

ArcGIS Pro Tasks: An Introduction

- Jason Camerano
- Amir Bar-Maor

Live Call With Esri Technical Support

- Esri Technical support: Jason

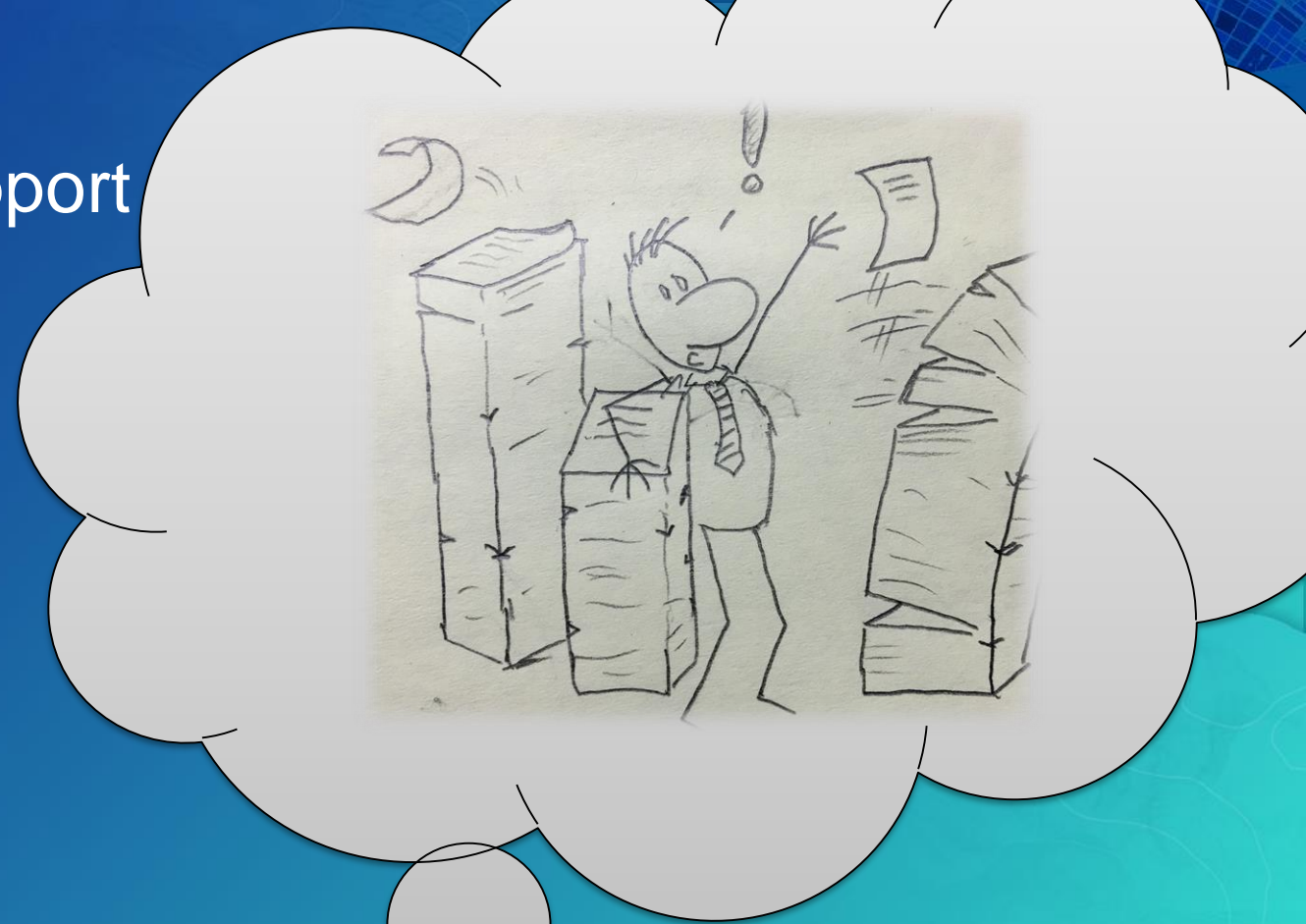


- Customer: Amir



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

Live Call With Esri Technical Support



Amir (Customer)

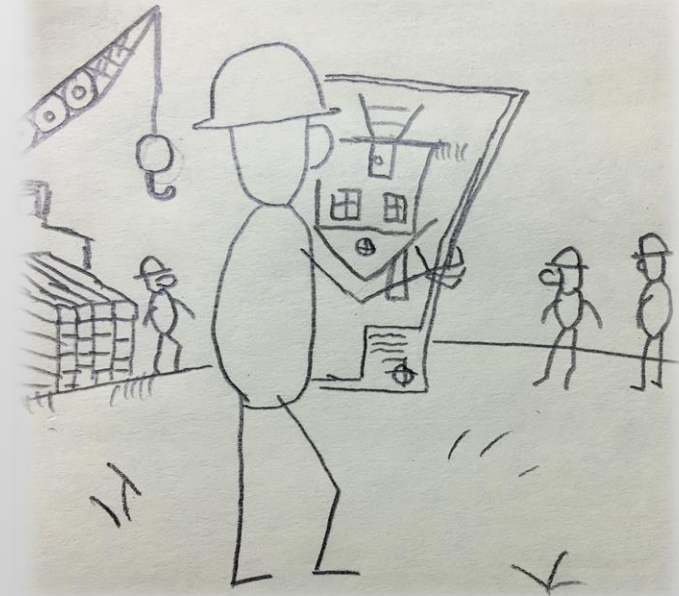
- Every user does things differently



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)

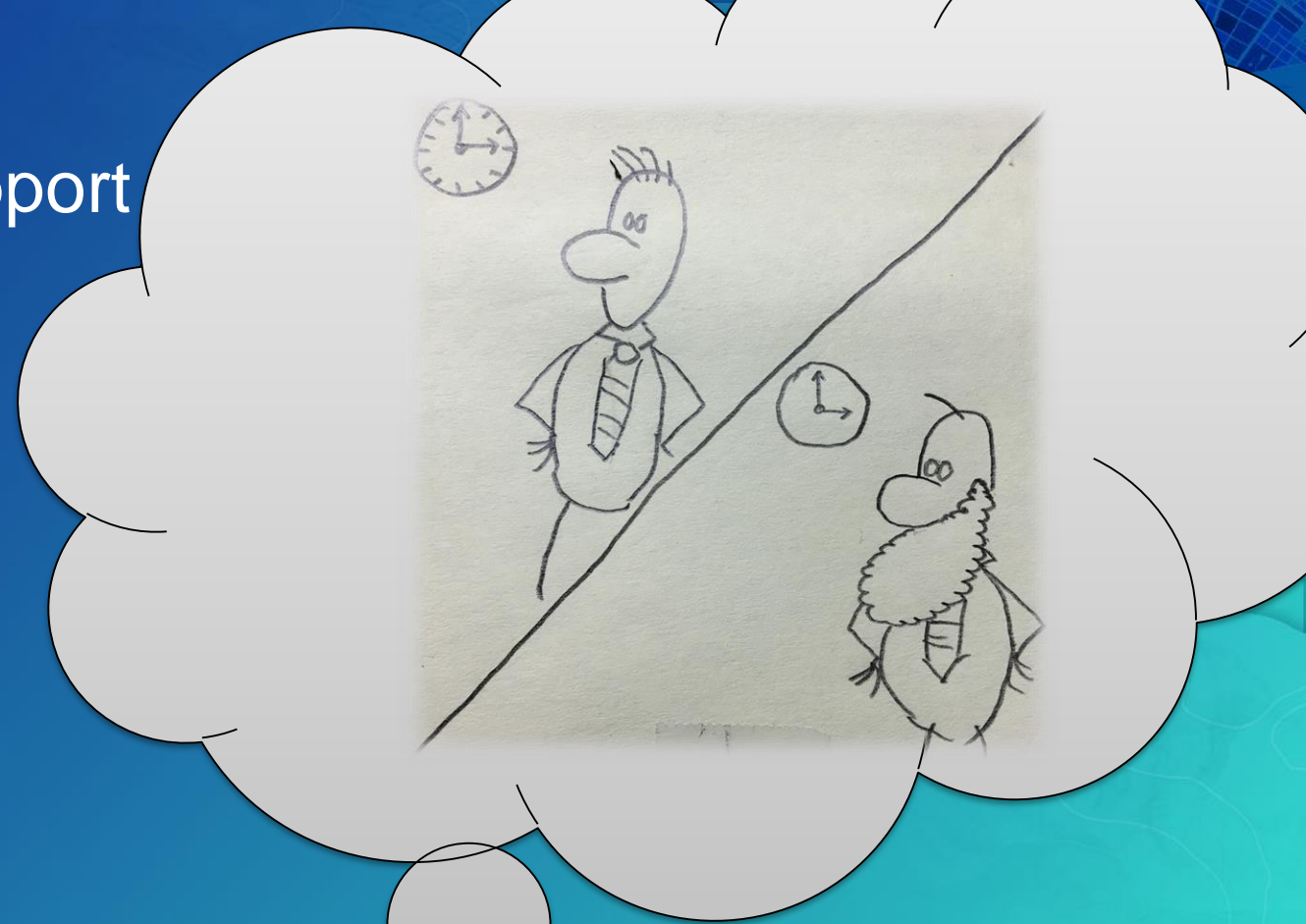
- Mistakes cost \$\$\$



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)

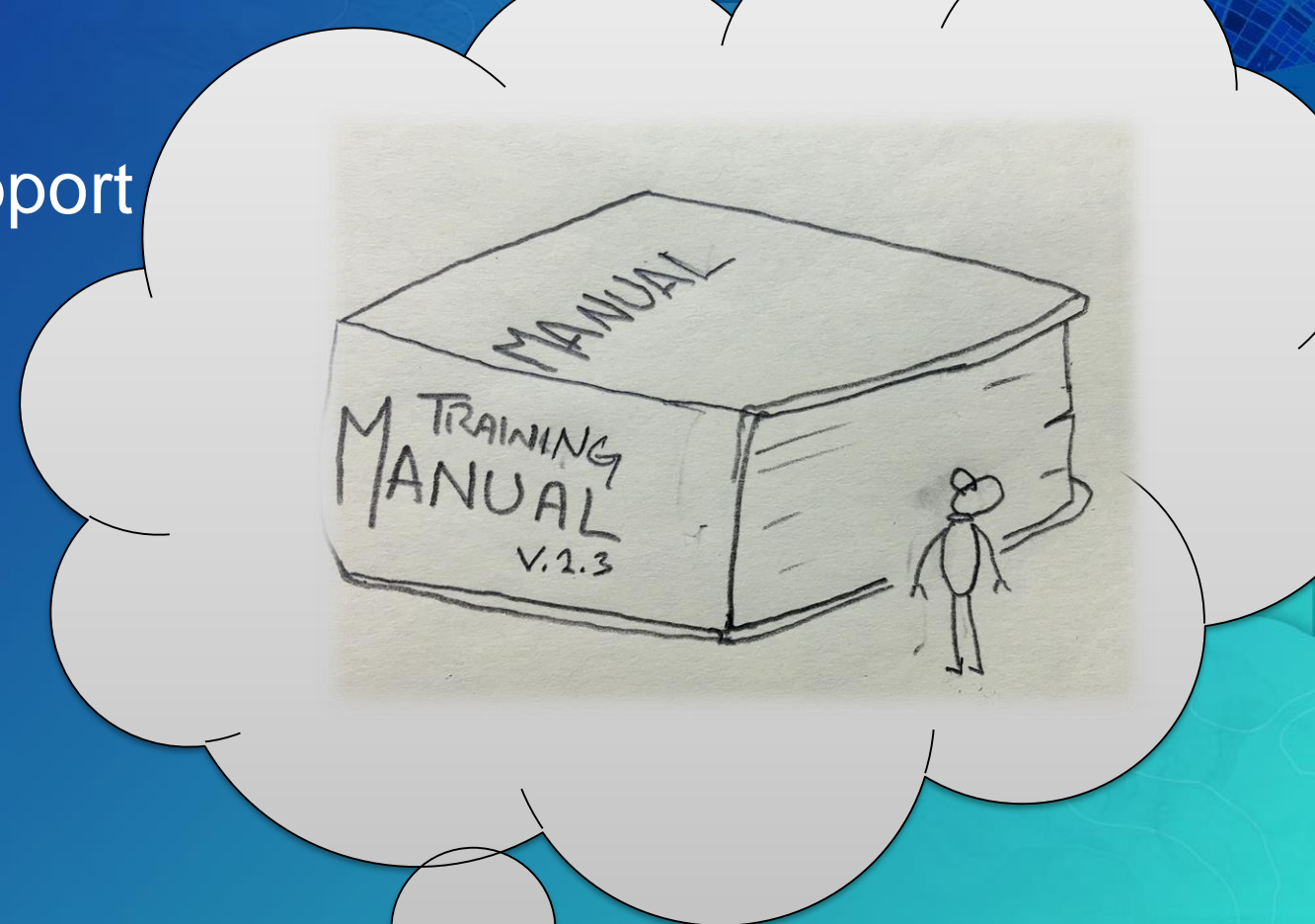
- Training new employees takes a long time until they become productive



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...



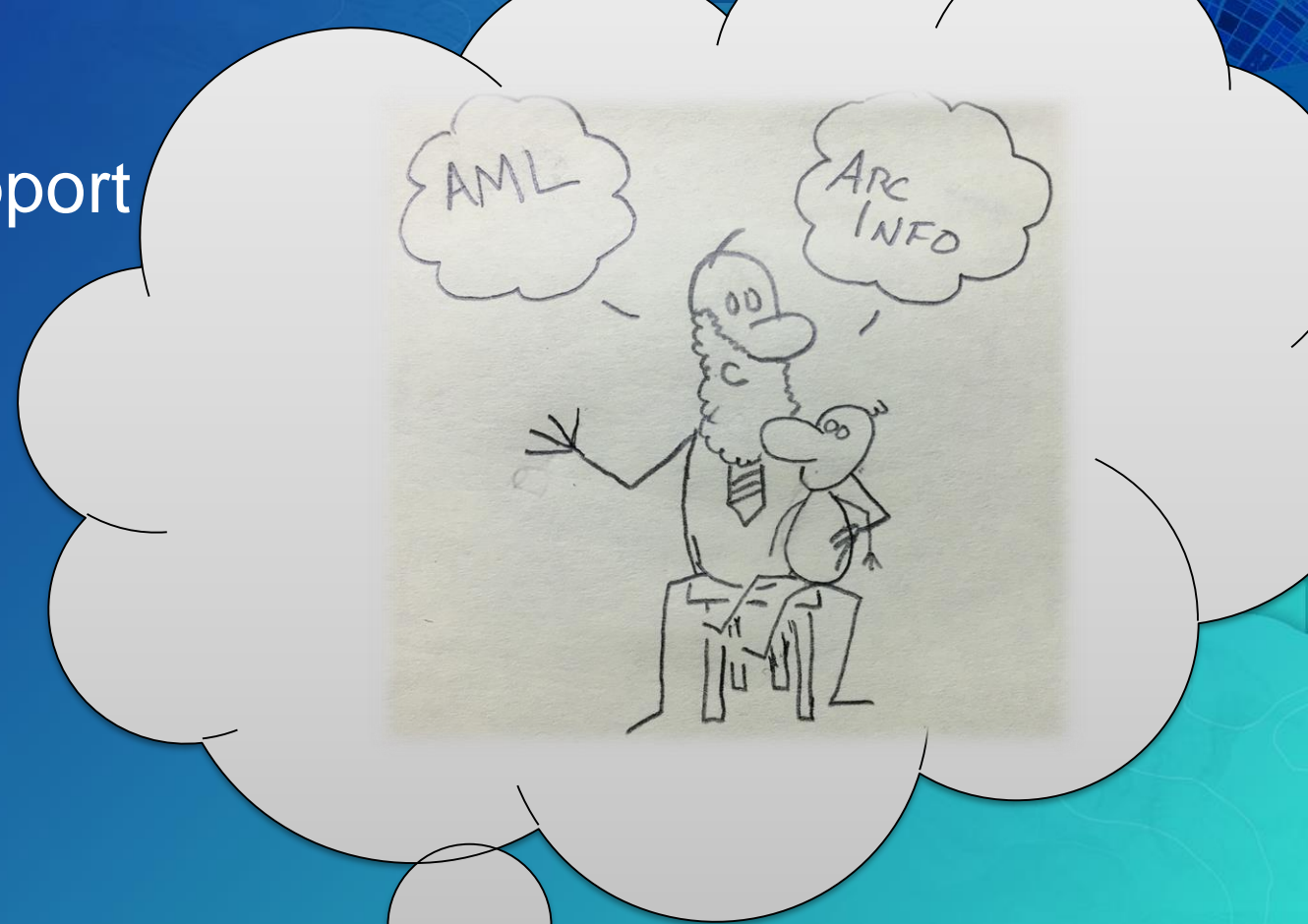
Amir (Customer)

- 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



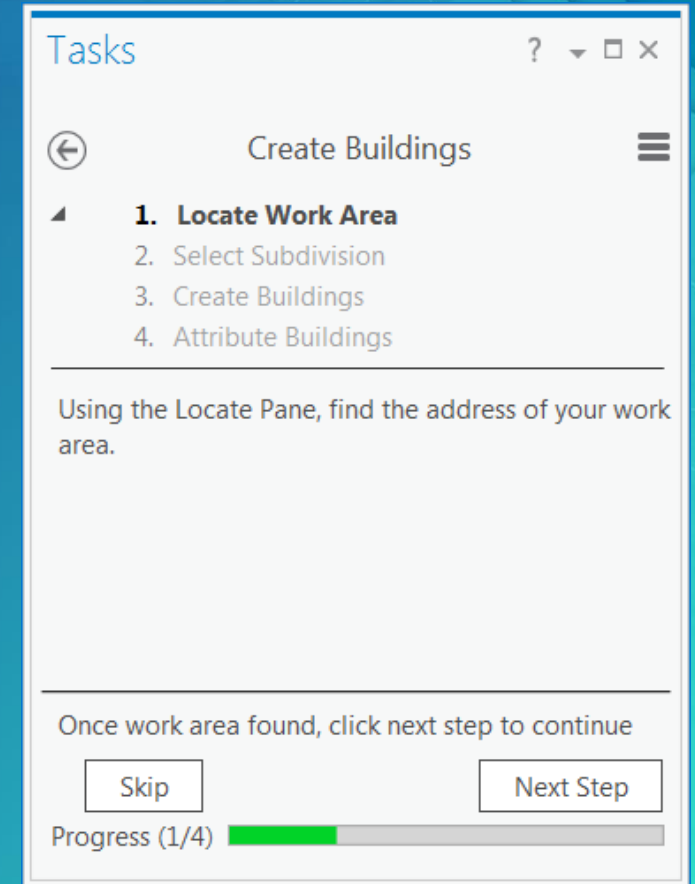
Demo: Help needed!

- 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"

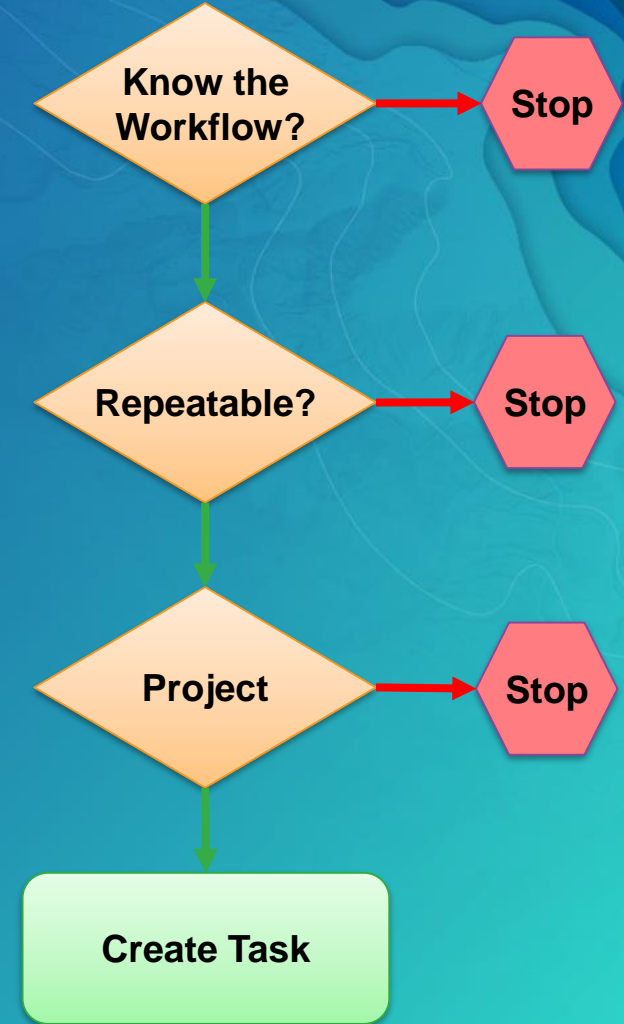
Demo: Creating a Task

- Jason – please share your screen



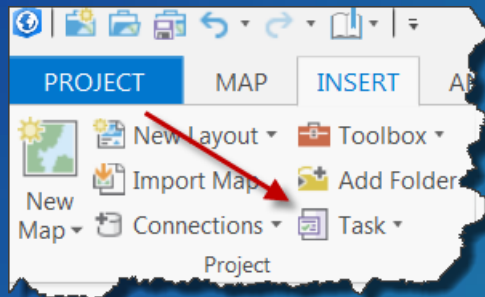
Design a task

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

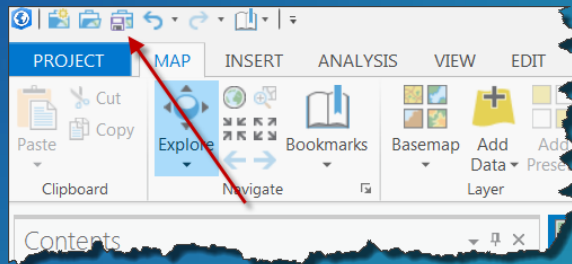


Insert a new Task Item

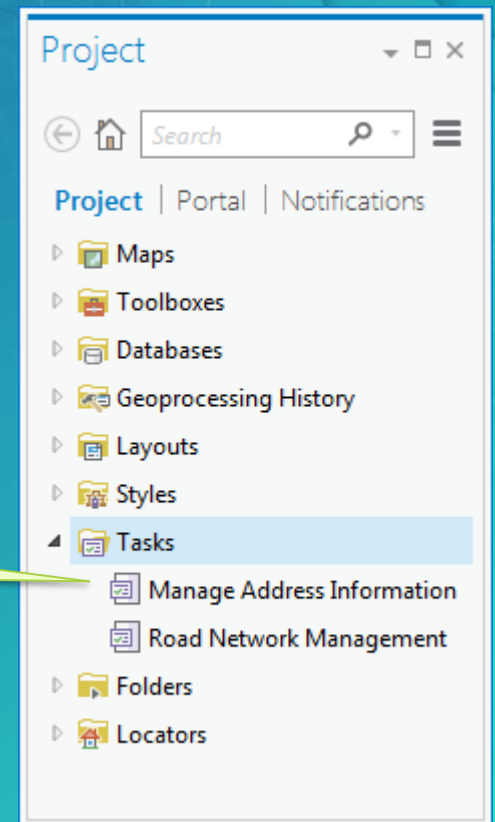
- A project might contains zero to many TASK ITEMS that are stored in the APRX file
- Use Insert tab → Task Item



- Use 'Save Project' to save task modifications

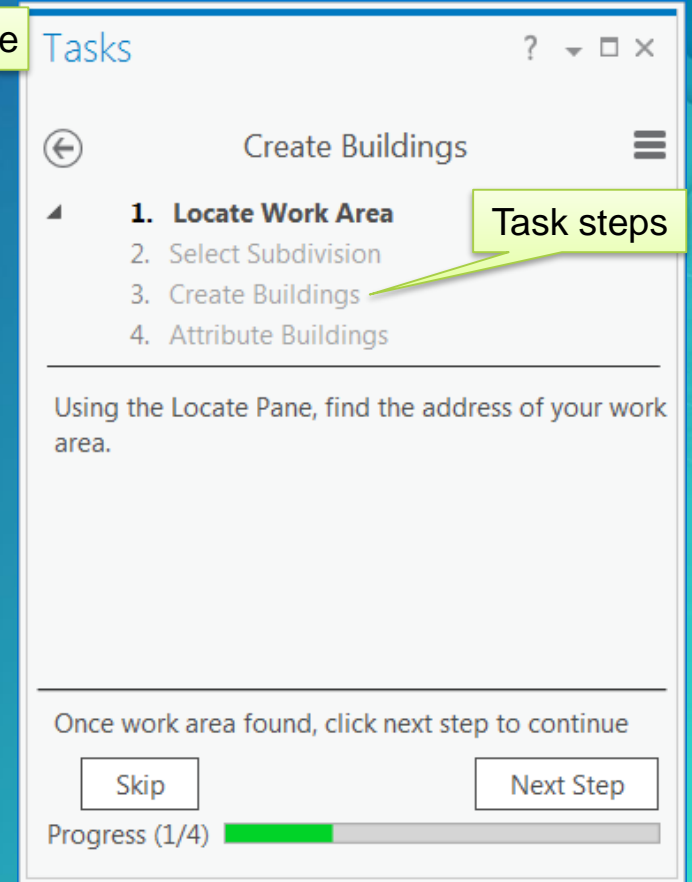
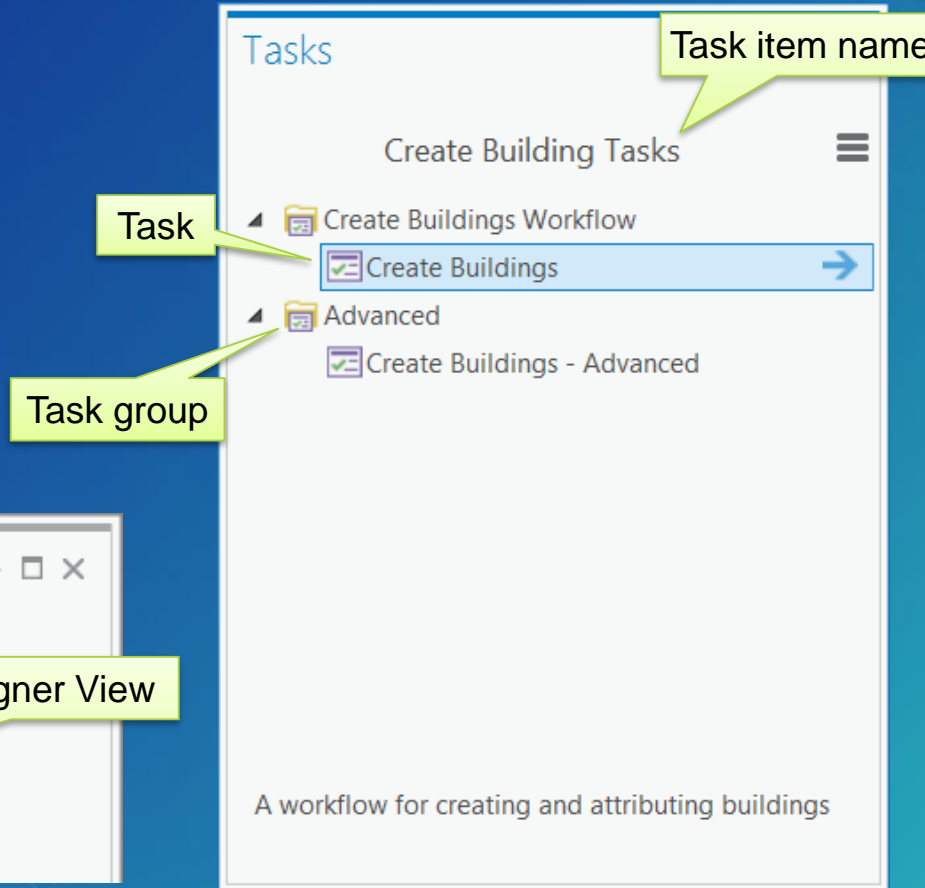
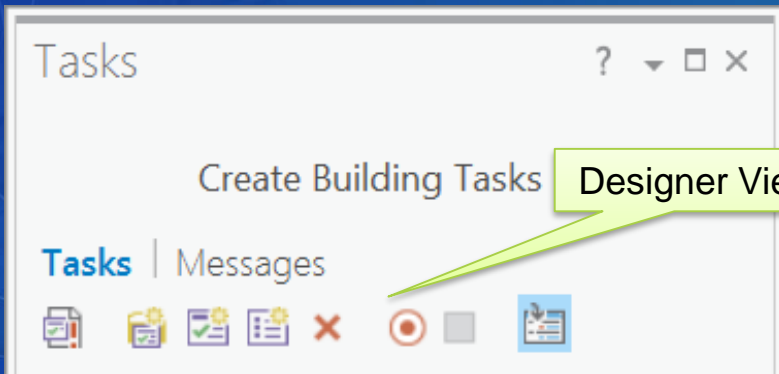


- Use 'Package Project' to share with a project



Create Tasks & Steps

- Create a task
- Create steps
- Group tasks



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

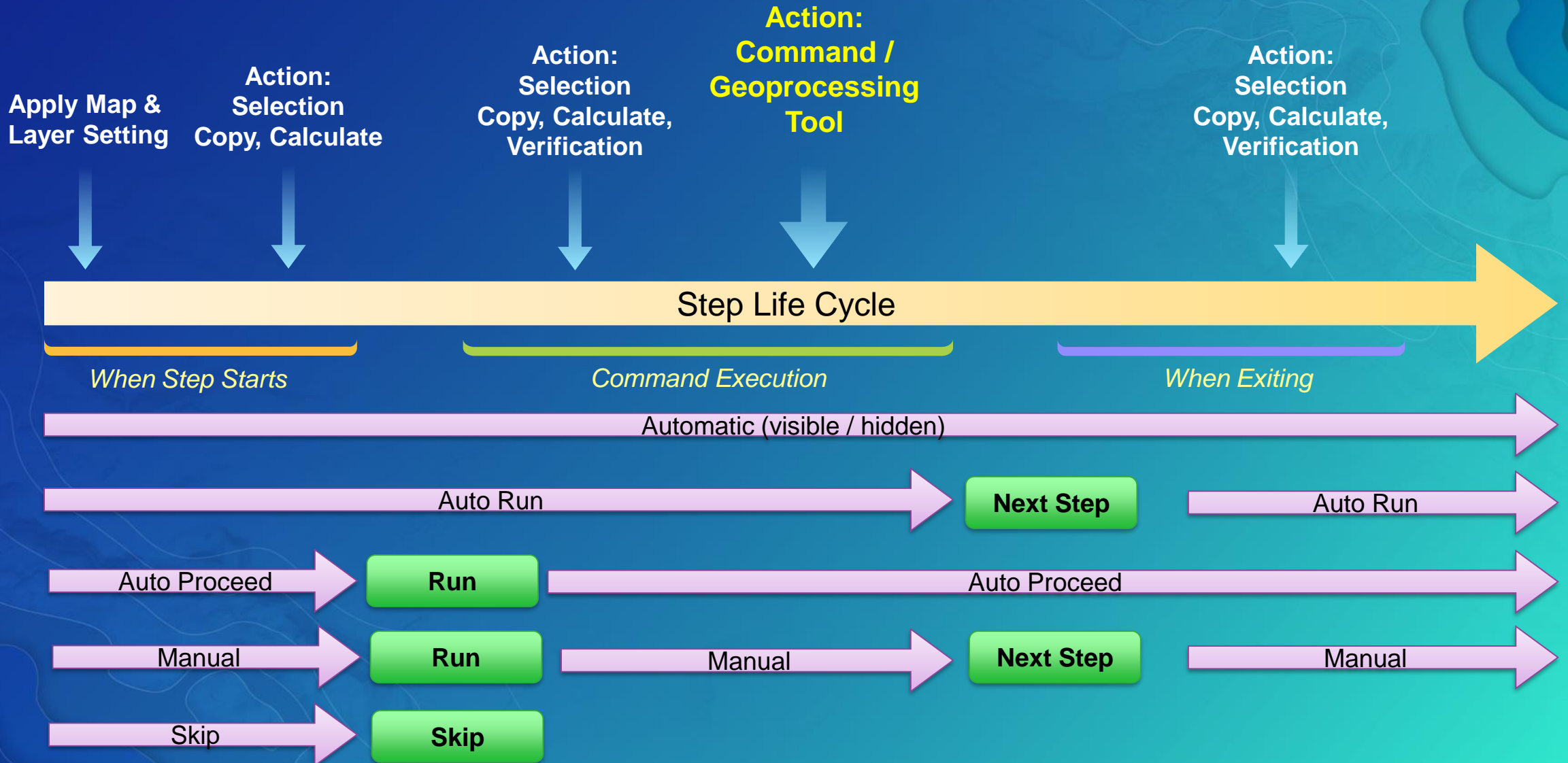
- Jason – please share your screen



Task Step



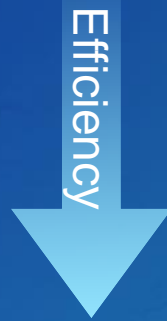
Step Life Cycle



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



Demo: Sharing a task & Task History

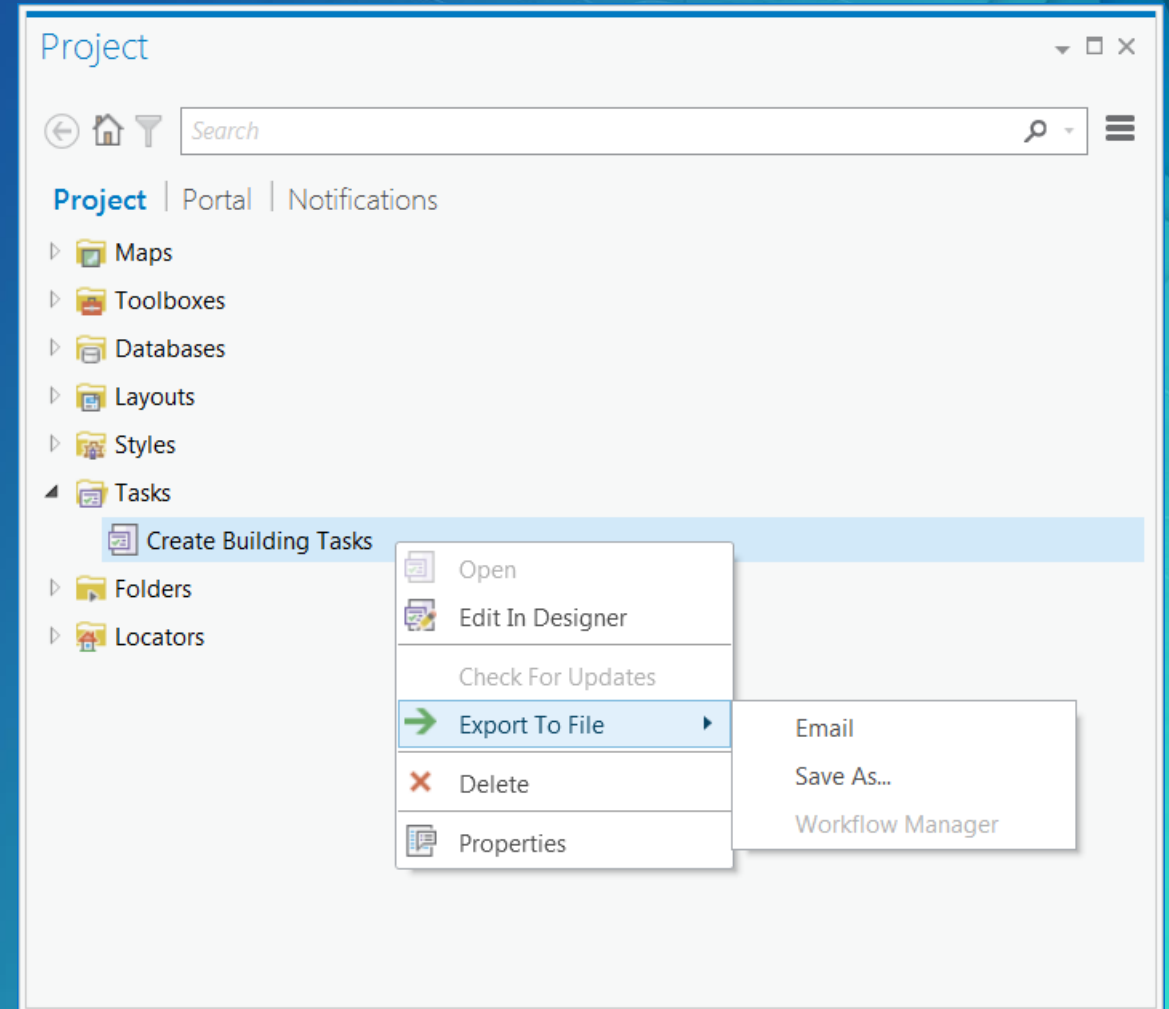


Sharing tasks

- Best method: as a project package

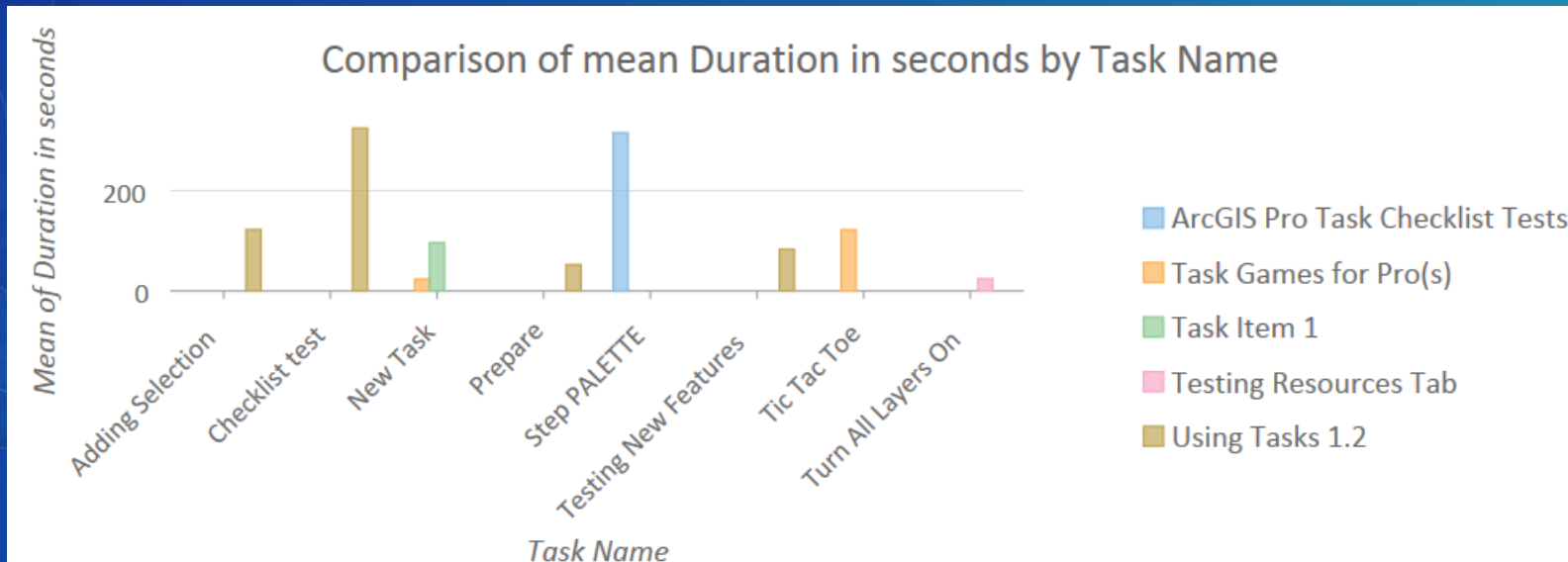
OR between projects:

- A task item can be shared via a task file
 - **.esritasks file**
- A task file can be imported into a project
- A task item is an AGOL item and can be shared via email



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
Duration in seconds

Aggregation
MEAN

Additional Series

None
 Series grouped from one field's values

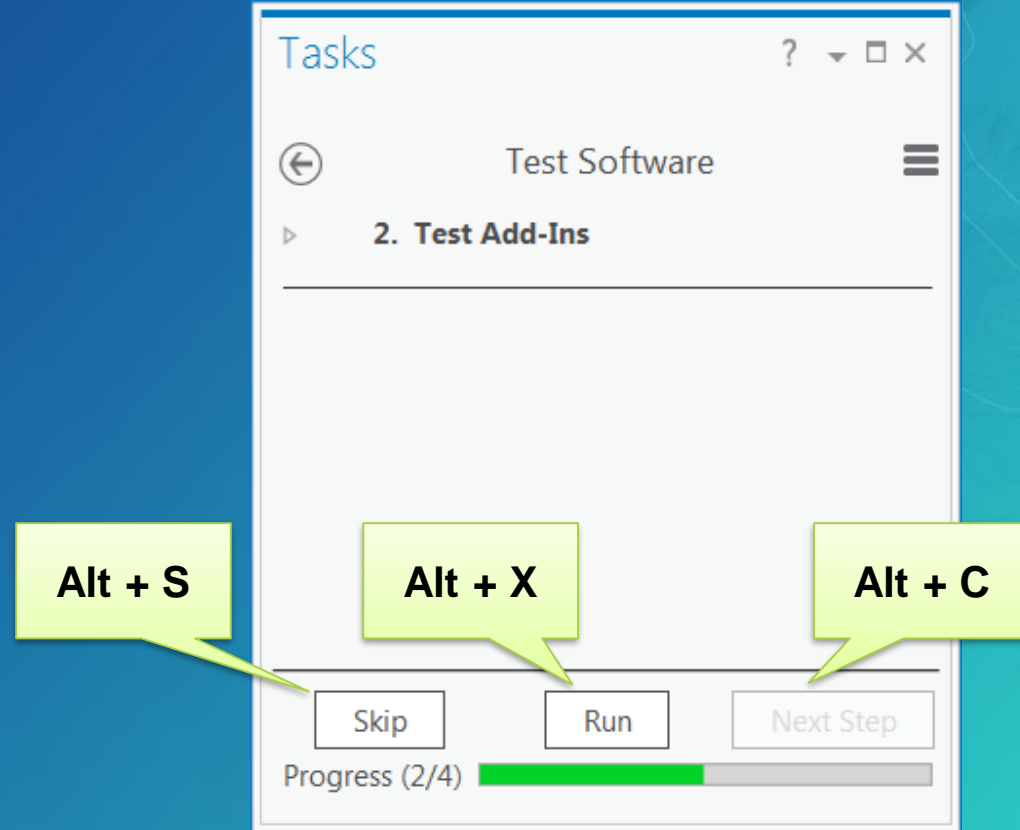
Category
Task Item Name

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

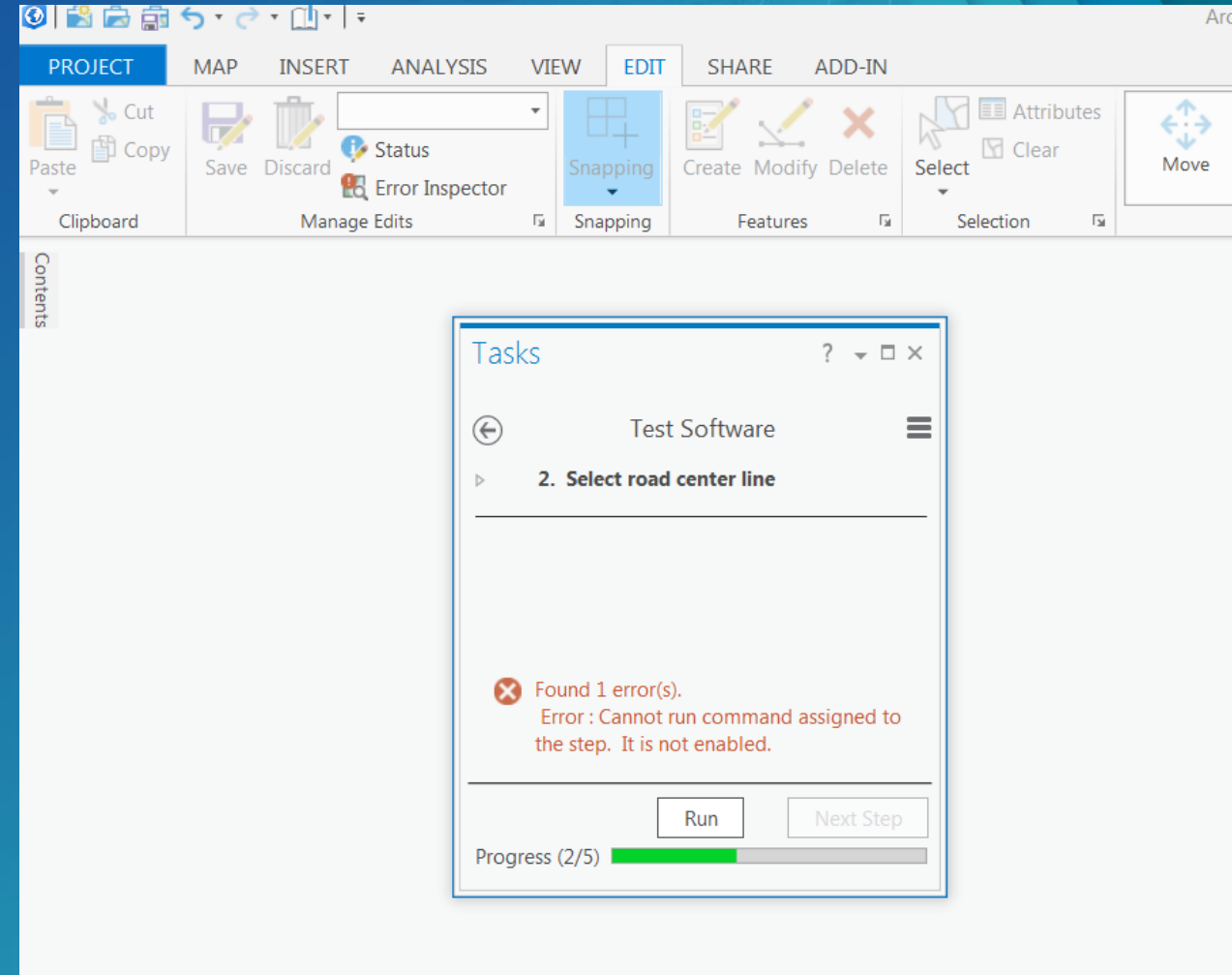
Tips & Tricks

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



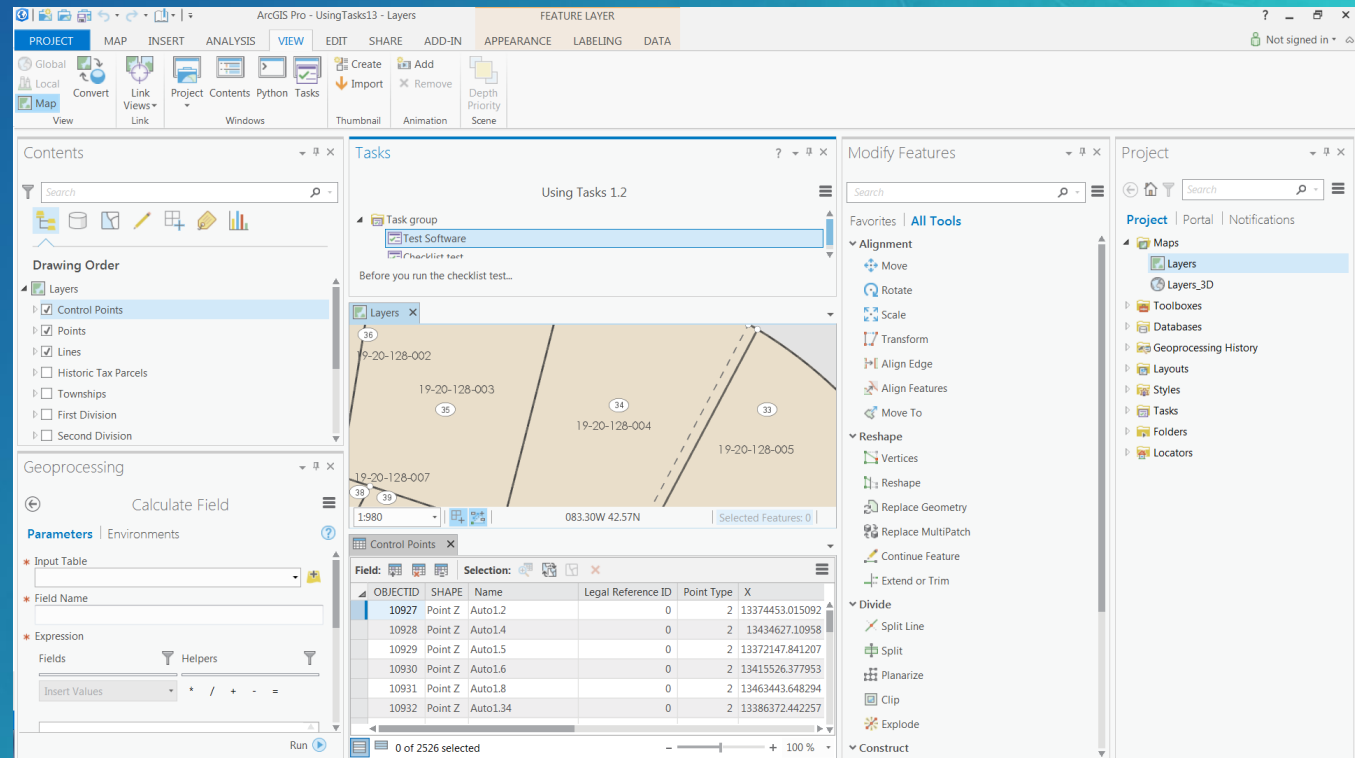
Tips & Tricks

- 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



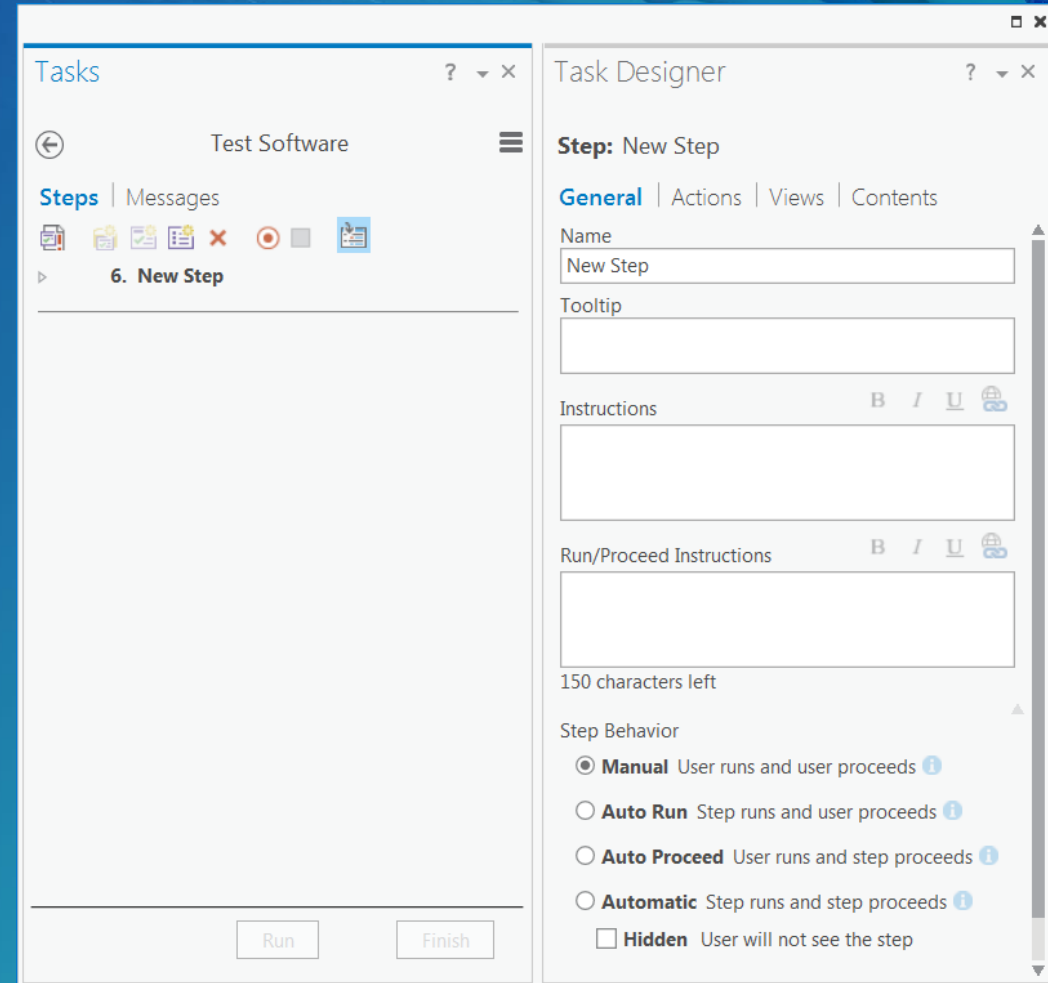
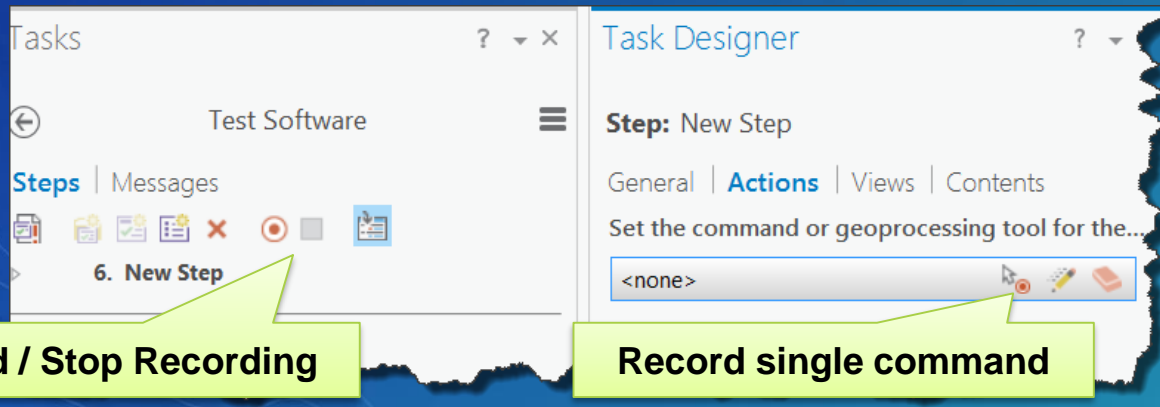
Tips & Tricks

- 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 navigation icons and a '6. New Step' label. The main area contains a table of layer states and a 'Current View' tooltip.

Layer	Icon 1	Icon 2	Icon 3	Icon 4	Icon 5	Icon 6
Control Points	✓	✗	✗	✗	✓	✗
Points	✓	✗	✗	✗	—	✗
Lines	✓	✗	✗	✗	—	✗
Historic Tax Parcels	✗	✗	✗	✗	—	✓
Townships	✗	✗	✗	✗	—	✓
First Division	✗	✗	✗	✗	—	✓
Second Division	✗	✗	✗	✗	—	✓
Tax Parcels	✓	✓	✓	✓	—	✓
Subs and Condos	✓	✗	✗	✗	—	✓
Lots and Units	✓	✗	✓	✗	—	✓
Encumbrances	✓	✗	✗	✗	—	✗

Reset

Snapping is On

Capture Layer Settings from

Previous Step Current View

Current View
Set the step contents states to match the current content states of the active map view.

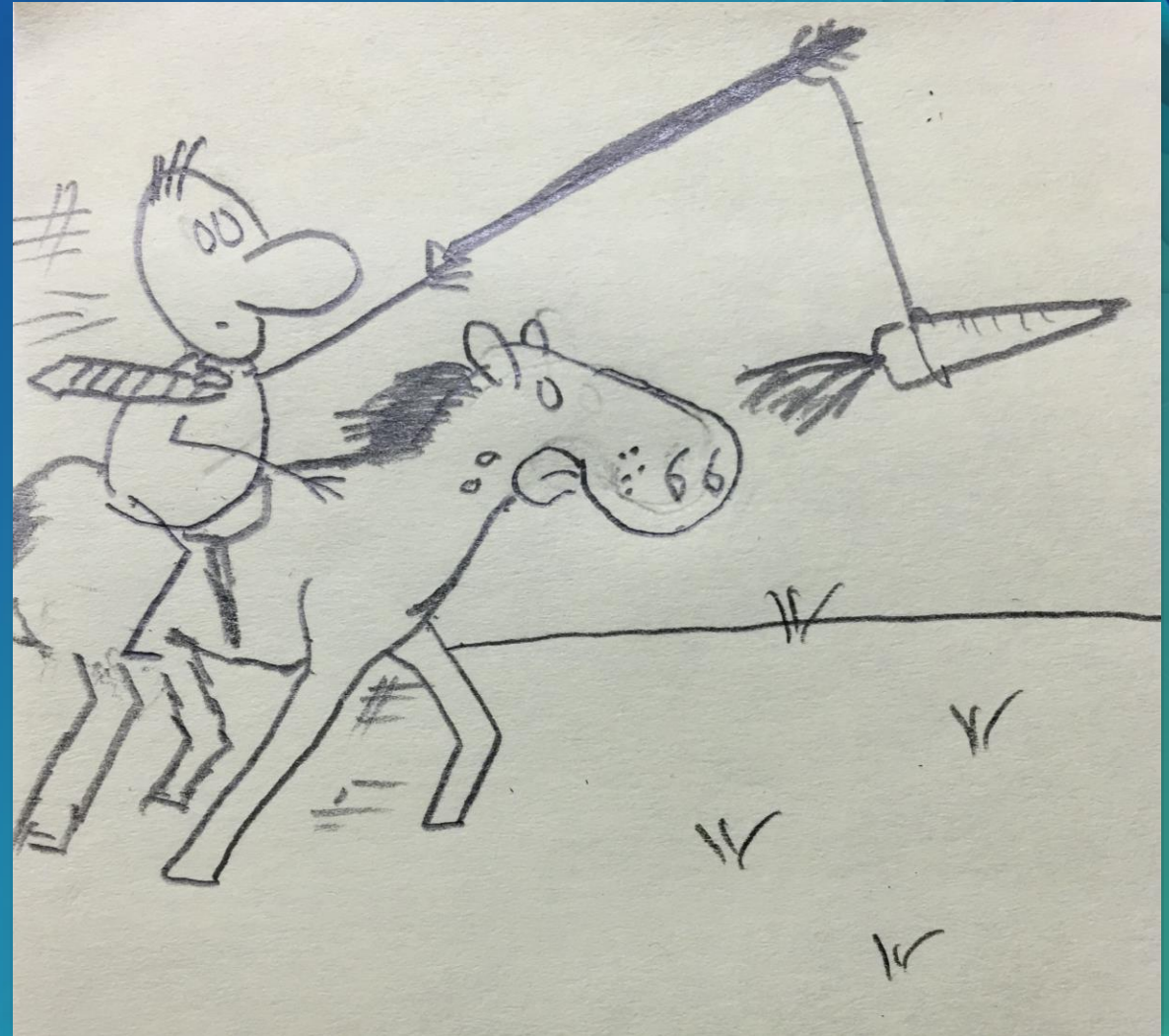
Capture View State

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



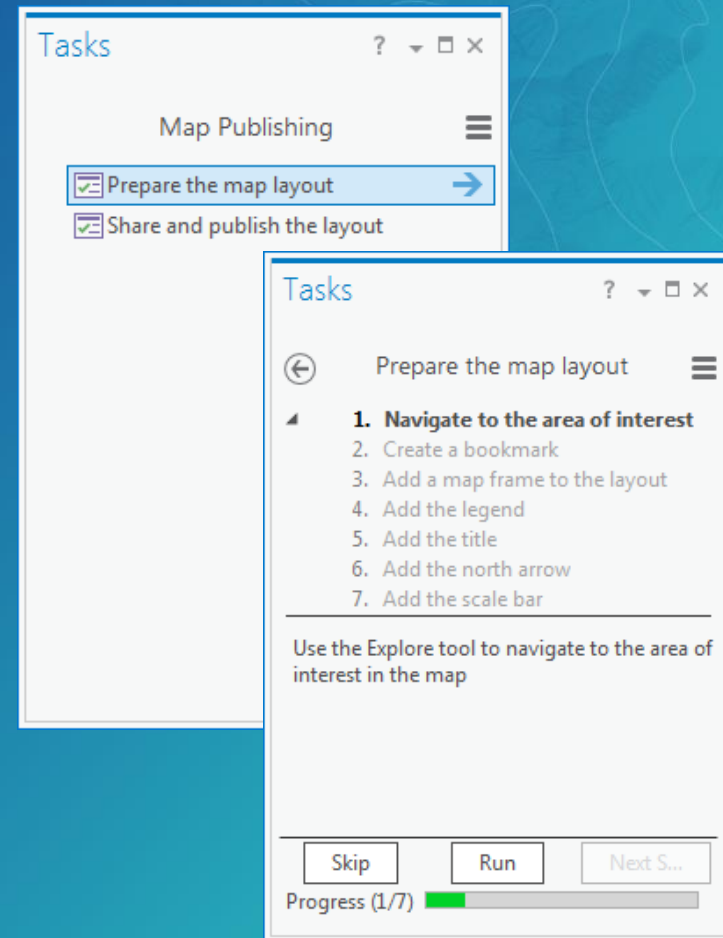
Quiz

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! ✓

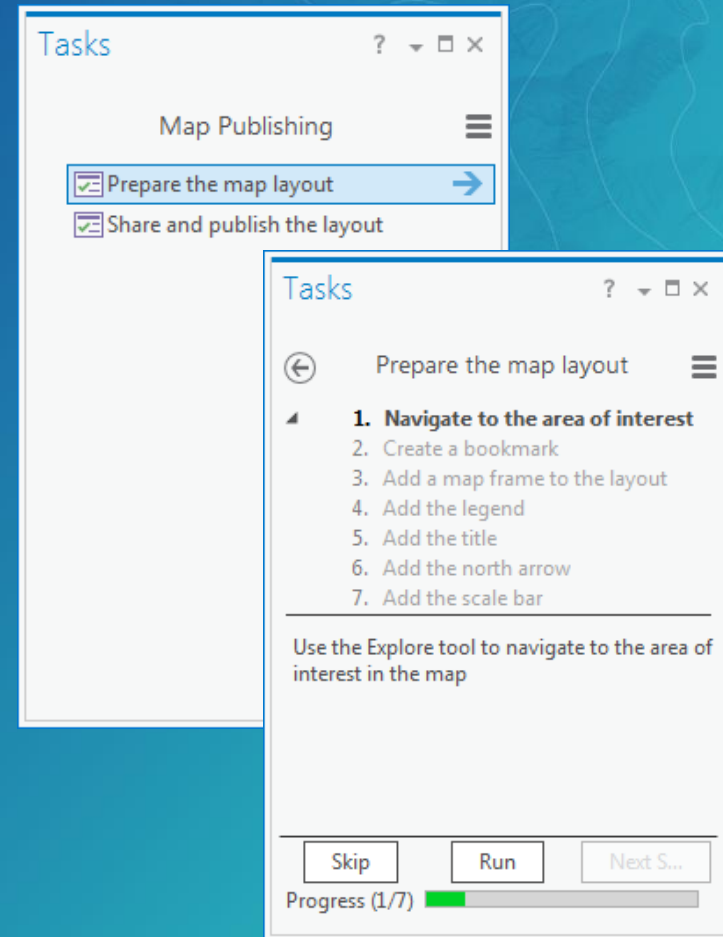
Summary - Tasks Improve Efficiency

- 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

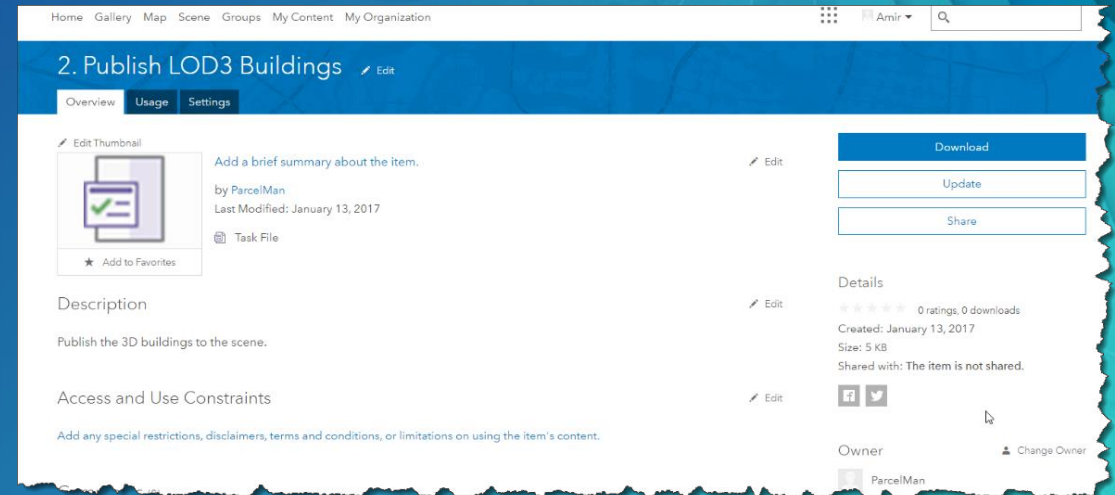


Tasks are interactive

Road Ahead

Customer driven

- As a task author I can share a local task item as an online item.
- Later I can update the online item →
- Notify users to update their local task item
- Online task item relies on permission user's level



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/arccgis-ideas>
- Visit us at the Geodata / SDK island:
 - Christine Leslie
 - Narelle Chedzey
 - Jason Camerano
 - Amir Bar-Maor



Technical Workshops

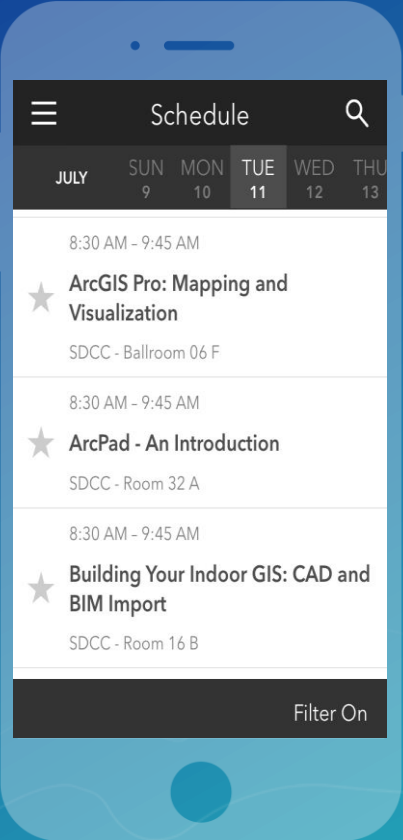
- ArcGIS Pro Tasks Tips and Tricks
 - Tue 7/11/2017, 11:00 AM - 11:30 AM, Tech Theater 17 Exhibit Hall A
- ArcGIS Pro Tasks: An Introduction
 - Tue 7/11/2017, 03:15 PM - 04:30 PM, Ballroom 06 B
- ArcGIS Pro Tasks: An Introduction
 - Wed 7/12/2017, 08:30 AM - 09:45 AM, Hilton - Sapphire Ballroom M/N
- ArcGIS Pro Tasks Tips and Tricks
 - Thu 7/13/2017, 11:00 AM - 11:30 AM, Tech Theater 17 Exhibit Hall A

Please Take Our Survey on the Esri Events App!

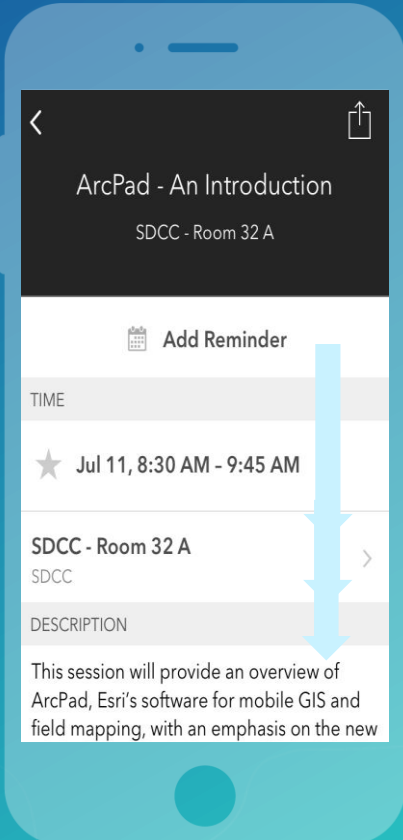
Download the Esri Events app and find your event



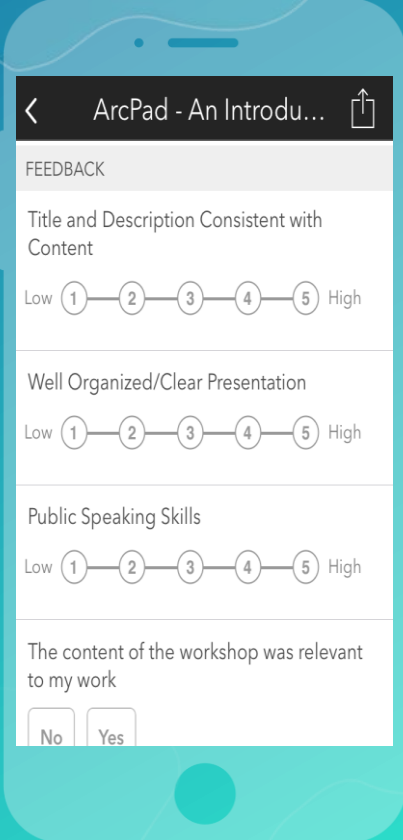
Select the session you attended



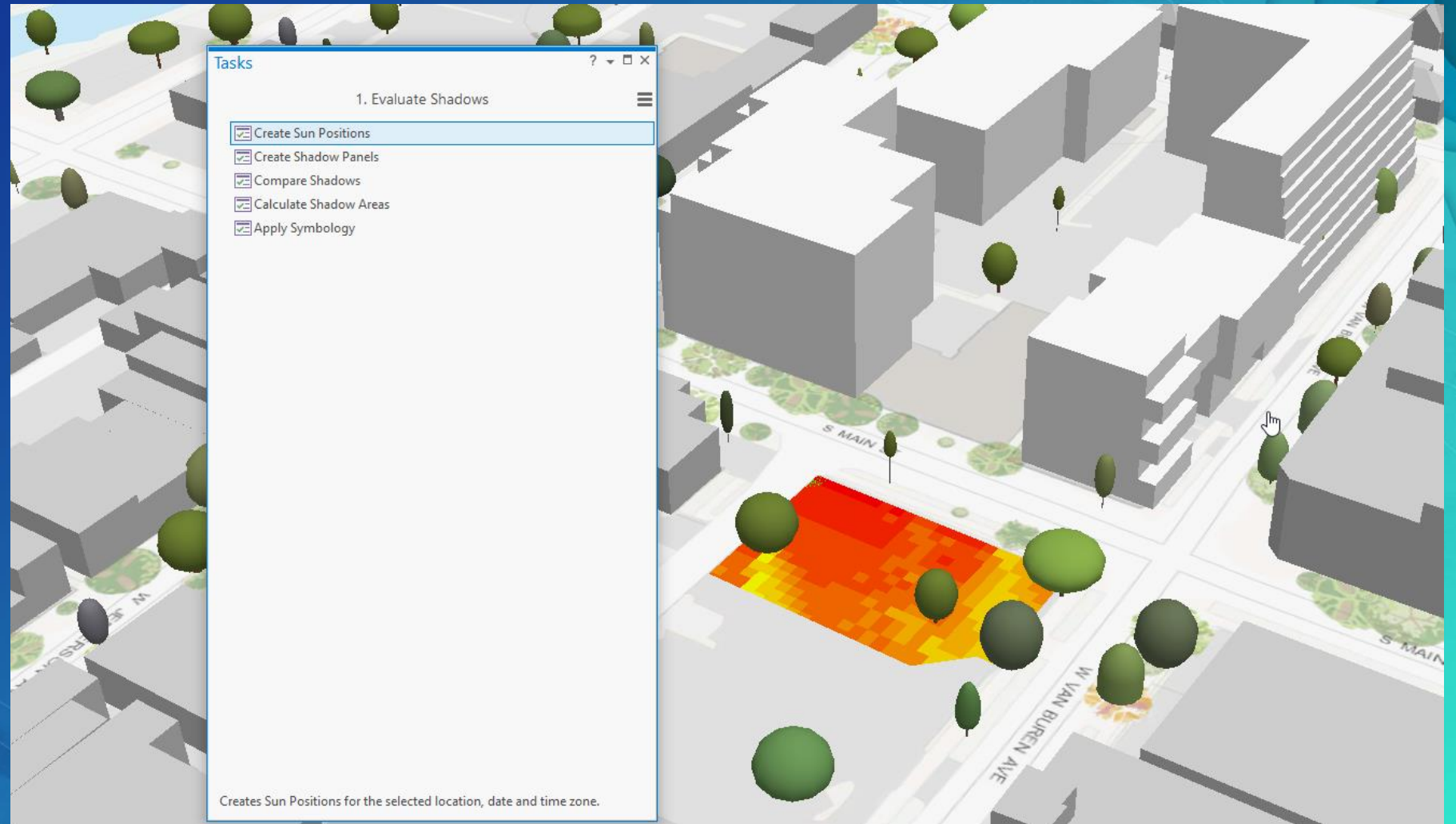
Scroll down to find the survey



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

 esri

250 Meters

SanGIS Bureau of Land Management, Esri, HERE, Garmin, Intermap, USGS, NGA, EPA, USDA, NPS

UNCLASSIFIED

Area Features	Ice	Obstructio Hazard	Building	Water Inundation	Line Features	Right Flank	Cliff	Ditch	Fence	Point Features
TYPE	Reef	Rock Outcrop	Dense Vegetation	Trees	TYPE	Left Flank	Wall	Pipeline	Road/Track	TYPE
Structure					Obstructio Hazard					Obstructio...

Use of Tasks for Indoor Routing Workflows

The image displays a software interface for indoor routing workflows. On the left, a 'Tasks' window titled 'Run Script tool' is open, showing a task named '1. Thin Network Lattices'. The window contains several parameter sections:

- Parameters | Environments**
- 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

At the bottom of the window are 'Run' and 'Finish' buttons, and a progress indicator showing 'Progress (1/1)'. The right side of the image shows a 3D perspective view of a building model with a complex network of black lines overlaid on its floor surfaces, representing the routing network. The building has several rooms and corridors, with some areas highlighted in purple. The interface also shows a status bar at the bottom with coordinates (117.1947867°W 34.0567979°N) and a distance of 16,984 ft.

Use of Tasks for Zoning Design Workflows

