

UC



# ArcGIS Pro Tasks: An Introduction

- Jason Camerano
- Amir Bar-Maor

GIS  
INSPIRING  
WHAT'S  
NEXT

# Live Call With Esri Technical Support

- Esri Technical support: Jason

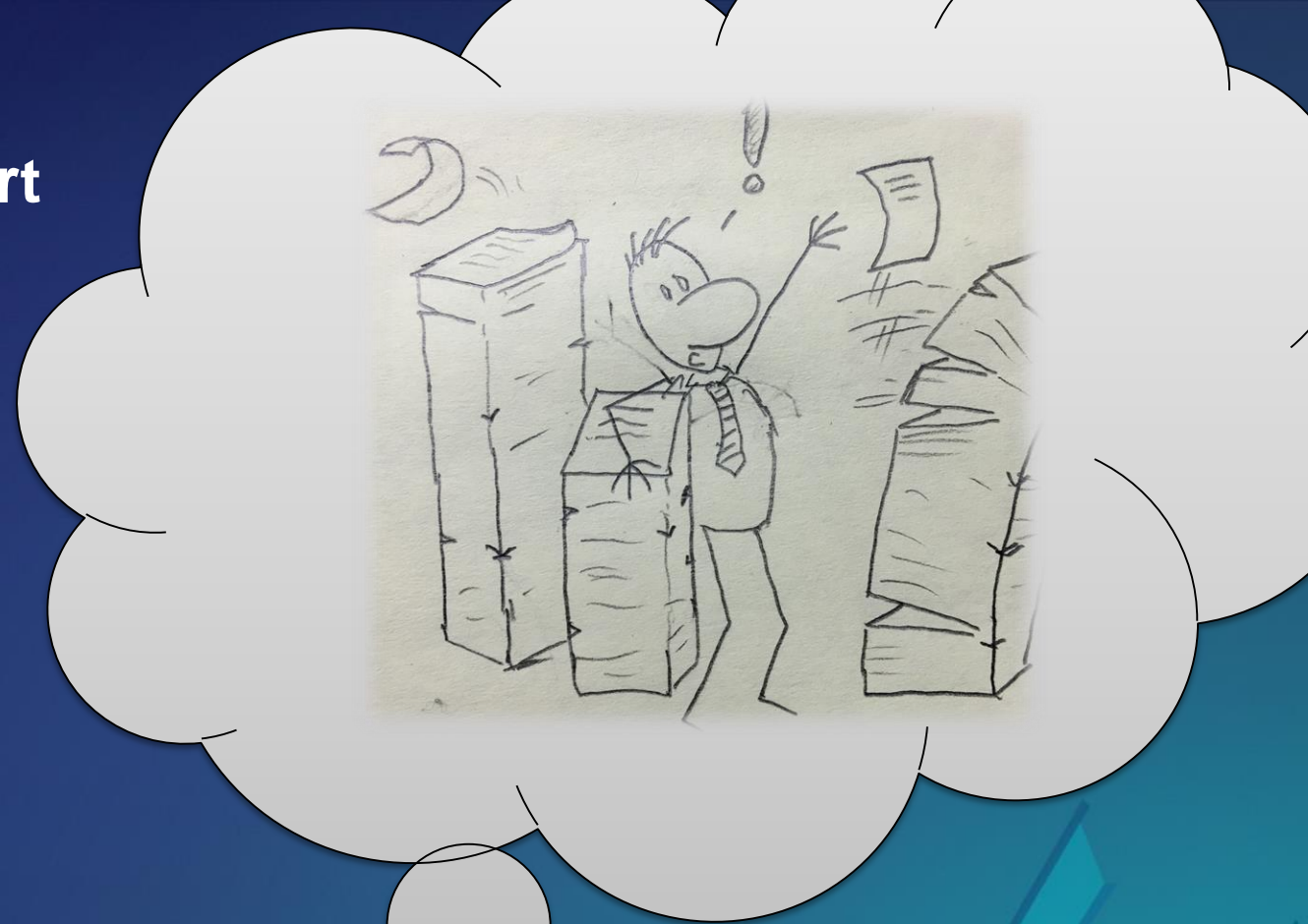


- Customer: Amir



- Warning: there is a test in the end of the presentation

# Live Call With Esri Technical Support



Amir (Customer)

- Every user does things differently

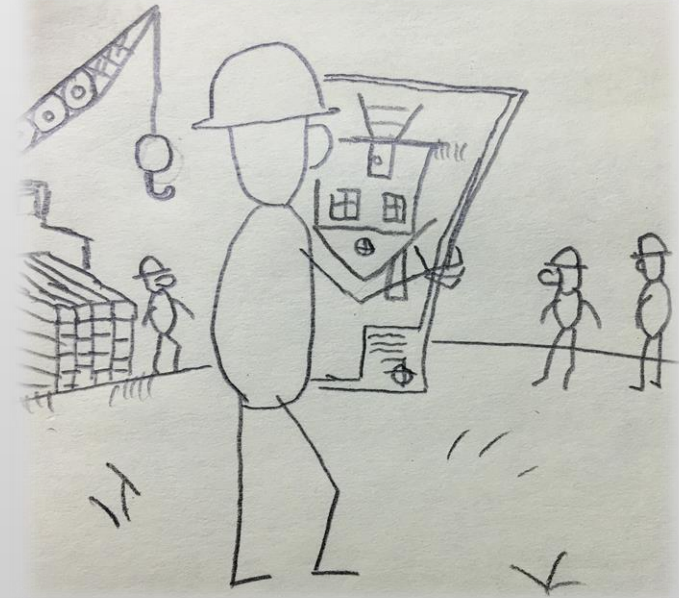


Jason thinks... Technical Support

- No best practice



# Live Call With Esri Technical Support



Amir (Customer)

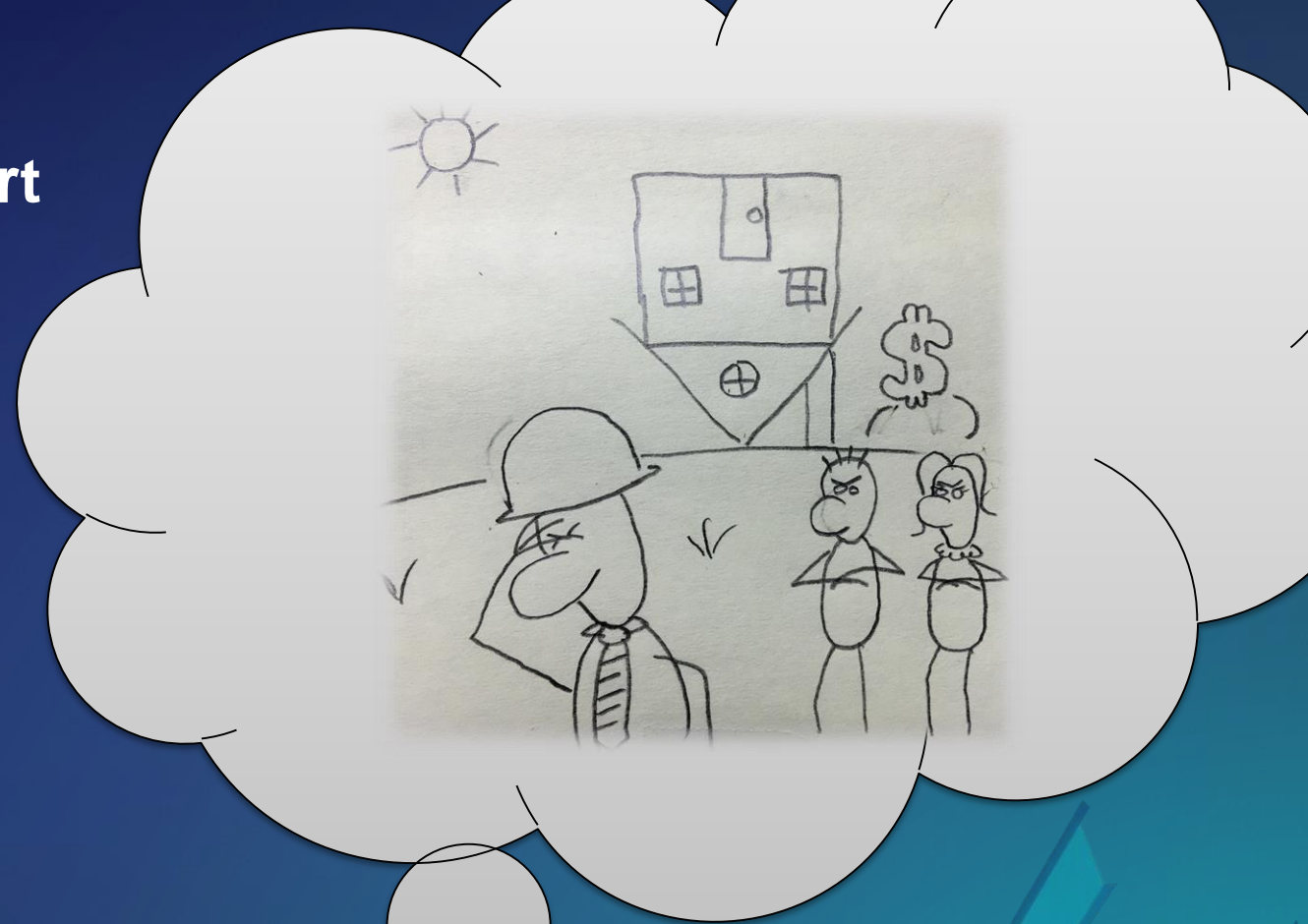
- People make mistakes



Jason thinks... Technical Support

- No quality assurance

# Live Call With Esri Technical Support



Amir (Customer)

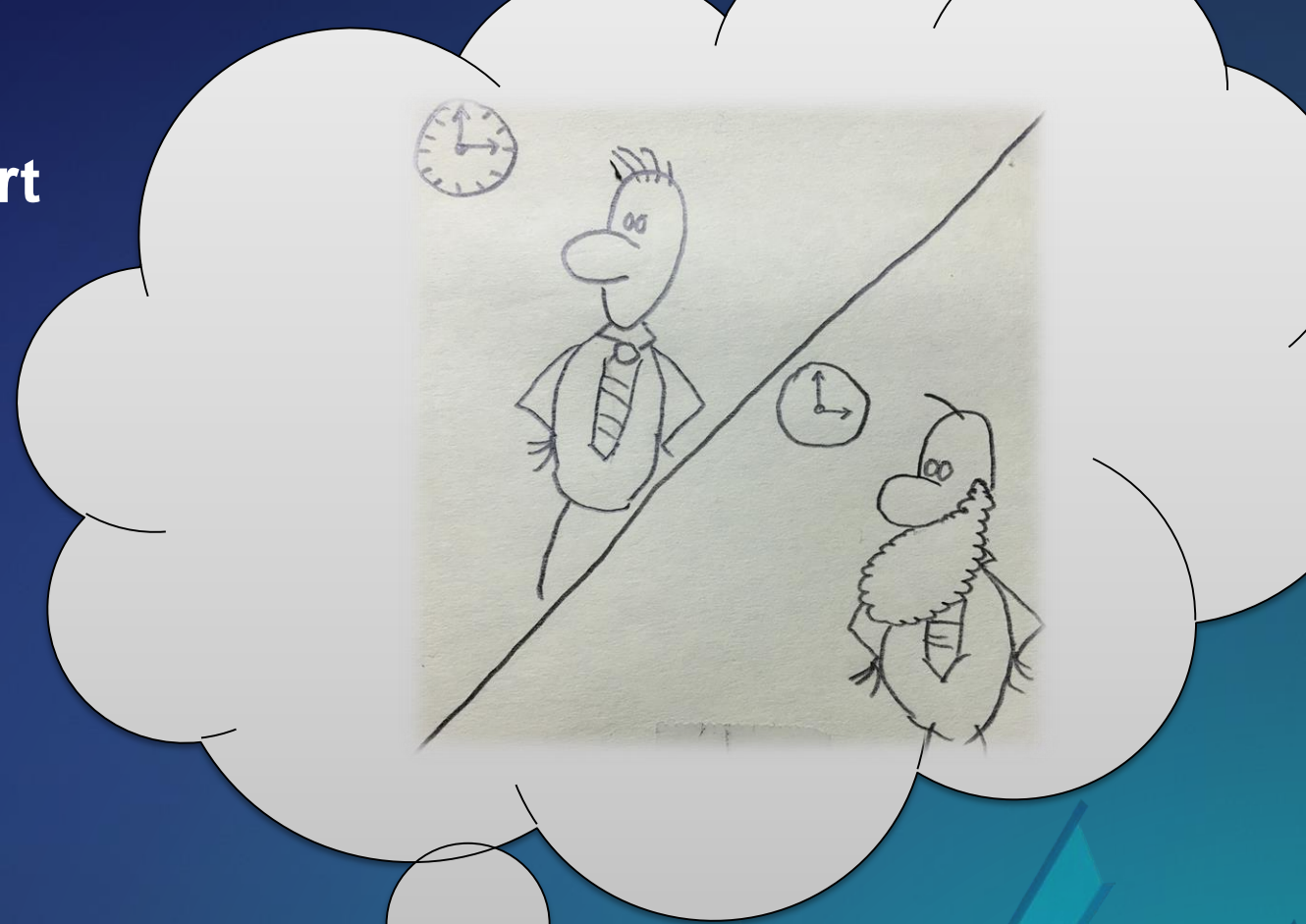
- Mistakes cost \$\$\$



Jason thinks... Technical Support

- Catch errors as they happen

# Live Call With Esri Technical Support



Amir (Customer)

- Complaints updates take “too long”



Jason thinks... Technical Support

- No metrics



# Live Call With Esri Technical Support

Doesn't seem to like new employees  
I hope he doesn't find out I'm a new employee



Amir (Customer)

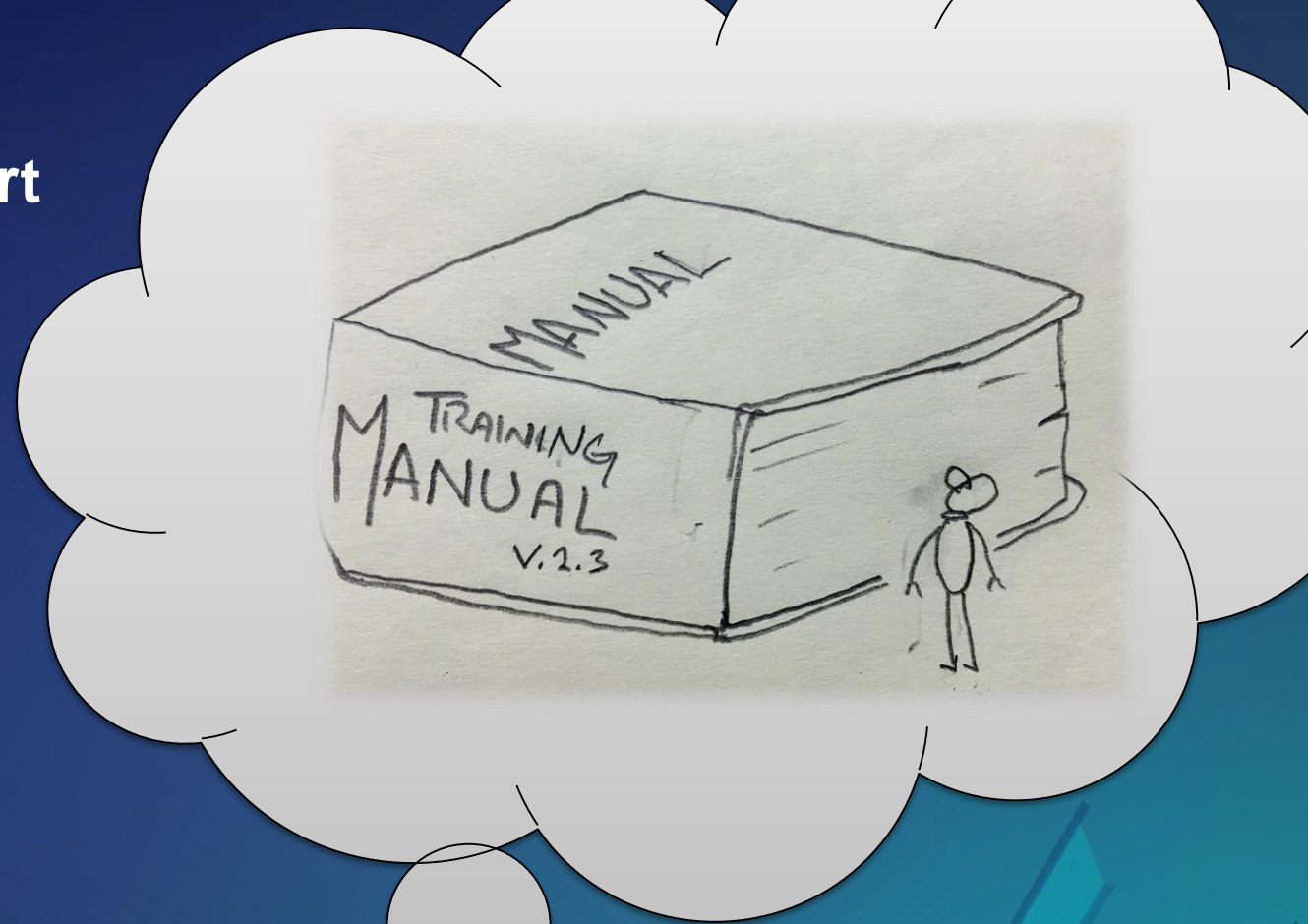
- Training new employees takes a long time until they become productive



Jason thinks... Technical Support

- Transfer business knowledge
- Learn how to use the software

# Live Call With Esri Technical Support



Amir (Customer)

- Don't people know how to read a manual?



Jason thinks... Technical Support

- Dynamic help that follows your steps



# Live Call With Esri Technical Support

Heard that before...



Amir (Customer)

- Our organization is special



Jason thinks... Technical Support

# Live Call With Esri Technical Support



Amir (Customer)

- Technology changes fast
- I remember my first GIS course on ArcInfo...



Jason thinks... Technical Support

- 1996... I was a toddler

# Create New Building Workflow





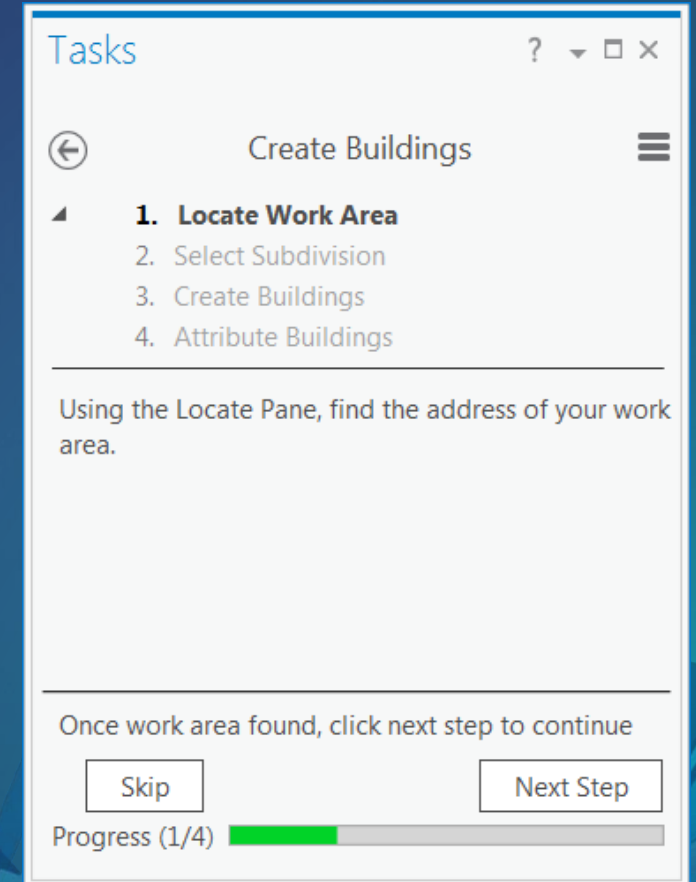
# Demo: Help needed!

Jason – please share your screen



# What is a task?

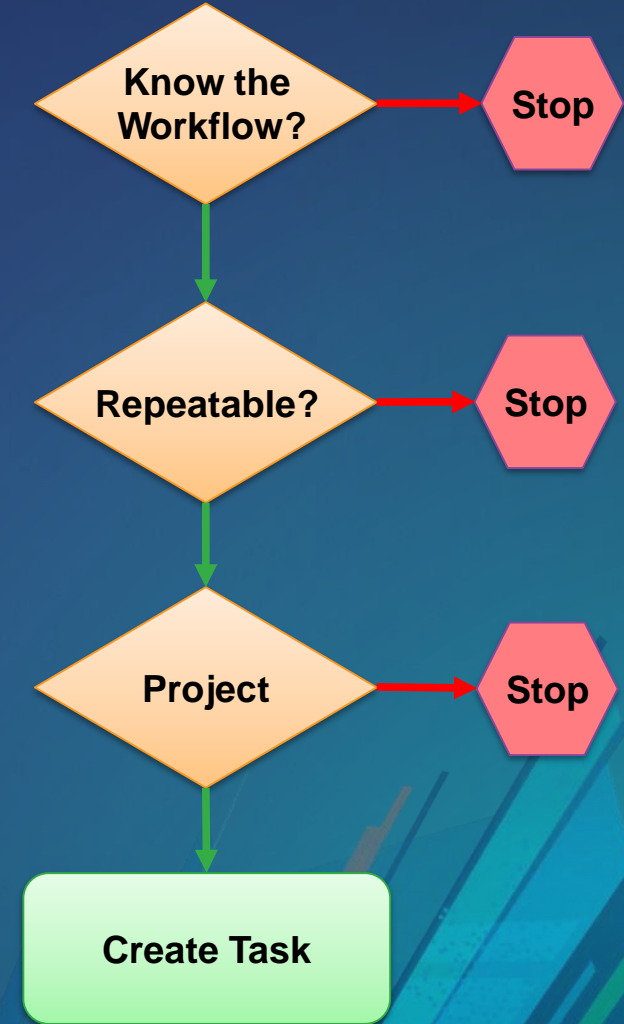
- Sequential steps that guide you through a repeatable workflow
- **Tasks:**
  - Used to guide and share knowledge
  - Are interactive
  - Improve efficiency
  - Improve quality
- Tasks use your (business) language
- Tasks are configurable



*"The right tool in the right time"*

# Design a task

- Know your business and workflows
- Repeatable workflows
- Know your project:
  - Maps
  - Layers
  - Tools
  - Add Ins
- Know your users:
  - Roles
  - License level / extensions
  - Permissions
  - Environment





# Task Step



# General – Step Behavior

- Manual – 2 mouse clicks
- Auto Run / Auto proceed – 1 mouse click
- Automatic – no mouse clicks

Efficiency



Step Behavior

- Manual** User runs and user proceeds *i*
- Auto Run** Step runs and user proceeds *i*
- Auto Proceed** User runs and step proceeds *i*
- Automatic** Step runs and step proceeds *i*
- Hidden** User will not see the step
- Optional** User can skip this step

Task Designer

**Step:** Zoom to work area

**General** | Actions | Views | Contents

Name  
Zoom to work area

Tooltip  
Locate work area by address


Instructions **B I U**  
Use the Locate dialog to search to the work area address and zoom to it.

Run/Proceed Instructions **B I U**  
Click Next Step to continue

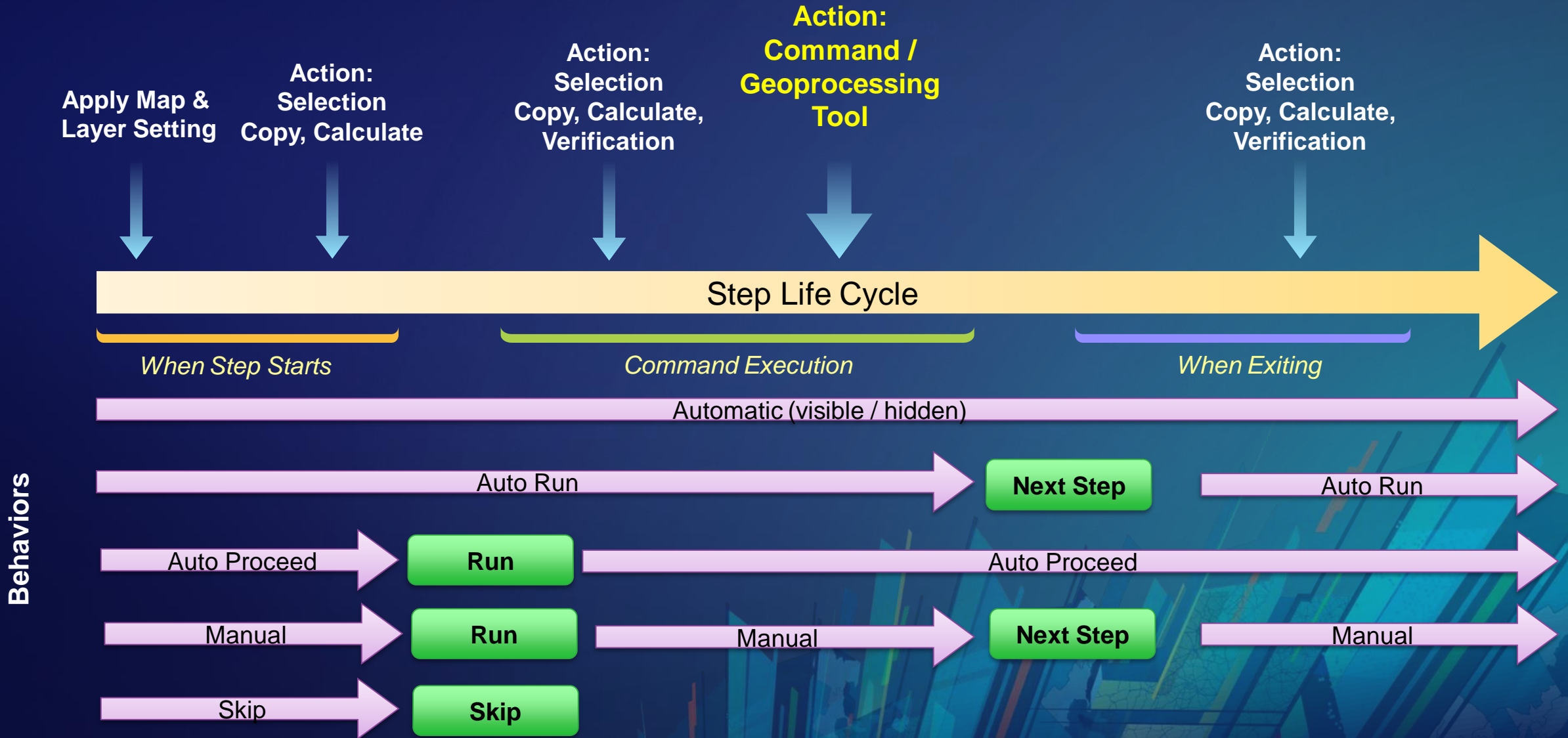
123 characters left

Step Behavior

- Manual** User runs and user proceeds *i*
- Auto Run** Step runs and user proceeds *i*
- Auto Proceed** User runs and step proceeds *i*
- Automatic** Step runs and step proceeds *i*
- Hidden** User will not see the step
- Optional** User can skip this step



# Step Life Cycle





# Demo: Creating a Task

Jason – please share your screen



# Live Call With Esri Technical Support

- Esri Technical support: Jason



- Customer: Amir



- Reminder: don't forget the test

# Create New Building Workflow – Simplified version





# Create New Building Workflow – Real version



# Common User Errors

- **Forget to attribute some of the attributes**
- **Wrong attribution, like mistype of the subdivision name**
- **Select the wrong features**
- **Forget which features were they created in the work order**
- **Time reporting is a challenge (coffee breaks, emails...)**

# Demo: Enhanced Task

Jason – please share your screen



# Demo: Sharing a task & Task History





# Sharing tasks

- Best method: as a project package
- Shared to your ArcGIS Online account
- Shared as an .esriTaskFile
- Tasks can be copied and pasted between Task Items and Projects

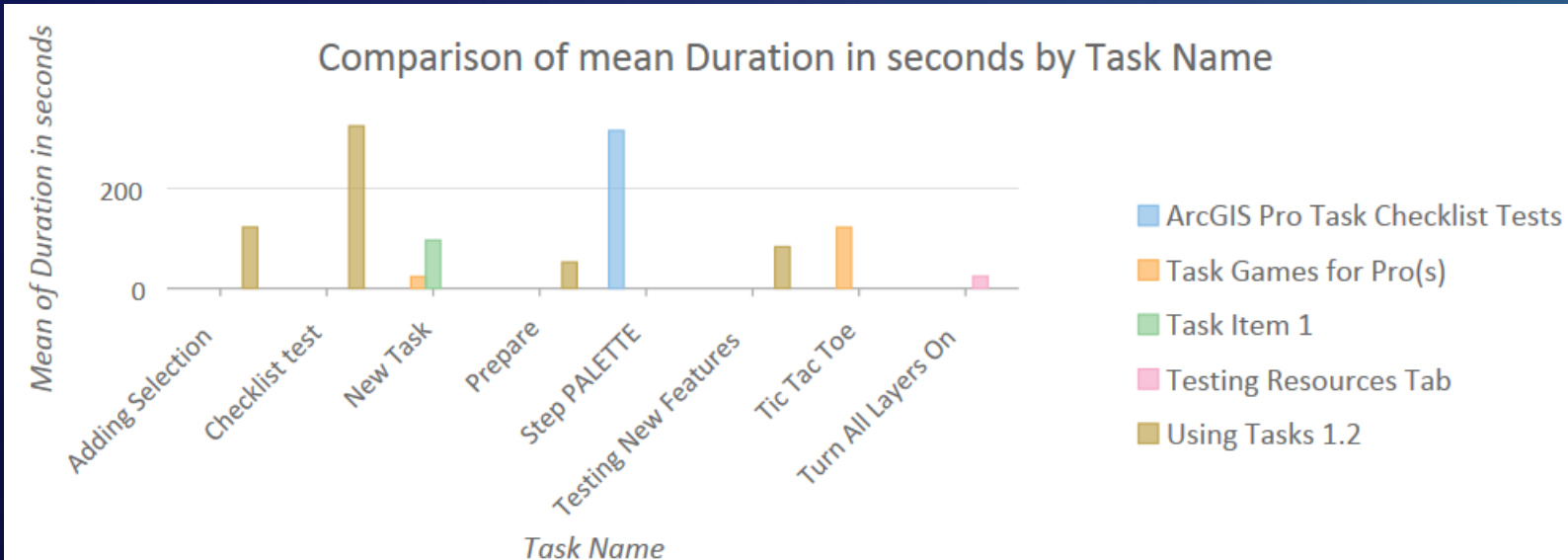
The image displays the ArcGIS Online interface for a task item named "Create\_Building\_Tasks". The browser address bar shows the URL <https://proappediting.maps.arcgi...>. The task item page includes tabs for "Overview", "Usage", and "Settings". The main content area shows a thumbnail of the task interface, the title "Create\_Building\_Tasks", and a description "Sharing my Tasks online!". Below the description, it indicates "Task File by Jaso2k" and provides metadata: "Created: Jul 5, 2018", "Updated: Jul 5, 2018", and "View Count: 0".

Overlaid on the right side is the "Share Task Item" dialog box. It contains the following sections:

- Share Task Item** (Title)
- Share** (Section Header)
- Start Sharing** (Section Header) with radio buttons for:
  - Upload task item to Online account
  - Save task item to file
- Item Details** (Section Header) with input fields for:
  - Name**: Create Building Tasks
  - Summary**: Sharing my Tasks online!
  - Tags**: Tasks, Create Building Tasks
- Share with** (Section Header) with checkboxes for:
  - Everyone
  - ProApp Editing
  - Groups** (Dropdown menu)
- Finish Sharing** (Section Header) with buttons for:
  - Analyze
  - Share
  - Jobs

# Task History (metrics)

- Optional project Settings (project options)
- Measures duration of each task; idle time is filtered
- Great to visualize with charts



Chart

TASK\_HISTORY\_CheckListTestUsin...

Data | General

**Variables**

X-Axis: Category

Task Name

Y-Axis: Number

Aggregation

Duration in seconds

MEAN

**Additional Series**

None

Series grouped from one field's values

Category

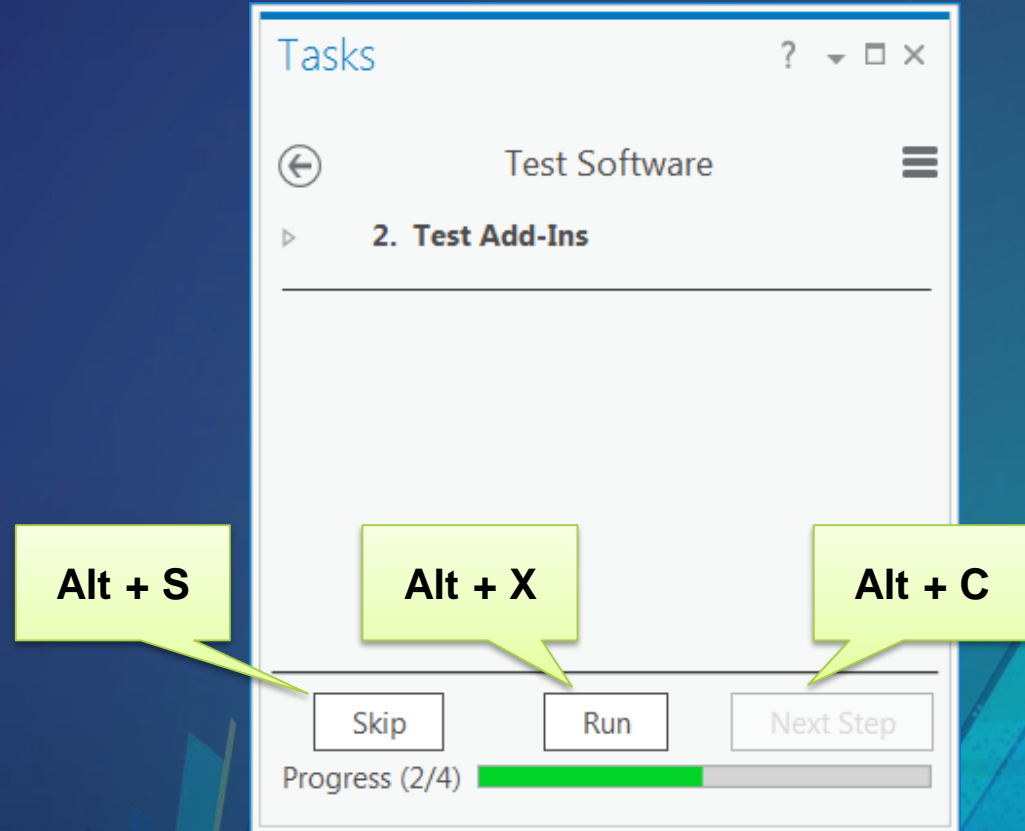
Task Item Name

## When NOT to use Tasks?

- A workflow that takes very long time
- Task resources keep changing frequently: maps, layers, Geoprocessing tools
- Micro Management tool
- Does not replace Geoprocessing models:
  - Geoprocessing is used for automation
  - Tasks are interactive

# Tips & Tricks

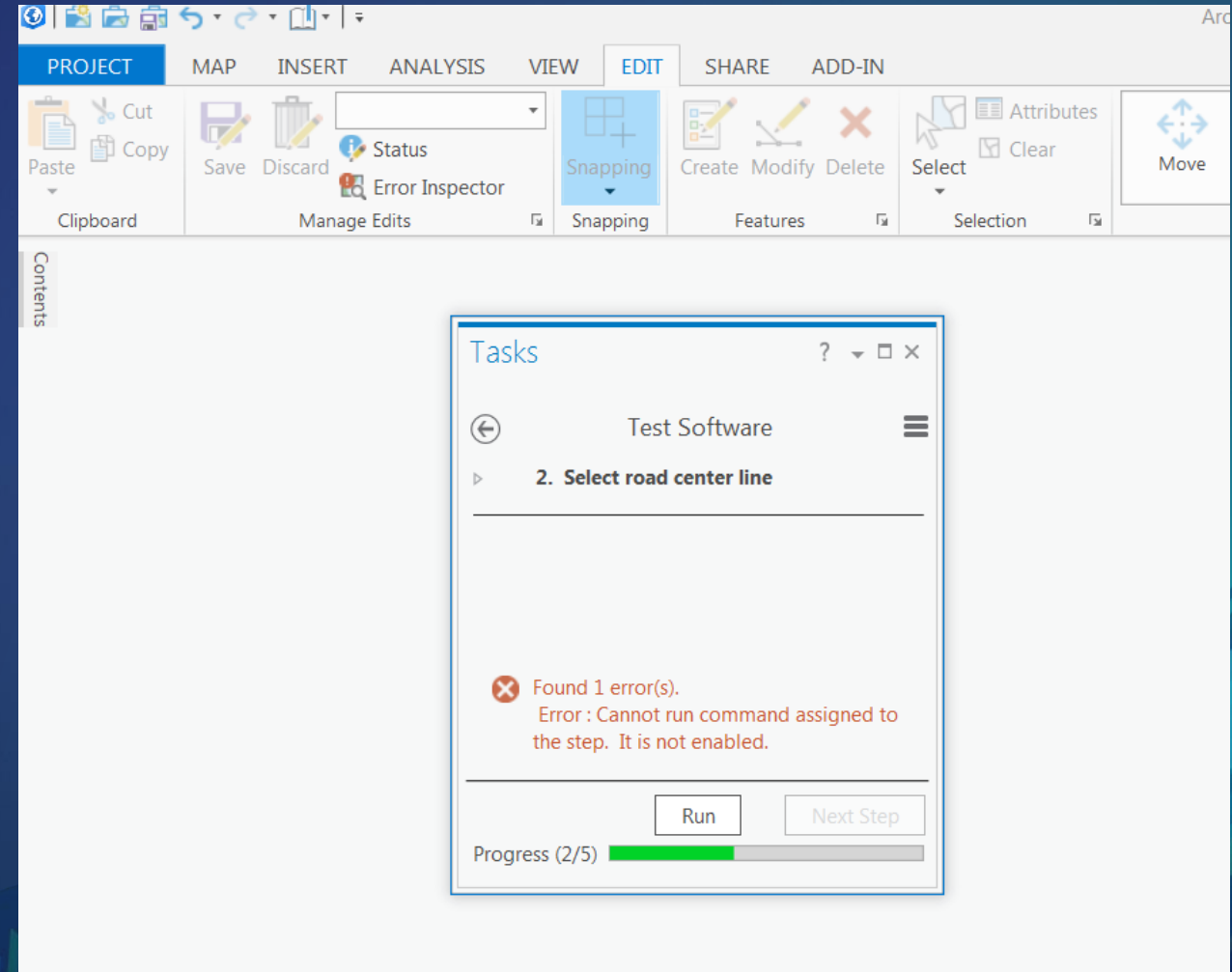
- Global shortcuts:
  - Alt X – RUN ('eXecute')
  - Alt C – NEXT STEP ('Countinue')
  - Alt S – SKIP ('Skip')





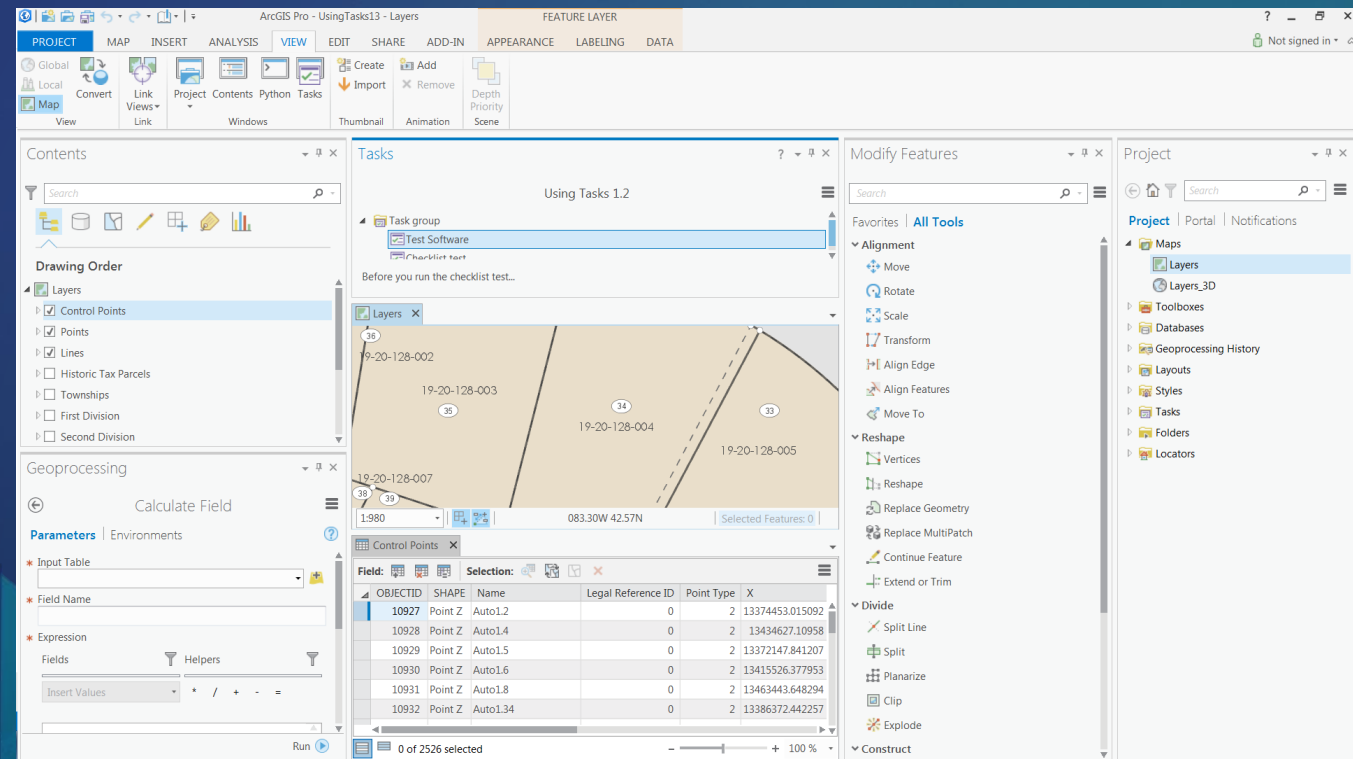
# Tips & Tricks

- **When a task fails...**
  - Check if the command is enabled
  - Commands are contextual
  - In this example: calling the select command without an active map view



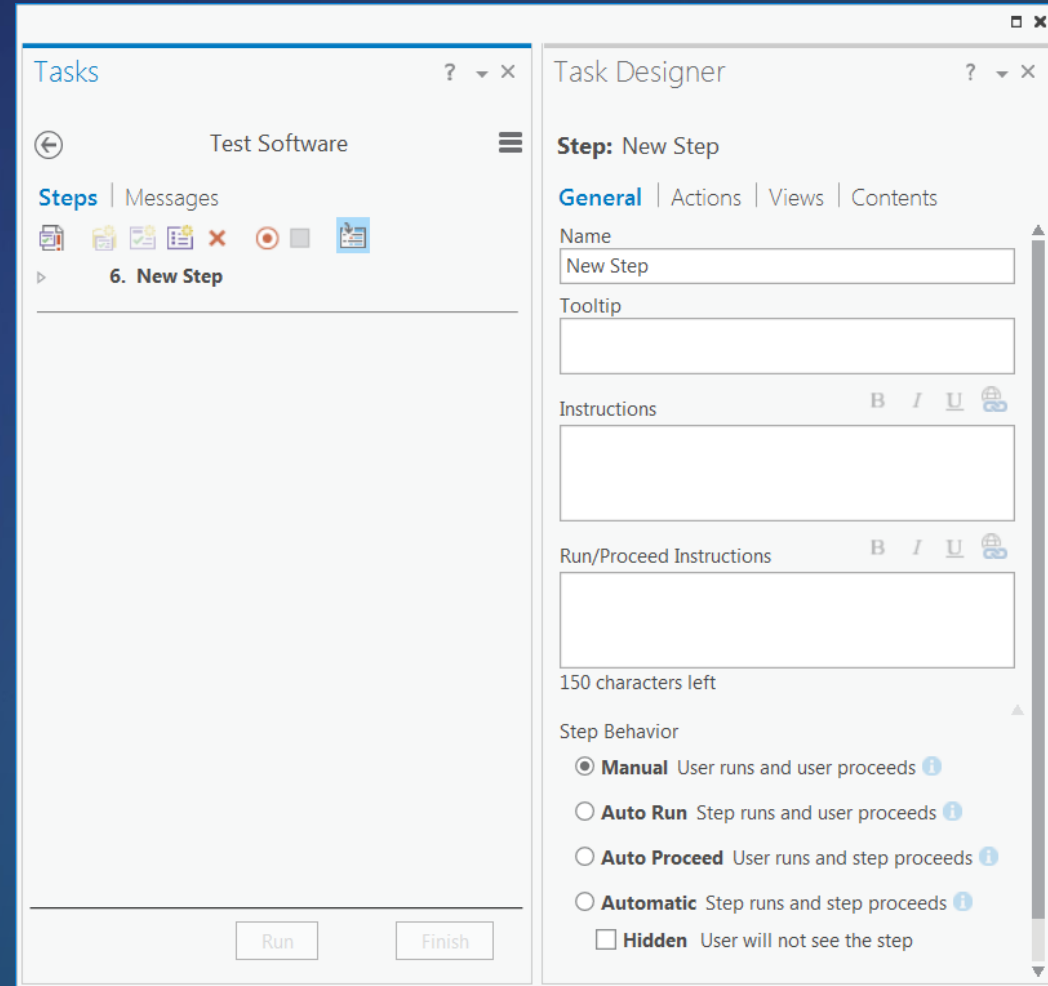
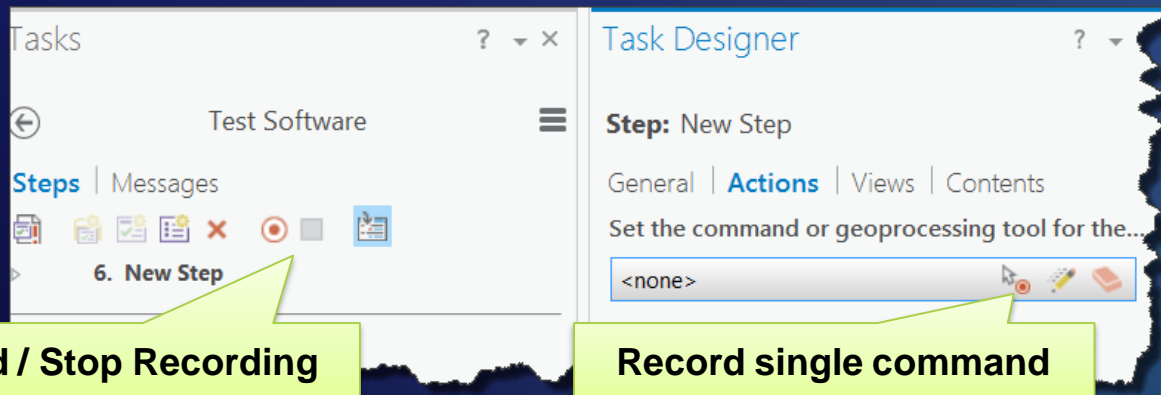
# Tips & Tricks

- Close panes.
- Don't "buddy-up" the task pane with other panes
- Can I run other commands while running a task?
  - Answer: Yes
- Leave nothing to chance!  
your users might:
  - Close maps
  - Turn layers off
  - Clear selection
  - Unselect a layer
  - ...



# Tips & Tricks

- Dock the task pane and task designer side by side
- Record commands is easier and more reliable



# Tips & Tricks

- Capture map view state (contents)

The screenshot shows the 'Task Designer' window with the 'Contents' tab selected. The 'Active View' is 'Layers'. Below the title bar, there are tabs for 'General', 'Actions', 'Views', and 'Contents'. The main area contains a table of layer states for a 'New Step'. The table has columns for different layer types, each with a corresponding icon. The rows list various layers with their current state (checked or unchecked) for each layer type. A 'Reset' button is located at the bottom right of the table. Below the table, there are icons for 'Snapping is On' and a 'Current View' tooltip. The tooltip text reads: 'Set the step contents states to match the current content states of the active map view.' At the bottom of the window, there are buttons for 'Run', 'Finish', 'Previous Step', and 'Current View'. A yellow callout box points to the 'Current View' button.

Layer	Control Points	Points	Lines	Historic Tax Parcels	Townships	First Division	Second Division	Tax Parcels	Subs and Condos	Lots and Units	Encumbrances
Control Points	✓	✗	✗	✗	✓	✗					
Points	✓	✗	✗	✗	—	✗					
Lines	✓	✗	✗	✗	—	✗					
Historic Tax Parcels	✗	✗	✗	✗	—	✓					
Townships	✗	✗	✗	✗	—	✓					
First Division	✗	✗	✗	✗	—	✓					
Second Division	✗	✗	✗	✗	—	✓					
Tax Parcels	✓	✓	✓	✓	—	✓					
Subs and Condos	✓	✗	✗	✗	—	✓					
Lots and Units	✓	✗	✓	✗	—	✓					
Encumbrances	✓	✗	✗	✗	—	✗					

**Capture View State**

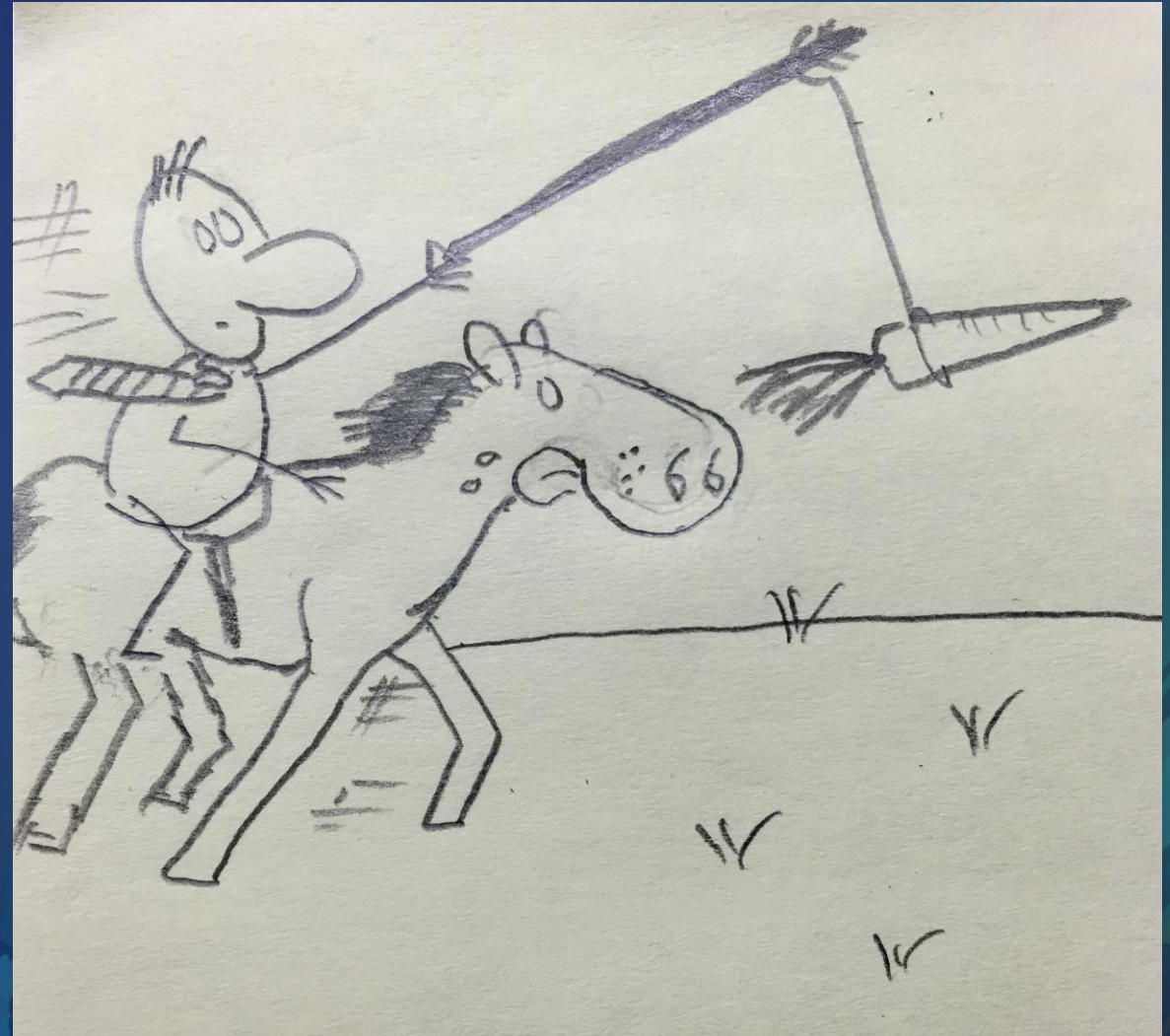


## Tips & Tricks

- Use 'Optional' step behavior during design (Skip)
- Copy paste steps between tasks, or tasks between task items
- Advanced 'If-Than' logic → use Geoprocessing scripts/models as a step

## Tips & Tricks

- **Configuration Vs. Customization:** consider tasks before writing Add Ins
- **Tasks have SDK**
- **Create tasks that save time & improve quality**



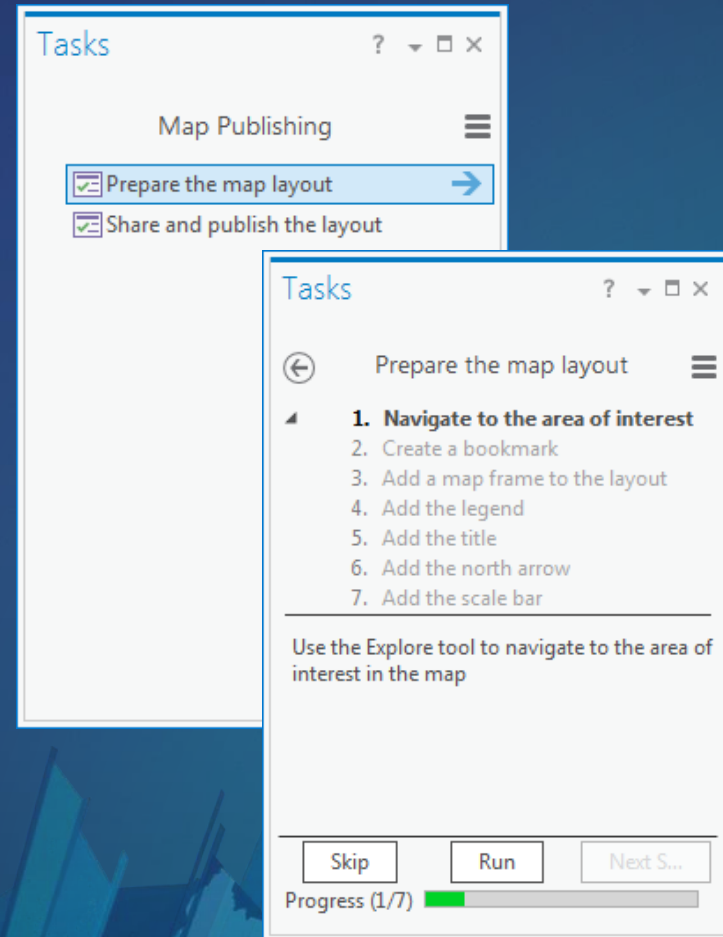
# Quiz

True ✓ or False? ✗

- Tasks are available in every license level ✓
- Tasks replace Geoprocessing models ✗
- Tasks can be shared between projects ✓
- The best way to share a task item is to package it in a project package ✓
- Manual behavior is the most efficient step behavior ✗
- Tasks are fan-task-tic! ✓

# Summary - Tasks Improve Efficiency

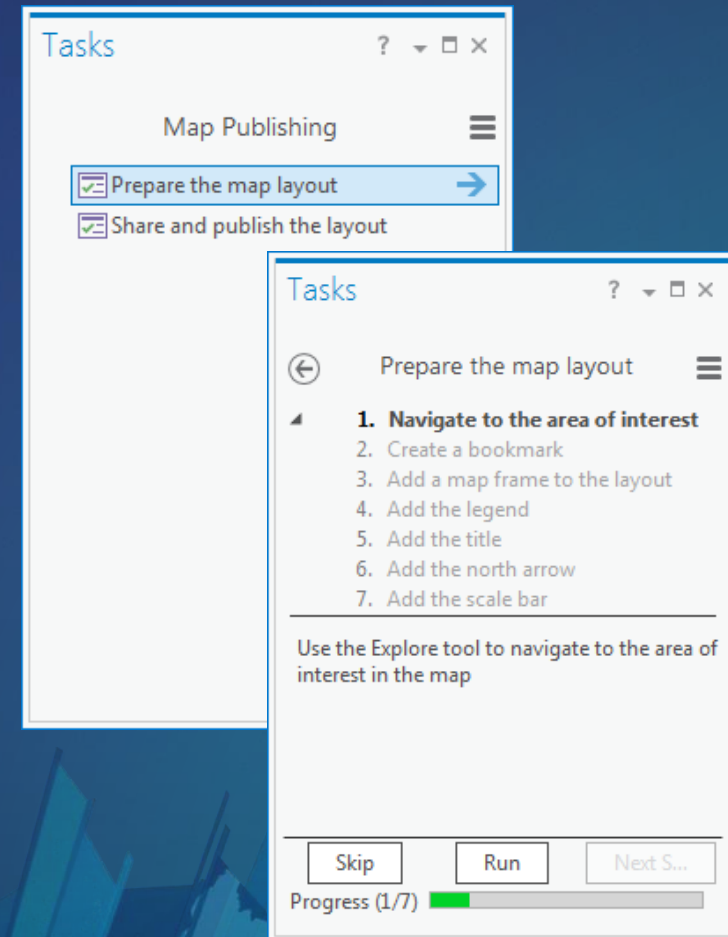
- Reduce learning curve time
- Open the right tool at the right time
- Open the right map & layer settings
- Reduce mouse clicks
- Reduce clutter (panes, ribbons, etc.)
- Selection management (save, load, clear)
- Attribution: get, copy & calculate actions
- Prevent mistakes: verification action
- Open a tool set: palette





# Summary - Tasks Share Knowledge

- **Define best practice workflows**
  - **Multiple ways to do the same workflow**
  - **Reduce confusion**
  - **Improve quality & Consistency**
- **Guide**
  - **Dynamic help / instructions**
  - **Link to additional resources**
  - **Use your (business) language**
- **Share**
  - **Export a 'Task Item' to a 'Task File'**
  - **Upload task file to ArcGIS Online**



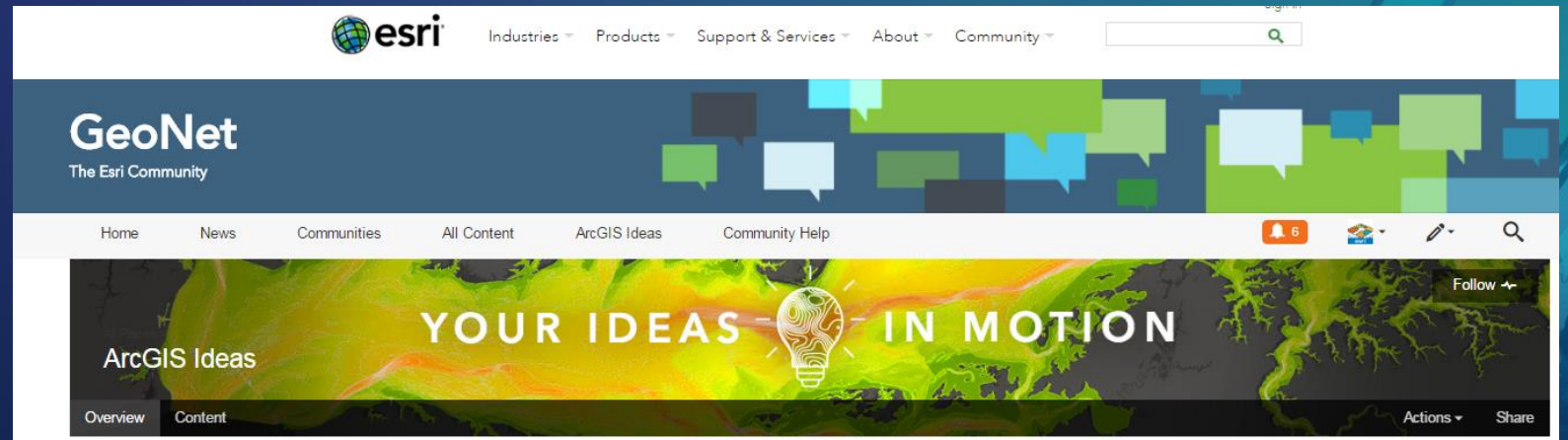
*Tasks are interactive*

# Want to learn more?

- **Software help documentation**
  - [Tasks in ArcGIS Pro](#)
- **Training:**
  - **Create and Share ArcGIS Pro Tasks (60 minutes, free)**
  - **Automating Workflows Using ArcGIS Pro Tasks (3 hours)**
- **Videos: [esri](#) / [YouTube](#)**

# Join the Task Force

- **Contribute your ideas:**
  - Geonet ideas: <https://geonet.esri.com/community/arcgis-ideas>
- **Visit us at the ArcGIS Pro Island:**
  - Christine Leslie
  - Jason Camerano
  - Amir Bar-Maor
  - Narelle Chedzey

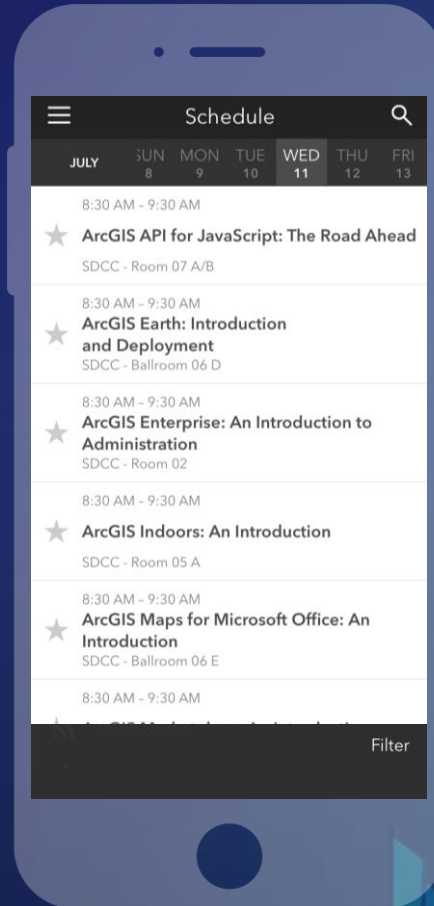


# Please Take Our Survey on the App

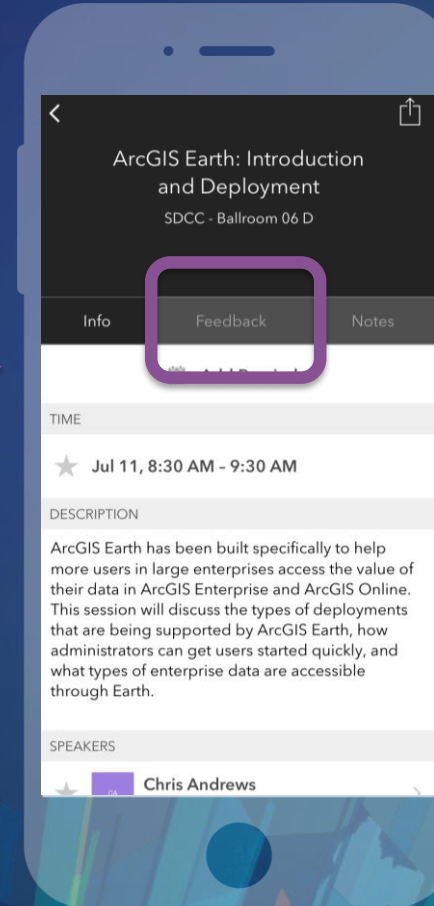
Download the Esri Events app and find your event



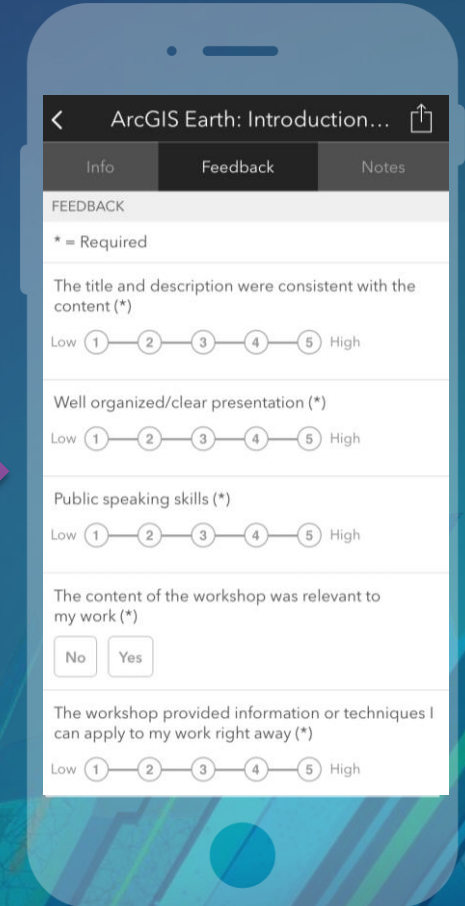
Select the session you attended



Scroll down to find the feedback section

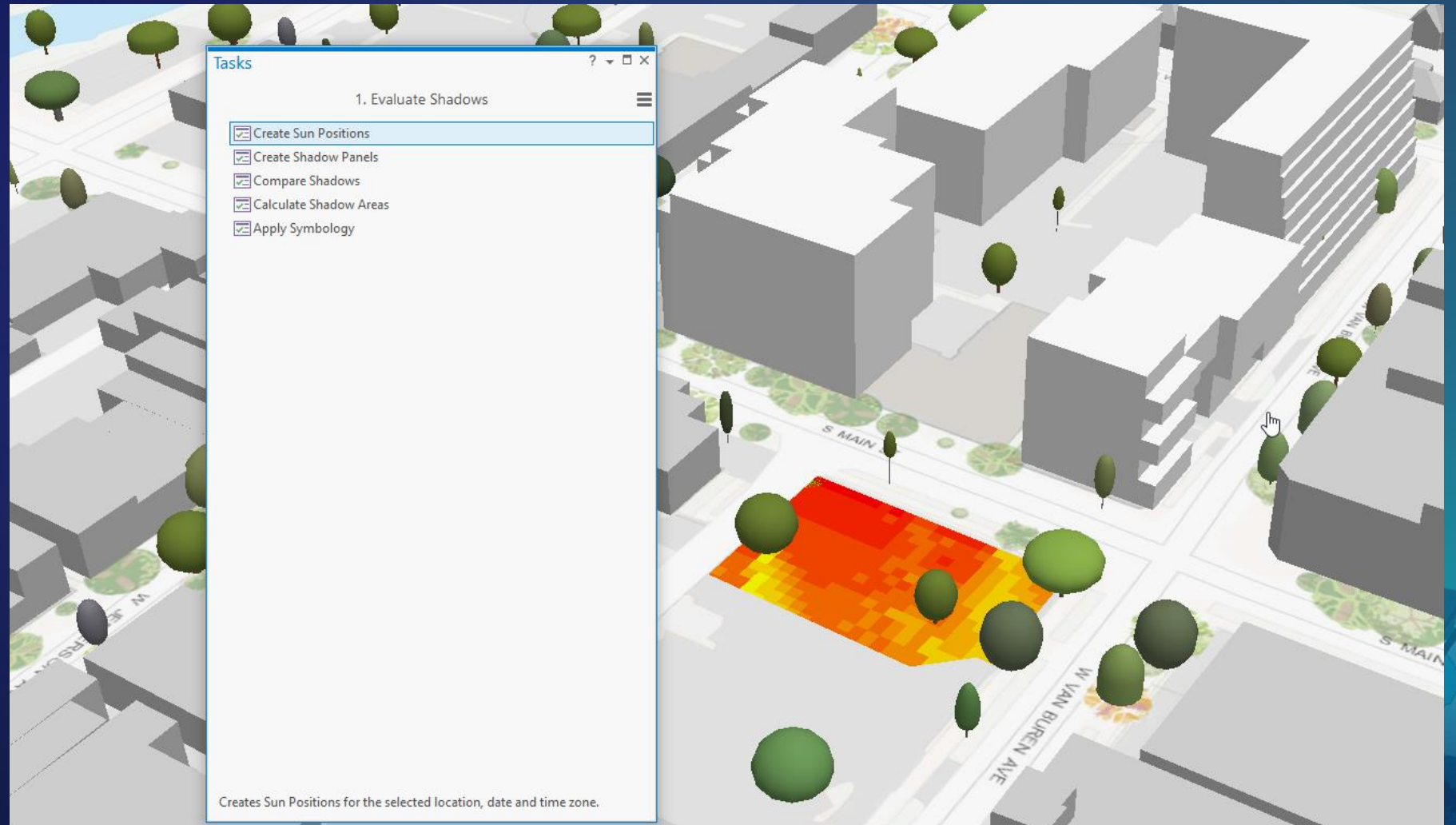


Complete answers and select "Submit"





# Use of Tasks for 3D Analysis Workflows



# Use of Tasks for Military Workflows

**Tasks** ? □ ×

Beach Landing ☰

Tasks | Messages

- ▾ Beach Landing
  - Identify Features
  - Create Beach Landing Layout

This task contains all of the steps required to create a printable map layout.


**Green Beach Landing** UNCLASSIFIED

Camp Pendleton Product Created: 10/06/2015 Time Zone: Zulu


Map Center: 117°26.12'W 33°15.61'N Scale: 1:10,000


Time of Image : 05/03/2010 0400Z Tidal Range: 1.5m


Low Tide: 05/03/2010 0200Z High Tide: 05/03/2010 0700Z



250 Meters







UNCLASSIFIED

<p><b>Area Features</b></p> <p>TYPE</p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: cyan; border: 1px solid black; margin-right: 5px;"></span> Ice</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> Obstructio Hazard</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: gray; border: 1px solid black; margin-right: 5px;"></span> Building</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Water Inundation</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: pink; border: 1px solid black; margin-right: 5px;"></span> Reef</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px dashed black; margin-right: 5px;"></span> Rock Outcrop</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Dense Vegetation</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Trees</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: orange; border: 1px solid black; margin-right: 5px;"></span> Structure</li> </ul>	<p><b>Line Features</b></p> <p>TYPE</p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid yellow; margin-right: 5px;"></span> Cliff</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed gray; margin-right: 5px;"></span> Ditch</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid red; margin-right: 5px;"></span> Fence</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black; margin-right: 5px;"></span> Road/Track</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed red; margin-right: 5px;"></span> Pipeline</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Wall</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed red; margin-right: 5px;"></span> Obstructio Hazard</li> </ul>	<p><b>Point Features</b></p> <p>TYPE</p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Beach Exit</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> Obstructio...</li> </ul>
--	---	--

# Use of Tasks for Indoor Routing Workflows

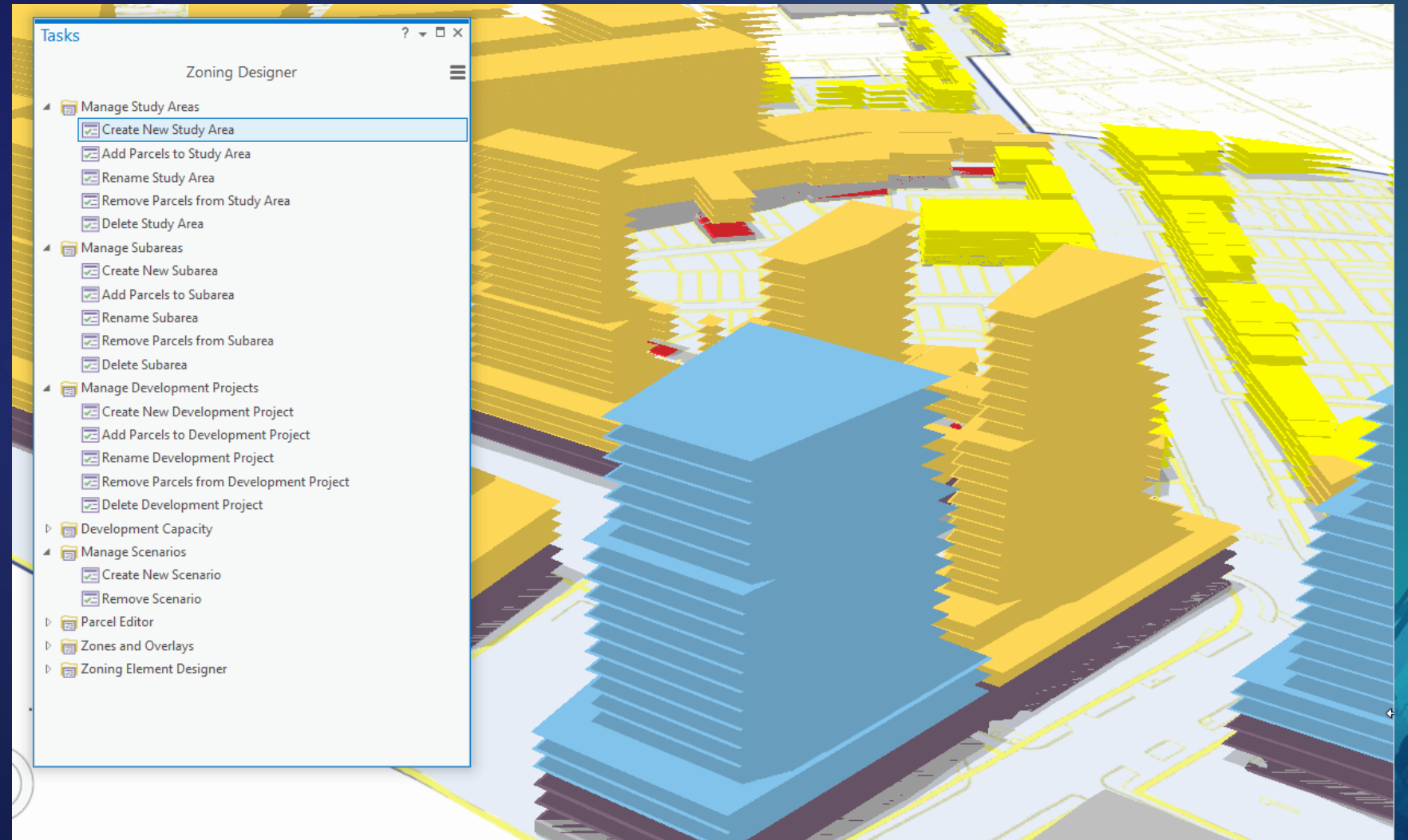
The screenshot displays the 'Tasks' window in a GIS application, specifically the 'Run Script tool' for the 'Thin Network Lattices' task. The window is titled 'Tasks' and contains the following parameters:

- Pathways feature classes:** Pathways
- Transitions feature classes:** FloorTransitions
- Origin/Destination Point feature classes:** BuildingInteriorSpacePt
- Origin/Destination Point feature classes: Building ID Field:** BUILDINGKEY
- Origin/Destination Point feature classes: Floor ID Field:** FLOORKEY
- Preliminary Network Dataset Template:** D:\Solutions\Pro\Indoor Network Tasks for Gert\Campus Viewer Sar
- Final Network Dataset Template:** D:\Solutions\Pro\Indoor Network Tasks for Gert\Campus Viewer Sar
- Facility Solve Count:** 50
- Use restriction "Hallways: Avoid Walls"
- Use restriction "Hallways: Prefer Center High"
- Use restriction "Hallways: Prefer Middle Med"
- Output Folder:** FinalNetwork
- Geodatabase Name:** CampusNetwork\_L\_A

The background shows a 3D model of a building with a network lattice overlay. The status bar at the bottom indicates the coordinates 117.1947867°W 34.0567979°N and a distance of 16.984 ft. The 'Selected Features' count is 0.



# Use of Tasks for Zoning Design Workflows







**esri**

**THE  
SCIENCE  
OF  
WHERE**