

California Natural Resources Agency, GIS Day

Transitioning to ArcGIS Pro

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Innovation in GIS





Imagery
Administration
Data Management
Security
Identity
Enterprise Integration
Interoperability
Editing
Geodesign
Solution Templates
Standards
3D
Spatial Analysis
Cloud
Content
Quality
Big Data
Apps
Real-Time
Usability
Developers
Open Data
Performance
Mapping
Location Analytics

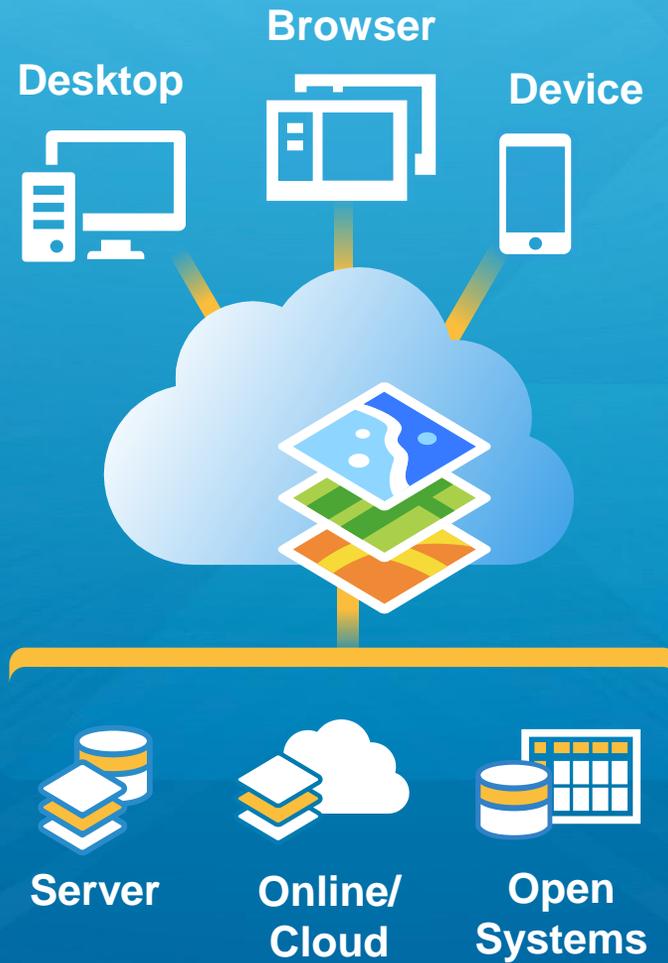
Our WORK

Creating Useful Technology and Supporting Our Users

ArcGIS

▶ An Integrated Web GIS Platform

ArcGIS



Apps

Access and Management

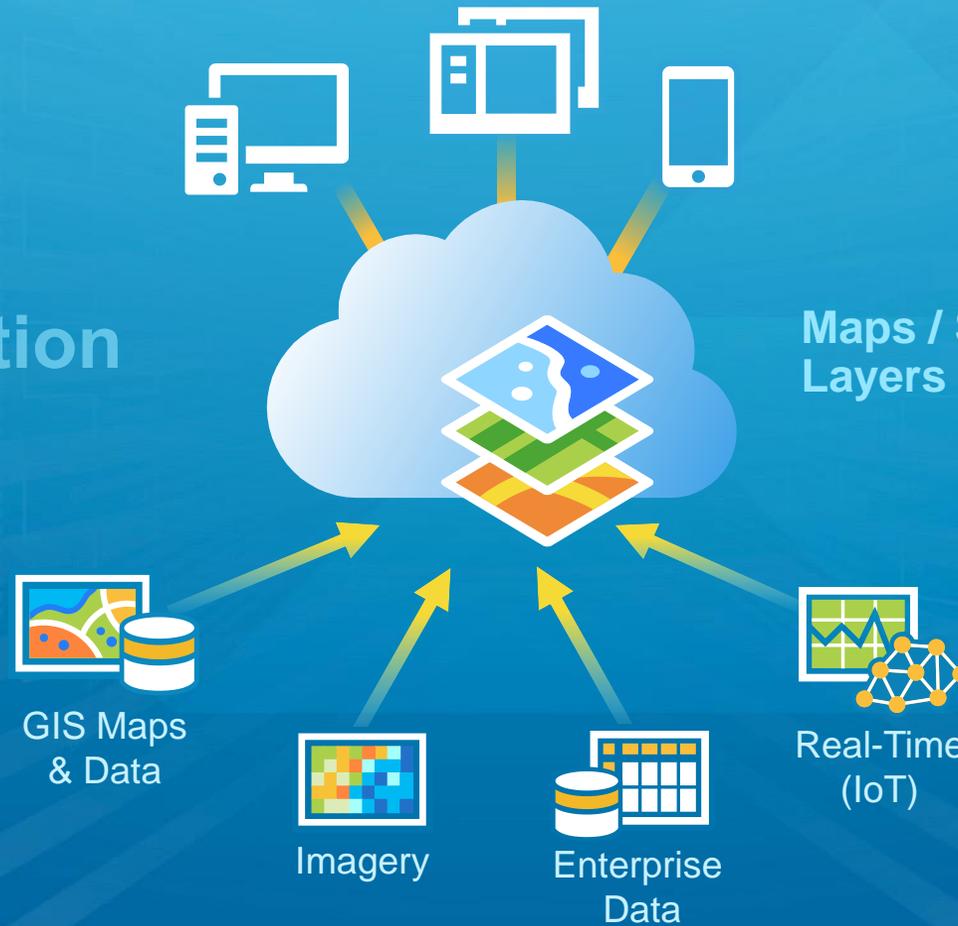
Services and Systems

Deployable On-Premises and Online

ArcGIS

Abstracts and Organizes All Types of Geospatial Data

GeoInformation
Model



Open Platform ▶ Ensuring Interoperability

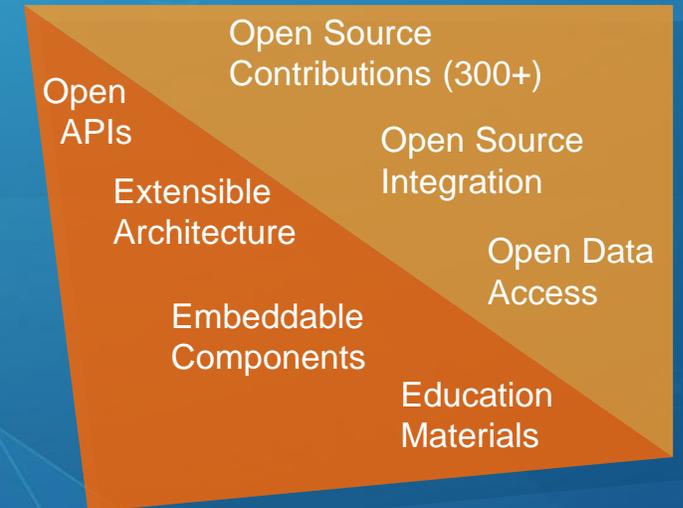
Open Standards



Industry Formats



Open Software



Product Integration



... Integrated into Thousands of Systems

10.4.1

Latest Release

Desktop

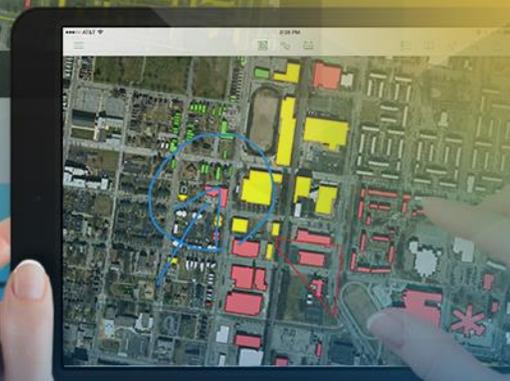
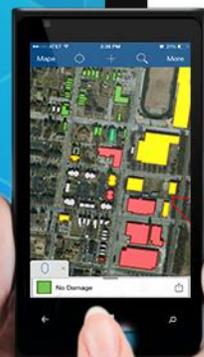
Online

Apps

Server

ArcGIS Platform Components

An Integrated System



ArcGIS Desktop

► Supports GIS Professionals



New and Improved

- Analytics & 3D
- Space-Time Modeling
- Vector Tiles
- Image Processing
- LAS Tools
- Concurrent Pro Licensing
- Metadata

What's Coming

- Advanced Mapping
- More 3D and Analytics
- WFS / KML

Providing Advanced Mapping, Visualization, Editing, and Analysis

... Simplifying and Improving

ArcGIS for Desktop Roadmap

Desktop Applications

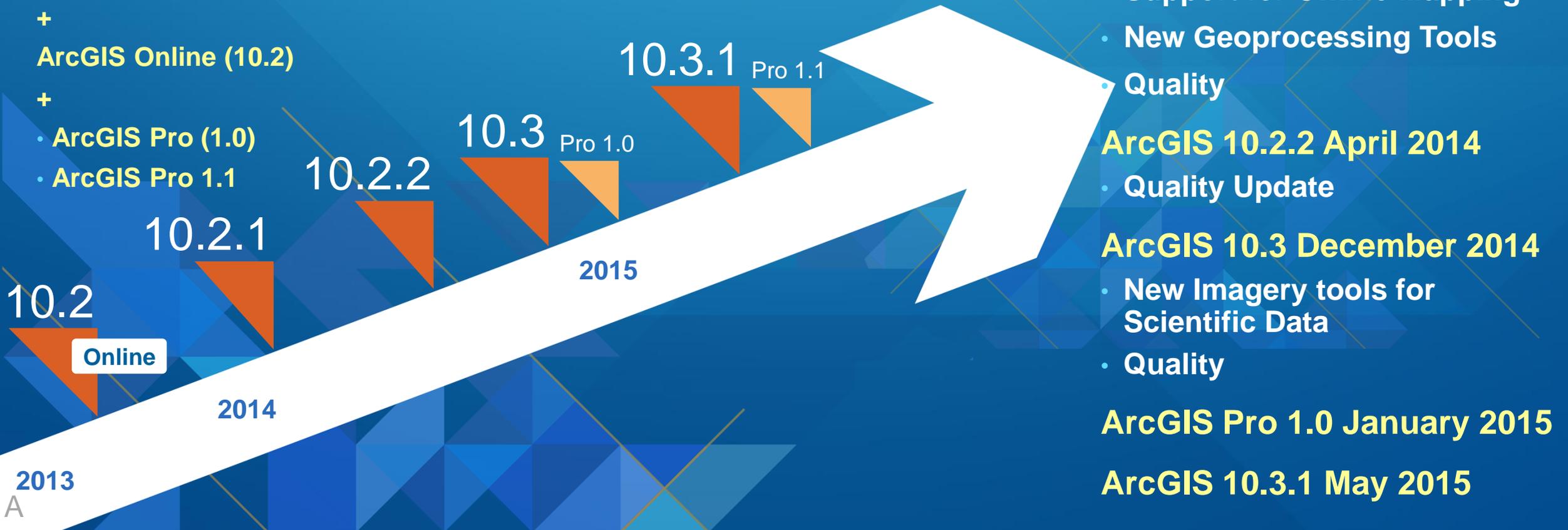
- ArcMap
- ArcCatalog
- ArcScene
- ArcGlobe

+

ArcGIS Online (10.2)

+

- ArcGIS Pro (1.0)
- ArcGIS Pro 1.1



ArcGIS 10.2

- Strong Adoption
- Important Release

ArcGIS 10.2.1 January 2014

- Support for Offline Mapping
- New Geoprocessing Tools
- Quality

ArcGIS 10.2.2 April 2014

- Quality Update

ArcGIS 10.3 December 2014

- New Imagery tools for Scientific Data
- Quality

ArcGIS Pro 1.0 January 2015

ArcGIS 10.3.1 May 2015

Road Map

▶ Advancing ArcGIS for Desktop

Coming

- Geodatabase Topology
- Utility Networks

Incremental Software Release



New and Improved

- More Analytics & 3D
- Vector Tiles
- Mobile Map Packages
- Better Metadata
- Concurrent Pro Licensing

New Features and Continuous Improvements

... Focused on Quality, User Needs, and Innovation

Who is ArcGIS Pro for?

Researcher

Designer

Cartographer

GIS Analyst

Manager

Editor

Geo-Centric Information Worker

Geo-Spatial Expert

Analyst

Image Analyst

Top ideas [▶ http://ideas.arcgis.com](http://ideas.arcgis.com)

Desktop

Export to Excel

64 Bit

Multiple
Layouts

The screenshot shows the ArcGIS Ideas website interface. At the top, there is a search bar and a login link. The main content area features a large banner with a woman pointing at a diagram titled "Your Ideas in Motion". The diagram is a circular flowchart with nodes: "Share Your Idea", "Review", "Strategy Process", "Share Your Idea", "Share Your Idea". To the right of the banner is a "User Participation" table:

	Today	Total
Ideas	3	8056
Votes	94	131462*

*Updated hourly.

Below the banner is a "Recent Ideas" section with a table:

Time	Topic
2:12 PM	Make Table View - Unselect Visible Fields
10:25 AM	Downtime/Maintenance Notice for ArcGIS Online Content
6:16 AM	Adding Yammer to the share social media options in ArcGIS Online
Yesterday	Collector Features
May 23, 2014	Collector App Update

On the right side, there is a "Leaderboard (Beta)" section titled "Top Contributors to Ideas Site!":

User	Ideas	Votes	Comments
susmar	1	3	0
aidleenk	1	1	0
Chleboy02	1	0	0

*Updated weekly.

The left sidebar contains navigation links: "Post", "My Ideas", "Workspaces", "Categories" (Products, Service, Industry, ArcGIS Marketplace), and "Links" (ArcGIS Beta Community, ArcGIS Resource Center, Esri Support, Support Services Blog, wiki.GIS.com). At the bottom, there is a "Stay Connected" section with social media icons for Twitter, LinkedIn, Facebook, and YouTube.

What you get with
ArcGIS Desktop



Web GIS

Portal



ArcGIS for Desktop

ArcMap & ArcGIS Pro

Basic

Standard

Advanced

*Desktop Users now have
ALL the Online Apps

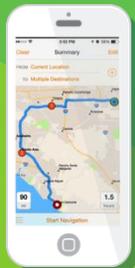
Apps

ArcGIS for Desktop includes new apps



Field

Navigator



Workforce



Survey123



Collector

Mobile

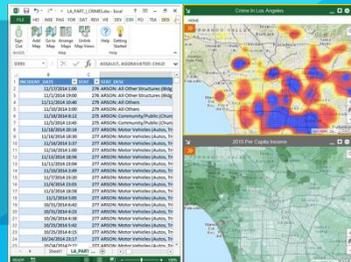
(Connected & Disconnected)

Office

Dashboard



Maps for Office



Explorer



ArcGIS Earth



Public

Open Data



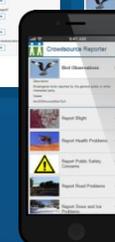
Story Maps



Photo Survey



Crowdsourcing



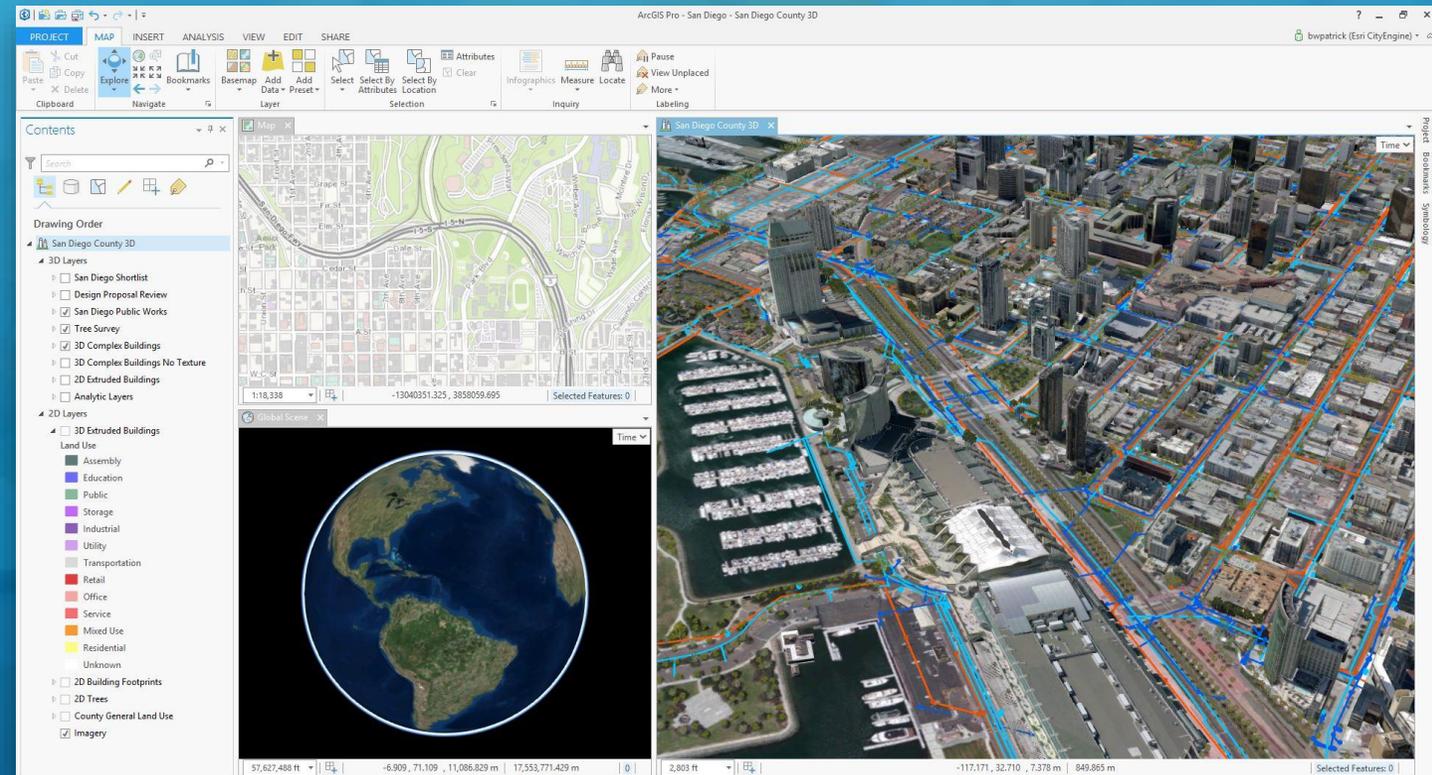
Configurable Solutions That Work Together

Easy, Focused, and Ready-to-Use

ArcGIS Pro

► Part of ArcGIS for Desktop

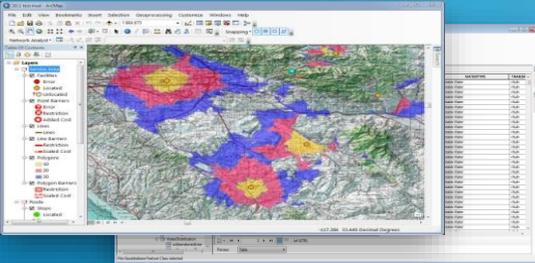
- 64 Bit, multi-threaded
- Simplified user interface
- Integrated with ArcGIS Online
- Combined 2D/3D experience
- Simple search and query
- Enhanced map layout capability



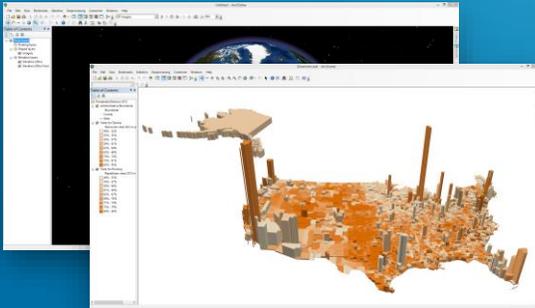
Application Fusion

Single, always responsive application

ArcMap / ArcCatalog



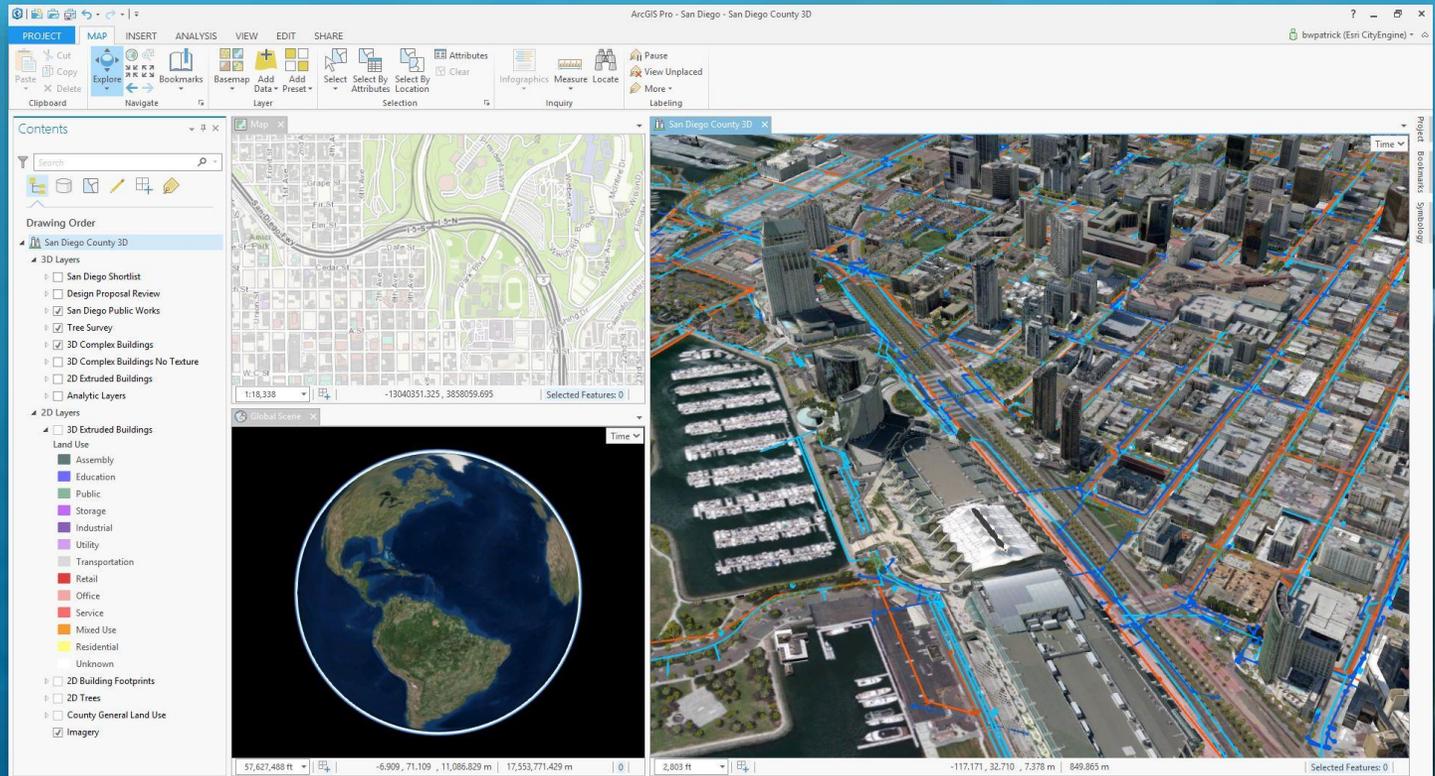
ArcGlobe / ArcScene



CityEngine



ArcGIS Pro



Is ArcGIS Pro a replacement for ArcMap?

- It's addition not a replacement
- ArcMap stays and continues!
- They run side by side



Product Life Cycle ▶ ArcGIS for Desktop Support Status

Version	Release Date	General Availability	Extended Support	Mature Support	Retired
10.4	Q1 2016	June 2016 – Jan 2018	Feb 2018 – Jan 2020	Feb 2020 – Jan 2022	Feb 1, 2022
10.3	December 10, 2014	Dec 2014 – Nov 2016	Dec 2016 – Nov 2018	Dec 2018 – Nov 2020	Dec 1, 2020
10.2.2	April 15, 2014	April 2014 – June 2015	July 2015 – June 2017	July 2017 – June 2019	July 1, 2019
10.2.1	Jan 7, 2014	Jan 2014 – June 2015	July 2015 – June 2017	July 2017 – June 2019	July 1, 2019
10.2	July 30, 2013	July 2013 - June 2015	July 2015 – June 2017	July 2017 – June 2019	July 1, 2019
10.1	June 11, 2012	June 2012 – Dec 2013	Jan 2014 – Dec 2015	Jan 2016 – Dec 2017	Jan 1, 2018
10.0	June 30, 2010	June 2010 – June 2012	July 2012 – Dec 2013	Jan 2014 – Dec 2015	Jan 1, 2016

Functionality

▶ ArcGIS Pro does NOT have all the functionality of ArcMap

• Continue to use **ArcMap** to maintain authoritative data in:

- Land Records

- Topology
- Parcel Fabric
- COGO

not supported in Pro

- Utilities

- Geometric Network
- Network Tracing

not supported in Pro

- Transportation (DOTs)

- Linear Referencing

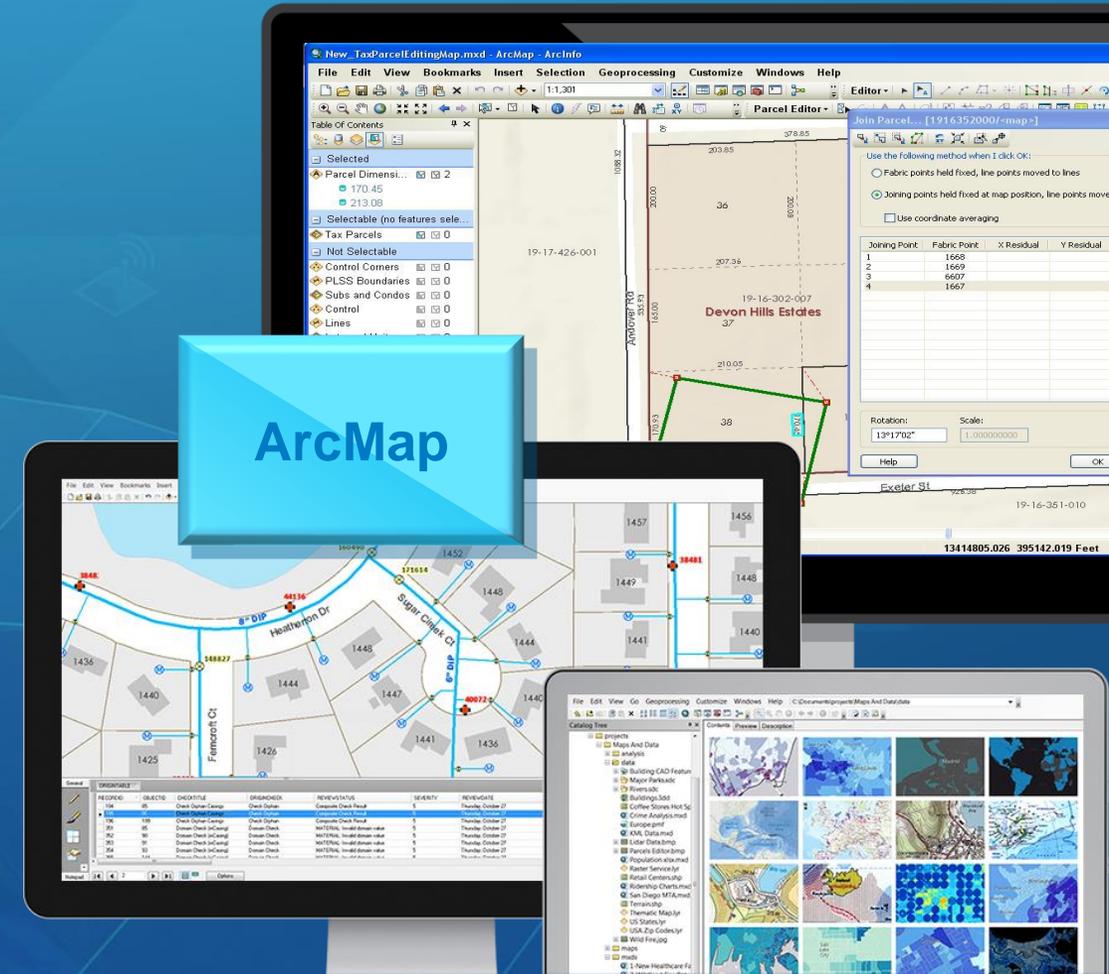
not supported in Pro

- Annotation

- Dimensions

- Spatial Adjustment

not supported in Pro



Customization

ArcGIS for Desktop 10.4

ArcGIS Pro

- Customize Ribbon
- Python
- Tasks
 - Pre-configured steps to automate workflows
- .NET API \ SDK
 - Add-ins

ArcMap

- Custom Tools
- Python
- Add-ins
- Extensions



Setup

▶ Installing and Provisioning ArcGIS Pro



Download
and Install



Sign-in and
Authorize



Get
Updates



Customize
User
Interface



Set Display
Language



Licensing

ArcGIS Pro Licenses Manage with ArcGIS Online or Portal

- Access is controlled by
 - “Named User” entitlement of ArcGIS Pro
 - Online Organization or Portal
- Organization Admin can:
 - Grant access of Pro by Named-User
 - Control product level and extension
 - Re-assign access as needed
- Pro User can:
 - Download and install ArcGIS Pro
 - Sign-in at startup
 - Go offline if needed

The screenshot shows the ArcGIS Pro License Management interface. The page title is "Managing ArcGIS Pro Licenses for Energy". The interface displays a grid of license counts for various products and a table of users with their assigned licenses.

Product	ArcGIS Pro Basic	ArcGIS Pro Standard	ArcGIS Pro Advanced	Spatial Analyst	3D Analyst	Network Analyst	Geostatistical Analyst	Data Reviewer	Workflow Manager	Data Interoperability
Licenses	50	50	50	100	100	100	100	100	100	100
Available	49	48	43	91	93	91	93	93	93	93

Members: SELECT ALL

Search by Name:

Click to select a member.

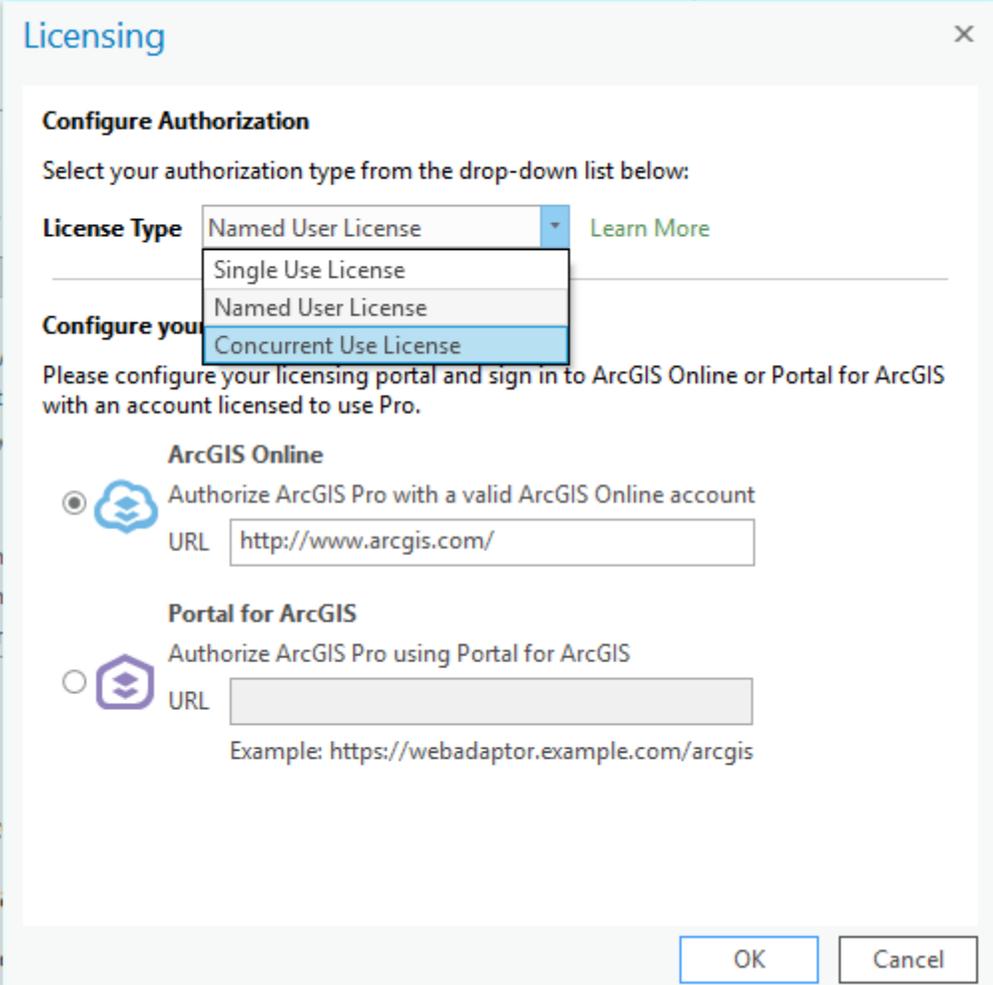
Name	Username	Licensed for	Last Used ArcGIS Pro
Xxx1	XXX1	Configure licenses	
Xxx2	XXX2	Configure licenses	
Xxx3	XXX3	Configure licenses	
Xxx4	XXX4	Pro Standard + 2 Extensions	
Xxx5	XXX5	Pro Standard + 2 Extensions	
Xxx6	XXX6	Configure licenses	
Xxx7	XXX7	Configure licenses	
Xxx8	XXX8	Configure licenses	
Xxx9	XXX9	Configure licenses	
Xxx10	XXX10	Configure licenses	
Xxx11	XXX11	Pro Basic	
Xxx12	XXX12	Configure licenses	
Xxx13	XXX13	Pro Advanced + 7 Extensions	

Selected Members: Click to remove a selected member.

Buttons: CONFIGURE, CLEAR

New Licensing options

- **Concurrent Use**
 - Requires a 10.4 license manager
 - Updated license file
- **Single Use**
 - Locked to a machine



Licensing [X]

Configure Authorization

Select your authorization type from the drop-down list below:

License Type Named User License [Learn More](#)

- Single Use License
- Named User License
- Concurrent Use License**

Configure your licensing portal

Please configure your licensing portal and sign in to ArcGIS Online or Portal for ArcGIS with an account licensed to use Pro.

ArcGIS Online

 Authorize ArcGIS Pro with a valid ArcGIS Online account

URL

Portal for ArcGIS

 Authorize ArcGIS Pro using Portal for ArcGIS

URL

Example: <https://webadaptor.example.com/arcgis>

OK Cancel

Extensions

► Add More Capabilities to ArcGIS Pro

- Spatial Analyst
- 3D Analyst
- Network Analyst
- Geostatistical Analyst
- Data Reviewer
- Workflow Manager
- Data Interoperability



MY ORGANIZATION

Licensed Members	Product	ArcGIS Pro Basic	ArcGIS Pro Standard	ArcGIS Pro Advanced	Spatial Analyst	3D Analyst	Network Analyst	Geostatistical Analyst	Data Reviewer	Workflow Manager
Maximum	150	50	50	50	50	50	50	50	50	50
Available	124	45	47	32	25	24	31	38	36	38

Licensed Products for Rob Elkins (rpe2) Last used ArcGIS Pro: Jan 9, 2015

Esri Applications

[-] ArcGIS Pro [-] Extensions

- Basic
- Standard
- Advanced

- Spatial Analyst
- 3D Analyst
- Network Analyst
- Geostatistical Analyst
- Data Reviewer
- Workflow Manager

UPDATE REVOKE ALL CANCEL

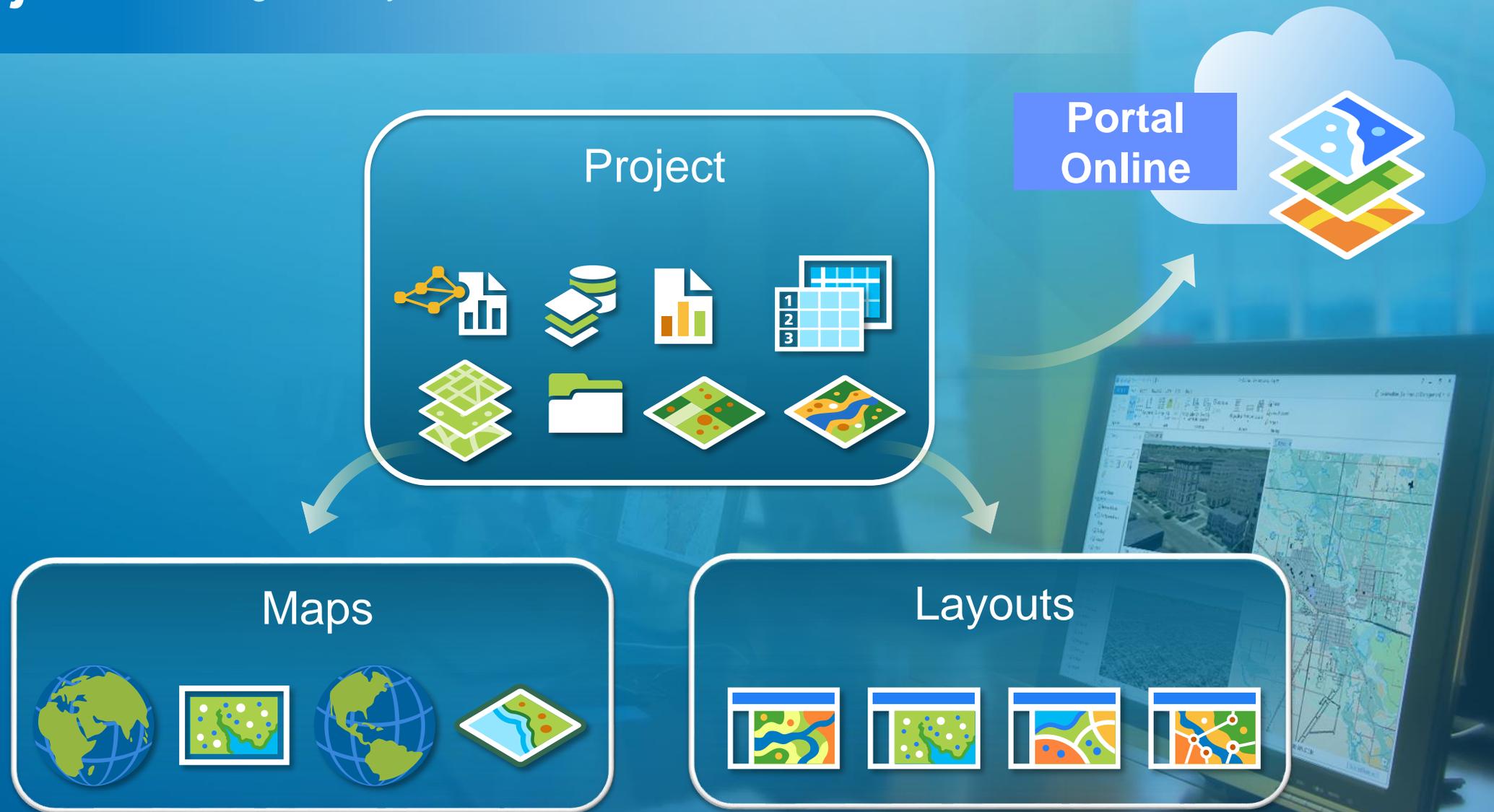
Key Terms

<http://pro.arcgis.com/en/pro-app/get-started/arcgis-pro-terminology.htm>

ArcGIS Pro	Description or usage	Similar concept in other ArcGIS for Desktop applications
Project	A collection of related geographic datasets, maps, layouts, tools, settings, and resources, saved in an .aprx file.	
Map	The project item used to display and work with geographic data in two dimensions. A map opens in a map view.	ArcMap document (.mxd)
Scene	The project item used to display and work with geographic data in three dimensions. A scene can open as either a global or local perspective. A scene can be converted to a map, and vice versa.	Global scene: ArcGlobe document (.3dd) Local scene: ArcScene document (.sxd)
Active view	The view that currently has keyboard focus. The active view controls the contents of the ribbon—for example, if a map is the active view, you see commands for working with maps. There is only one active view within the application at any given time.	Active data frame
View	The window representing the primary work area of the application. You can have multiple views open at the same time and display them side by side.	Similar to a map view or layout view, but there can be other types in ArcGIS Pro.
Ribbon	The rectangular area across the top of the application composed of tabs that contain software functionality.	User interface menus and toolbars
Contextual tab	A context-sensitive tab that appears and disappears on the ribbon under certain circumstances.	
Pane	A dockable window that contains a related set of commands.	Dockable window

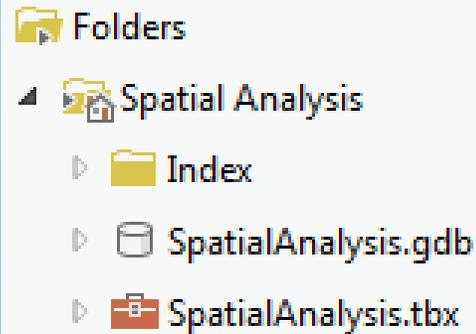
Project

Organizes your work in ArcGIS Pro

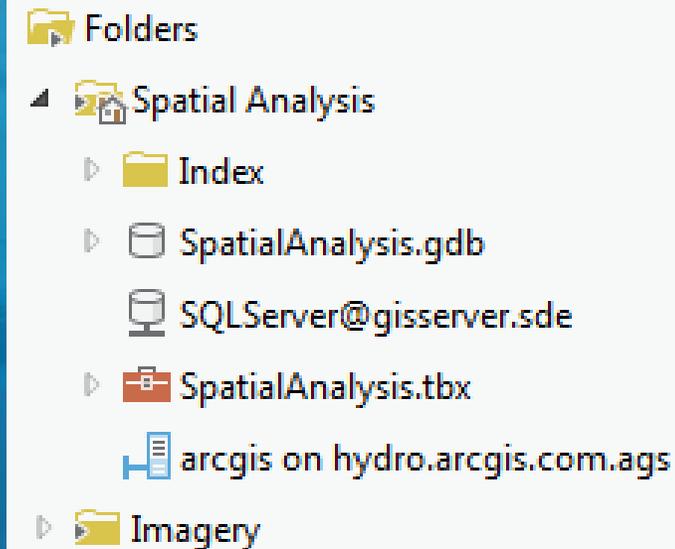


Project Management

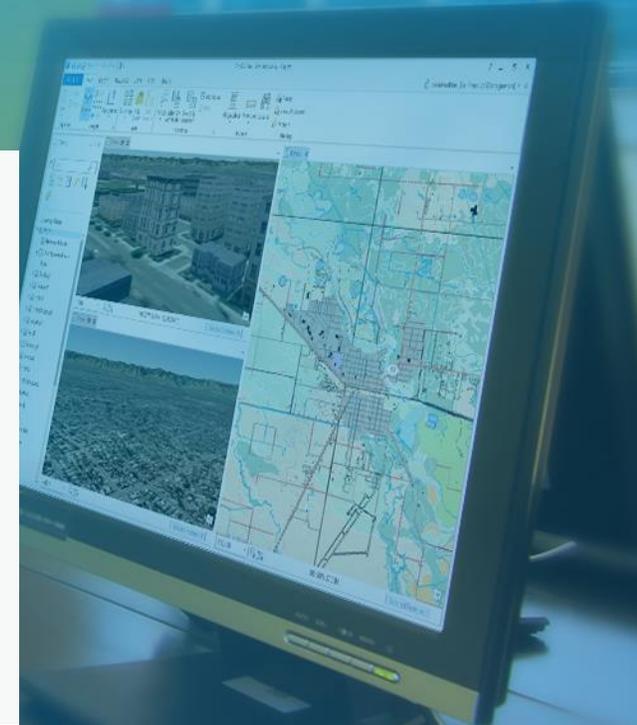
- Every Project has:
 - Home Folder
 - Default File Geodatabase
 - Default Toolbox



- Can Insert:
 - Folder Connections
 - Database Connections*
 - ArcGIS Server Connections*
 - Locators

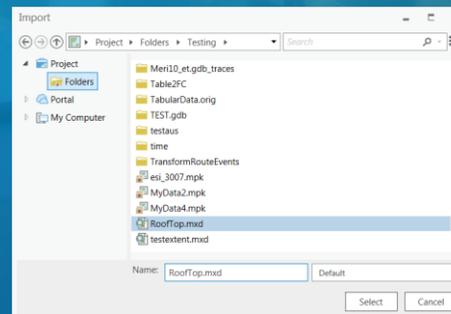
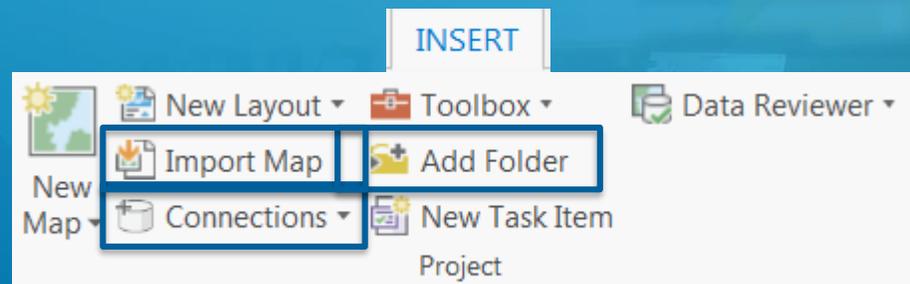
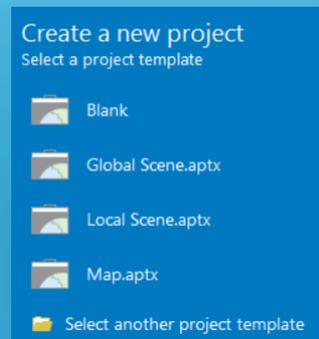


* Connection files stored in Project folder



Migrate your work ArcGIS Pro

- Create & Connect
- Add Maps and Content
- Migrate tools, models, and scripts



Project

-  Maps
-  Toolboxes
-  Databases
-  Folder



What can you do with **Pro**?

Summary

ArcGIS for Desktop 10.4.1

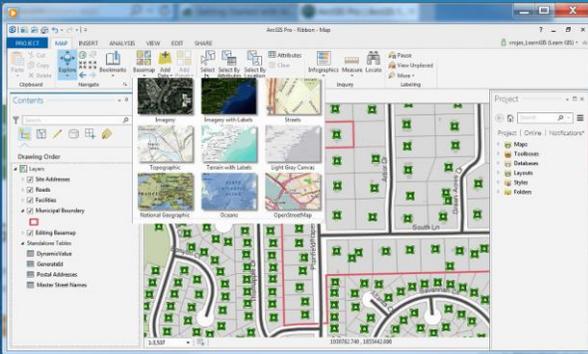
- ArcMap continues and keeps getting better
- ArcGIS Pro is part of Desktop
- ArcGIS Pro Can Run Side-by-Side with ArcMap
 - Separate install
 - Imports MXDs, SXDs, and 3DDs
 - Models and Scripts (Python)
- Basic, Standard, and Advanced Levels
- Familiar Extensions to ArcGIS Pro
 - Spatial Analyst
 - 3D Analyst
 - Network Analyst
 - Geostatistical Analyst
 - Data Reviewer
 - Workflow Manager
 - Data Interoperability



ArcGIS Pro Resources

Terminology Guide

Video Tour



<http://pro.arcgis.com/en/pro-app/>

ArcGIS Pro Help

Quick-start tutorials

Migrate content

Navigate your data

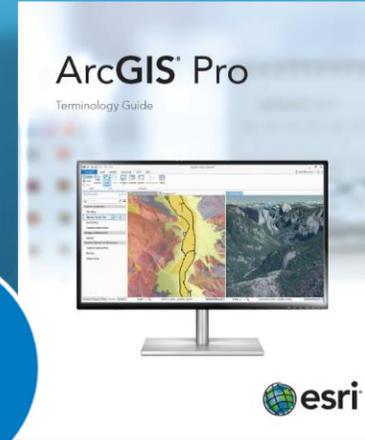
Symbolize your data

Label your map

Create features on the map

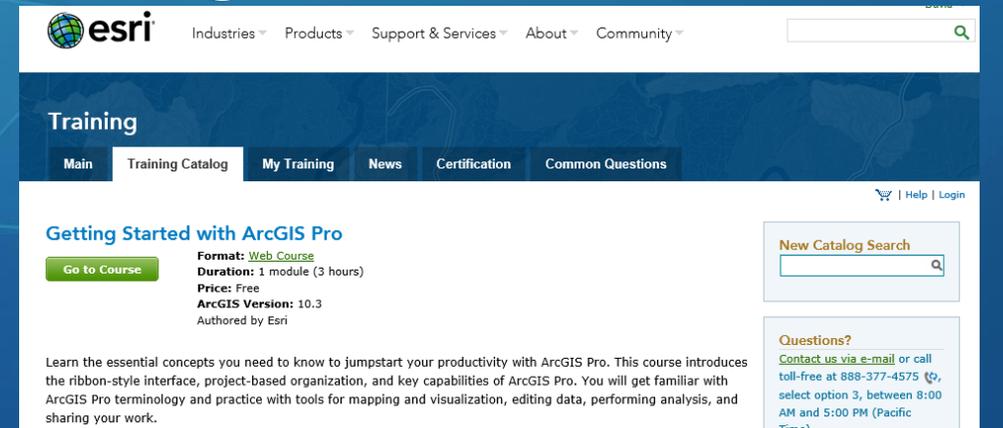
Perform analysis

Add maps to a layout



Essential Terminology or Functionality That's New to ArcGIS® Pro		
ArcGIS® Pro	Usage	Similar Concepts in Other ArcGIS for Desktop Applications
Project	A collection of related geographic datasets, maps, layouts, tools, settings, and resources, saved in an aprx file.	
Map	The project item used to display and work with geographic data in two dimensions (A map opens in a map view).	Data frame
Scene	The project item used to display and work with geographic data in three dimensions.	Global scene: ArcGlobe® document (.ldj) Local scene: ArcScene® document (.lwx)
Ribbon	The rectangular area across the top of the application composed of tabs that contain software functionality.	User interface menu and toolbar
Tab on the ribbon	A region on the ribbon that groups related software commands.	Toolbar
View	The window representing the primary work area of the application.	Similar to a map view or layout view, but there can be other types in ArcGIS Pro.
Active view	The view that currently has keyboard focus (The active view controls the contents of the ribbon).	Active data frame
Pane	A dockable window that contains a related set of commands.	Clickable window
Gallery	A rectangular window or menu that presents an array or grid of visual choices.	
Task	A set of preconfigured steps to guide users through a workflow or business process.	Similar to functionality in the Task Assistant Manager extension.
Quick Access Toolbar	A collection of icons located on the title bar that provides shortcuts to commonly used commands.	
Portal	Connection to an ArcGIS Online or Portal for ArcGIS organization.	Similar to ArcGIS Administrator > Add Portal Connection. In ArcGIS Pro, connect to a portal on the Project tab > Portals tab.

Getting Started with ArcGIS Pro



The screenshot shows the Esri website navigation bar with links for Industries, Products, Support & Services, About, and Community. Below the navigation is a 'Training' section with tabs for Main, Training Catalog, My Training, News, Certification, and Common Questions. The 'Getting Started with ArcGIS Pro' course is highlighted, with a 'Go to Course' button. Course details include: Format: Web Course, Duration: 1 module (3 hours), Price: Free, ArcGIS Version: 10.3, and Authored by Esri. A 'New Catalog Search' box and a 'Questions?' section with contact information are also visible.

<http://training.esri.com/gateway/index.cfm?fa=catalog.webCourseDetail&courseid=2889>



esri

Understanding our world.

Nakul Bhatia
State Practice Team, Esri

✉ nbhatia@esri.com