ArcGIS Earth: An Introduction

DARRON PUSTAM | ARCGIS EARTH

ArcGIS Earth is

ArcGIS Earth is a lightweight globe desktop application that helps you explore any part of the world and investigate and create 3D and 2D map data including KML

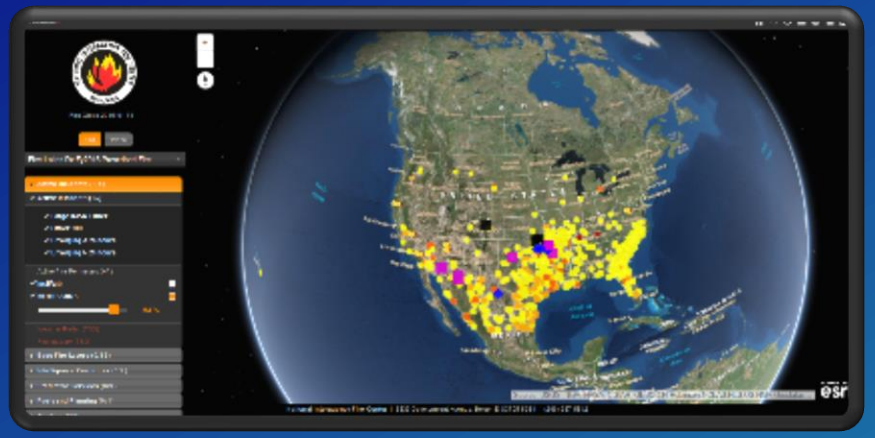
Why are customers interested

Require file-based workflows with KML and other vector and raster GIS data sources and services

Want lightweight user interface and familiar experience

Need to provide consistent communication among stakeholders across the enterprise

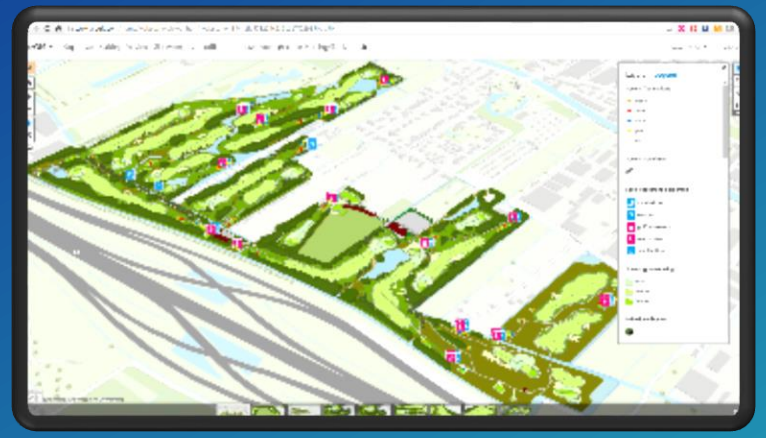
Customer examples include



Large Enterprises

Exploring data securely on premises

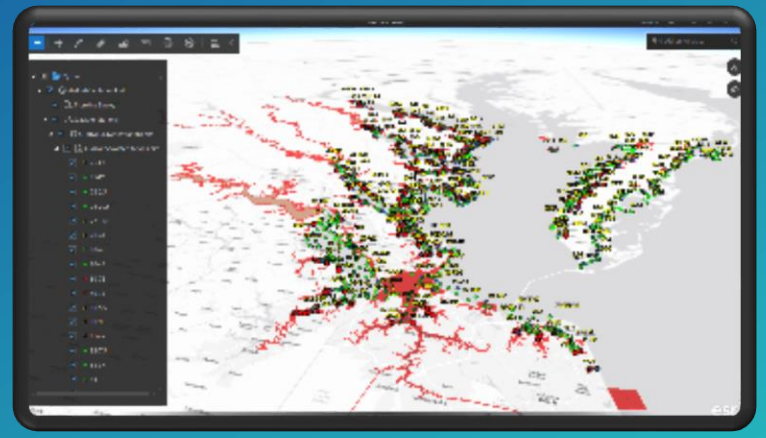
Law enforcement, federal agencies & large companies need to explore information across large areas using 3D GIS behind a firewall



Small Enterprises

Sharing 3D using ArcGIS Online

City planners, urban designers, and small AEC firms want to create and share plans and status with constituents in 3D



Hybrid scenario

3D with large data packages in connected and disconnected workflows

Emergency managers, military, and utilities agencies need to use 3D within the organization for planning and to share with collaborators in the field to inform response and action

ArcGIS Earth in Education

One of our key social studies standards in fifth grade is to gain an understanding of the major landform regions of the United States. Having access to ArcGIS Earth will allow students to experience these regions rather than simply point to them on a map.

ArcGIS Earth allows students to gain an understanding of how the location and geography of their state directly influences agriculture, the state's economy and even recreational attractions for their state.

Mrs. Duran – Victoria Groves Elementary School

ArcGIS Earth being used heavily in education from elementary to college levels where it is being integrated directly into geospatial studies

Designed for large customers, works for everyone

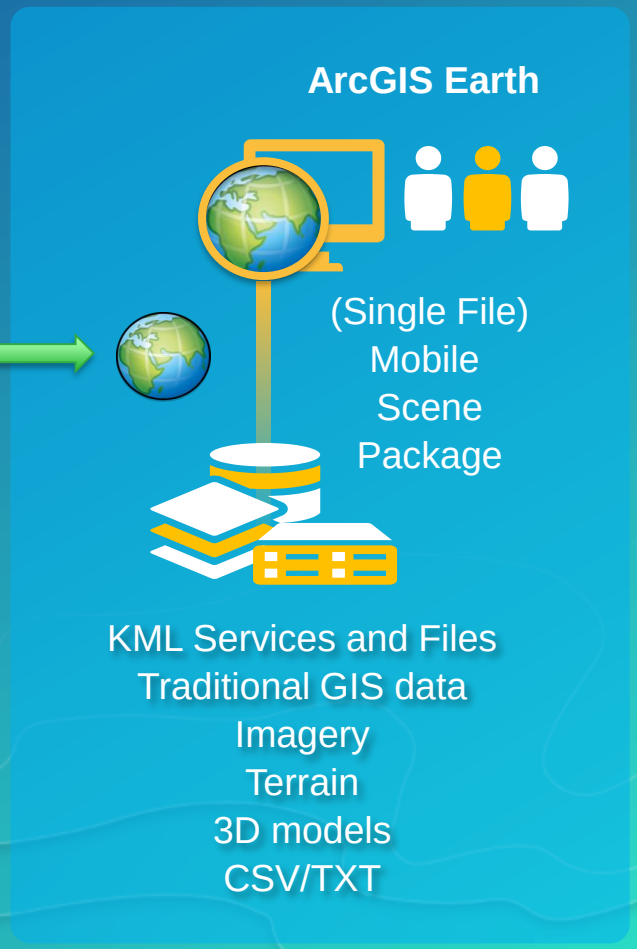
- Lightweight (~60Mb)
- Configurable during installation
- Secure authentication
- Multiple deployment patterns
- Low training requirement

ArcGIS Earth Deployment Patterns

ArcGIS Earth Deployment Patterns | Offline

Current Workflow
Offline - “Disconnected”

Future Workflow
Offline - “Disconnected”



3D as a core GIS capability anywhere in any environment

Combine 2D and 3D in the same web GIS architecture

Reuse dynamic services across clients

Securely collect, manage, curate 3D data

Conduct analysis across real-time and historical data

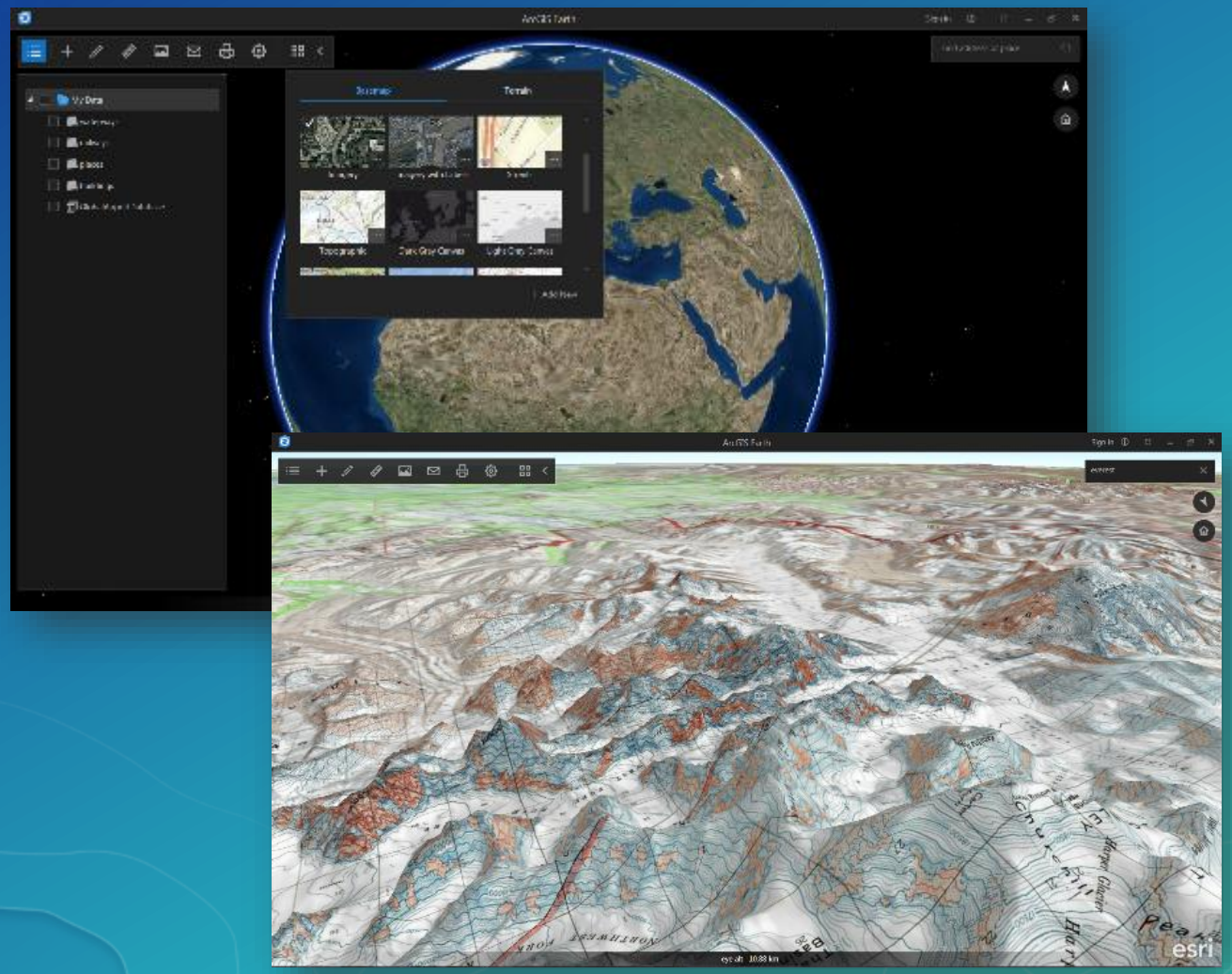
Create tailored experiences for different types of users

Navigate

Zoom, Pan, and Orbit with mouse, keyboard, or touch

Navigate using the TOC

Locate Points of Interest



Choose basemap and elevation sources

Basemaps

- Add Imagery TPKs or services
- Add/remove basemap

Elevation sources

- Use services or local elevation files
- Add/remove/change order

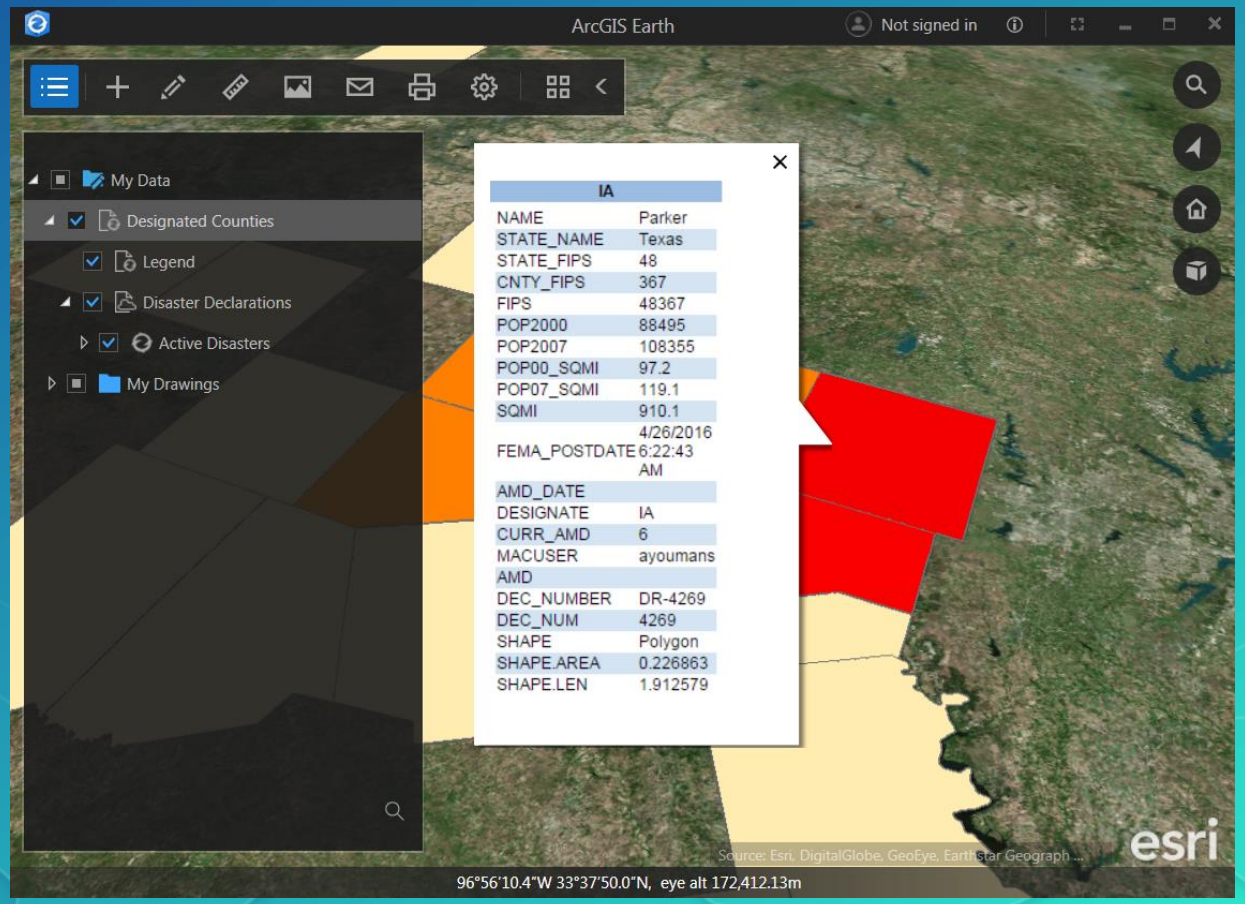
Add KML/KMZ

Load KML/KMZ files and services

Use NetworkLinks, overlays, and other standard KML features

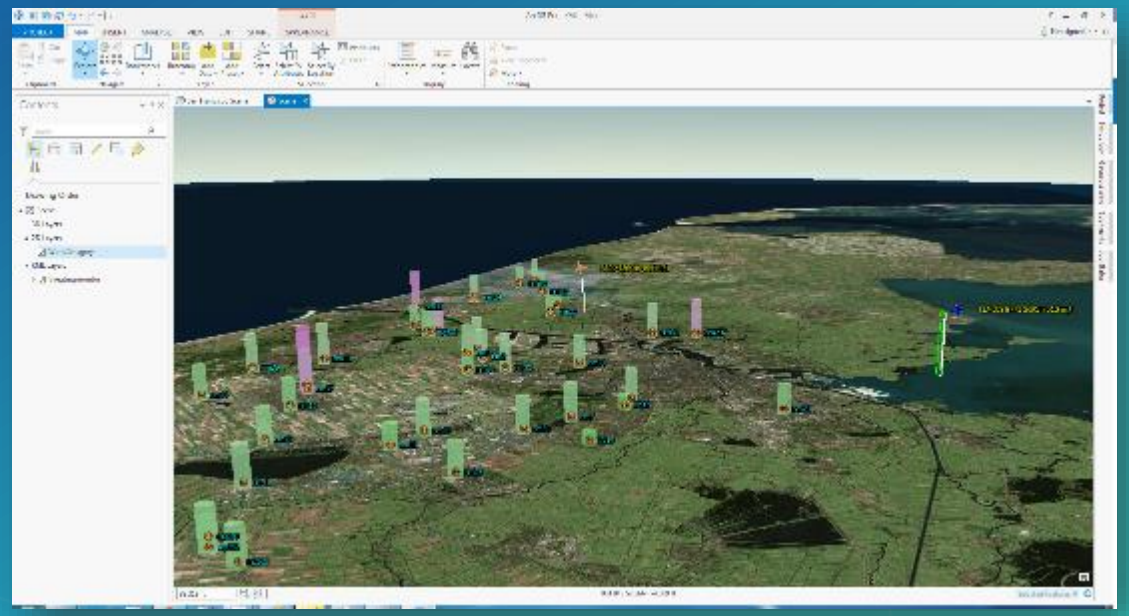
Timesliders with playback

Play KML tours in Earth



KML support across the platform

- Native support for KML visualization and interaction
  - ArcGIS Earth
  - ArcGIS Pro
  - ArcGIS Explorer Desktop
  - Runtime SDKs
  - JavaScript API 3.x support is partial (2D)



- Support for network links, overlays, tours, COLLADA, KML Tours

- Will be improving editing capability in the future

Add 3D Scene Layers

3D Object and Integrated Mesh scene layers

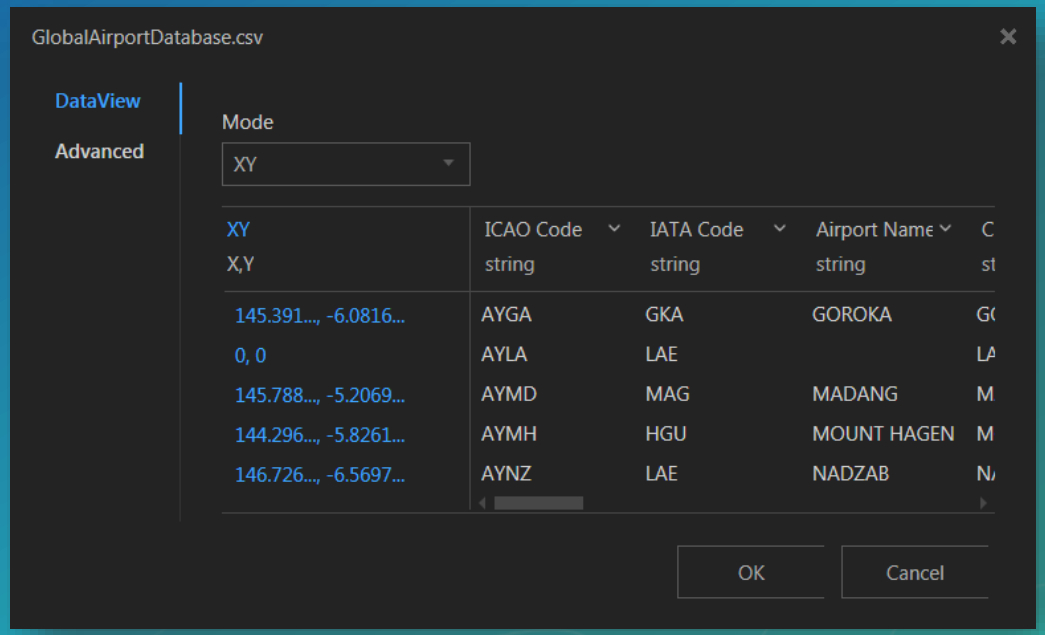
Services or local SLPK files

Add SHP and CSV/TXT

Address geocode CSV/TXT if connected to on premises Portal

Identify multiple overlapping features

Change symbols



Add Esri RESTful Services

Map service

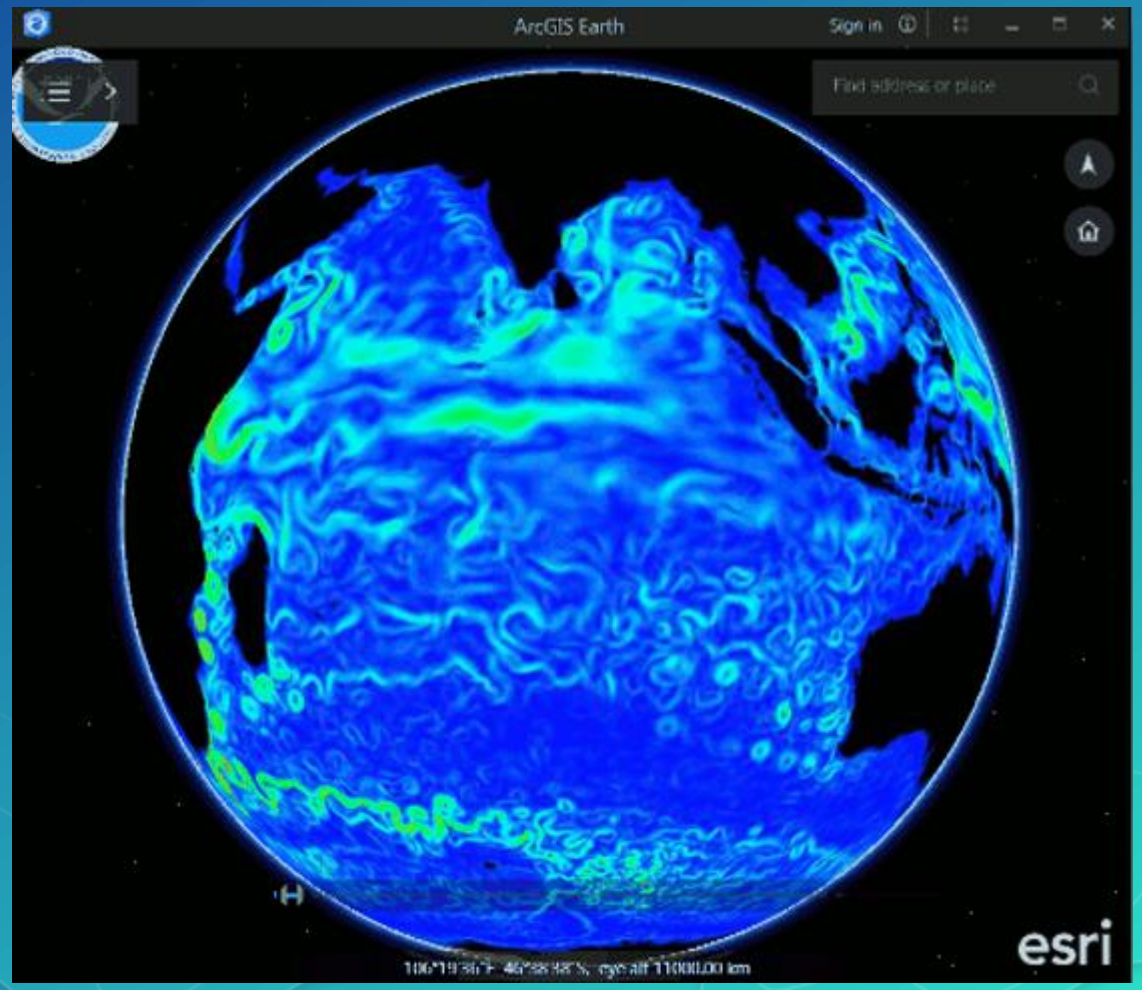
Image service

Feature service

Scene service

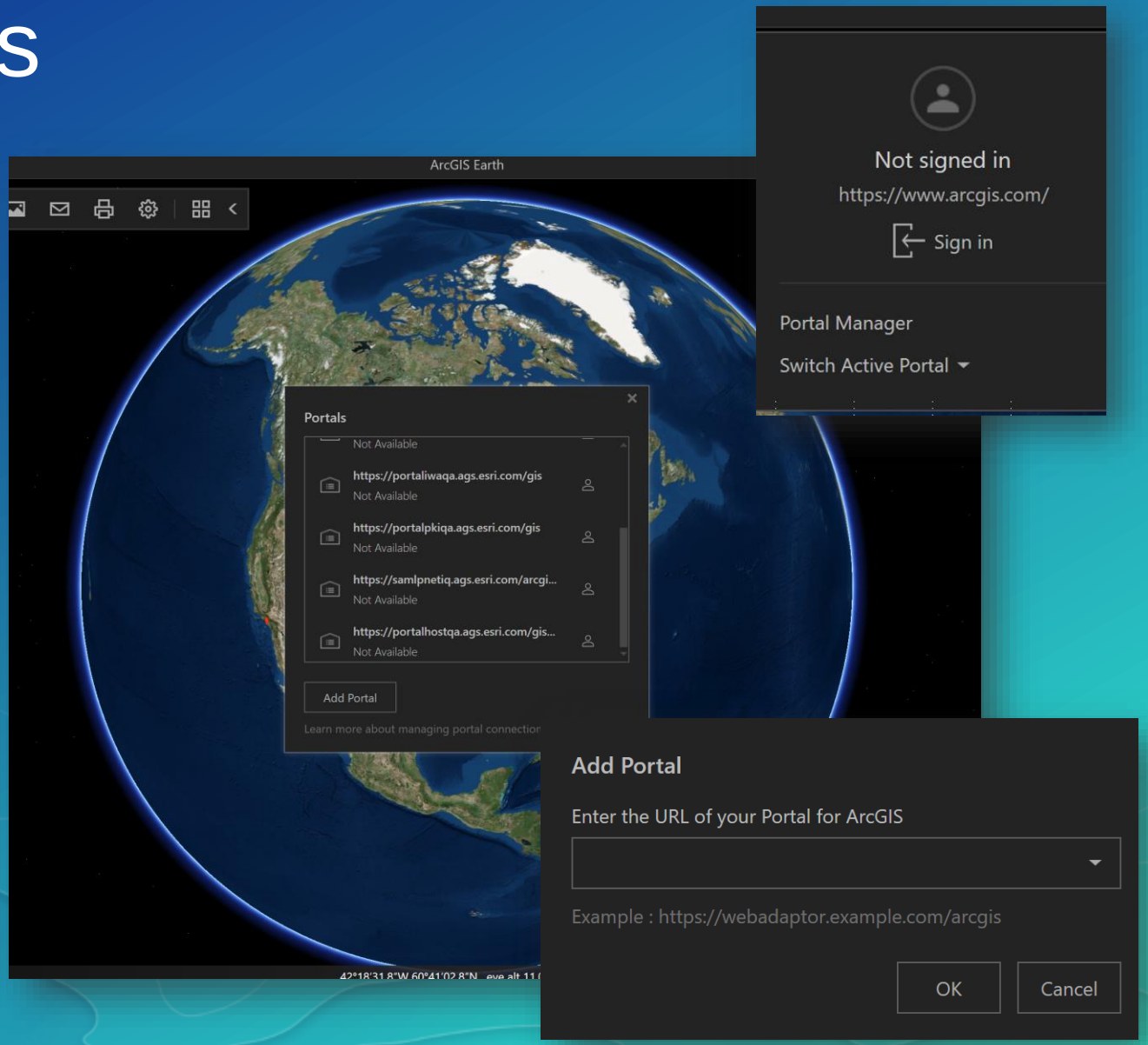
KML

OGC WMS and WTMS



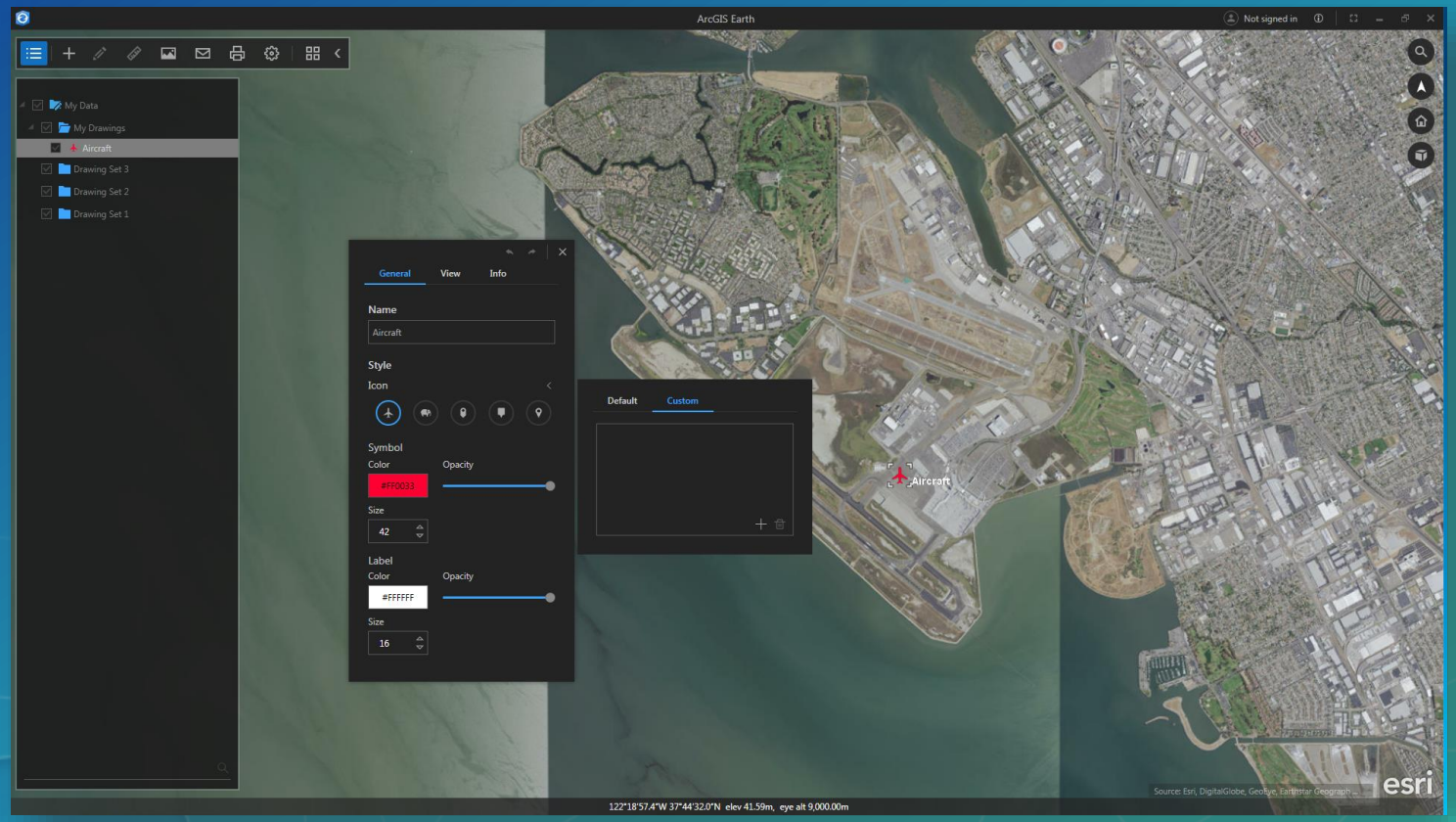
Add and switch portals

Easily switch between organizations in ArcGIS Enterprise or ArcGIS Online



Sketch – Draw, label and edit 2D points, paths and polygons

- Set fill and outline colors
- Set opacity
- Add and use custom icons
- Create snapshot views
- Set altitude behavior
- Style notes with HTML
- Export as KMZ
- Newly designed icons



*New in 1.5

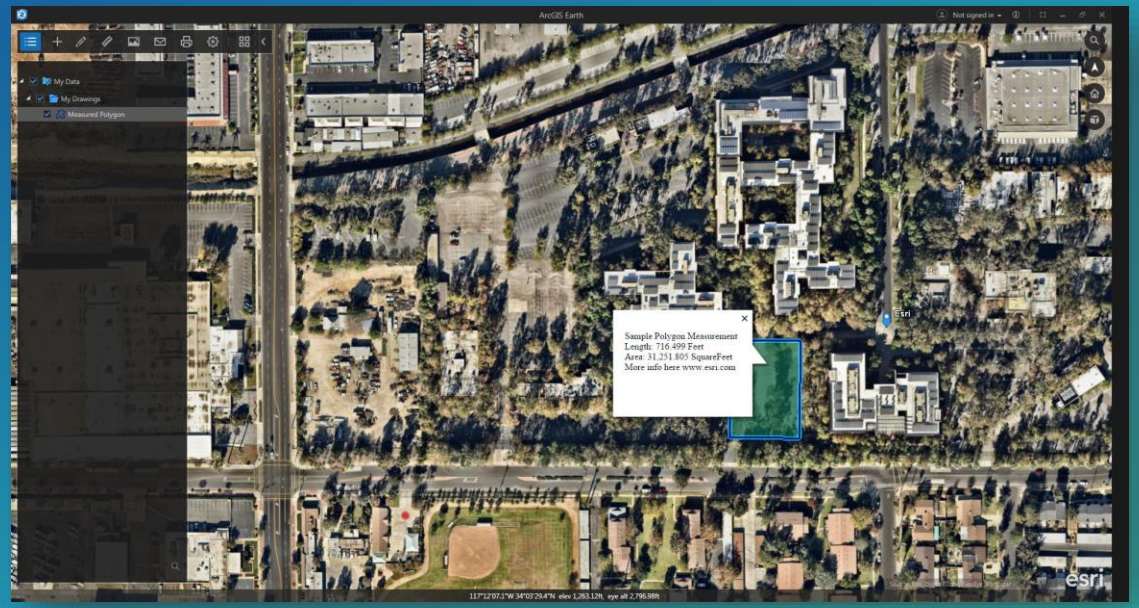
Measure

Measure coordinate locations, path distance & heading, area

Copy measurements to clipboard

Set default measurement and coordinate display units

Save measured results as a draw features and export to kmz



*New in 1.5

Personalization

Define proxy settings

Set user profile location

Import/export workspace

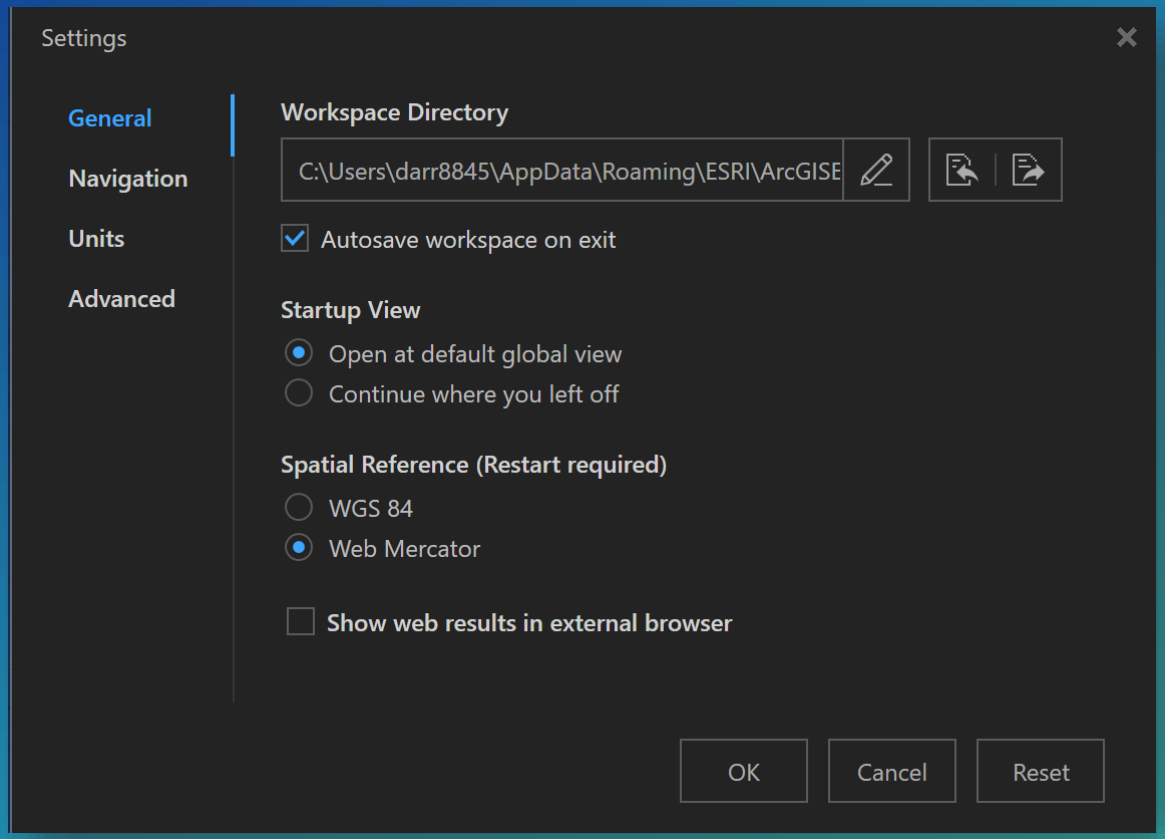
Set default measurement units

Set navigation speed

Turn on/off auto-save

Edit Workspace Directory Location

Show hyperlinks in external browser



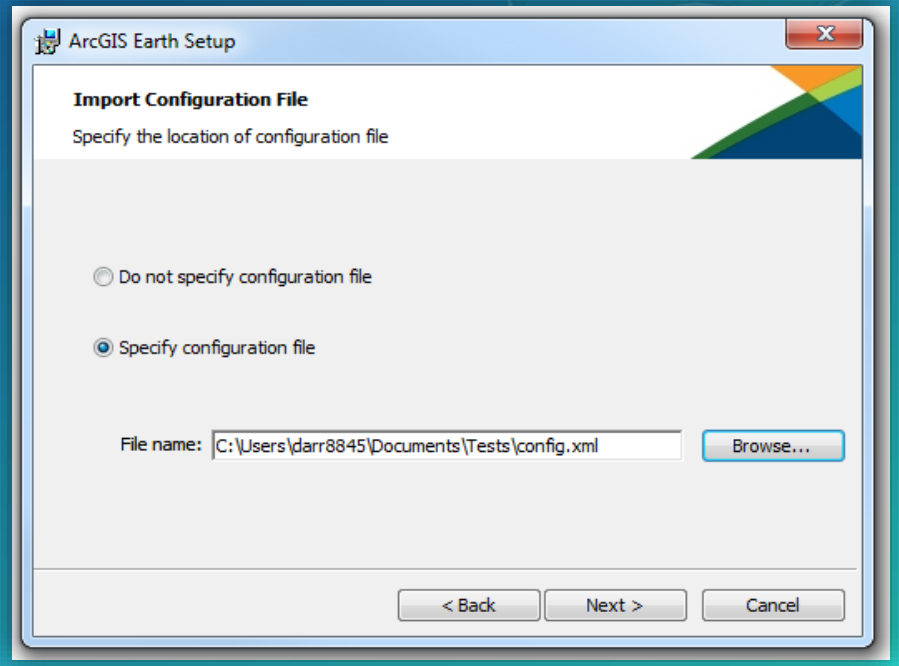
Configure ArcGIS Earth at install

Preset configuration parameters

in *config.xml*

Add Start Up layers including WMS

Configure help location, feedback link, acknowledgements, message banner



Silent configuration possible using command line parameters at install

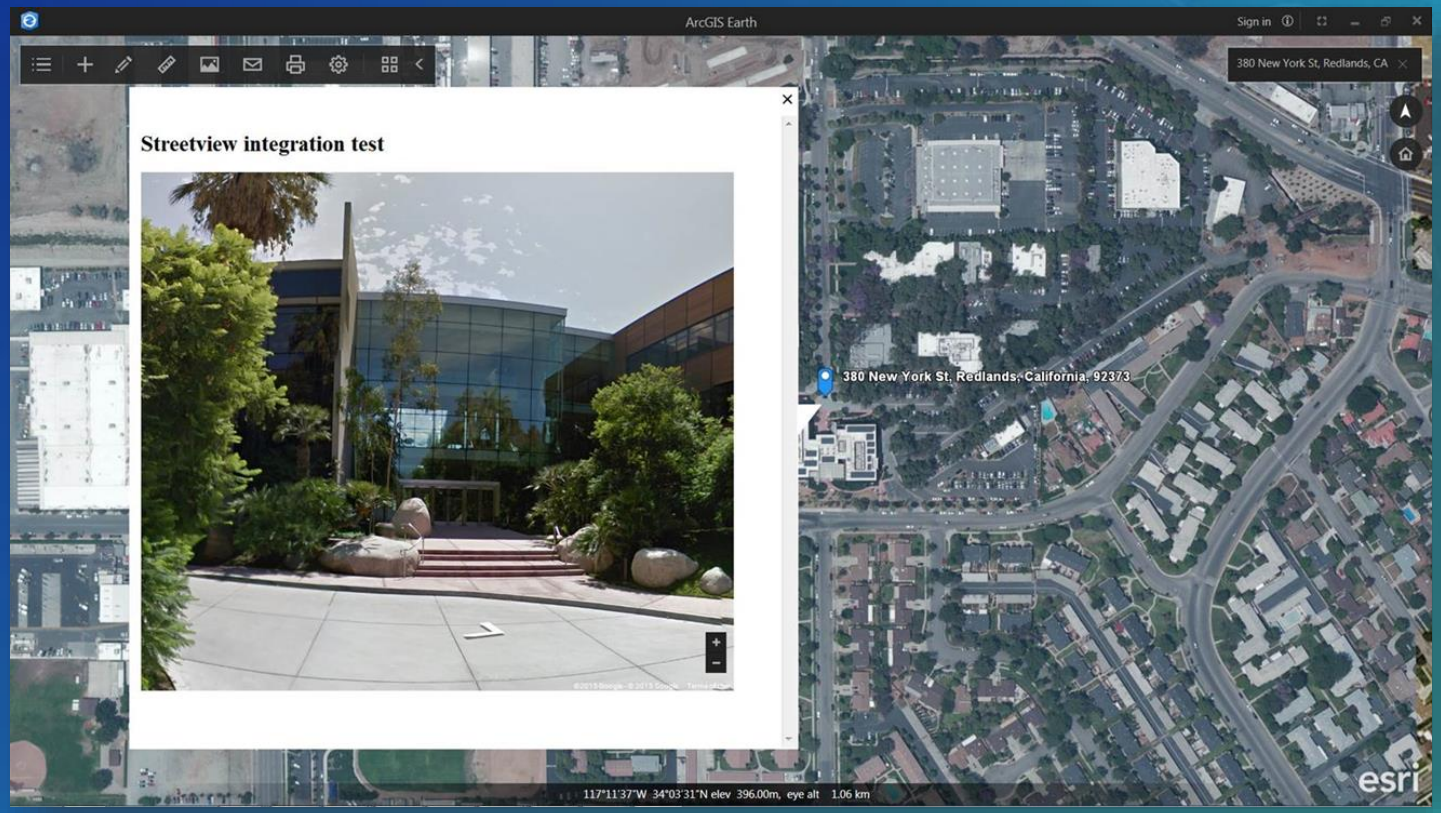
Preconfigure ArcGIS Earth for your users

Additional configuration parameters include specifying:

- Portals
- Navigation
- Units
- Data layers (basemaps & terrain)
- Error logging
- Alternate icon path for legacy KML

```
  <!--Admin Settings-->
  <isDefaultKmlViewer value="True"/>
  <portals>
    <portal url="https://www.arcgis.com"/>
  </portals>
  <fonts>
    <symbolFontName value="Arial"/>
  </fonts>
  <log enable="True">
    <!--Debug Info Warning or Error-->
    <category value="Info"/>
    <rollSizeKB value="10000"/>
    <maxArchivedFiles value="1000"/>
  </log>
  <startupLayers name="Startup Layers" state="Visible">
    <!--<layer name="startup_kml" type="KML" url="C:\test.k
state="Visible"/>
          <layer name="startup_shapefile" type="Shapefile"
url="C:\test.shp" state="Invisible"/>
          <layer name="startup_wms" type="WMS" url="http:/
&lt;catalog-url&gt;/&lt;serviceName&gt;/MapServer/WMSServer
state="Visible"/>
          <layer name="startup_mapservice" type="MapServic
url="http://&lt;catalog-url&gt;/&lt;serviceName&gt;/MapServ
state="Invisible"/>
          <layer name="startup_featureservice"
type="FeatureService" url="http://&lt;catalog-url&gt;/
&lt;serviceName&gt;/FeatureServer" state="Visible"/>
          <layer name="startup_imageservice" type="ImageSe
url="http://&lt;catalog-url&gt;/&lt;serviceName&gt;/ImageSe
state="Invisible"/>
          <layer name="startup_sceneservice" type="SceneSe
```

Call external KML services with a click of the mouse



See http://doc.arcgis.com/en/arcgis-earth/ for more…

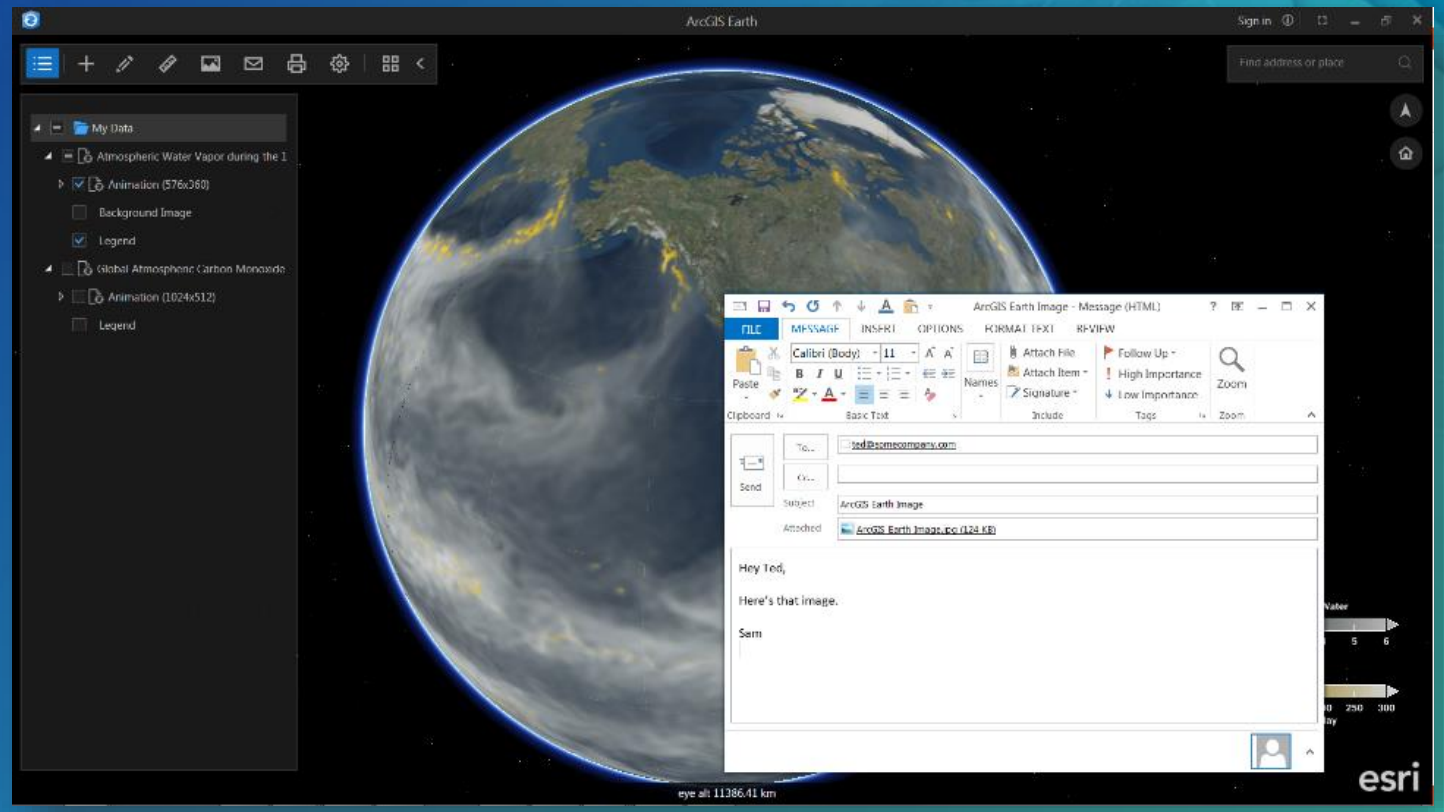
Streetview imagery shown is a demo example of Google Streetview integration and does not imply endorsement of ArcGIS Earth or Esri by Google

Share and Save maps

Send maps by email

Save map images

Print maps



ArcGIS Earth Roadmap (planned)

Essential User Experience
2016

Lightweight & easy to use
KML, Services & Open Standards (WMS, WMTS)
Portal

Secure & Deployable
2017

Configurable Install
Authentication
Drawing, Icons and Popup Implementation

Major Runtime Technology Dependency

Data, Capabilities & Performance
New runtime version
Mid Term

Vector Tiles, Point Clouds, 3D Points, GeoJSON
KML Editing
Interactive Tools
Disconnected Globe (Mobile Scene Package)

Extended Workflows
Longer Term

Plug-in Framework and API
Centralized configuration in Portal
Earth Mobile

Creation Date: Jun 27th 2017

Licensing

ArcGIS Earth is free for download and use

- Users of ArcGIS Earth can view publicly-shared data in ArcGIS Online and Portal for ArcGIS without a Named User account
- Protected data in Online and Portal requires Named User access
- Some premium content in the Living Atlas requires a Named user account

Download directly from http://j.mp/ArcGISEarthDownload

Version 1.5 is English-only

More information and support

Product pages and download – http://j.mp/ArcGISEarthDownload

Help documentation and system requirements – http://j.mp/Earth1_0Doc

GeoNet forum - http://j.mp/Earth1_0Forum

Twitter - @ArcGISEarth

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Thank you

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