



ArcGIS Pro: An Introduction

Tom Schwartzman, Esri



ArcGIS Pro: An Introduction

Or....

Helping you get over the fear of change

Tom Schwartzman, Esri

ArcGIS Desktop



ArcMap
ArcCatalog
ArcScene
ArcGlobe



ArcGIS Pro



Apps

Portal

Access



Server

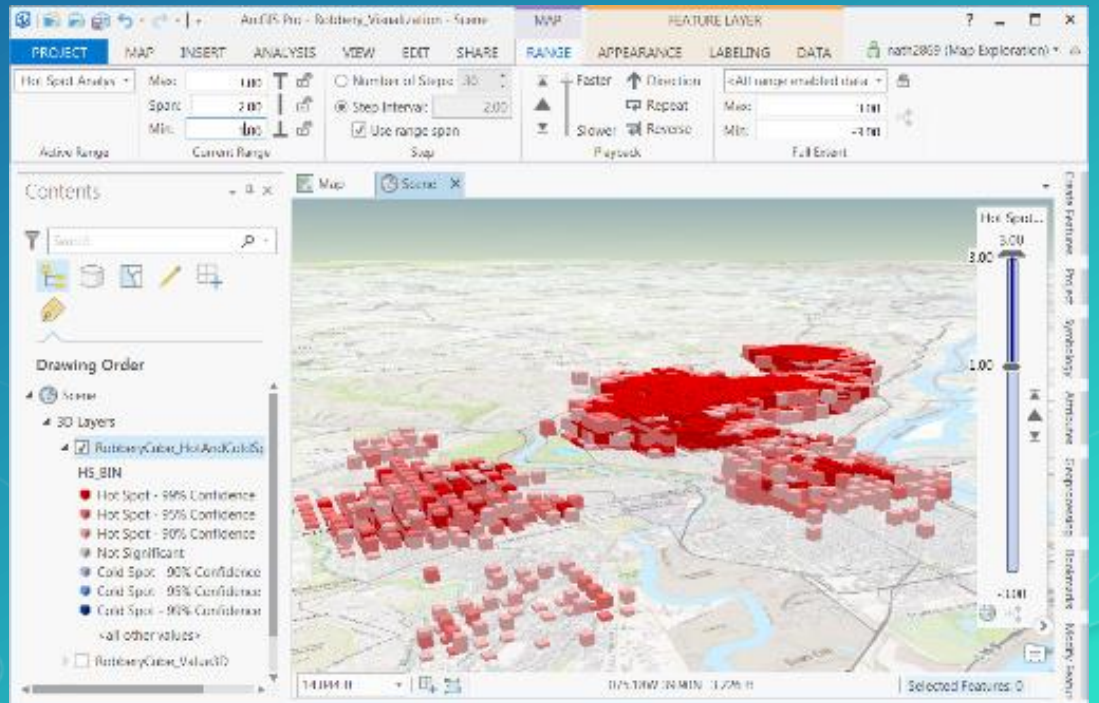
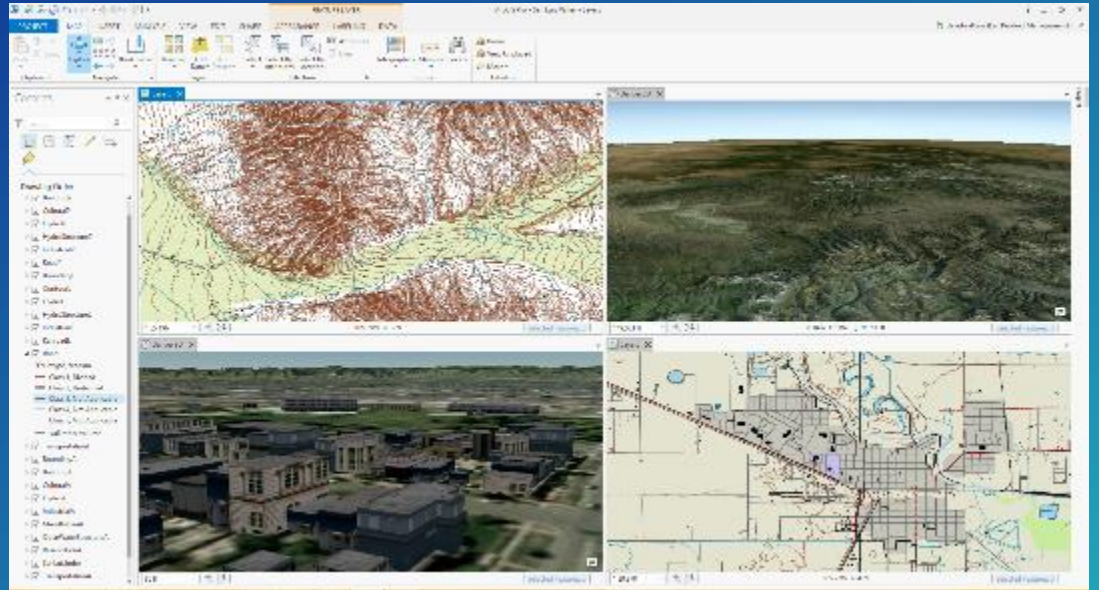


Online Content
and Services

Services

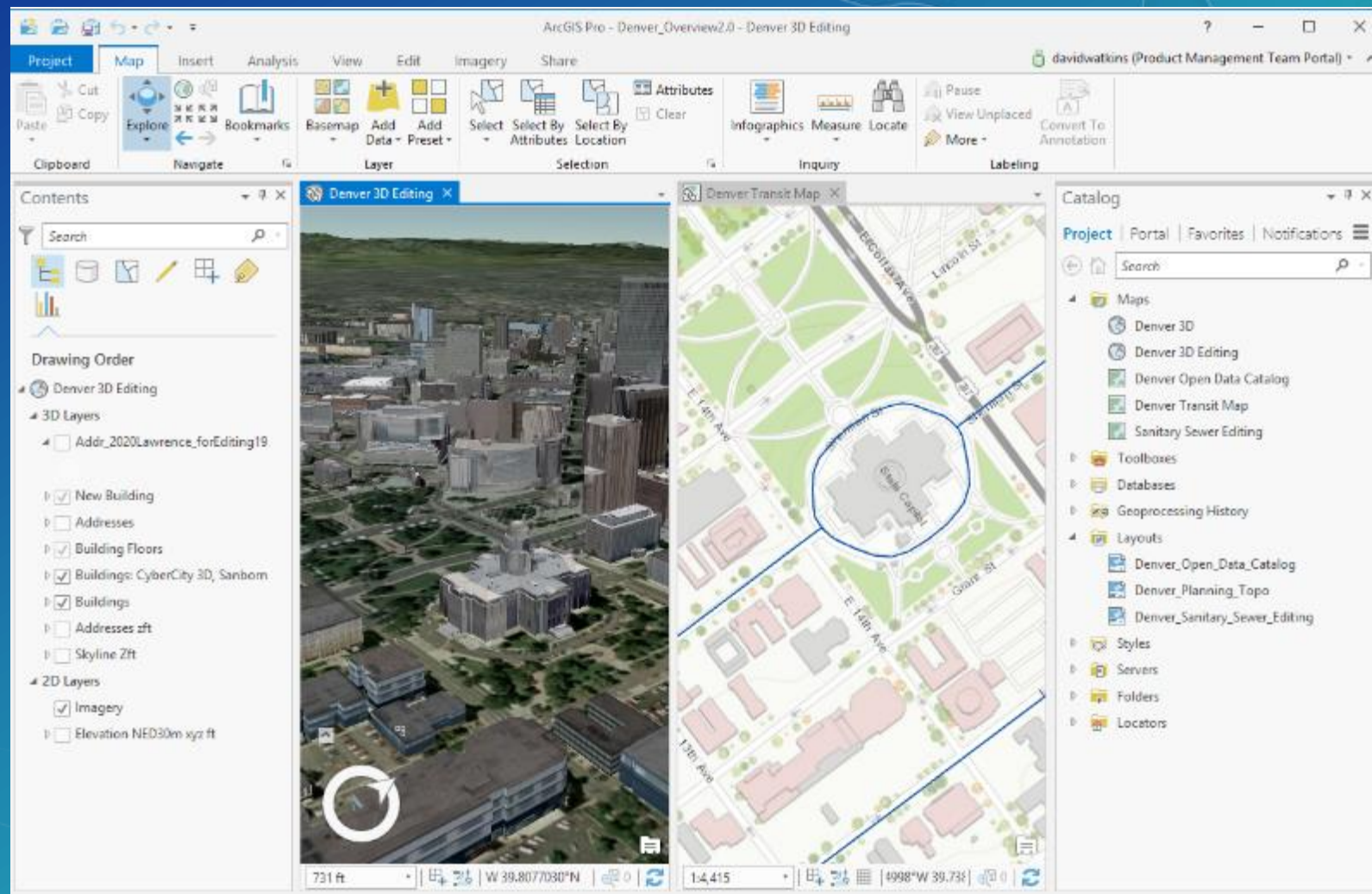
ArcGIS Pro

- 64 Bit, multi-threaded
- Simplified user interface
- Integrated with ArcGIS Online
- Combined 2D/3D experience
- Multiple maps and layouts
- All the analysis tools
- Simple search and query



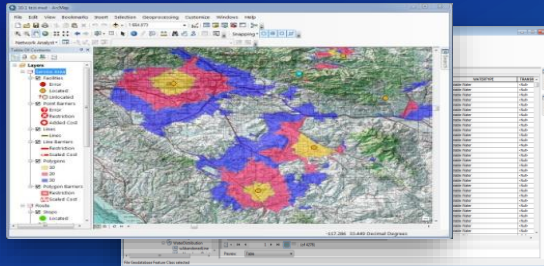
The user interface is new

- Contextual
- Intuitive
- Project based
- Map focused
- Integrated

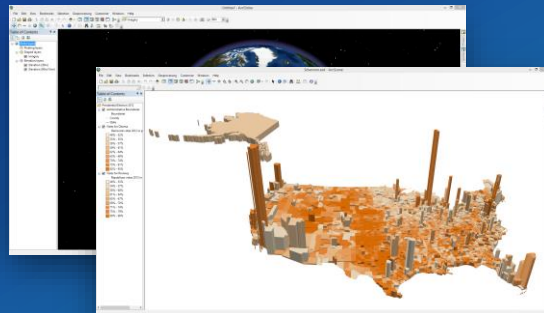


Fusion of applications

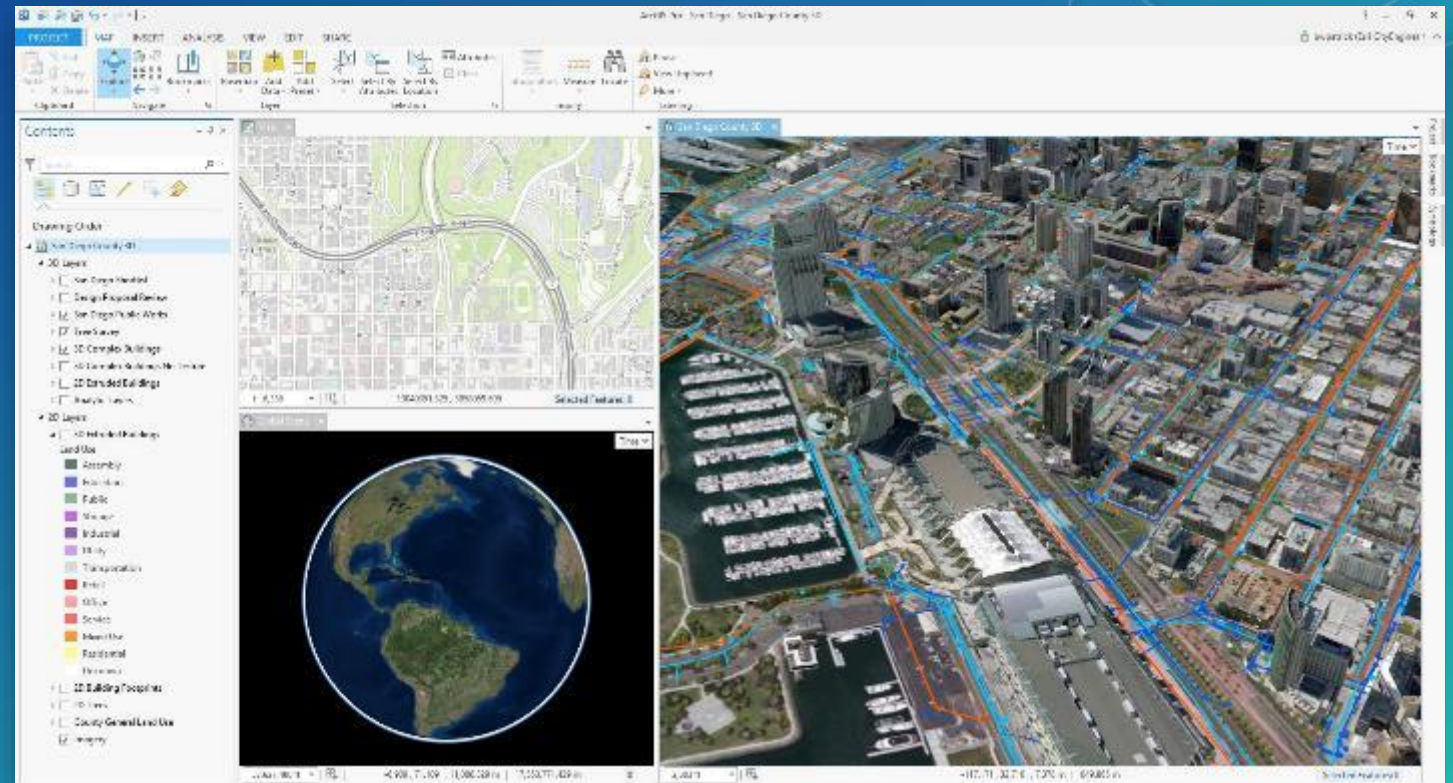
ArcMap / ArcCatalog



ArcGlobe / ArcScene

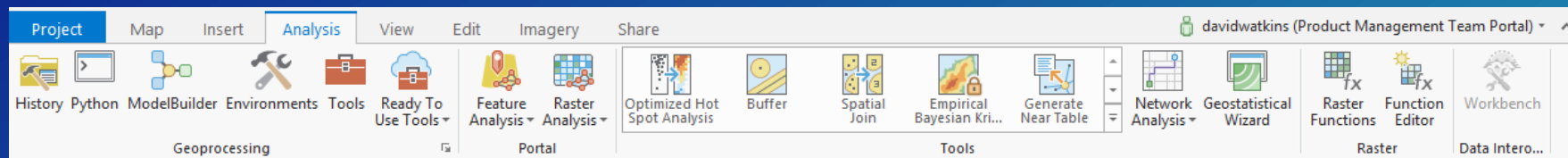


CityEngine

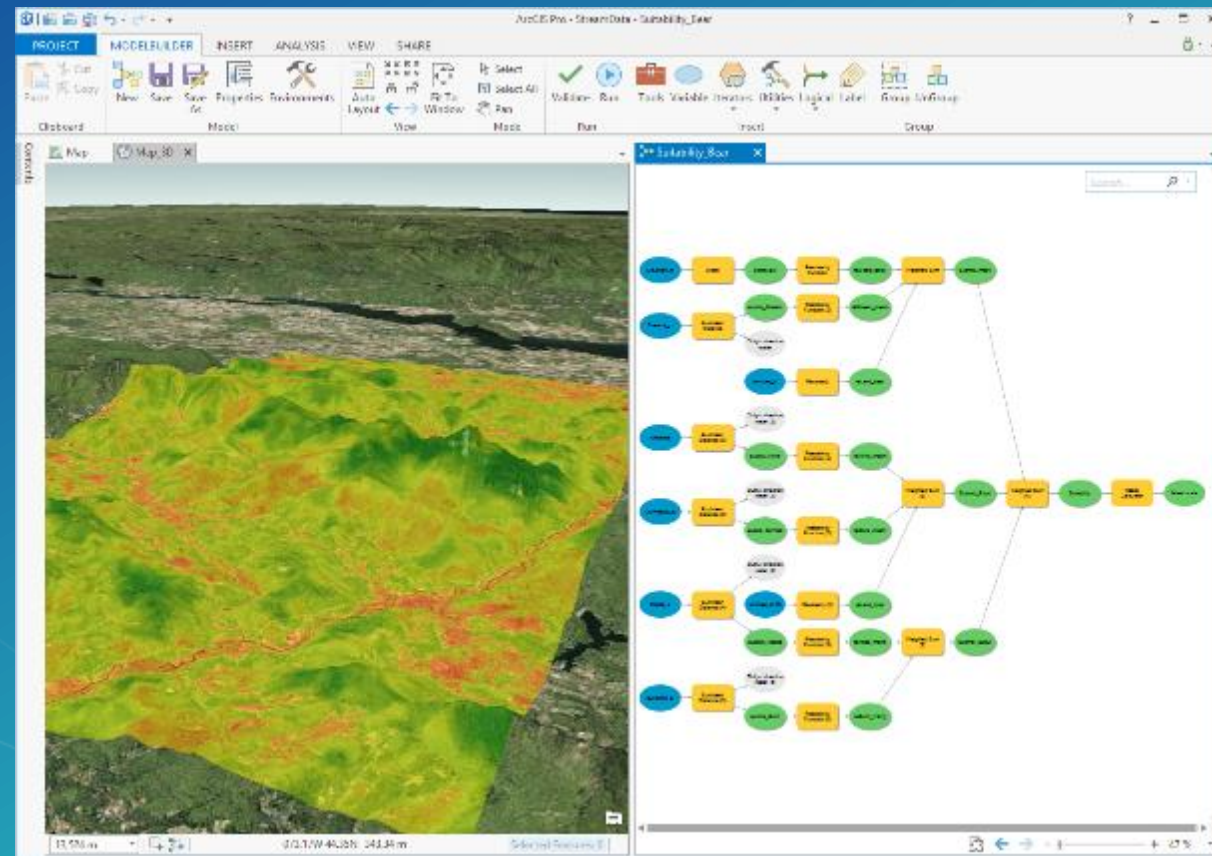


What can I do with ArcGIS Pro?

Analysis

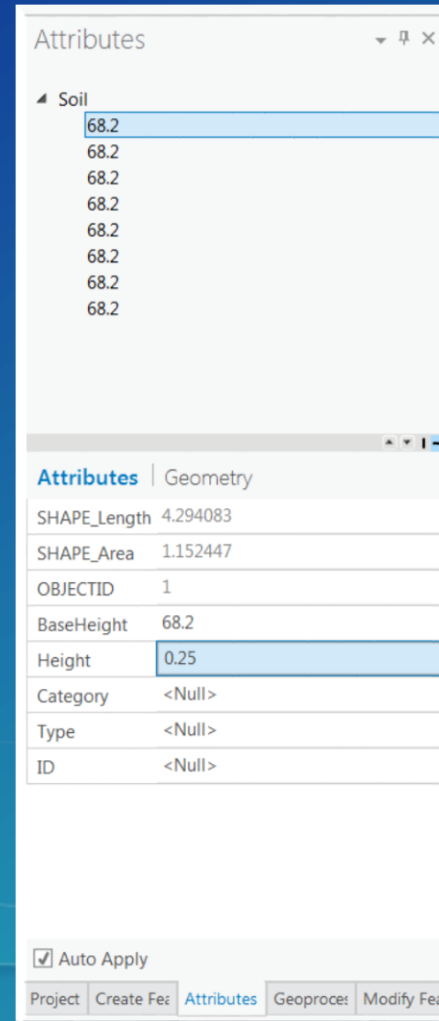


- Analysis ribbon
- Majority of tools from ArcMap
- Geoprocessing pane
- Modelbuilder
- Python window
- Network Analysis
- Geostatistical Wizard
- Image and Raster Analysis

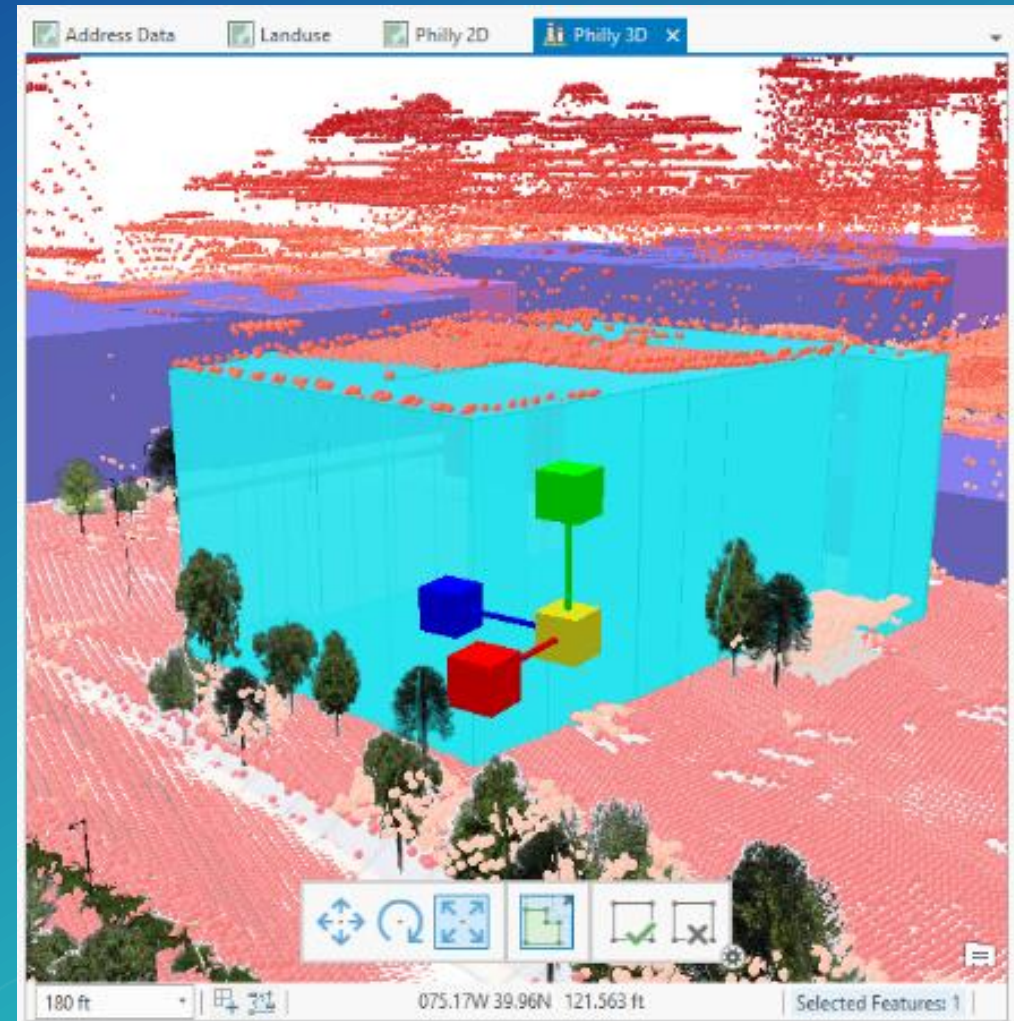


Editing

- 2D and 3D editing
- Simplified edit sessions
- Edit enterprise GDBs
- Group templates
- GDB & Map Topology
- CAD like editing experience



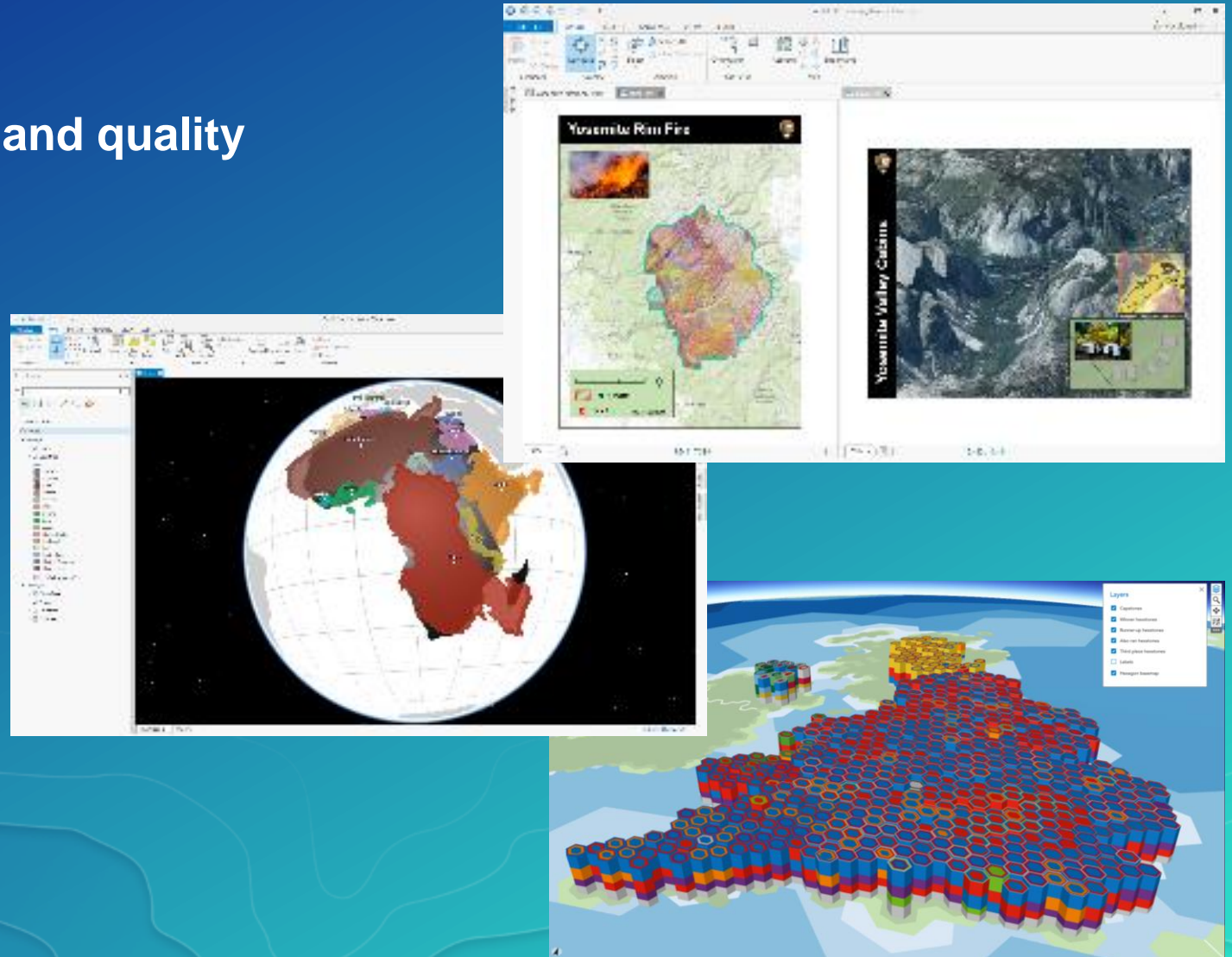
Update Attributes



Create & Maintain

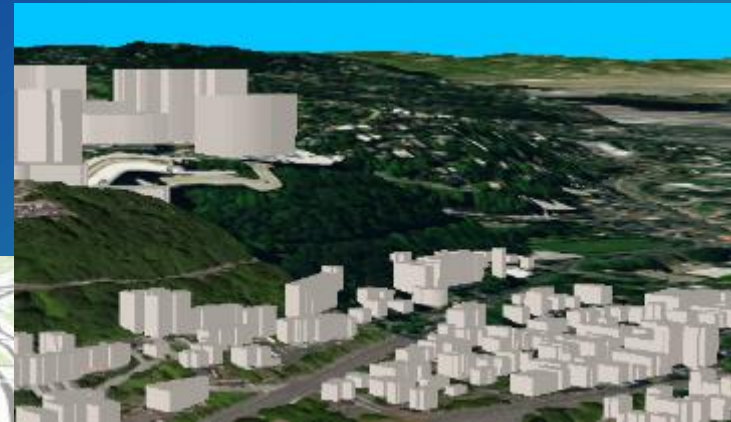
Mapping & Visualization

- Improved drawing performance and quality
- Multiple layouts
- Unified symbol model
- Transparency
- 3D Cartography
- Map Series
- Animation



Sharing

- Web maps and 3D web scenes
- Map and layer packages
- Project packages
- Map & Layout files
- Task files
- Symbology (stylx)



Portal
Online



Share



ArcGIS Pro

Common Questions

**Is ArcGIS Pro a replacement
for ArcMap?**

Yes. ArcGIS Pro will eventually replace ArcMap. We will continue to support and maintain ArcMap. However, our focus is on making ArcGIS Pro the world's best desktop GIS. There are still some capabilities of ArcMap that are not yet in ArcGIS Pro, so some ArcGIS Desktop users will be using both ArcGIS Pro and ArcMap until ArcGIS Pro has everything you need to fully support your work.

How is ArcGIS Pro licensed?

Any way you want



Becky

Named user



Single use



Concurrent use

Licensing options

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

Licensing

Configure Authorization


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

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


Configure your Named User License
Concurrent Use License

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`

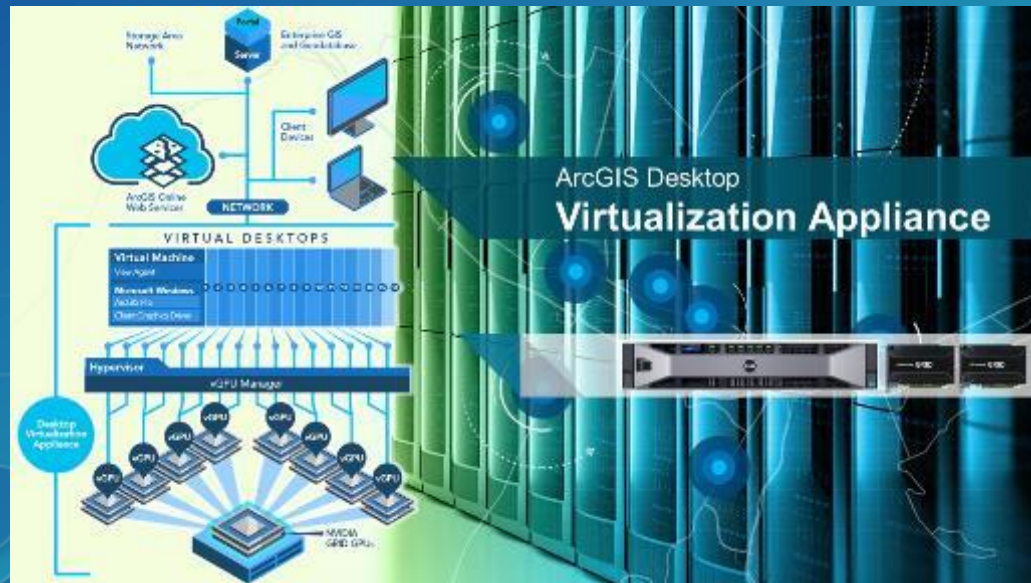
OK Cancel

Can ArcGIS Pro be virtualized?

On-premise Virtualization

Virtualization Platform

- VMWare
 - ESXi
 - Horizon View
- Citrix
 - XenServer
 - XenDesktop



Cloud-based Virtualization

Microsoft Azure

- **NV-Series VM**
 - **Nvidia GPU**
 - **56 Gb Memory**
 - **380 Gb storage**
 - **Demo'd at Microsoft Ignite**

AWS

- **GPU Workspace**
 - **Nvidia GPU**
 - **8 vCPUs**
 - **15 Gb Memory**
 - **200 Gb storage**



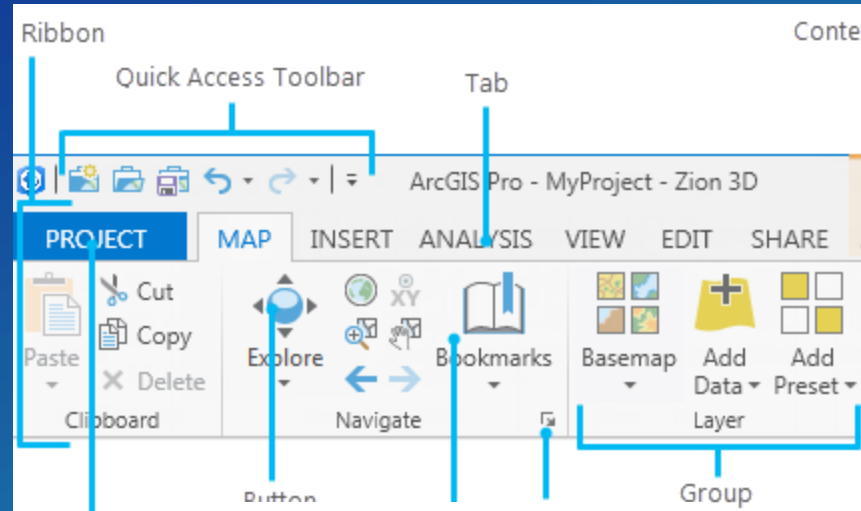
- ▶ Available Now
- ▶ Tested by Esri Performance Engineering – Great UX

The demo really demonstrated the “Workstation in the Cloud” scenario that is now really possible with Azure NV based Virtual Machines at Ignite! - Karan Batta, Microsoft Azure

Can I customize ArcGIS Pro?

Tasks

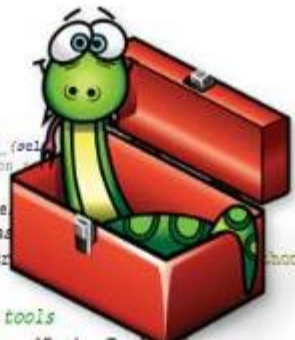
- Use
- Configure
- Automate
- Extend



Project ta
Use to m
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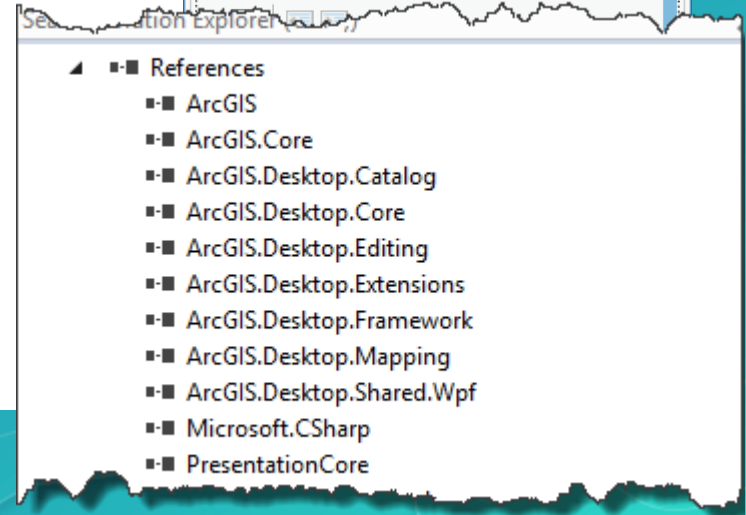
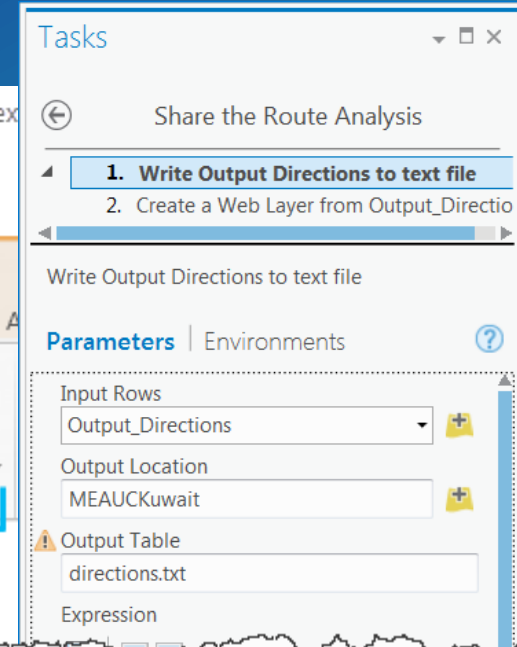
Custom

Python



```
import arcpy  
  
class Toolbox:  
    def __init__(self):  
        """Python  
        toolbox class  
        """  
  
        self.label = "Python Tools"  
        self.alias = "Python Tools"  
        self.description = "Python Tools"  
  
        # List of tools  
        self.tools = [PythonToolbox]
```

.NET API



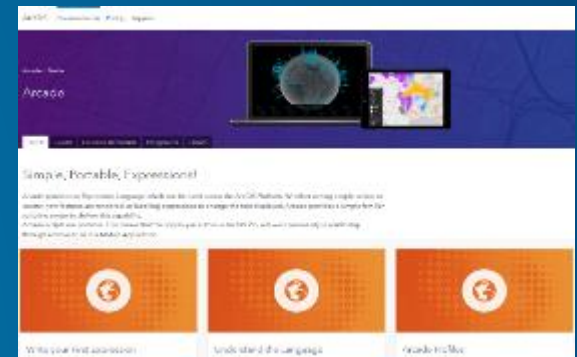
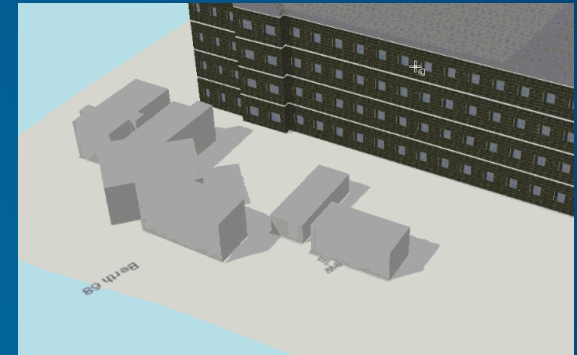
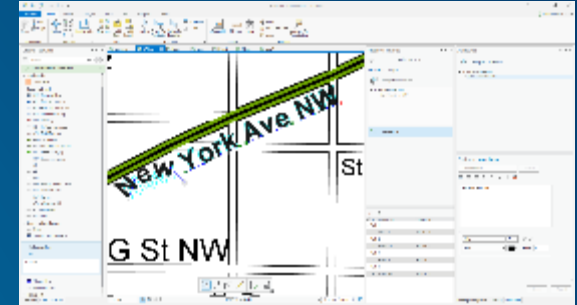
What's new at 2.1?

ArcGIS Pro 2.1 Priorities

ArcMap Equivalence

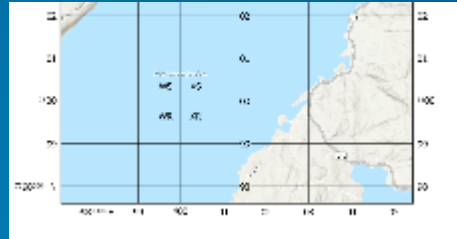
New Innovation

Connected Desktop

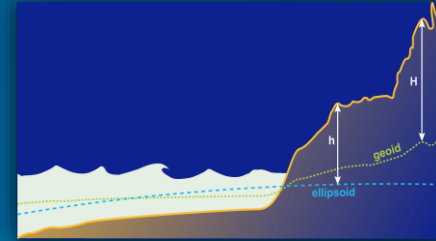


ArcGIS Pro 2.1 is a big release

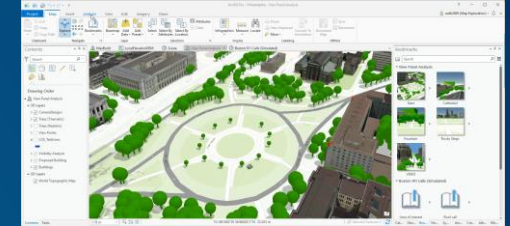
- Sharing Maps and Layers
- Mapping
- Layout
- Editing
- Geoprocessing
- 3D Enhancements
- Image Analyst Extension
- Business Analyst Extension
- Utility Network Management



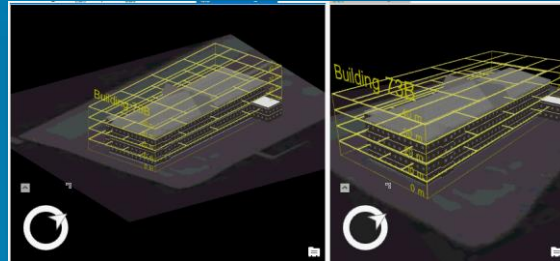
MGRS Grids



Vertical Coordinate Systems



Exploratory Analysis



Isometric Views

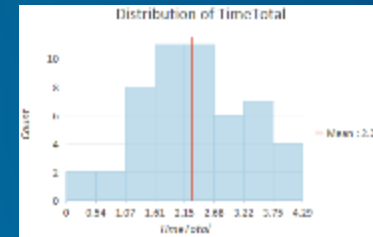
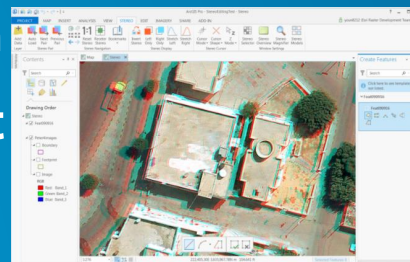


Table Statistics



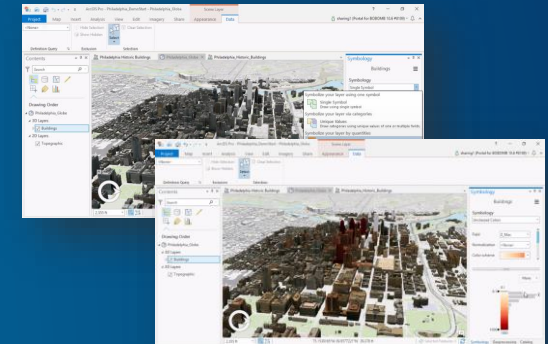
Branching Logic



Stereo

Year	Theme	Location	Actor
1991	Dominant	Class Trip	High School
1997	The Living City	Stores	Trading Center
1997	The Living City	Suburbs	Trading Center
1997	The Living City	Urban Core	Trading Center
2000	Central City	Financial	Real Estate
2000	Central City	Office	Real Estate
2000	Central City	Warehouse	Real Estate
2000	Central City	Public	Real Estate
2000	Central City	High School	Real Estate
2000	Central City	State Government	Real Estate
2000	Central City	Hospital	Real Estate
2000	Central City	College	Real Estate
2010	Central City	Government	Real Estate
2010	Central City	Police	Real Estate
TOTAL	1990-2010	Miles	Real Estate

Dynamic Tables



Scene Layer Symbology

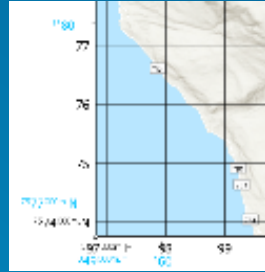
Sharing Maps and Layers

- Offline maps and layers
- Overwrite map image layers
- Publish scene layers referencing registered data store items
- Sharing Web styles
- File system drag and drop

Mapping



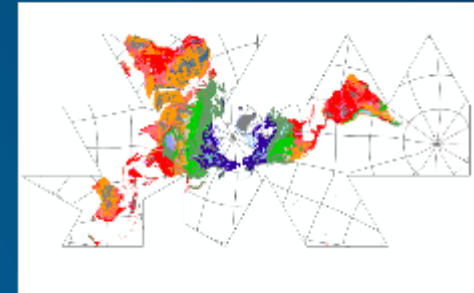
Annotation Editing



MGRS Grids



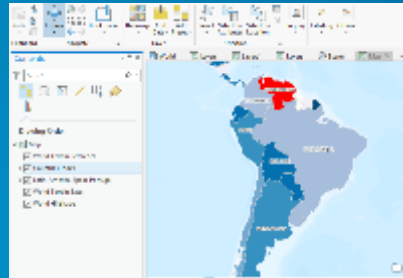
Text in Marker Symbols



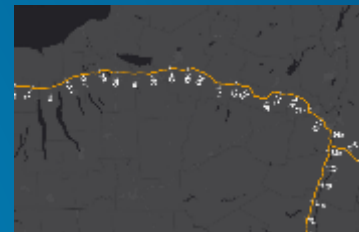
Vector Tile Improvements



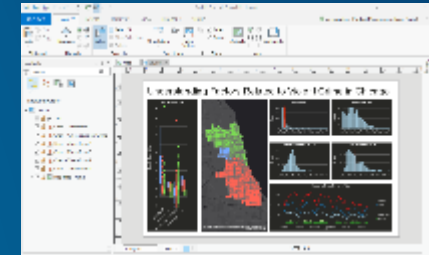
Generalization



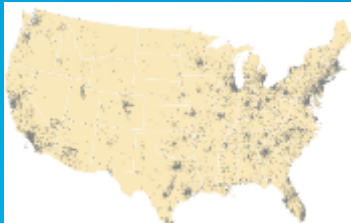
Attribute driven color overrides



Linear hatches and labels



Additional Chart Types



Dot Density



Pro-based Print Service

Year	Location	Country	Movie
1960	Elizy, Scotland	Yugoslavia (Disputed)	From Russia with Love
1960	Courmayeur, Italy	Yugoslavia (Disputed)	From Russia with Love
1960	Orsk, Denmark	Yugoslavia (Disputed)	From Russia with Love
1960	Vienna, Austria	Austria	From Russia with Love
1964	London, England	Switzerland	Goldfinger
1964	London, England	Switzerland	Goldfinger
1964	Bombay, India	Switzerland	On Her Majesty's Secret Service
1969	London, England	Switzerland	On Her Majesty's Secret Service
1969	London, England	Switzerland	On Her Majesty's Secret Service
1969	London, England	Switzerland	On Her Majesty's Secret Service

Dynamic Tables

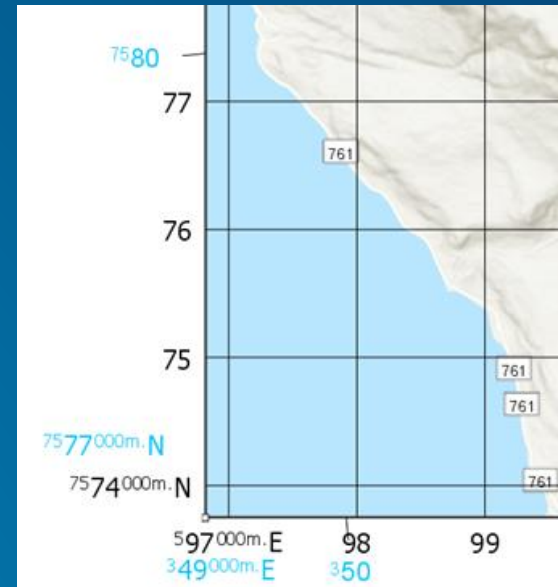


Arcade

Layout

- **MGRS Grids**

- Corner Labels
- Interior Labels
- Intersection Points
- 100,000m Grid Identifiers



- **Dynamic Tables**

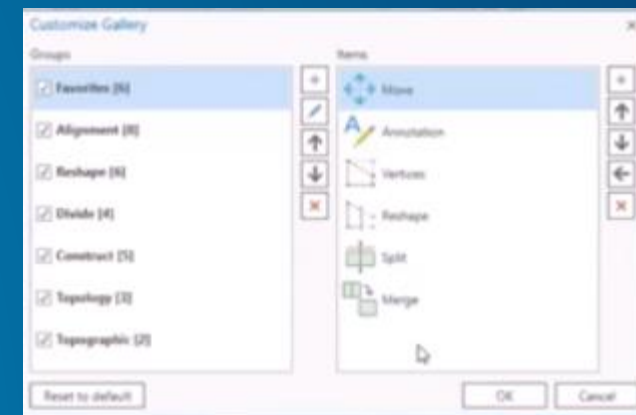
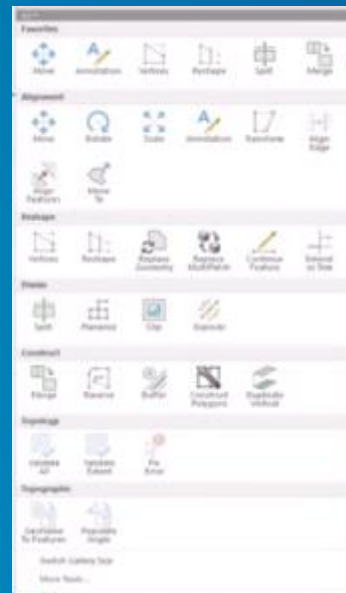
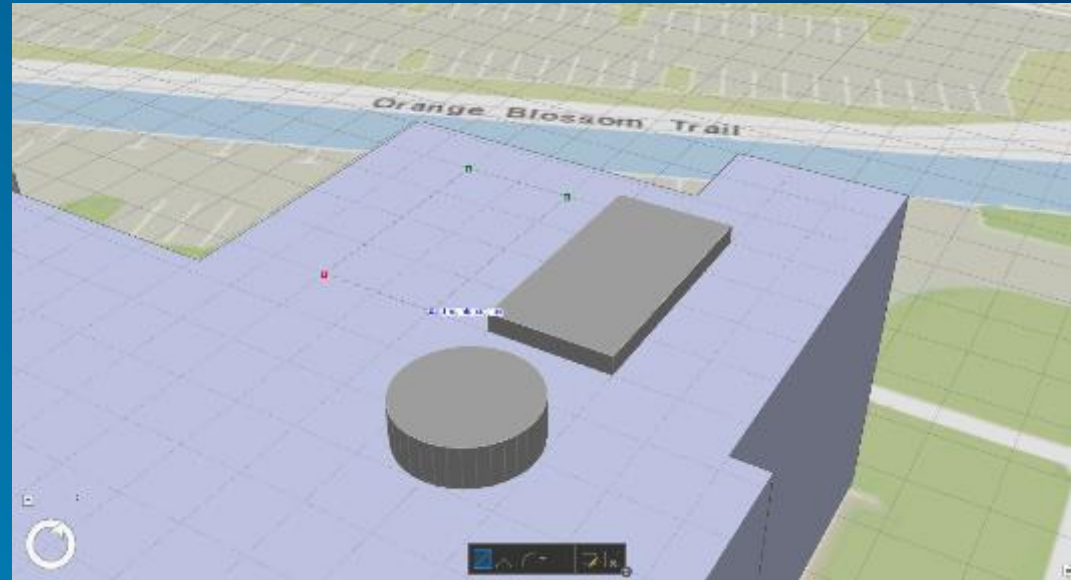
- Style Headers, Rows & Fields
- Word Wrapping
- Width, Gaps, Spacing
- Column Wrapping
- Sorting
- Zebra Stripes

Year	Movie	Location	Actor
1963	From Russia with Love	Fairey Speedboat	Sean Connery
1963	From Russia with Love	Countryside road	Sean Connery
1963	From Russia with Love	Orient Express	Sean Connery
1963	From Russia with Love	Venice	Sean Connery
1964	Goldfinger	Goldfinger Factory	Sean Connery
1964	Goldfinger	Mountain Roads	Sean Connery
1969	On Her Majesty's Secret Service	Bern	George Lazenby
1969	On Her Majesty's Secret Service	Piz Gloria	George Lazenby
1969	On Her Majesty's Secret Service	Alpine Barn	George Lazenby
1977	The Spy Who Loved Me	Berggarten	Roger Moore
1979	Moonraker	Venice	Roger Moore
1981	For Your Eyes Only	Cortina d'Ampezzo	Roger Moore
1983	Octopussy	Karl Marx Stadt	Roger Moore
1983	Octopussy	US Airforce Base	Roger Moore

Year	Movie	Location	Actor
1983	Octopussy	Circus Train	Roger Moore
1987	The Living Daylights	Vienna	Timothy Dalton
1987	The Living Daylights	Bratislava	Timothy Dalton
1987	The Living Daylights	Mountain slopes	Timothy Dalton
2006	Casino Royale	Prague	Daniel Craig
2006	Casino Royale	MI6 Recuperation Facility	Daniel Craig
2006	Casino Royale	White Residence	Daniel Craig
2006	Casino Royale	Spirit 54 Sailing Yacht	Daniel Craig
2006	Casino Royale	Venice	Daniel Craig
2008	Quantum of Solace	Bregenz	Daniel Craig
2008	Quantum of Solace	Lake Garda	Daniel Craig
2015	SPECTRE	Altausee	Daniel Craig
2015	SPECTRE	Sölden	Daniel Craig

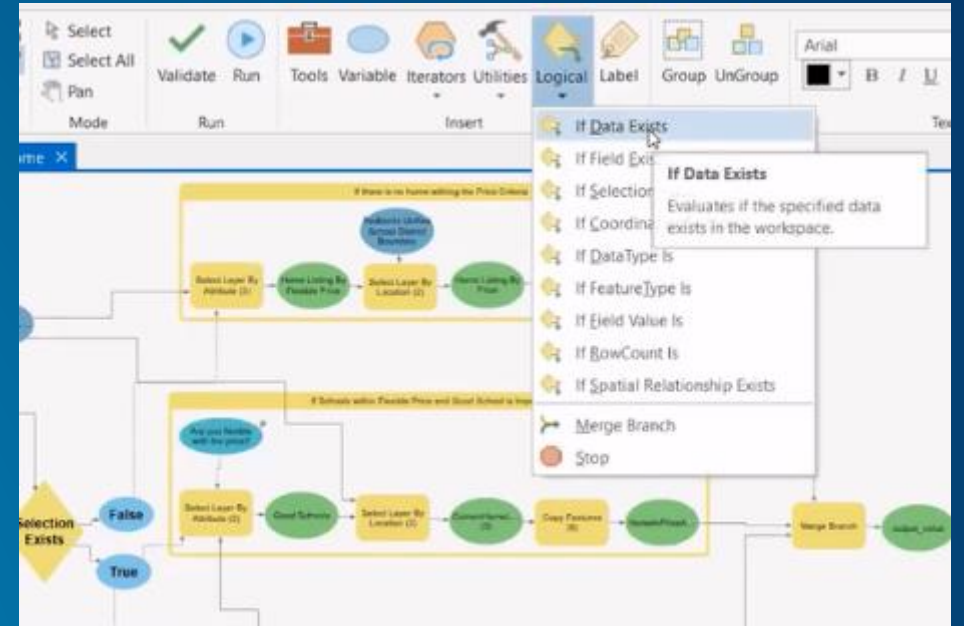
Editing

- 3D editing grid
- Preset multipatch shapes
- Editing gallery
 - Favorites
 - Customize gallery
- Attribute Rules
- Stereo editing tools

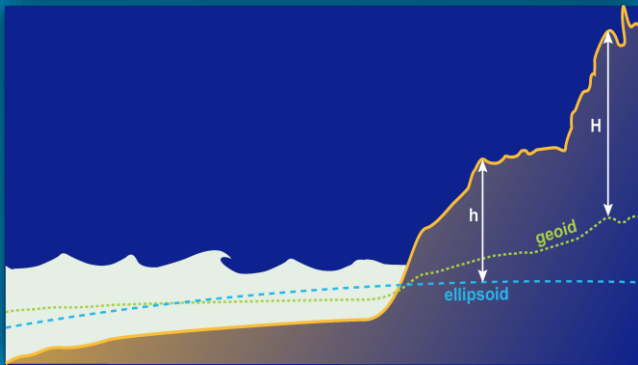


Geoprocessing

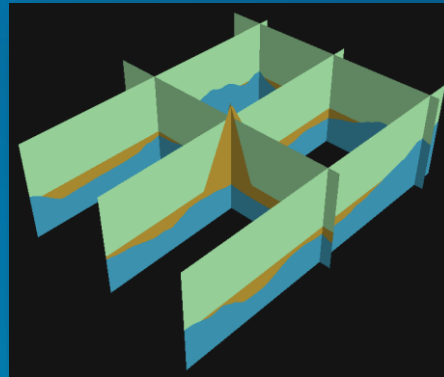
- ModelBuilder enhancements
 - If-then-else branching
 - Find and replace
 - Filter by (i.e. “Add to Display”)
 - Report of tools and parameters
- Interactive tool input



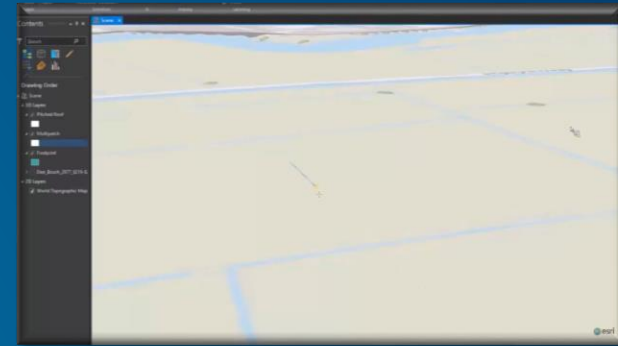
3D Enhancements



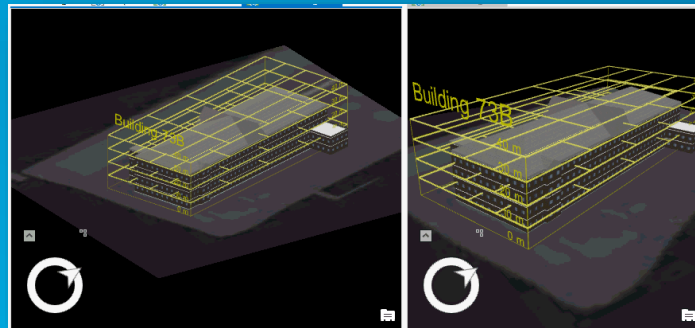
Vertical Coordinate Systems



3D Analysis – Fence Diagram



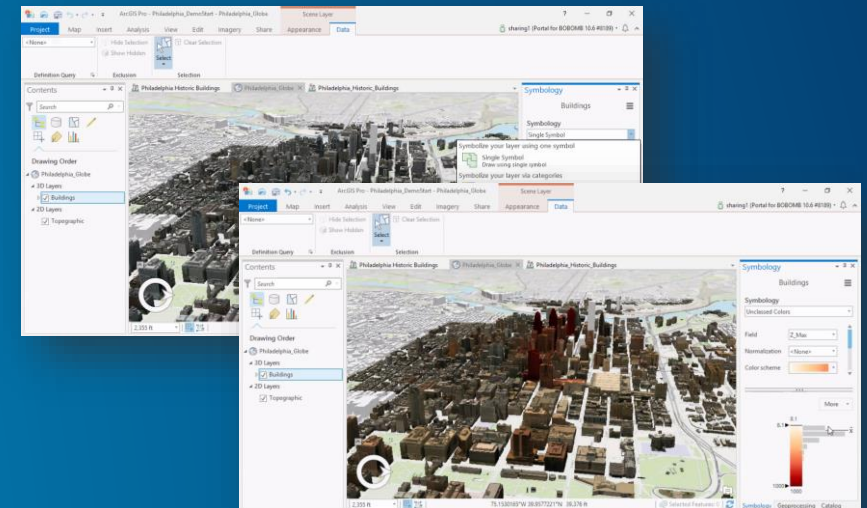
Multipatch Object Creation and Editing



Isometric Views



Exploratory Analysis



3D Object Scene Layer Symbology

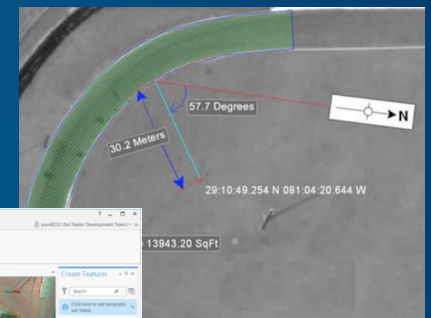
Image Analyst Extension

- Image interpretation and exploitation
- Creation of information products
- Advanced feature interpretation and measurement
- Stereo Imagery for capture and measurement
- Raster and image analysis workflows for machine learning and feature extraction

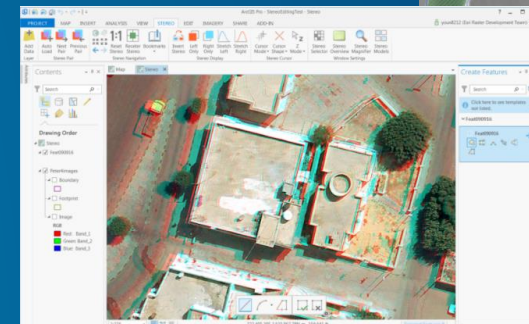


Image Coordinate System

Mensuration



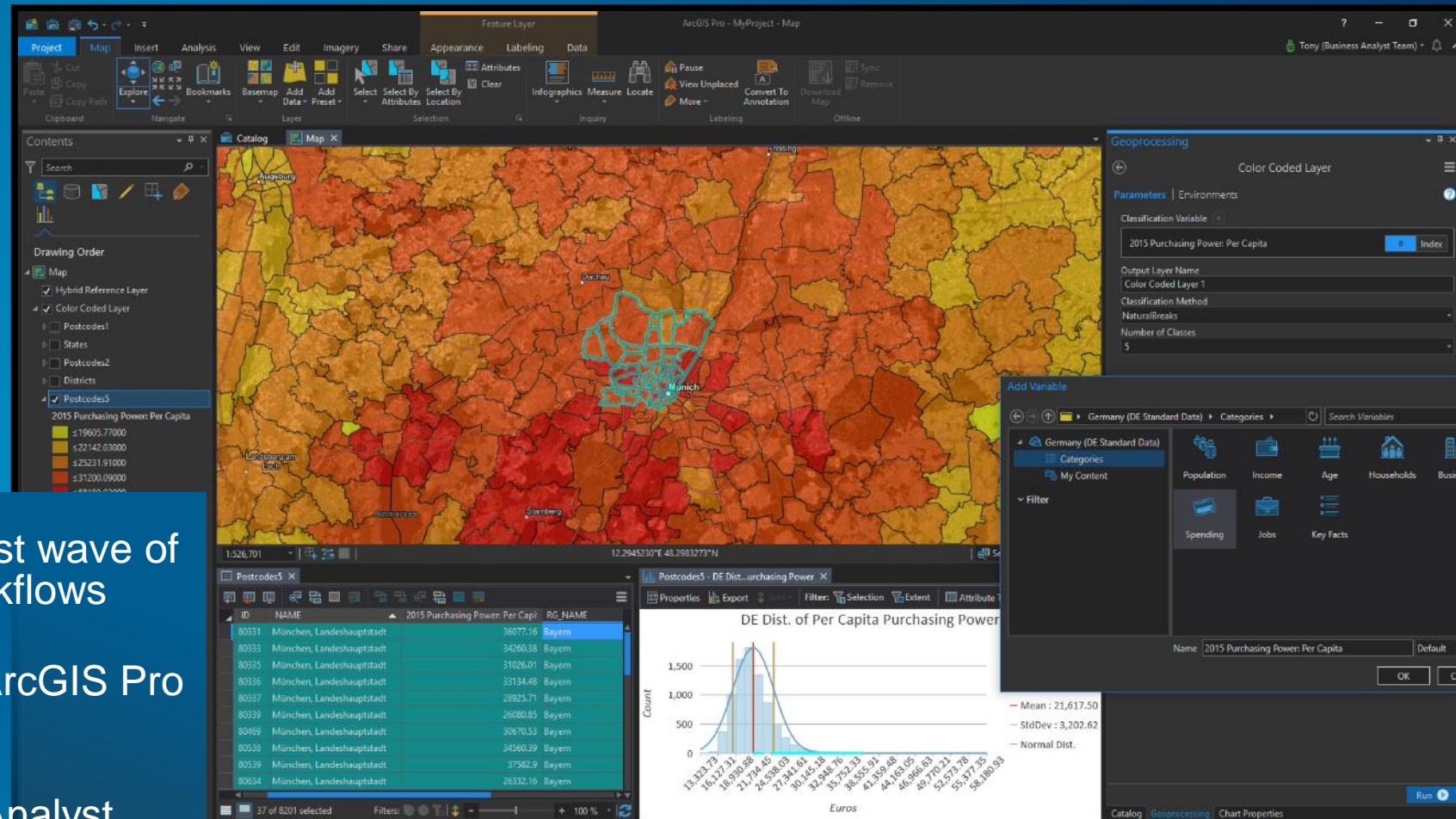
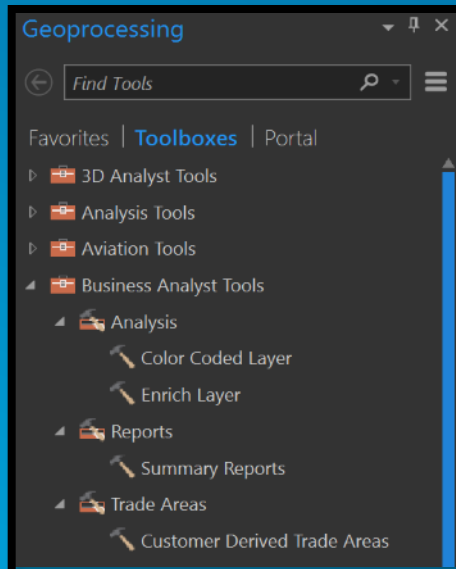
Stereo



Designed for Image and Geospatial Analysts

Business Analyst for ArcGIS Pro

Introducing BA in the ArcGIS Pro 2.1 Release



- A foundational release with the first wave of BA-based content, tools, and workflows
- Installed and updated with each ArcGIS Pro release
- Available to all current Business Analyst Desktop users

ArcGIS Pro Roadmap

Near-term

- Metadata (Import, Export and Sharing)
- Reports
- Full motion video
- Real time streaming
- Offset printing
- Presentations
- Scene Layer Editing
- Revit File Support
- Attribute Rule
- More predictive analysis
- Spell Check
- Batch Geoprocessing
- Data Clock Chart

Mid-term

- Parcel Management
- Dynamic Feature Binning and Clustering
- Projects in the Enterprise
- **Animated** symbols
- Dimensions
- Materials
- 3D Effects
- 3D Interpolation
- GPS Support
- Terrain Editing
- Trend Profile Chart
- Interactive Suitability modeling
- New Extensions

Long-term

- Physically based rendering
- Geoprocessing in the database
- Distributed desktop processing using Spark
- Space-Time interpolation
- ...