



# *ArcGIS Pro SDK Preview*

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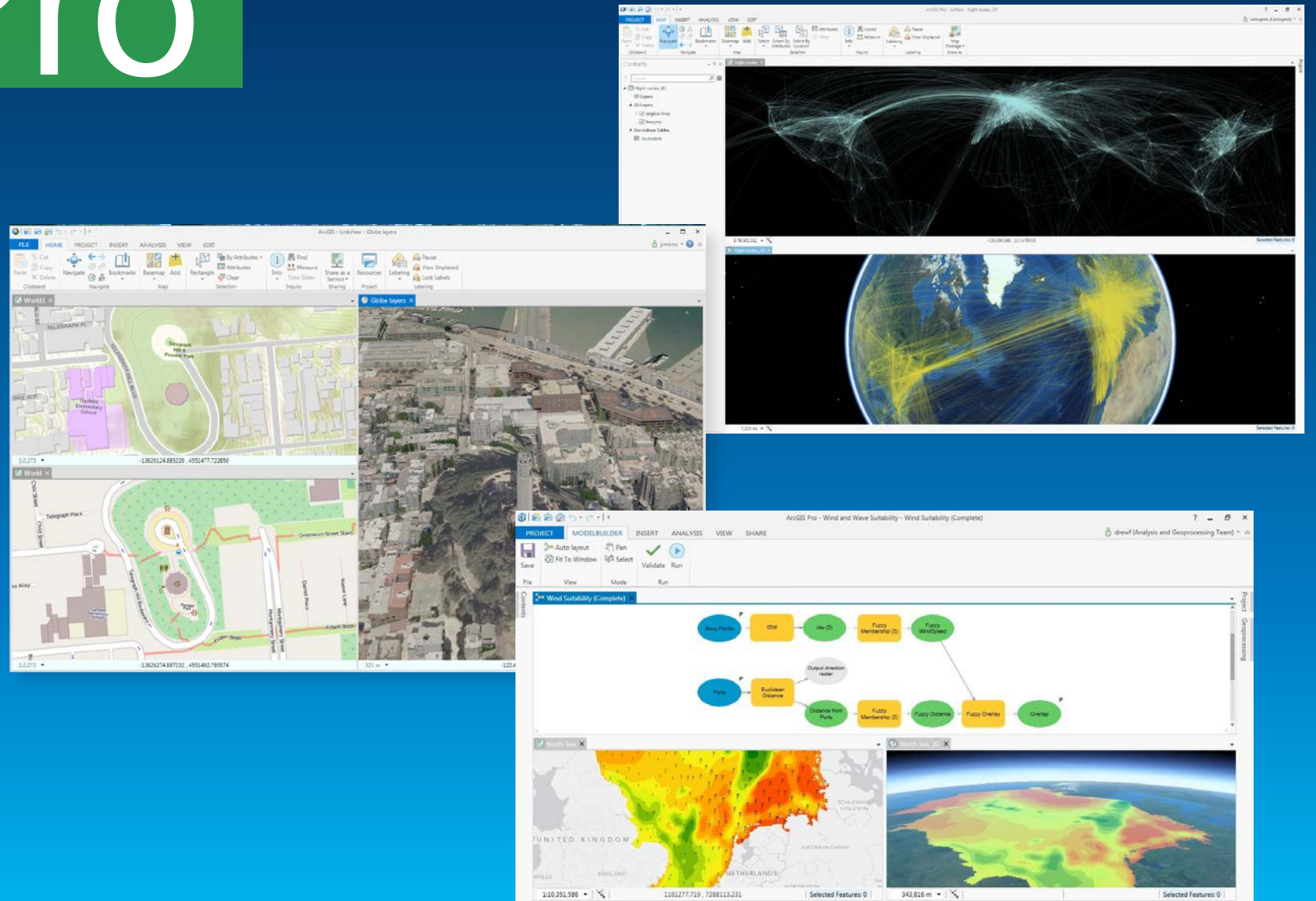
Esri Developer Summit  
Washington, DC



Modern

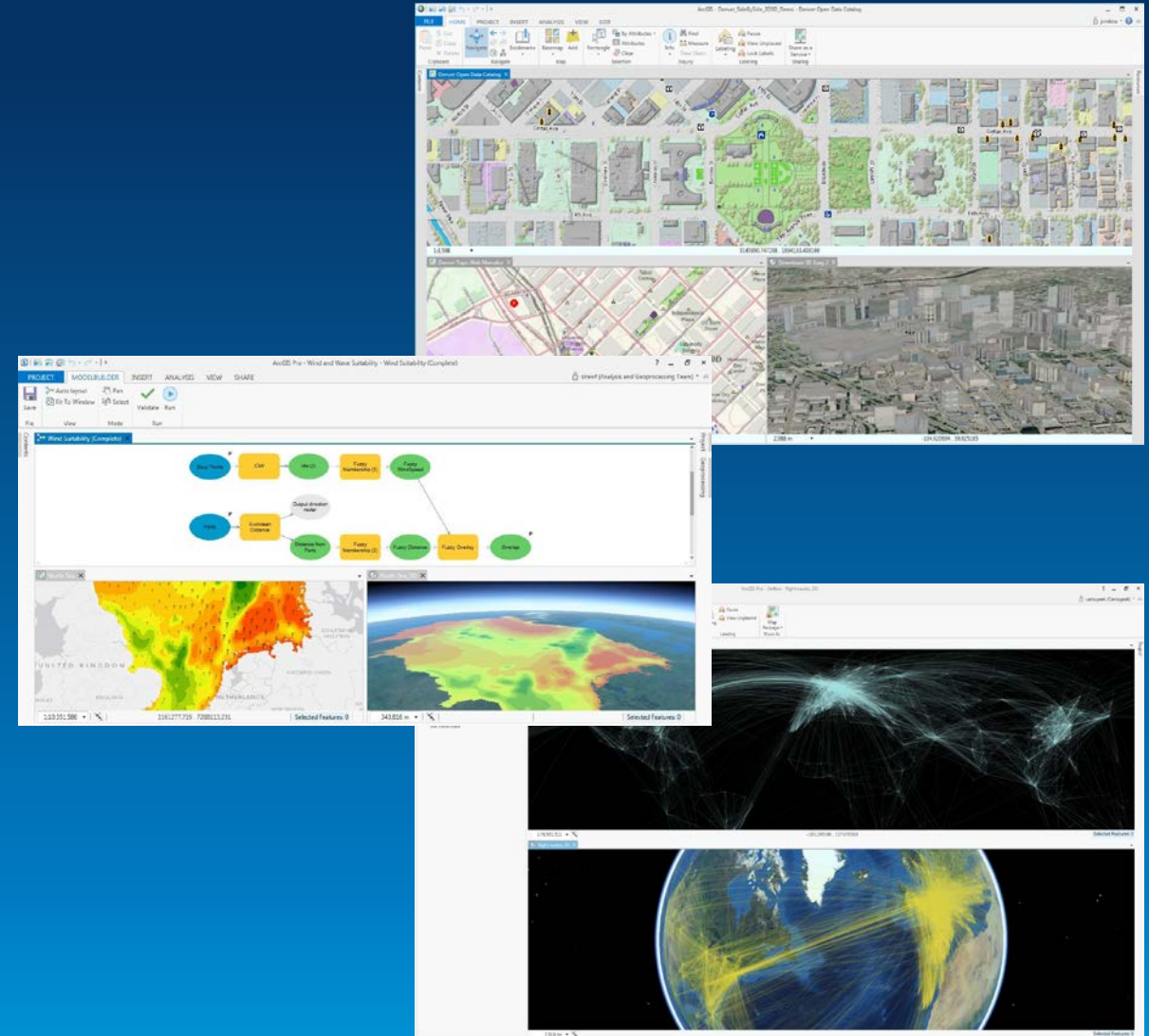
Fast

Powerful

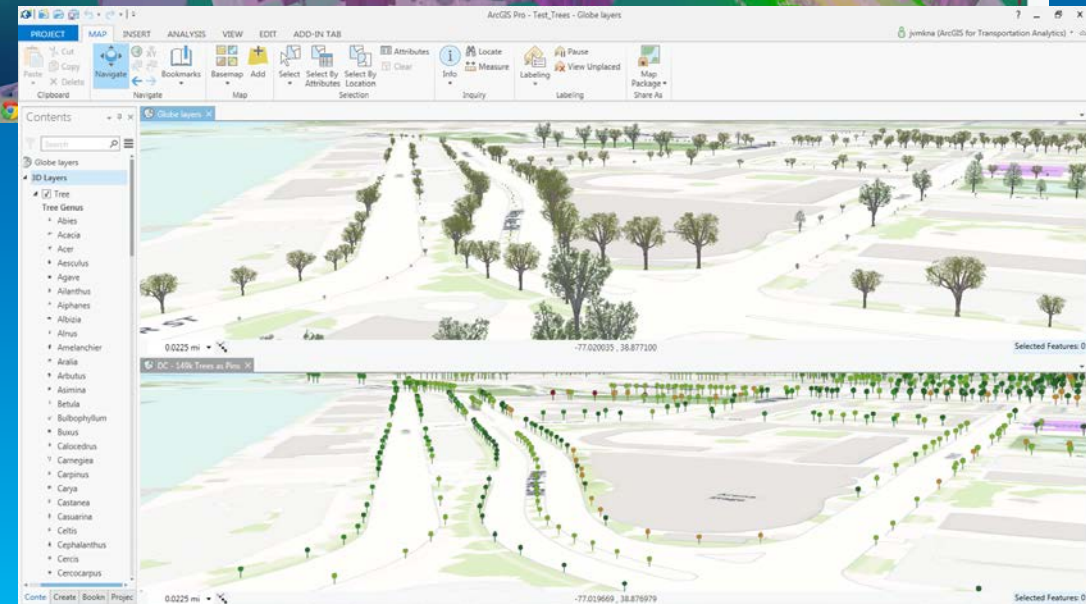
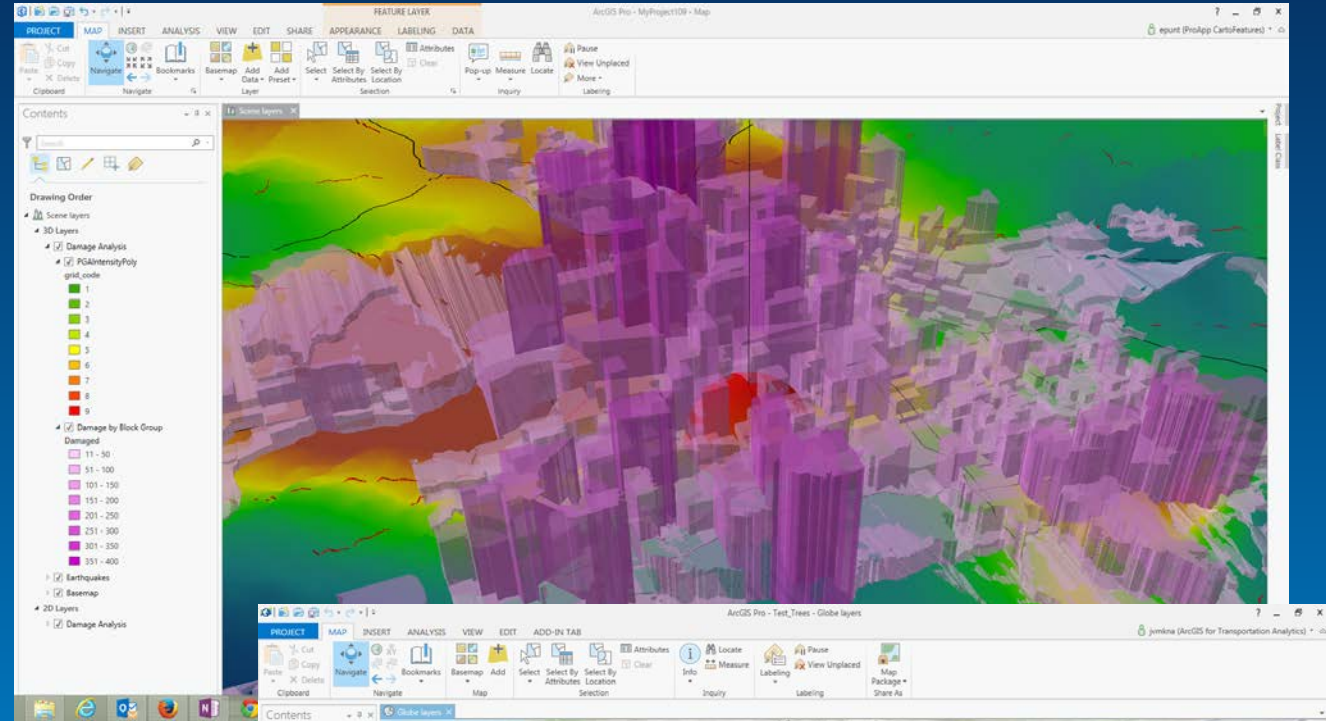


# Strengths of Pro 1.0

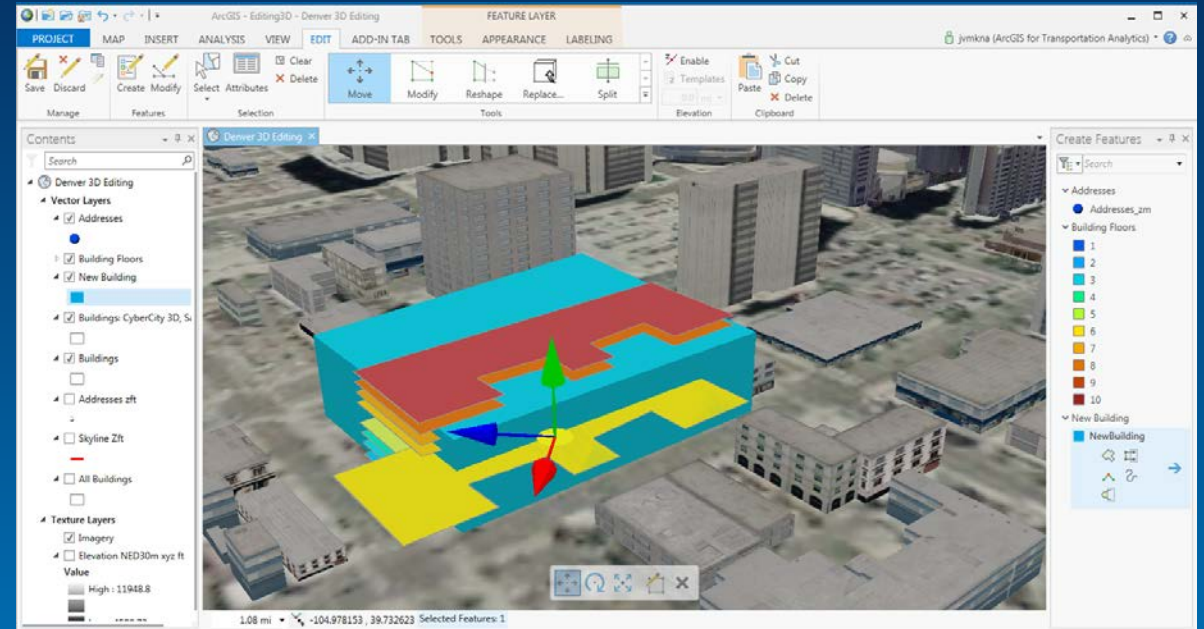
1. Performance 2D / 3D
2. Analysis
3. Web Map Authoring
4. 3D Publishing \ Preset Layers
5. Feature Service Editing
6. Imagery \ Raster Function Editor
7. Tasks
8. Geodesign
9. Works well in VM's
10. And a lot more...



- 64 Bit, multi-threaded
- Always responsive application
- Simplified contextual user interface
- Integration with ArcGIS Online
- New, fast, 2D/3D graphics engine
- Integrated 2D/3D experience
- Enhanced map layout capability
- Simple search and query



- **Powerful analysis**
- **Editing in 2D and 3D**
- **Simpler data modeling**
- **Integrated with Esri solutions**
- **Tasks - guiding workflows**
- **Improved help system**
- **Web based installation and automatic updates**
- **Simplified licensing model**
- **Customization (Python and Net)**



# ArcGIS Pro 1.1 Drivers

- **SDK**

- **KML Scene services (publish and consume Multi Patches, Points, Lines and Polygons)**
- **Vector Tiles (Internal)**
- **Mobile Map Packages**
- **Date Line Wrapping**
- **Excel Support**
- **Quality**
- **Performance**

# What is the SDK?

- Customization with Tasks
- NET Addins for extending Pro (C#, VB)
- Arcpy for automating Pro (Python 3.4.1)
- Modern asynchronous API (native .NET)
- Resources
  - Samples, Concepts, Reference



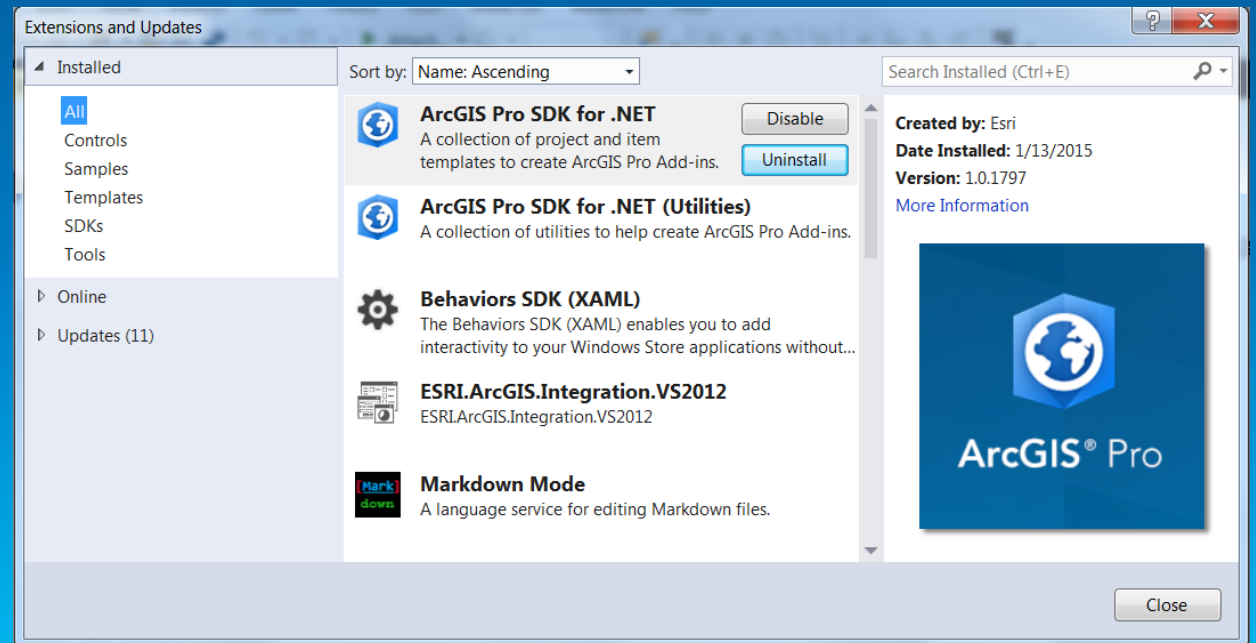
# ArcGIS Pro SDK Initiatives

- **Application Customization**
- **Sharing and Search**
- **Editing Customization**
- **2D/3D Visualization Filters**
- **2D/3D Visualization Navigation**
- **Feature Selection**
- **Map Mash-up**
- **Symbology Picker**
- **Apply Symbology and Styles**
- **Layout**
- **Application Licensing**



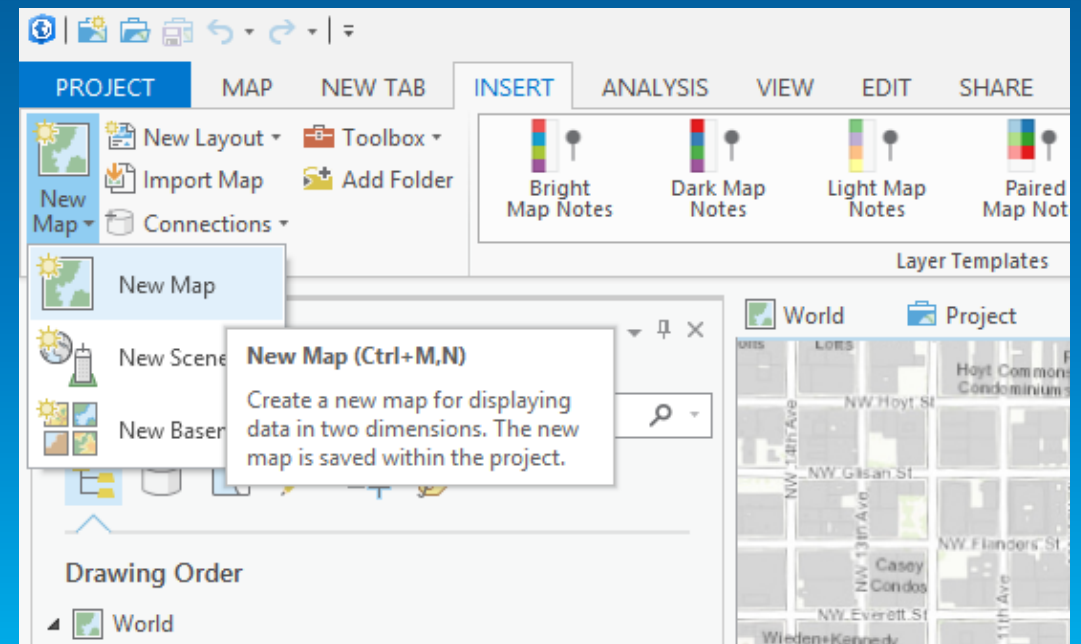
# .NET SDK

- **New installation experience**
  - Integrated with VisualStudio gallery
- **Can manage using Visual Studio's "Extension and Updates" feature**
  - Receive notifications of SDK Updates directly in Visual Studio
  - Lightweight install. Does not require elevated user permissions



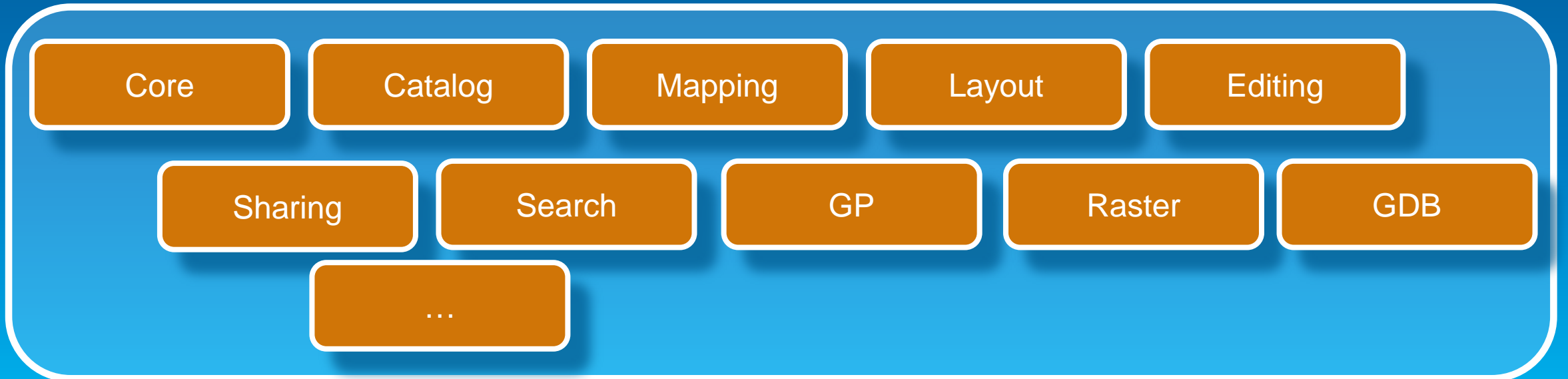
# .NET Extensibility Through Add-ins

- Familiar extensibility model to desktop programmers
- Any of ArcGIS Pro's UI Elements can be implemented as Add-ins
- Add-ins consist of:
  - A module and code files
  - An xml Configuration file (Config.daml)
  - A .esriAddinX deployed to a well known folder



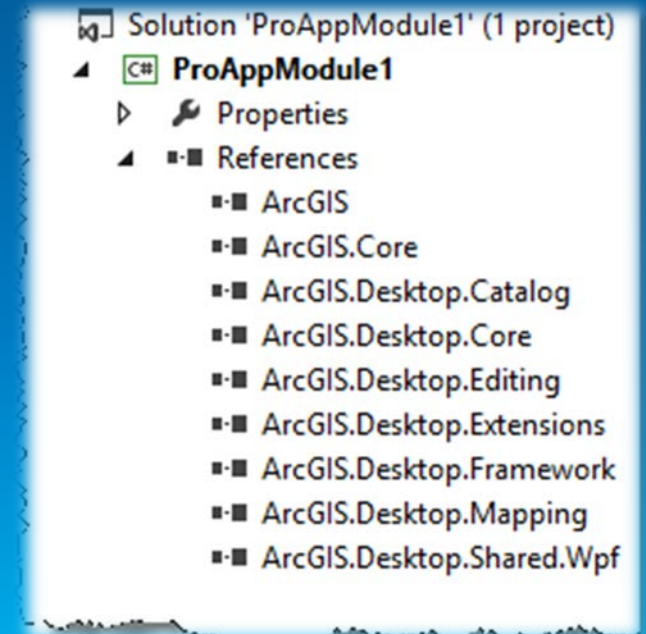
## .NET SDK APIs installed with Pro

- .NET APIs exposed by the Pro Extensions (Installed as part of *Pro*)
- Modern API
  - Native .NET
  - UI is WPF and XAML



# .NET API Characteristics

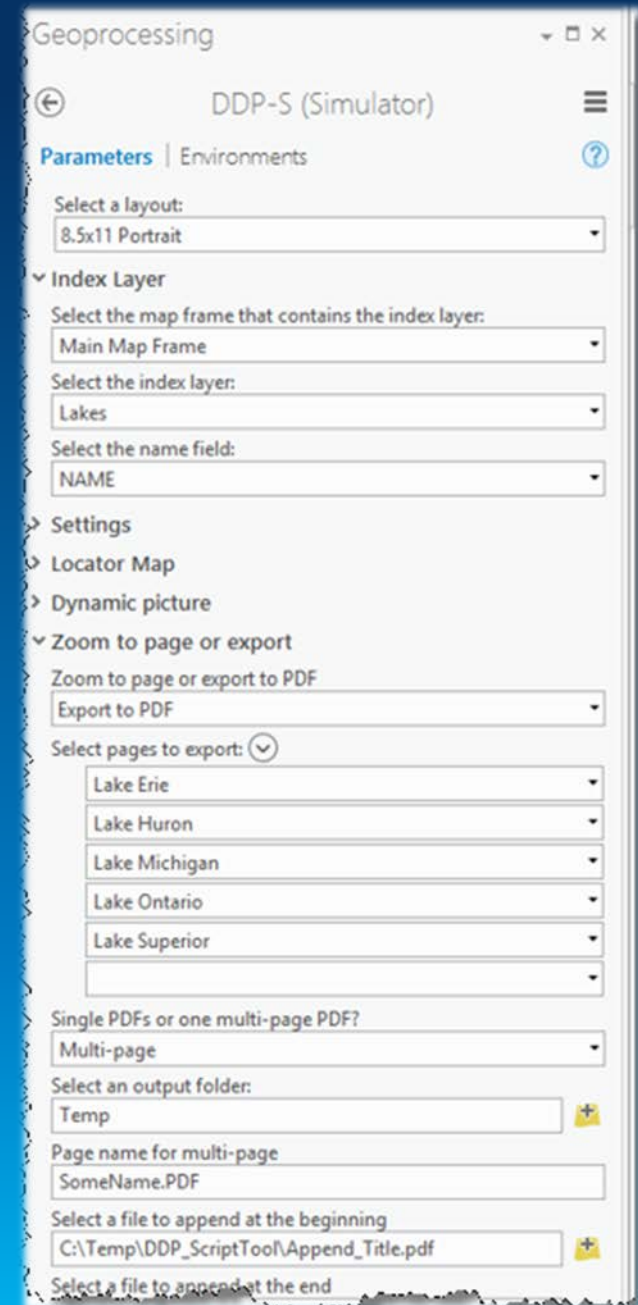
- Coarse grained functions to simplify and stream line coding
- Easier to understand and use
- Demand driven growth (API to grow over time based on customer needs)
- Targeting the most common workflows for the first release
- API in-line with Runtime API. Not identical but follows same principals



# Automating Pro with Python

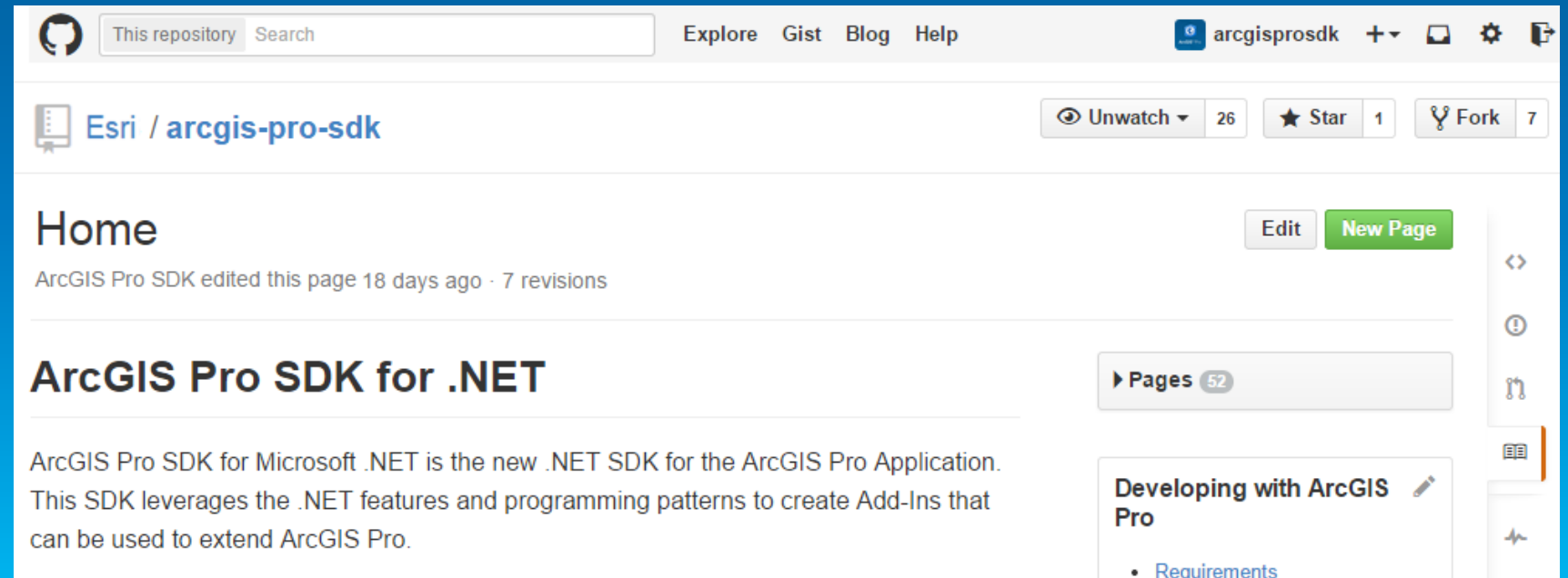
## ArcPy

- Pro uses Python 3.4.
- Arcpy.mapping renamed to arcpy.mp
- In addition to map automation, arcpy.mp provides project-level management
- Fewer root level functions, more focus on OO (classes+methods)
- Focus on samples and really good documentation
- It is possible to write scripts that work in ArcMap and Pro
- Dig Python? Check out the Python session right after this one...



# SDK Resources for .NET and Python

- We will provide
  - ProSamples, ProTutorials, ProSnippets, ProGuides, Reference documentation
    - .NET and Python
  - Samples and Content available through [github.com/Esri](https://github.com/Esri)
  - Contributions from the community encouraged



The screenshot shows the GitHub repository page for `Esri / arcgis-pro-sdk`. The repository is owned by `arcgisprosdk` and has 26 watchers, 1 star, and 7 forks. The main heading is `Home`, edited 18 days ago with 7 revisions. Below this is the heading `ArcGIS Pro SDK for .NET`, which has 52 pages. The description states: "ArcGIS Pro SDK for Microsoft .NET is the new .NET SDK for the ArcGIS Pro Application. This SDK leverages the .NET features and programming patterns to create Add-Ins that can be used to extend ArcGIS Pro." A sidebar on the right shows a section titled `Developing with ArcGIS Pro` with a sub-item `Requirements`.

## SDK Availability

- **Early Adopter Program Now**
  - **20+ Major Distributors and Business Partners**
- **Beta with ArcGIS Pro 1.1 Q2**
- **Release with ArcGIS Pro 1.1 Q2**

**Let's see it**

- **David**



