Argis® Lens On-Boarding
Create Safety and Savings with AR + GIS
A New Way to See GIS Data

Now you can see *this* type of data:

![Screenshot from Esri’s ArcGIS Online](image1)

Like *this*, in real time:

![Screenshot from the Argis Lens](image2)
What the Lens won’t do – and will give you

- Replace your magnetic locator
- Replace your surface markings and locates
- Provide greater accuracy than your existing data (we use your existing data!)
- Give you “x-ray vision” where there is no data

- An instant real-world view of your existing data.
- On a locate - immediate assurance that flagged assets match existing data.
- The ability to rapidly locate assets even if they are covered with water, snow, mud, debris.
- Ability to take a screen shot with all data visible for review and comparison.
- Allow you to view and edit records of your assets while in the field.
New Terms

• **Data Scene**: A *data scene* is a collection of your GIS feature services and layers, which you create and name. The Argis Lens translates your data scenes into AR (Augmented Reality) through the camera on your mobile device.

• **Data Layer**: *Within each of your data scenes* there will be **layers of data**. The layers are the layers in the source Feature Services. The layers of data can be selected for viewing once the Data Scene has been selected and opened.

• **AR View**: Once you select and load your Data Scene, the Argis Lens takes you into the *AR View*, which shows your data in AR as an overlay through the camera on your device.
Profile, Organization, and License Management through the Argis Lens Console

• As the Support Point Of Contact with Argis Solutions, your account will be designated as the initial admin for your organization by Argis Technical Support.

• As an admin, your responsibility will be to assign licenses and roles to your organization’s Argis Lens users as needed.

• Every Argis Lens user may log in to the Console, but important management features are accessed exclusively through the Console.

• Create your profile with “New Account”

• The Argis Lens Console is at https://admin.argissolutions.com/
Create and Verify Your Profile

- Once your profile is created and verified (a link is sent by email), your profile can be assigned a role and license in your organization by your administrator.
  - If you are the first user and the Support Point Of Contact for your organization, the Argis Technical Support team will create your organization and assign you as its administrator.
- Once you have a profile with a role and license assigned, tap the Login button to enter your credentials. (Your user email will be saved on this device for future logins.)
Dashboard Overview

Under the “Permissions” sections of the Dashboard, you will find your organization’s licenses and members listed along with their roles and license assignments.
Initially, only the Support Point Of Contact will be listed, with the admin role. For a user to use the Argis Lens, the following must be true:

- The user must be added to your organization
- The user must have a role of User or higher assigned
- A license must be assigned to that user’s account

To add the member’s account, search for the email address they used when creating their profile, using the “Add Member” button.
Once added, the user will be displayed in the “Organization Members” section, and roles and licenses can be assigned by using the edit and add/remove icons.

If a user has not created their profile or verified their account, a message to that effect will display; confirm with the user that they have created and verified their account, and the email address used.

If necessary, an admin can create an account for a user on the members page as well.

As the first user, you should assign yourself a license now, using the “+” button next to your entry in the list.
Because the Argis Lens supports multiple access types for GIS users in the Esri product ecosystem, it is useful to keep in mind which specific account types can be used for different types of access.

<table>
<thead>
<tr>
<th>Account Type</th>
<th>Data Access</th>
<th>Argis Login Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argis Account (email address)</td>
<td>N/A</td>
<td>YES</td>
</tr>
<tr>
<td>ArcGIS Online (AGOL) Account</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>ArcGIS Enterprise Login Account</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
Argis User Roles

Argis User Roles should be assigned based upon the user’s responsibilities and normal activities; these are the standard roles that work within the Argis Lens and control certain features and functions available for a user:

- guest: This is a user without data access within the application.
- user: This is a standard visualization user accessing the Lens.
- useredit: This is a standard licensed user that has attribute editing privileges through the Lens app. Required for ticket management (ARTMS).
- admin: This is an organizational admin. The admin role allows adding/removing members, changing license assignments, and changing user roles.
Dashboard Overview

• In the “Tools” section of the Dashboard, you will find the Servers and Scenes options; to configure data for your organization, you will set up servers for data access, and create data scenes with a custom selection of layers that are accessible to your users.

• Once the servers and data scenes have been created, users simply log in to the Lens Console and add their credentials for the server(s). Then, when logging into the Argis Lens, the data scenes available are automatically listed for use.
Beginning at the Dashboard, the following steps will allow you to quickly and easily set up data for your users.

1. Select “Servers” first.
2. Under Servers, click “Add Server” to begin.
Add a Server

3. Input the following information:
   – The “Server Name” should clearly identify your server.
   – The “Server URL” is the REST endpoint URL of the server for the Feature Service(s) to be used with the Argis Lens. (It should end with “rest/services”.)
   – If a login is required for server access, the username and password should be entered here (both are case sensitive!).
   – If the server will be used only with public data, check the “Public Server” checkbox.
   – **NOTE:** Enterprise 10.3.1 or higher only
Add a Server

4. When the scene is saved, you’ll see a success message and will be returned to the Servers and Data Scenes management page.

NOTE: All Argis Lens users must log in and use “Update” to add their credentials for the servers they will access.
Create a Data Scene

1. To create a data scene (a set of data for your Argis Lens field users to view in augmented reality), click “Create Data Scene”
Create a Data Scene

2. Check the server (or servers) that will be used for your data layers, and then proceed to “Select Layers”.

Select Server

Select the servers you would like to use to create a data scene.

Name
City of Cupertino, CA

Url
https://gis.cupertino.org/cupgis/rest/services

Select Layers  Cancel
Create a Data Scene

3. On the Create Data Scene page
   - Enter a short name
   - Enter a description
   - If a data scene should be restricted to a certain minimum user level (such as admins only), you can set the user level here.
Create Data Scene – Adding Layers

4. Within each of your data scenes there will be **layers of data**. The layers are the layers in the source Feature Services.
   - Click through the server’s folders and feature services to select the layers you want to add to the Data Scene
   - Click Save to finish
Create a Data Scene

5. When the data scene has been added, you’ll receive a success message and can review the data scene through “View Data Scenes”.

**Note for GIS Administrators:** If a feature service is updated (not features, but the actual service, such as new symbology or table schema), you must delete the associated data scenes and recreate new data scenes.
Create a Data Scene

6. In the Data Scenes page, you’ll see a listing of your data scenes, along with controls to Delete/Update/View Layers.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Role</th>
<th>Delete</th>
<th>Update</th>
<th>View Layers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakewood public works test</td>
<td>test of public works data for City of Lakewood</td>
<td>user</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Share a Data Scene

Now that your data scenes are ready, **the final step remaining is for your Argis Lens users to log in to the Lens Console, and add their login credentials for each server** (listed in the red error message).

### Servers and Data Scenes

- **Error**: Please update this server with your credentials: CSU

### Servers

<table>
<thead>
<tr>
<th>Name</th>
<th>Url</th>
<th>Role</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lakewood</td>
<td><a href="https://maps.lakewood.org/arcgis/rest/services">https://maps.lakewood.org/arcgis/rest/services</a></td>
<td>user</td>
<td>Public</td>
</tr>
<tr>
<td>CSU</td>
<td><a href="https://services1.arcgis.com/KN6R05cN6EnqCTjk/arcgis/rest/services">https://services1.arcgis.com/KN6R05cN6EnqCTjk/arcgis/rest/services</a></td>
<td>user</td>
<td>Private</td>
</tr>
</tbody>
</table>
Share a Data Scene

The Update Server page will only need the user’s username and password added for the ArcGIS Enterprise server user or ArcGIS Identity.
Sign In to the Argis Lens

• If you do not have a profile you will need to create one by tapping on the New Account button.
• Once you have a profile, tap the Sign In button to enter your credentials. Your username/email will be saved on this device for future logins.
The AR View of the Argis Lens includes both contextual information about your data and augmented reality visualization, and several important application controls.
Available data scenes are shown at login. Tap on a scene to select it. The first tab for a scene shows info about the scene. The Contents tab lists the layers and fields within the scene.
Work with Cached Data Scenes

Tap a scene’s “Cache” button to save it onto your device. Caching is quick, makes data available offline, and reloads almost instantly in the field.

NOTE: Ground plane elevation services are currently only available when loading scenes from the Cloud.
Refresh your Data and Location

- Changing location requires a refresh for an accurate view.
- Every time the 🔄 icon is tapped, both the data and location are automatically updated.
- The initial display of data is based on your coordinates at the moment of refresh; do not change position before data is loaded, or an inaccurate visualization will result.
- For safety precautions, do not walk and view at the same time so you can be aware of your surroundings and footing.

WALK. STOP. REFRESH.
Manually Set Longitude and Latitude (optional)

Though the Argis Lens automatically uses the available GPS information from your device (or paired Bluetooth GPS) you can also enter your location manually by tapping the icon, located on the left-hand side of the screen.

Once tapped, the user may:

- Enter **manually** a longitude and latitude coordinates
- Tap the Location Icon again to use the **Current Location** of the device.
View Data Layers in the AR View

- View multiple layers of data by tapping the **wheel** at the center right of the screen.
- By spinning the wheel, additional data layers included in the data scene can be viewed.
- Each layer of data is clearly designated **with an eye icon** with a written descriptor above.
- Data layers can be **toggled** on and off by simply tapping the selected icon.
- Once selections are made, the wheel menu can be **collapsed** by tapping at the center of the wheel, allowing a clear screen.
- Data layers in the scene that are empty for that location are shown “grayed out”.
Adjusting the AR View

Without an external GPS, mobile devices are inherently inaccurate.

The “HDOP” (Horizontal Dilution of Precision) reading on the top line of the screen shows the distance of inaccuracy, based on the GPS device and signals in use.

Our AR View adjustment tools will help you align your data more accurately, to overcome the limitations of GPS inaccuracy.

After you tap the Adjustment Icon, a blue menu appears on the lower left of the screen. On this menu you can fine tune your data’s visual placement with: the Ground Position Joystick and the Camera Height Control.
Ground Position Joystick

The **Ground Position Joystick** moves the plane displaying the data left, right, forward and back. It works just like a joystick. Hold and press with your thumb.

- If your field of view has a “**known point**”, this tool would allow you to shift your data to line up with your known point.
- When using the adjustment tools a grid will appear. This grid will only appear while you are making adjustments. Each grid marking represents approximately **2 meters**. This grid allows you to visualize the ground position while it is being adjusted.
- Always tap **Apply** to accept your changes.

**NOTE:** If an adjusted ground position cannot be found which matches the real-world objects and your mapping data, the Argis Lens is likely revealing the limitations of your existing data.
‘Show Elevation’, View Distance, and Other Settings

Tap the profile icon and its details, to enable the ground plane elevation, set visibility range for data, and other preferences.
Selecting and Previewing Feature Attributes

Simply **tap on the point, polygon or line whose attributes you wish to view** and the Attribute Window will open.

The **symbol icon** associated with the selected attribute will become highlighted.

A tray will appear at the bottom of the screen from which you can **select a feature object to review or edit**.
The Feature Attributes Window

- The expanded feature attribute window displays all the feature attributes of an object, and scrolls by touch to show the full info.

- To Edit the record, tap “Edit”
Editing Your Records in the Field

- Enter changes to the record (text, dates, or domain values)
- Tap “Done” to close the keyboard
- “SAVE” to save the changes
Capturing the AR View

• To capture the AR View directly from the Argis Lens, tap the camera icon at the lower-right, and the AR View is saved to the iOS Camera Roll for you.
Accuracy in the Field

Without an external GPS, mobile devices are inherently inaccurate. While most newer models have a 1 to 2 meter inaccuracy some older models can have up to 5 meters of inaccuracy.

• If your GPS can’t put you in the right spot, your data will not line up and you will spend time adjusting your AR view.

• If possible, use an external GPS unit with as much accuracy as you can afford!
  – 3 meter +/- accuracy is workable when you are viewing data near a highway or a known road
  – 2 meters is a lot of adjustment in the field, where many lines and points are positioned closely together - often within a 1 meter area
Deployment Considerations: iPhones versus iPads

**iPhone**

**Pros:**
- Most portable, most common and nearly everyone has one
- Performance is satisfactory for most use cases

**Cons:**
- Screen controls are more crowded
- Much smaller view of your data
- Battery drain may be more noticeable

**iPad**

**Pros:**
- Vehicle-friendly for field crews and trucks – they are more readily shared
- Bigger screen means better view of site and data
- Screen controls are most easily manipulated (thumb-friendly, hold and tap)

**Cons:**
- Magnetic covers distort the compass.
Deployment Considerations: Which Mobile Device?

• When it comes to utilizing AR Technology, not all Mobile Devices will perform equally.

• Requirements:
  – Minimum: iOS 12.4 or higher on supported devices
  – Recommended: iOS 12.1 or higher; iPhone 8 or newer; iPad 4 or newer

• For Enhanced Accuracy: External GPS paired with your device (Bluetooth)
Deployment Considerations: Sun and Glare
Improve the Quality of Your Data

Did you know that with the Argis Lens you are on your way to more accurate data?

• By making your geospatial data visible in the real world, your field teams can validate your maps. Over time your GIS data accuracy will greatly improve.

• Ask your field teams to send you screenshots (see previous slide) when data is inaccurate or missing.

• Once your GIS Admin has reviewed the screenshots and updated the map, take the Argis Lens into the field again. Take a look at your data. Is the data more accurate then before?
We Want to Hear from You

At Argis Solutions, we are committed to continually improving your experience with the Argis Lens and Framework and addressing your questions and concerns. We want to hear from you no matter how trivial the comment seems. Your experiences and feedback help us improve!

Help: 303-495-3040

techsupport@argissolutions.com

Don’t Guess. Know.

www.argis.com
Have you thought about.....

- **Assets that are hard to find** - buried under foliage, snow, sand, debris, water
  - Assets that are in the middle of nowhere – no known point
- **Right of Way and Easements** – saves $$ on surveyors
- **Model new and existing construction**
- **Insuring ALL of your data is flagged.** Argis Lens is the first look and the last look
- **Those not experienced at looking at data in the field.** The Argis Lens gives a real-world view of company assets
- **Maintenance records can be edited and updated in the field**
- **Data of any kind can be displayed.** Trails. Historical Data. Building information. Restricted Areas.

Whatever data you create, the Argis Lens allows you to see it in the real world.