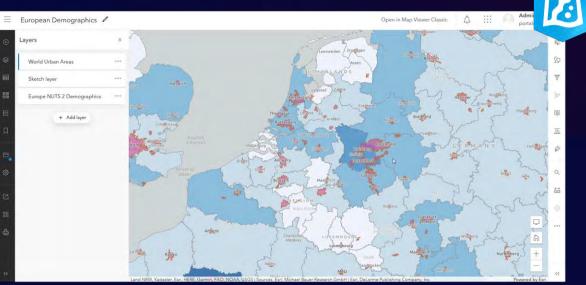


### Map Viewer

Easier to switch quickly between layers when styling and configuring popups.

New capability to hide interface elements to increase web map visibility.





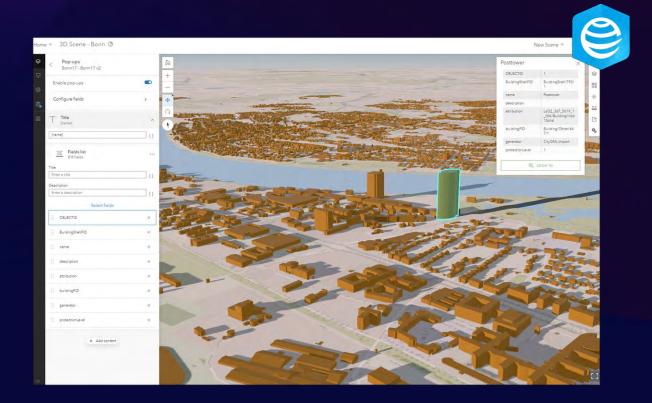
### Scene Viewer Updates

Edit feature layers directly within the Scene Viewer

Create elevation profile charts for your scene data

Save layer option to save the visualization of your scene layer

Configure pop-ups in your scene to further tailor attribute information



# ArcGIS Enterprise Administration

One runtime for services to be published from ArcMap.

ArcGIS
Enterprise
contains
two internal
runtimes.

One runtime for services to be published from ArcGIS Pro.

Starting this year, the runtime that allows for services to be published from ArcMap will be removed from ArcGIS Enterprise.

ArcGIS 2021 Releases:

New migration tooling can switch *compatible* services from ArcMap runtime to ArcGIS Proruntime.

Both runtimes are still included.

Services that aren't compatible will need to be manually republished.

ArcGIS 2022 release:

Only the ArcGIS Pro runtime will be included.

It will no longer be possible to publish or run services published from ArcMap.

ArcMap-based services will no longer run if not migrated before upgrading to this release.

Runtime Features at 10.9.1

Image Services and Geodata services now compatible with the tooling

10.9.1 will include option to not install ArcMap-based runtime.

### **ArcGIS Data Store**

### Feature Enhancements

### **Disk Cleanup Utility**

- New tool available in the tool directory
- Removes unused and unneeded files left over from upgrades and backup process



### **Graph Store**

- Newest data store type
- Utilized by ArcGIS Knowledge
- Publish and use knowledge graphs in ArcGIS Pro



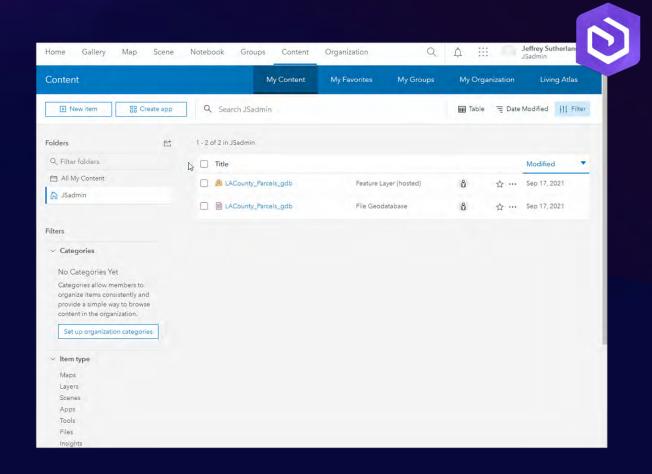
# Content and Data Management

# New Experience for Adding Content

New improved experience for adding content to your organization.

A "New Item" button has been added to the content page

Drag and drop functionality



# Cloud Data Warehouse Support

Supported cloud data warehouses:

- Google BigQuery
- Snowflake
- Amazon Redshift

Now supported with ArcGIS Enterprise and ArcGIS Pro

- Register with ArcGIS Enterprise hosting server
- Create direct connections in ArcGIS Pro

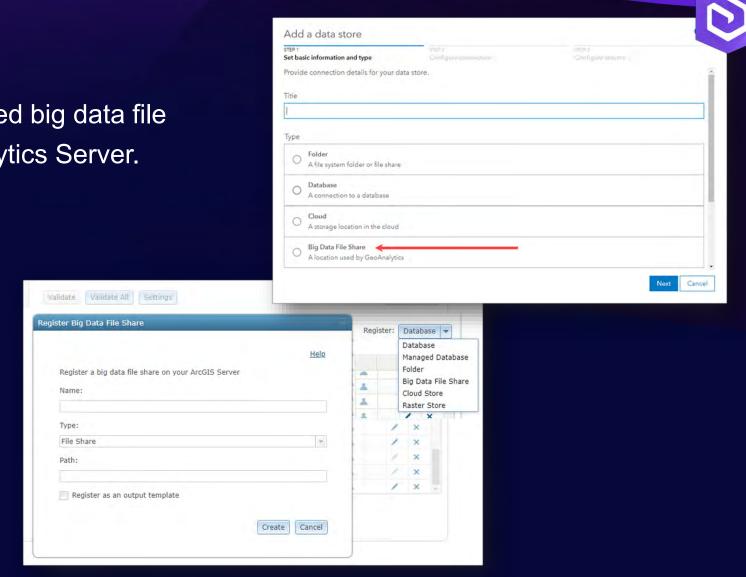




# Big Data File Share Support

Improved user experience when added big data file shares for use with ArcGIS Geo Analytics Server.

It is now possible to adding big data File shares from the portal content page.



# Google Cloud Support

ArcGIS Enterprise now supports many new feature related to Google Cloud:

- Support for cloud data store items that access locations in Google Cloud.
- Google Cloud SQL for Postgre SQL
- Google Cloud SQL for SQL Server



# ArcGIS Server Roles

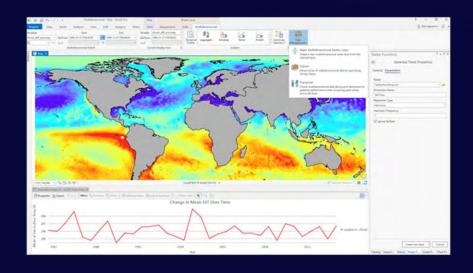


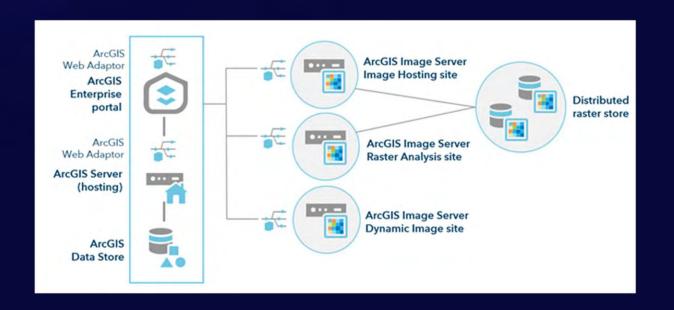
### ArcGIS GeoEvent Server

- Updates to backend libraries and dependencies
- Optimization to dynamic geofencing
- Query definitions can now be applied when importing geofences

### **ArcGIS Image Server**

Portal analysis tools for ArcGIS Pro and the Sustainability Modeler.



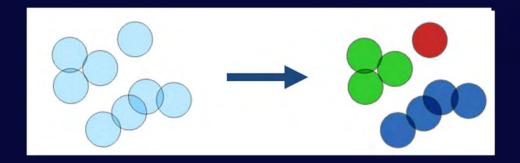


ArcGIS Image Server on Linux can now be configured with the enterprise portal for raster analytics.

# **ArcGIS GeoAnalytics Server**



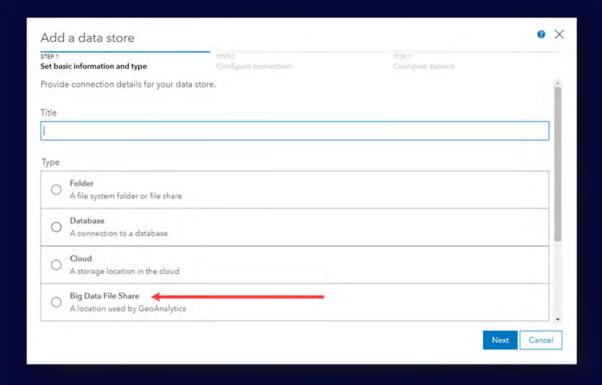
New tool: Group by Proximity



Tool enhancement: Summarize within

- Standard deviation
- Variance

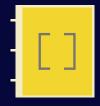
Add big data file shares through the **New Item** interface in the enterprise portal



# ArcGIS Workflow Manager Server



Highly Available sites are now supported





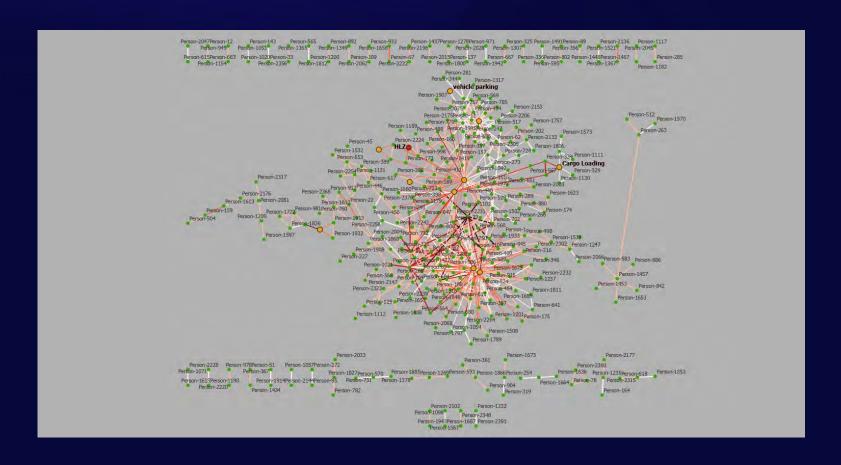
# ArcGIS Notebook Server



- Webhooks can execute a notebook when triggered
- Notebooks can now be published as web tools



### ArcGIS Knowledge



Model and analyze complex supply chain models natively within ArcGIS using ArcGIS Knowledge

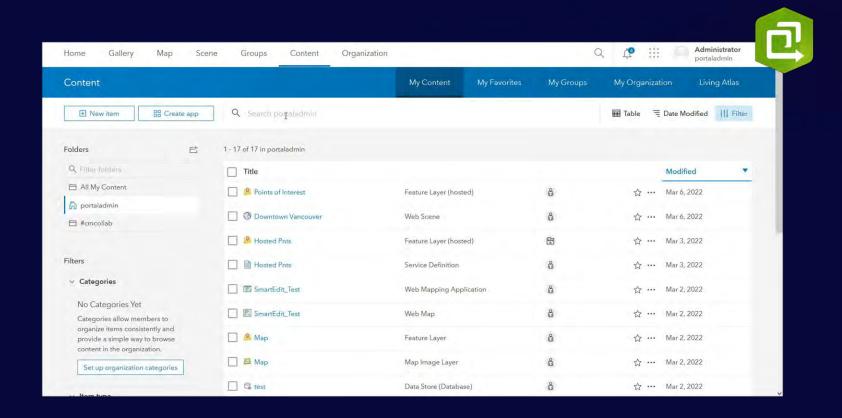


Accessed from the 'Create Apps' menu.

Ability to filter templates by capabilities

Template Updates:

- Portfolio
- Nearby



### **ArcGIS Dashboard**

New generation of ArcGIS Dashboards build off the ArcGIS API for JavaScript 4.x

Previous version of ArcGIS Dashboard transition to ArcGIS Dashboards Classic. Improved performance and additional features



What's coming in ArcGIS Enterprise 11.0

# ArcGIS Enterprise 11.0 key stories

- ArcGIS Enterprise 11.0 feature deprecations
- Map Viewer: Support from Flow renderer, Layer Effects, and Charts
- Member Hierarchy Categories
- Beta features: Custom Data Streams, Service Level Webhooks
- Improvements to Portal for ArcGIS installation / upgrade experience
- Publish Geodata Services from ArcGIS Pro



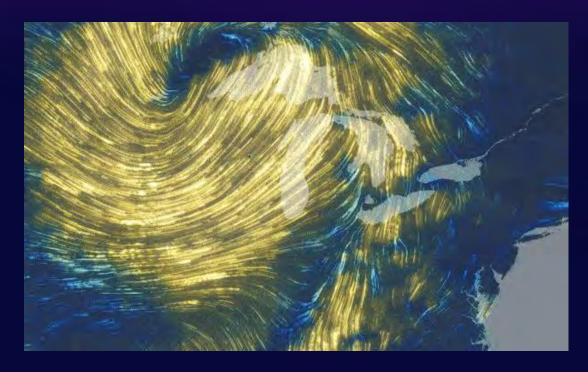
# ArcGIS Enterprise 11.0 + deprecated features

- Upgrading to ArcGIS Enterprise 11.0 supported from 10.7+
- Recommended to upgrade to 10.9.1 first
- Services still in the ArcMap based service runtime will be automatically migrated (if supported by the tooling)
- Configurable App Templates that are retired will not be migrated



Read more in the Consider
ArcGIS Enterprise 10.9.1
until you're ready to
turn it up to 11
blog.

### Map Viewer and Member Hierarchy

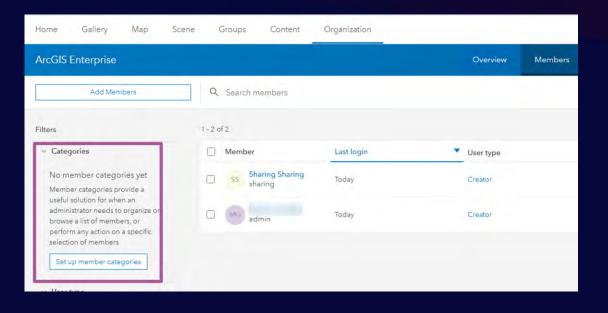


### Map Viewer Updates

- Flow Renderer
- Layer Effects
- Charts
- Pop-up enhancements with Arcade

### Member Hierarchy Categories

- Reflect user membership within organization
- Filter users by the member category
- Display member categories on the user's settings page



# Beta features in ArcGIS Enterprise 11.0

### **Custom Data Feeds**

- Separate install
- Read Only feature services from custom data providers

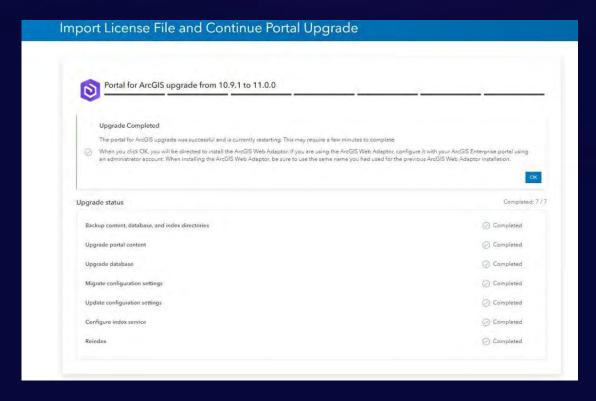
### **Service Webhooks**

- Track CRUD events for hosted and referenced Feature Services
- Track Job Completion events for Geoprocessing Services

### **Notebook Server**

Support for Windows Containers

### Other notable updates



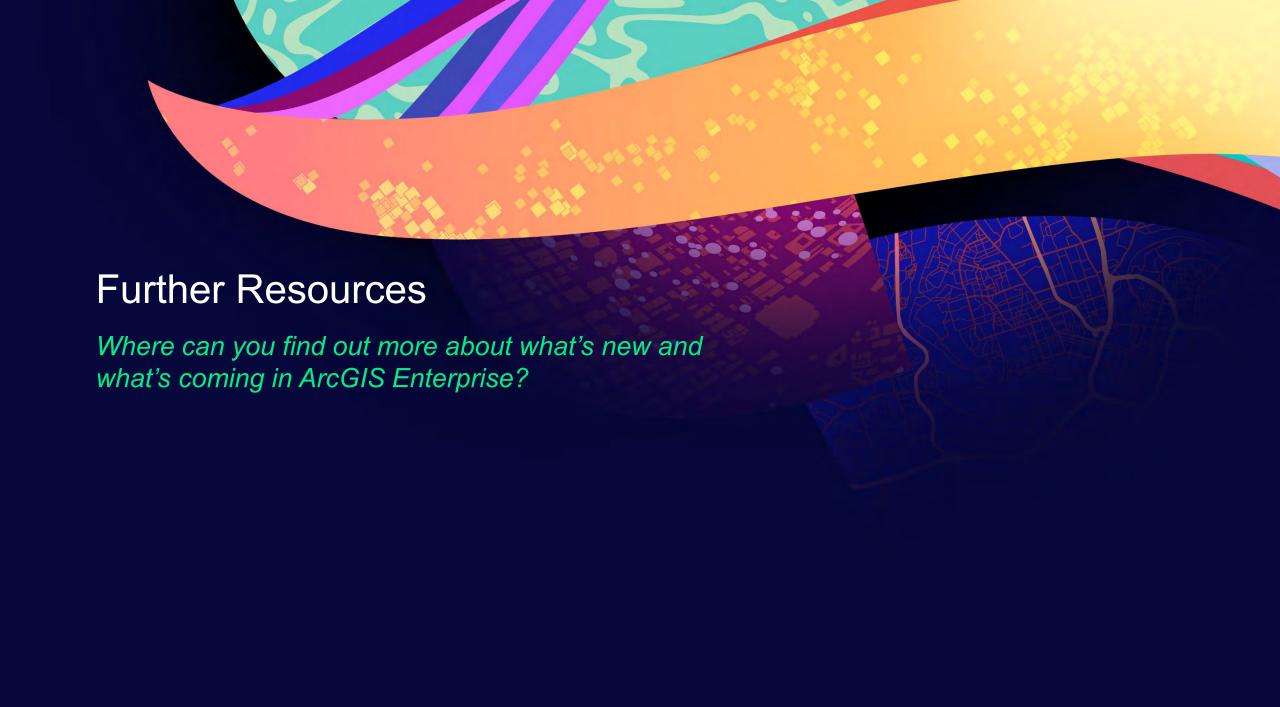
Portal for ArcGIS shows more details post installing / upgrading about what step is being worked on

### **Operational Health Script**

Troubleshoot issues relating to architecture, configuration, and operational issues in your Enterprise portal.

### **Geoprocessing Services**

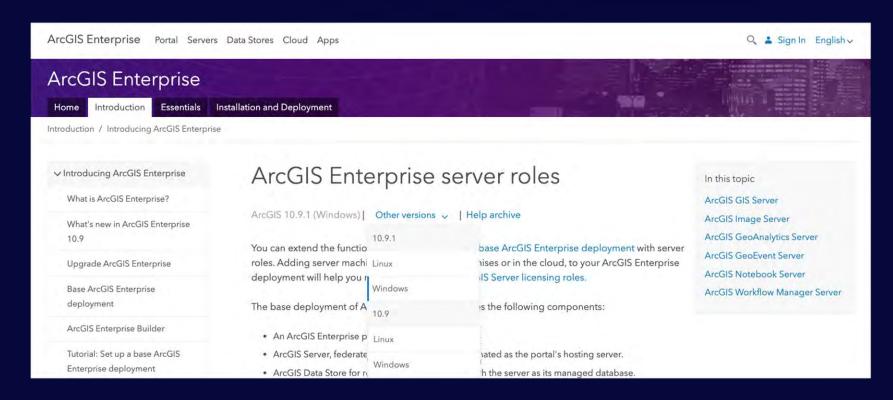
Support to publish Geoprocessing Services from ArcGIS Pro 3.0 to ArcGIS Enterprise 11.0



# **Updated Documentation Pages**

Prior to 10.9.1, there was a single "What's New" page for both 10.8.0 and 10.8.1

At this release, both the short term and long-term releases will have separate pages (One for 10.9 and one for 10.9.1)





A global community of Esri users where you can find solutions, share ideas, and collaborate to solve problems with GIS Q Search all content Are you a member yet? Join Our Community Latest Activity Sort/Filter : Created 🕶 Community Tips See a guided overview of the community and learn about new Autopopulate a survey from existing feature service features. and output to feature report? I'm trying to find the best way to configure a survey123 survey to 00 00 00 autofill some values, gather new info, then output... Introduce Yourself by BFerri • New Contributor
ArcGIS Survey123 Questions • Last Updated 9m ago Connect with fellow members and build your network.

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ArcGIS Online: What's New



# New Experience Builder Widgets in 2022



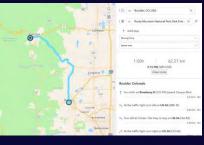
Print



Timeline



Draw



**Directions** 

Toolbox



Floor Filter

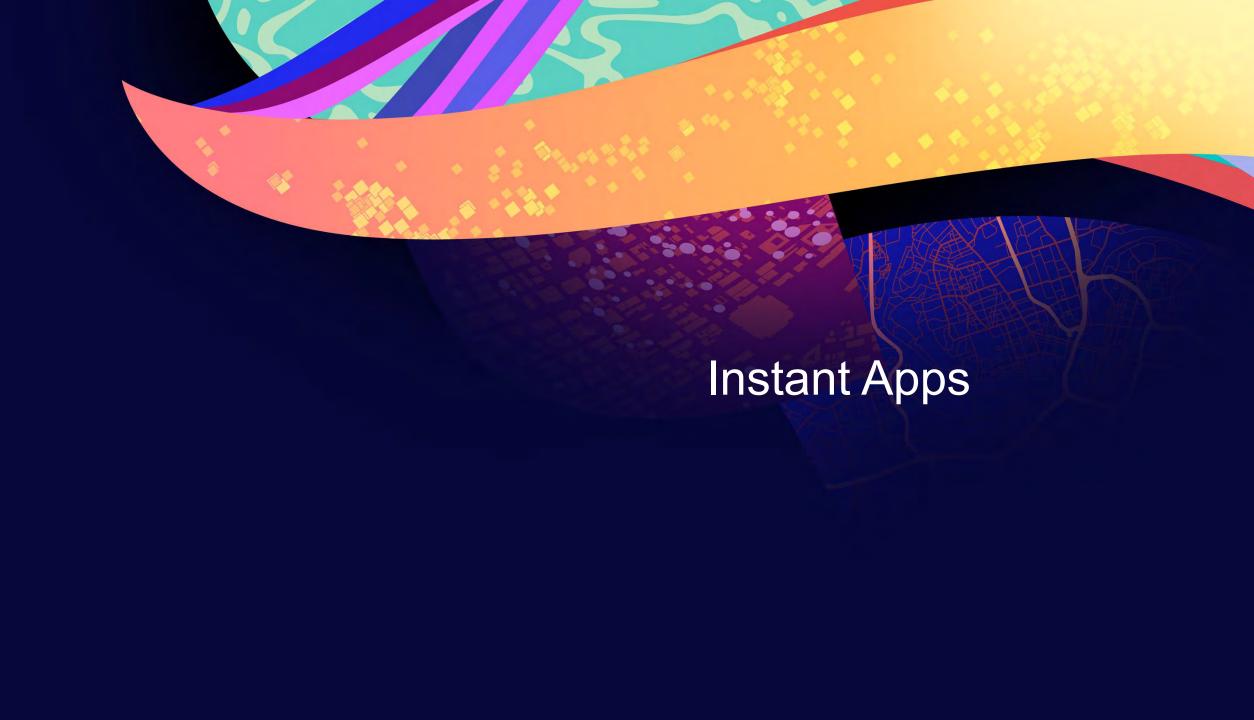


**Utility Network Trace (beta)** 



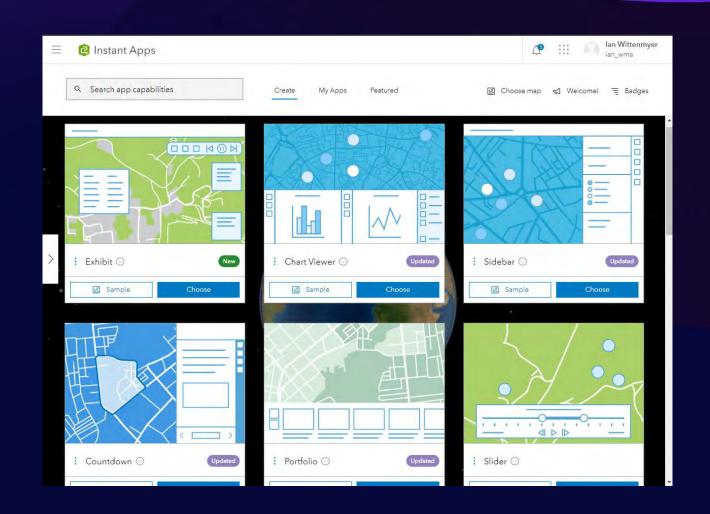
Business Analyst Infographic (beta)





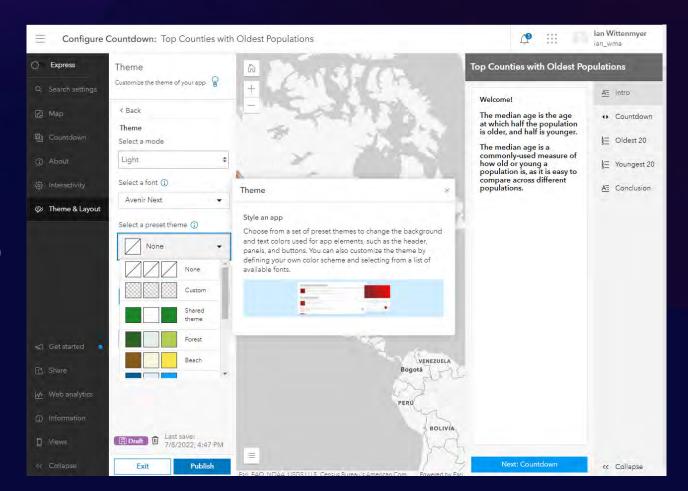
What's new since last UC?

- •6 New apps:
  - Basic (maps or scenes)
  - Chart Viewer
  - Countdown (maps or scenes)
  - Exhibit (maps or scenes)
  - Sidebar
  - Slider



What's new since last UC?

- New capabilities:
  - Editing: Sidebar and Attachment Viewer
  - Theming: preset or custom options
  - Effects: emphasize results
  - Web Analytics: (Google and now Adobe)
  - 'Get started' content improved in config



What's new since last UC?

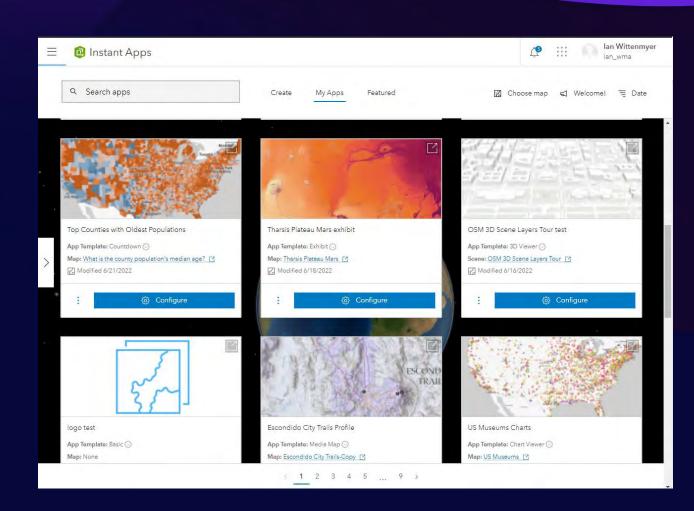
### **Instant Apps home**

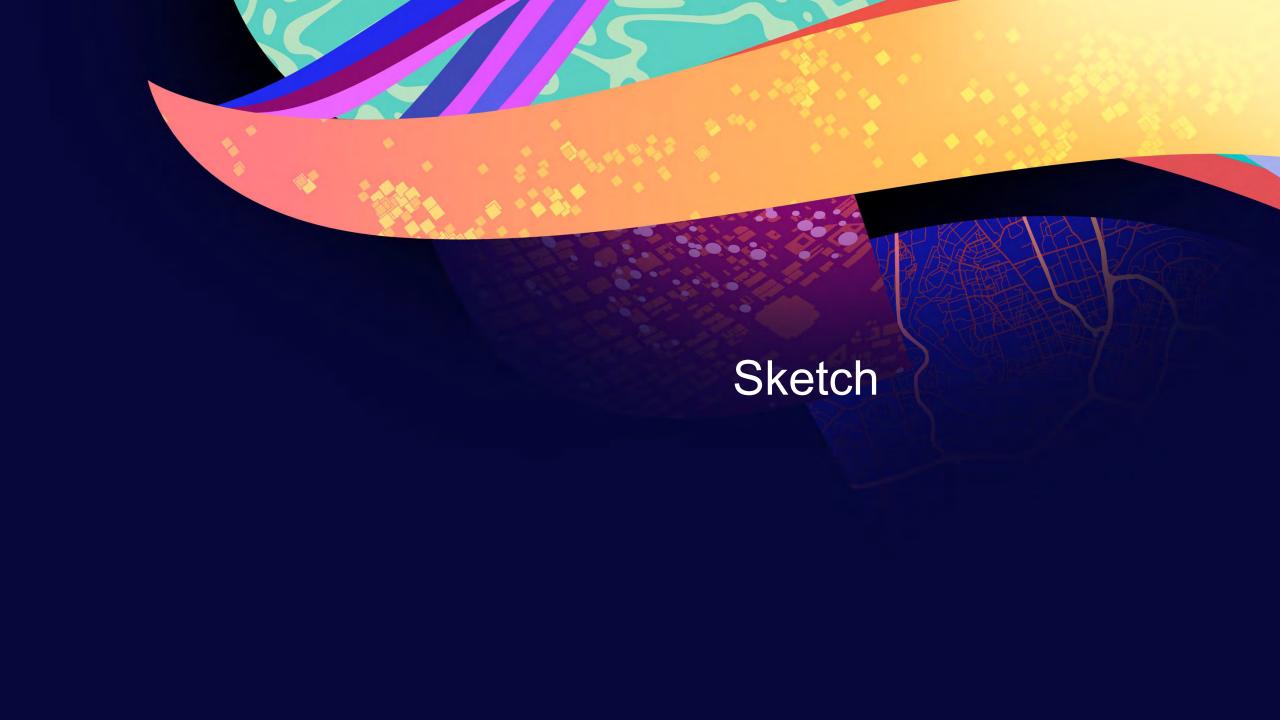
Added to Scene Viewer and App Launcher Improved app selection

- Multiple keyword search
- Suggestions

Create no code native apps

- powered by AppStudio
  - Attachment Viewer
  - Nearby
  - Sidebar
  - Zone Lookup

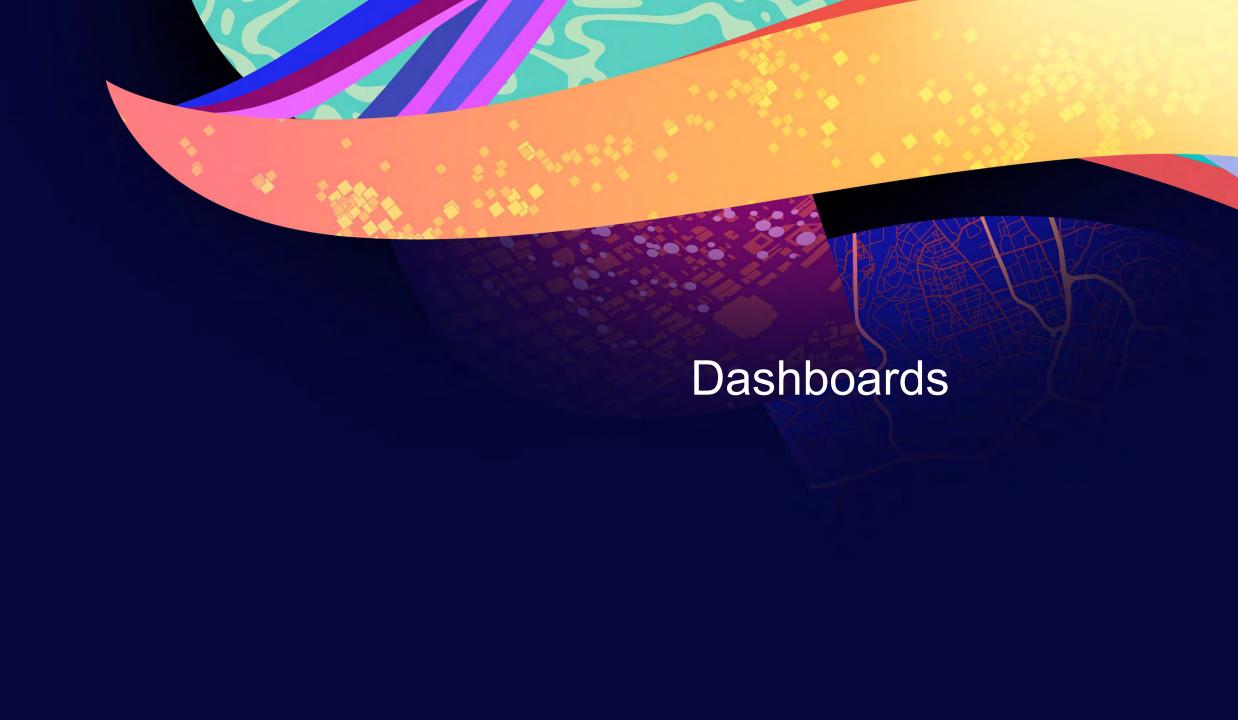




### Sketch: What's new?

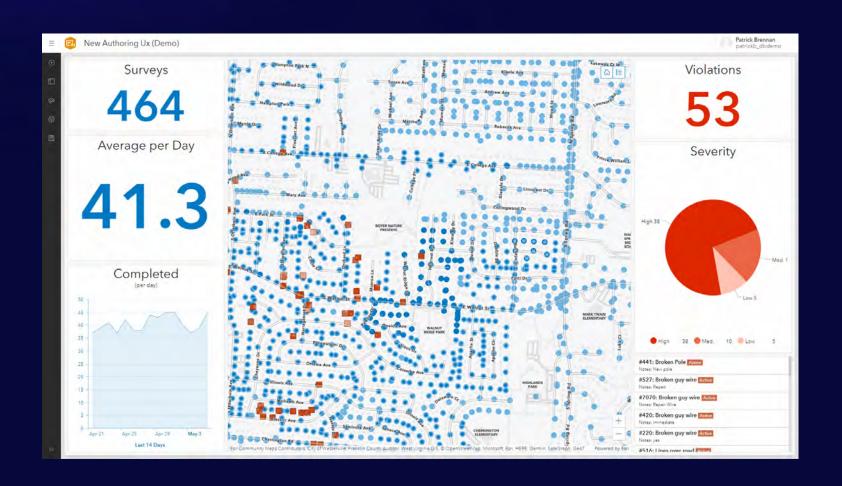
- Sketch was introduced in the Map Viewer in April 2021
- Since then, we have added several enhancements including:
  - Snapping controls in the UI / ability to snap to other features in the map
  - Expanded symbol gallery for lines & polygons
  - Advanced symbol styling
    - Random marker placement for polygons
    - Improved color picker
  - Add to sketch from search results
  - Improved user interface





# New Authoring Ux – Calcite Components

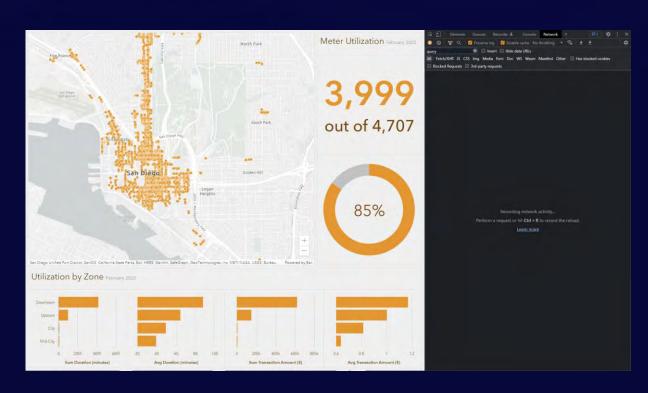
- Built using Calcite Design System
- Synergies with mobile dashboards, accessible dashboards
- Highlights include:
  - All authoring controls in convenient sidebar
  - One click to rename or resize and element
  - Add elements anywhere into the layout

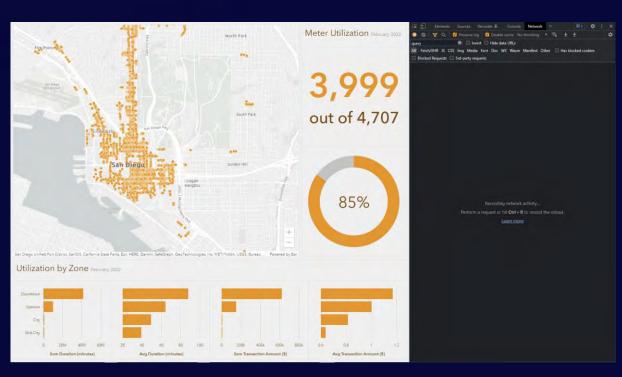




### Dashboards Performance

Before and After September 2021



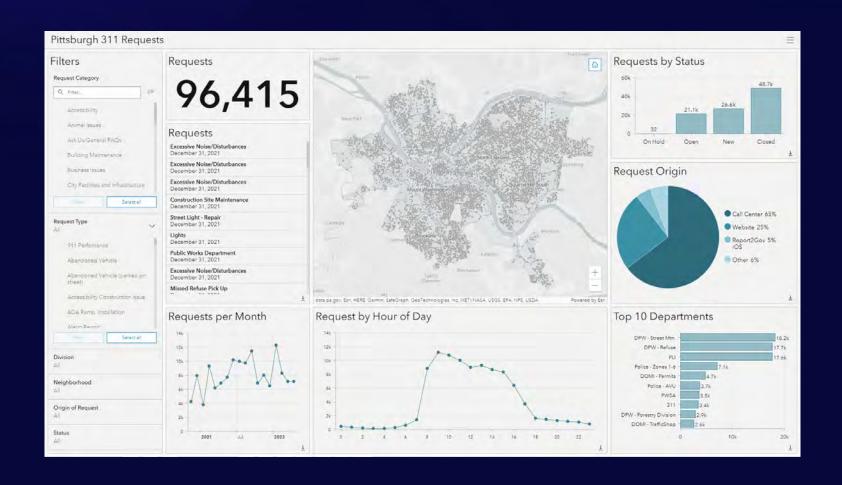


After

Before

# **CSV** Download

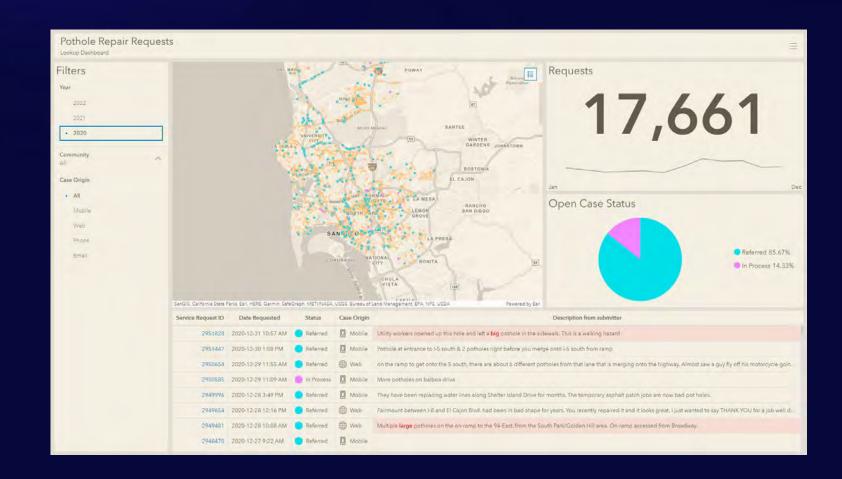
- Options:
  - Summarized data
  - Source data
- Status:
  - Available now in ArcGIS Online
  - Coming soon for ArcGIS Enterprise



# New data visualization

#### **Table**

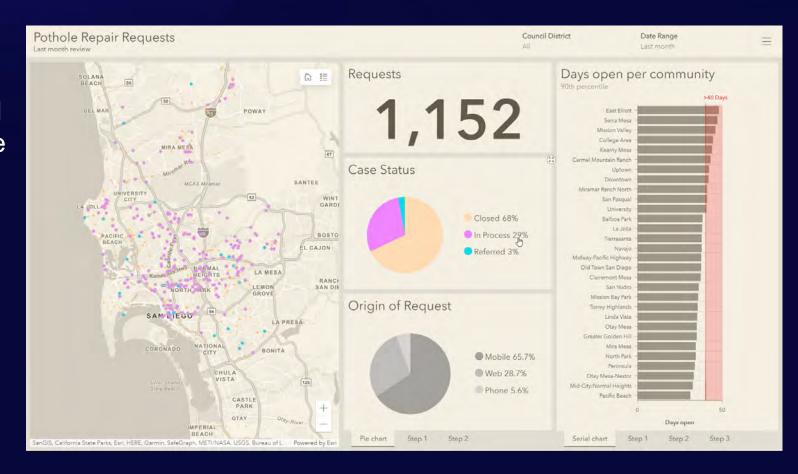
- Highly configurable
- Examples:
  - Highlight Rows
  - Color ramp
  - Icons
- Available now in ArcGIS Online
- Included in ArcGIS
   Enterprise 11.0 (coming soon)



# Actions

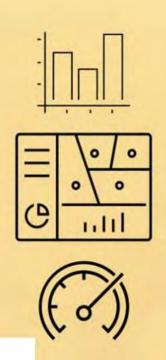
#### Better Filtering via Actions

- Grouped values charts can now target elements based on a a different data source (December)
- Re-designed configuration experience (March)
- Grouped values charts can trigger map actions (pan, zoom, flash)









ArcGIS Dashboards Classic is Retiring

Announcements March 02, 2022





Patrick Brennan Scott Sandusky



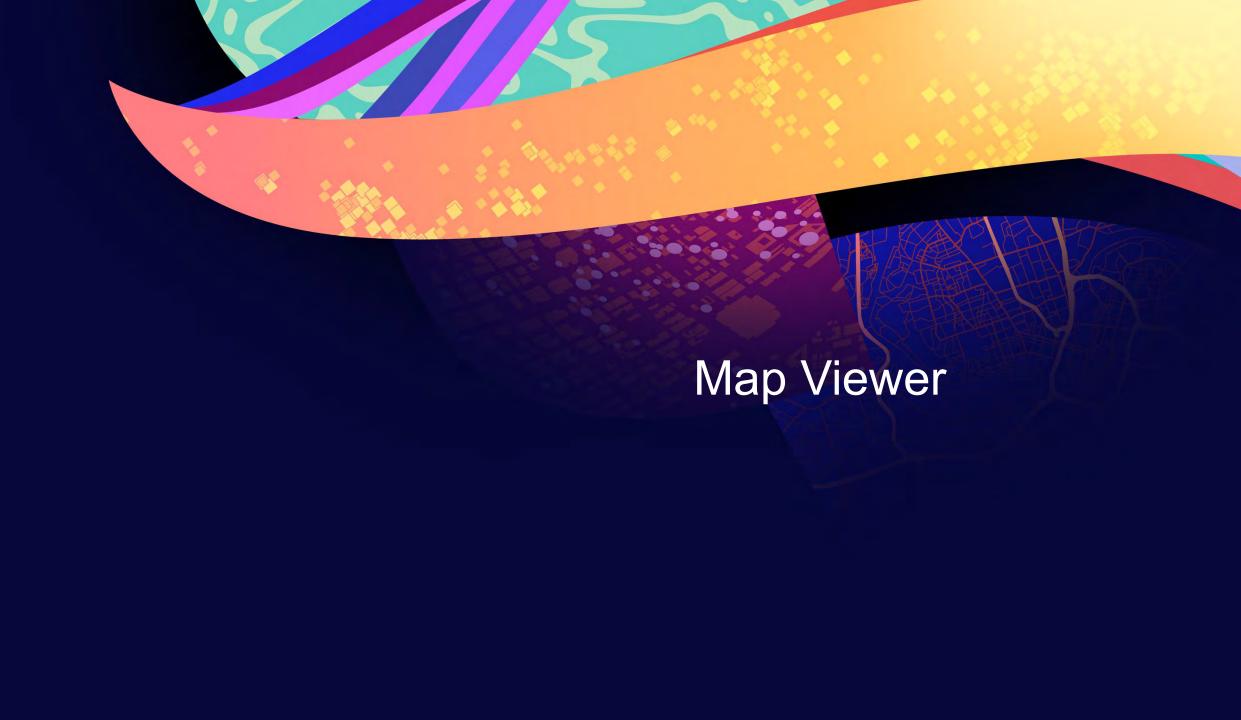
ArcGIS Online Q3 2022

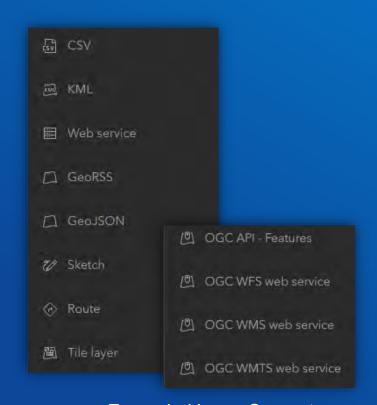


ArcGIS Enterprise 11.0



No required upgrade process

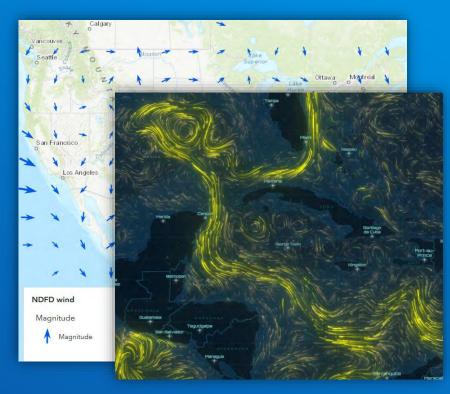




**Expanded Layer Support** 

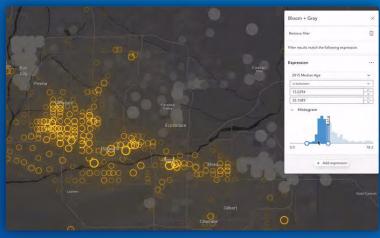


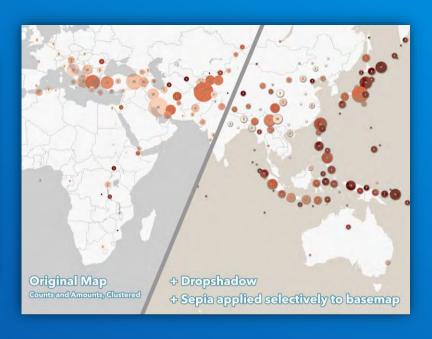
Floor-aware map navigation



New Imagery Styles

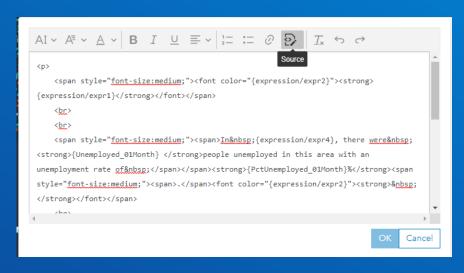


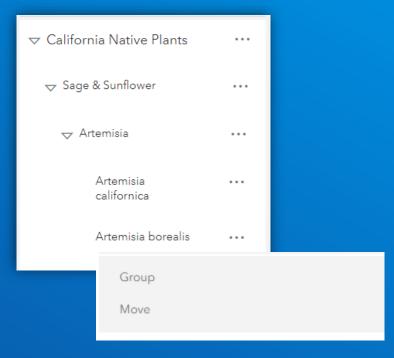




Feature display order Feature Effects Layer Effects



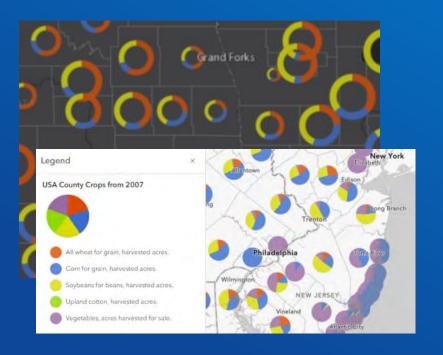




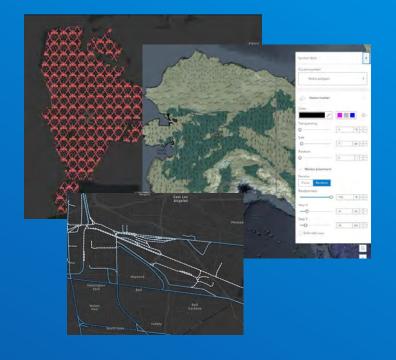
Basemap Projection Switching

HTML Popups!

**Nested Groups** 







Charts smart mapping style

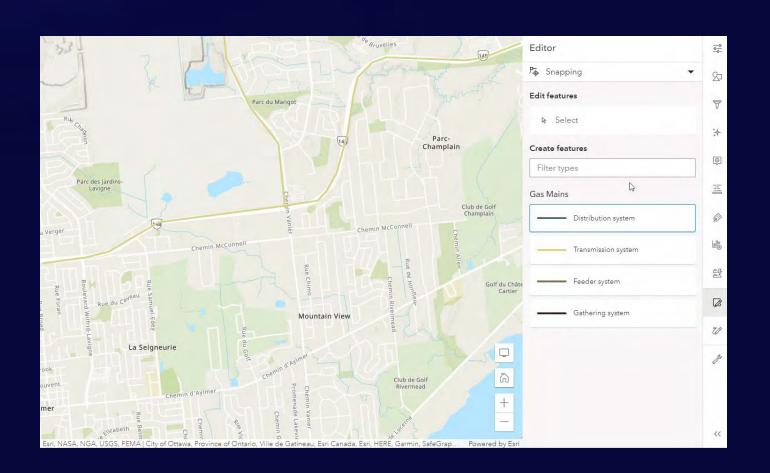
Better Heatmaps

Vector Symbols Hatch Symbols Complex Symbols

# Map Viewer Editing

# Editing: What's New

- Form-based editing
  - Conditional visibility
  - Calculated expressions
  - Authoring in Map Viewer
- Snapping and geometry guides
- Improved symbology





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# ArcGIS Field Maps: An Introduction & What's New

# Field Maps Strategy

Transforming five apps into one

Included in Q4 2020 Release ArcGIS Collector\* ArcGIS Explorer\* ArcGIS Tracker Soon! G ArcGIS Workforce Coming ArcGIS Navigator



# Field Maps Components

#### Prepare Maps for the Field

Field Maps web app



#### Do Work in the Field

Field Maps mobile app



# Field Maps Mobile App

Do Work in the Field

#### Who is it for?

Mobile workers – various types of work

#### Requirements

- Android 8.0+/ iOS 14.5 +

#### Capabilities

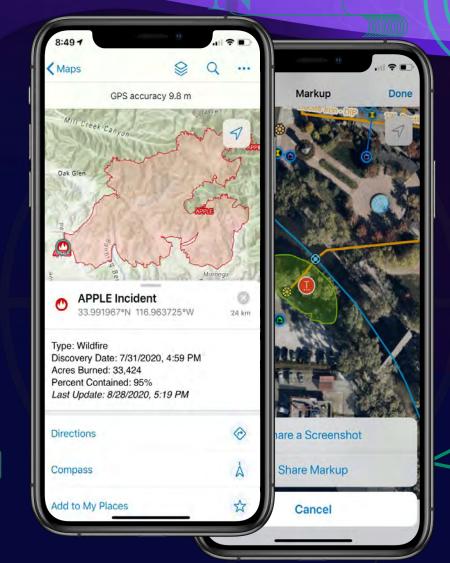
- View and search maps
- Markup the map and share with others
- Collect and update data, with high accuracy
- Record and share location, with Apple watch support
- View Indoor maps
- Offline capabilities



# Map Viewing

#### Spatial awareness for mobile workflows

- View maps and configure your map viewing experience
- Map viewing Tools
  - View rich cartographic maps, update in real-time
  - View your current location (GPS)
  - Search (locations, coordinates, features)
  - Support for Indoor maps
  - Basemaps, Layers, Legend
  - Measure (lines, areas)
  - Share maps, markup
  - Sync map changes, Auto-sync
  - Get driving directions
  - Locate using a Compass
- Map markup and notes
  - Freehand sketch, marker placement on the map
  - Share peer-to-peer, by email, to organization





What's New in Field Maps

# Field Maps: What's New Highlights (Mar – June 2022)

- Smart Forms
  - Calculated Expressions
  - Contingent Values
  - Creating form elements
- Geofencing
  - Notify mobile workers when they enter or exit a location
  - Switch on/off location tracking when inside/outside an area
- Indoors
  - Include support for Indoor Maps and Indoor Positioning
- Utility Networks
  - Viewing containment, associations and tracing capabilities
- Linear Referencing
  - Find measurements along linear features
- GPS metadata for lines and polygons
  - Average/Worst horizontal and vertical accuracy, worst fix type, number of manual locations captured

# **Indoor Maps**

Building floor awareness

- ArcGIS Field Maps supports the ArcGIS Indoors information model
- Support for floor-aware maps
- Floor filter below GPS tool
- Floor panel shows floor details
- Support for ArcGIS Indoor positioning system (IPS)



## Geofences

Provide location-based notifications

- Powered by the ArcGIS Geotriggers capability
- Geofences define areas that trigger actions when they are entered
- Field Maps supports two geofencing actions:
  - Location Alerts
  - Location Sharing
- Geofences work online and offline and in the foreground and background of mobile devices

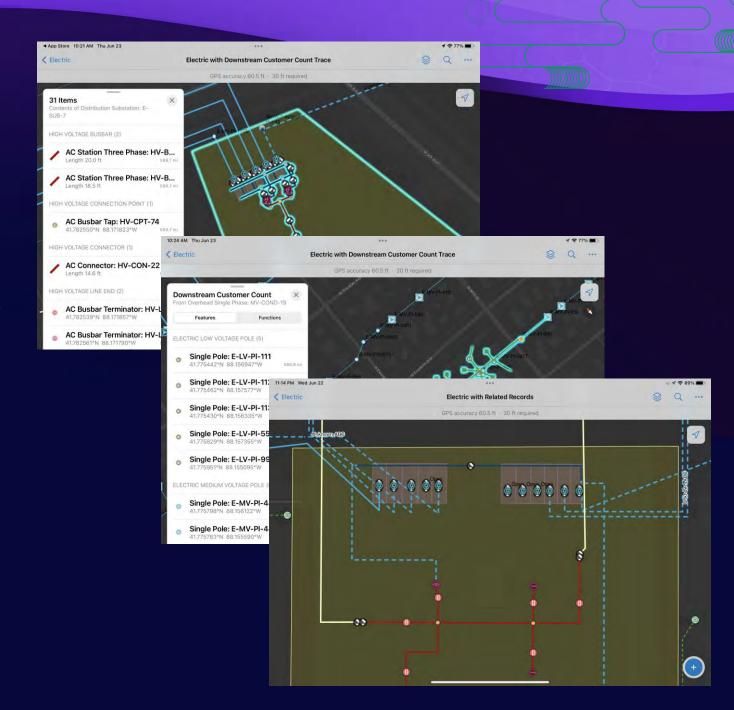


# **Utility Network**

#### Model utility systems

- Support for electric, gas, water, stormwater, and wastewater utilities
- Requires:
  - ArcGIS Enterprise 10.9+
- Configure utility networks in ArcGIS Pro
- Share utility network map with users
- View associations:
  - Structural Attachments
  - Connectivity
  - Containment
- Perform traces
  - Requires Utility Network User Type

    Extension



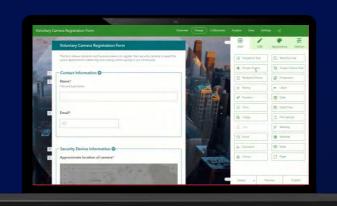


# ArcGIS Survey123 Intro & What's new



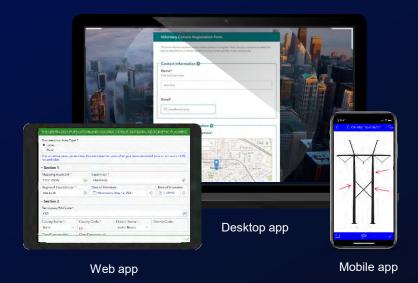
2022 ESRI DEVELOPER SUMMIT

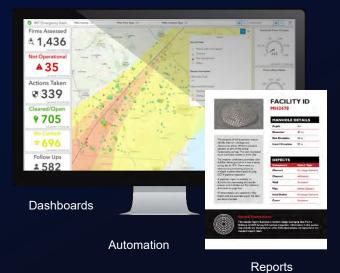
# ArcGIS Survey123 A complete form-centric data collection system



Survey123 designer

Survey123 Connect





1

#### **Create Surveys**

#### Create your own forms

- Drag-and-drop, no code required
- Industry-specific templates
- Sophisticated smart form logic with XLSForm



#### **Get Answers**

#### Collect accurate data

- Intuitive interface
- Web surveys and mobile forms
- Multimedia: signatures, photos, etc.

# 3

#### **Share Results**

#### Make data-driven decisions

- Real-time dashboards
- Enterprise workflow automation
- Create custom PDF reports

# Survey123 designer and web surveys What's new

- Create your own surveys, visually, from your web browser with Survey123 designer
- Use your surveys from a web browser, or the mobile app
- What's new:
  - Address question
  - Calculations and hidden questions
  - Custom maps



- Use your forms from the mobile app:
  - Works even if offline
  - Supports external sensors and additional data capture methods
  - Work with to-do lists
- What's new:
  - Inbox enhancements
  - Photos and photo markup
  - Overview folder

# The Survey123 field app inbox

Use it to update existing records

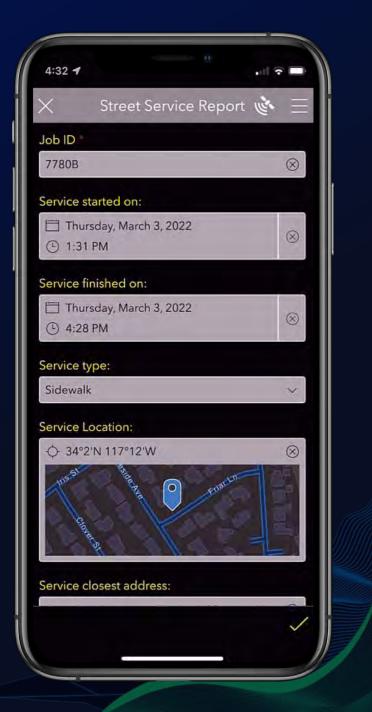
- It is available in the Survey123 mobile app
- Allows you to download existing records and update them
- The inbox can be optionally enabled in Survey123 Connect
- Very useful to:
  - Update records
  - Support inspection workflows and to-do lists
  - Model approval workflows
- The inbox now supports:
  - Display existing and add new photos to records from the inbox
  - Public surveys
  - Location indicators



#### **Photos**

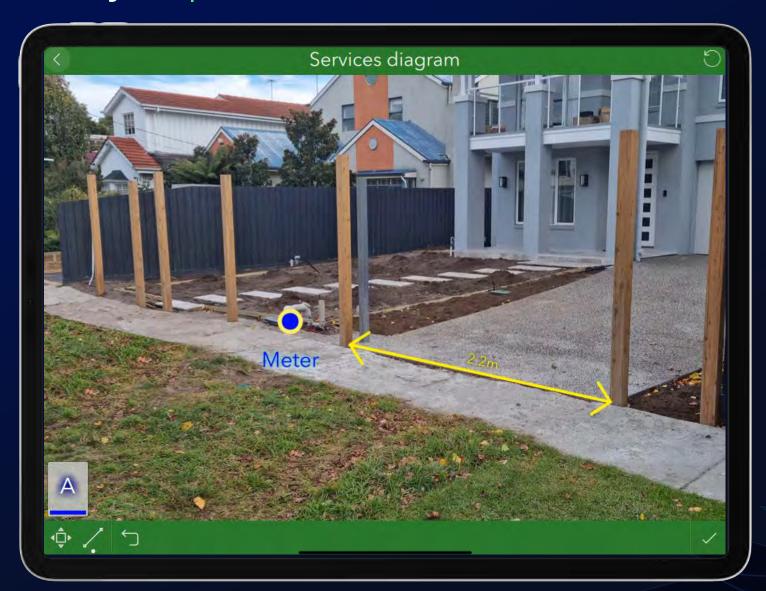
A few new things you may not be aware of

- You can now collect multiple photos with a single image question
  - Use the multiline appearance in XLSForm or setup in designer
- And also hide or show the camera roll option
  - This is useful if you want users to always take a new photo
  - Configure via web designer or XLForm (method in body::esri:style)
- Configurable in Survey123 Connect for the field app
  - Watermark photos with data from your form
  - Enhanced photo annotation tools
  - New in February 2022: Custom annotation tools





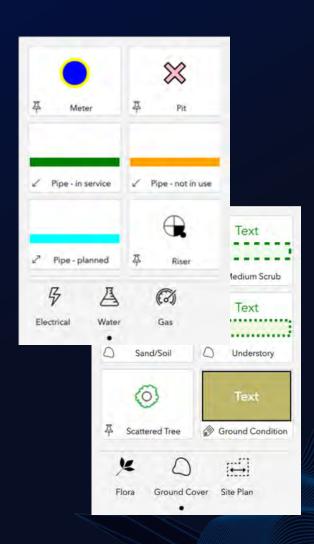
# **ArcGIS Survey123** | Annotation tools





# ArcGIS Survey123 | Custom annotation palettes

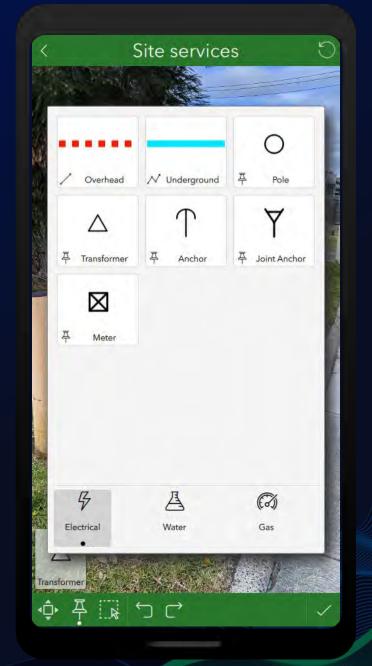
- New in February 2022
- Create your own custom annotation palettes
  - Give your markup tools a meaning
  - Tailor the markup experience to the workflow at hand
  - Get more consistent markups
  - Streamline the user experience
- Create your own palettes in Survey123 Connect and reuse them across multiple surveys





## **ArcGIS Survey123** | Custom annotation tools

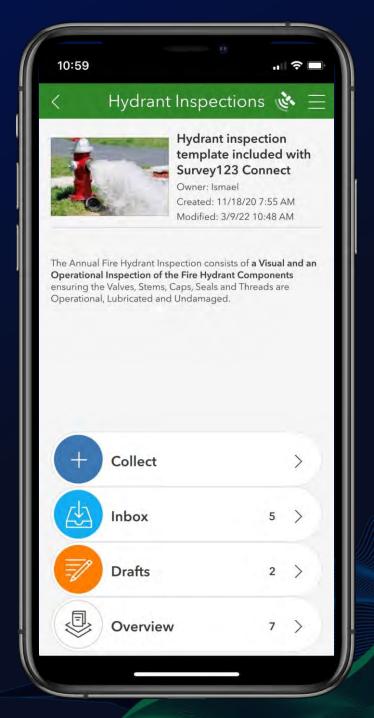
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## New overview folder

- Visualize all survey records in the device:
  - In a map
  - In a list
- Open existing survey records
- Collect a new survey directly from the map
- Enable the Overview folder in Survey123 Connect





- Survey123 Connect is a desktop authoring tool
  - Connect is to forms what ArcGIS Pro is to maps and GIS
  - Use it to create sophisticated forms for the web
  - It also includes extra options for using surveys in the field app
- What's new
  - Calculation modes
  - Publishing changes
  - Media folder



# ArcGIS Survey123 | Calculation modes

- When should a calculation be triggered?
  - Auto: If the question value is empty or has not been manually updated by the end user. Great to create 'smart default' values
  - Always: Whenever elements of the expression have changed. Particularly useful when updating an existing record
  - Manual: Only if requested by the end user
- Calculation modes are set in the bind::esri:parameters XLSForm column



# ArcGIS Survey123 | Calculation modes

Calculates the closest address to the asset location and accuracy (Auto)

type	name	label	appearance	calculation	bind::esri:parameters
text	asset_id	Asset ID			
geopoint	location	GPS Location			
decimal	horizontal_accuracy	Horizontal Accuracy (m)	hidden	pulldata("@geopoint", \${location},"accuracy")	
text	address	Nearest Address		pulldata("@geopoint",\${location},"reversegeocode.address.ShortLabel")	
select_one hydrant_type	hydrant_type	Hydrant Type	minimal		
text	owner	Owner			
date	install_date	Installation Date			
date	last_inspection_date	Last Inspection Date		max(\${inspection_date})	calculationMode=always
select_one condition	last_status	Last Reported Condition	minimal	indexed-repeat(\${status},\${inspections},count(\${inspections}))	calculationMode=always
begin repeat	inspections	Inspection Log	minimal		query allowUpdates=false
date	inspection_date	Inspection Date			
select_multiple checklist	checklist	Condition Checklist			
select_one condition	asset_condition	Condition	minimal	if(count-selected(\${checklist})=8,"good","needs_repair")	
text	comments	Comments			
text	inspector	Inspector	hidden	pulldata("@property","email")	calculationMode=always
end repeat					
hidden	assigned_to	Assigned To			

Calculates the email of the logged-in user adding a new inspection record (Always)

Calculates attributes in the parent hydrant layer using information from the related inspections table (Always)

# **ArcGIS Survey123 Roadmap 2022**

#### Q2-Q3 2022

#### Web designer

- Calculate values using other layers: Spatial inheritance
- Better social media sharing
- Captcha

#### Location tracking in the field app

- Last known location and location tracks
- Field Data Collection Capabilities:
  - Launch a form from a map (without leaving the Survey123 app)
  - Streaming mode for line and polygon data collection

#### XLSForm/Connect enhancements

- Calculate photo file names
- pulldata('@layer'): Query layers and tables without the need for custom JS functions
- Record longer audio files and adjust quality
- Update geodatabase domains when a list in Connect changes

#### Q4 2022

#### Indoors

- Indoor Positioning support
- Floor-aware forms

#### Field Data Collection Capabilities:

- Measure heights and offset data collection with laser range finders
- Inspect and tag assets with external RFID
- Oriented imagery

#### XLSForm enhancements

- Cache answers (alternative to favorites)
- More pulldata awesomeness

#### Background sync framework

- Automatically upload collected features
- Unattended update of surveys, lists and other resources

#### **Beyond 2022**

- Report service installer for ArcGIS Enterprise
- Grid layouts in the web app
- Smart camera read-to-use Al models
  - Redact PII
- Peer to peer sharing
  - Surveys
  - Maps
  - Collected data
  - Assignments
- Geotriggers
  - Alerts, Location sharing
- Offline mobile printing
  - Print a receipt using a mobile printer

All road map information is subject to change



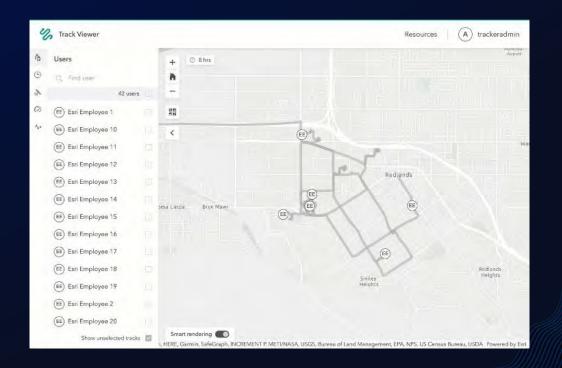
# ArcGIS Survey123 | pulldata(@"layer")

- Query layers and tables without a custom JS function
  - Calculation: What is the parcel id at the provided location?
  - Constraint: Is the user provided location within my city?
- Syntax:
  - pulldata('@layer', 'getRecordAt',<targetLayer>,<location>,<whereFilter>)
  - pulldata('@layer', 'getRecord',<targetLayer>,<whereFilter>)
- Available for Early Adopters before end of March 2022 (web app only)
- Planned to be released in July 2022 (field and web app, but online only)
- Offline support in the field app coming later



# ArcGIS Survey123 | Location tracking

- Monitor the last known location of Survey123 users
- Understand where Survey123 users have been
- Leverages the location tracking capability of ArcGIS
- Requires a Tracker license
- Coming Q2-Q3 2022





### **ArcGIS Survey123** | Indoors

- Collect data indoors with Survey123
  - More accurate locations with IPS support
  - Floor-aware forms
- Enrich collected data with room/building information
- Use room/floor information to create data validation rules or hide/show sections of your form

• Q4 2022







### **ArcGIS Survey123** | InfraMarker

- Use InfraMarker with Survey123 to streamline field data collection workflows
  - **Asset tagging:** Physically attach Inframarker RFID tags to your assets. Each tag carries a unique id (EPC). Use Survey123 to write data such as location, asset name and owner into your tags
  - Asset inspection: Use InfraMarker to scan and automatically open your asset inspection forms within Survey123



Asset tagging



Asset inspection



### **ArcGIS Survey123** | Laser range finder support

- Easily bring measurements from your laser range finder into Survey123
  - Measure heights: Poles, trees, buildings
  - Offset mapping
- Two workflows:
  - Launch Survey123 and auto-populate questions in your form after a measurement is made
  - Incorporate a laser range finder question within your form



Calculate the exact location of an object



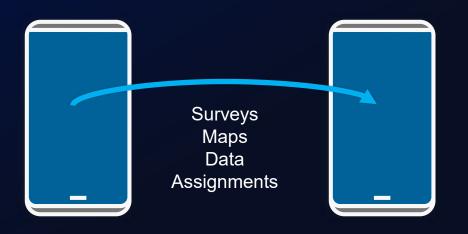
Measure heights

Beta software available May 2022



# ArcGIS Survey123 | Peer to peer sharing

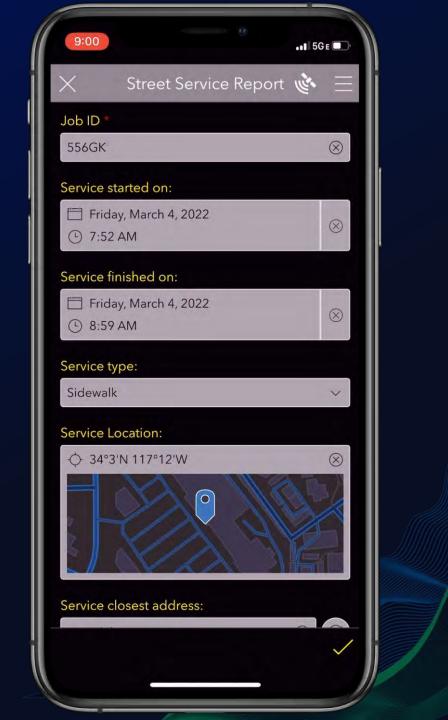
- Bluetooth-based device to device sharing:
  - Surveys
  - Maps
  - Collected data (Outbox)
  - Work assignments (Inbox folder)
- No need to be connected
- Planned for 2023





### ArcGIS Survey123 | PII Removal Filter

- Automatically remove Personal Identifiable Information such as faces and license plates from photos
- Leverages a ready to use AI model and the Survey123 smart camera
  - Distorts license plates and faces immediately after the photo is taken with Survey123 and before the photo is submitted to ArcGIS
- Planned Q4 2022





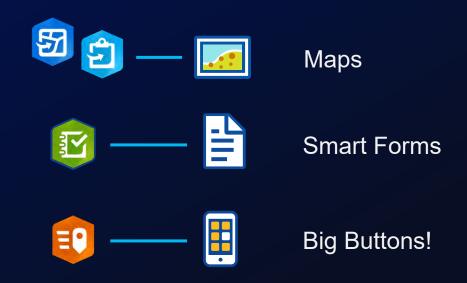
# ArcGIS QuickCapture What's New



# ArcGIS QuickCapture

The rapid data collection app

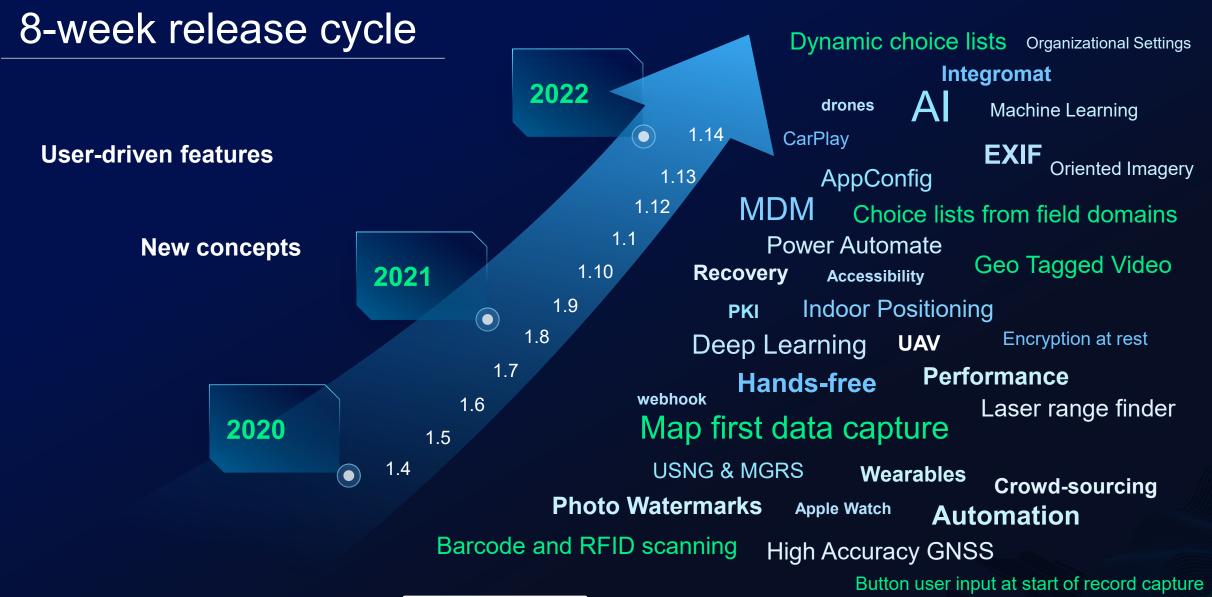
- A "big button" mobile app
- Simplest way to capture field observations
- At-speed & rapid data collection workflows

















# ArcGIS QuickCapture 2021-2022 in a nutshell

- Release across all supported platforms: iOS, Android and Windows
- 4 Releases (1.10, 1.11, 1.12, 1.13)
- Same BIG button end user experience, more powerful

### **HIGHLIGHTS**

Multiple photos for a captured record

Multiple project user inputs for a project

Sort and search added for projects

Location tracking (tracks and last known location)

Organization administrators can specify autosend policy.

New icons (Transportation and Conservation)

New variables

#### MAPPING ENHANCMENTS

Cache webmap content for offline usage
Default offline basemap included in app
Split screen views resizable
Share coordinates from the app
Enhancements to point editing workflow
Support for Android extras
Force split screen setting

# Oriented Imagery

Solution for viewing, mapping and managing oblique imagery

Photo properties that help us do more

- Photo X,Y
- Camera heading
- Camera pitch
- Camera roll
- Horizontal field of view
- Camera height above ground
- Acquisition date

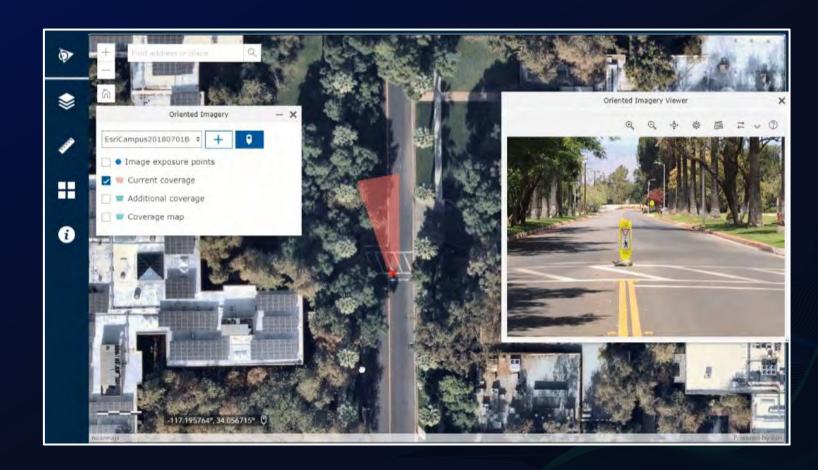


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Solution for viewing, mapping and managing oblique imagery

Photo properties that help us do more

- Photo X,Y
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- Camera height above ground
- Acquisition date



### **NHITE SANDS**



# **LONG BEACH** Capacity Last update: a few seconds ago







Last update: a few seconds ago







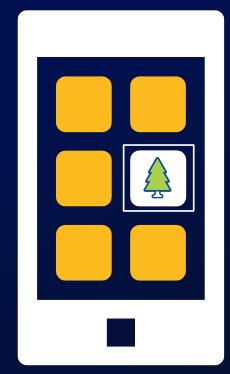


Last update: a few seconds ago



Exits Last update: a few seconds ago

# Sketch based data capture



Geometry from device



Geometry digitized





2022 ESRI USER CONFERENCE

# ArcGIS for Microsoft 365

# Technology Changes

**Evolution of Microsoft productivity tools** 

- Office
  - A collection of business applications installed locally
- Office 365
  - Subscription based and hybrid cloud applications
- Microsoft 365
  - Industry-leading apps combined with intelligent cloud services



### ArcGIS for Microsoft 365

- Innovative Mapping across the Enterprise
  - Generate new insight by using maps in spreadsheets
  - Add a new dimension in BI reports
  - Search for files and documents on a map
  - Automate data engineering workflows
  - Discover, view and share content.

ArcGIS for Microsoft 365
M365 Azure Marketplace listing



# ArcGIS for Microsoft 365

Mapping with Microsoft across the Enterprise



- Create layers and Maps in Excel
  - ArcGIS Viewer and Creator User Types
- Analytic tools drive decisions
  - Use the map to filter and export rows
- Publish layers to ArcGIS
  - Update layers based on changes in cells
- Available in the Microsoft Store today!
  - Works in a browser, Windows and Mac.





# SharePoint

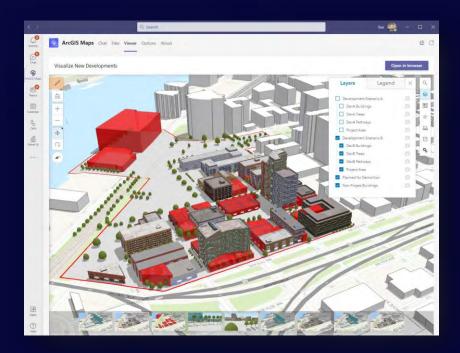
- Use a map to tag and search for documents
  - Reduces time to find important files
- Add Maps to your SharePoint Sites
  - Display a List as a Layer
- Publish Map to ArcGIS
  - Updates can also be published as needed





### Teams

- Access ArcGIS when and where it matters
  - Search, View, and Share
- Collaborative
  - Leverage Map & Scene Viewer Capabilities
  - Open StoryMaps and Dashboards
  - Use Survey 123 within Teams
- ArcGIS Online
- New Support for ArcGIS Enterprise is available!





## Power BI

- Add maps to your BI Reports
  - Responsive with other visuals
- Custom Geographic Data
  - Points, Lines, and Polygons
- Power BI Report Server
  - Leverages ArcGIS Enterprise

Ships in the box with Power BI



### Power Automate

**Robotic Process Automation** 

- Collection of Configurable Components
  - Business System & Data Connections
  - Conditional Logic/Branching
  - Alerting & Notifications
  - Executes on Schedule or Trigger
  - Fast time to value

Reduce Human Error

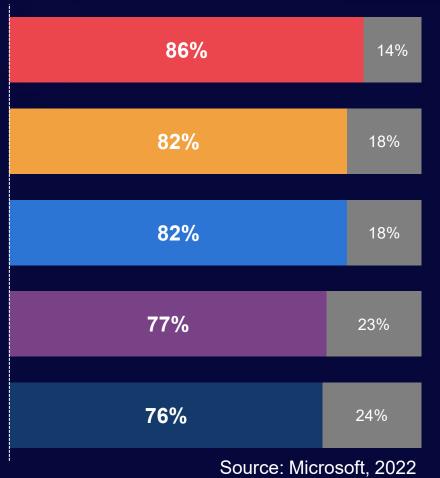


# Adoption of RPA



Large and very large organizations will have deployed some for of RPA by 2023

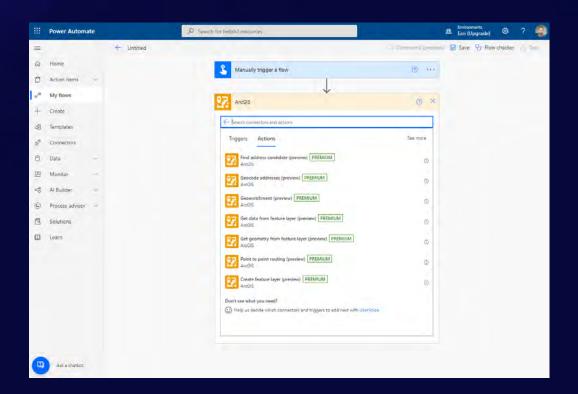
Source: Gartner, 2018





### **Power Automate**

- No code solution to working with ArcGIS
  - Low code is Excel like formulas
- ArcGIS Actions
  - Single/Multiline address matching
  - Boundary Matching
  - Routing and Directions
  - Demographic Enrichment
  - Add data to/from ArcGIS
- Connect to ArcGIS using your ArcGIS Identity or API Key (PaaS)



### Use Cases

Many active customers today

- Connecting Dynamics 365 with ArcGIS Field Apps
- Automate data updates into Power BI
- Geocode from a SharePoint list
- Enrich CRM data with demographic variables
- Send notifications to Teams based on data changes
- Place tagged Teams messages on a map
- Image classification and notifications
- More...

### What's next in ArcGIS for Microsoft 365?

Immediate Road Map\*

- M365 Certification in progress
- Teams
  - support for Enterprise\*
  - Meeting Extension\*
- Power Apps Map Component
- Power BI Support for multiple Power BI Data Layers, Drill Through, many more!
- Excel Pivot Table support, many more!
- SharePoint Extend SharePoint list with Map Field type, automation for GeoTagging, more!

