

UC



From CAD Drawings to Campus Routing Apps: Taking GIS Indoors

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Agenda

- 3D Indoor Routing App (Demo)
- ArcGIS & Indoor Mapping
- Content Creation
 - CAD to GIS
 - Symbology & Styling
 - Indoor Transportation Networks
 - Publishing
- Deploying Apps
 - 3D Web App (JavaScript 4.4 API)
 - 2D Mobile App (iOS Xamarin & .NET)

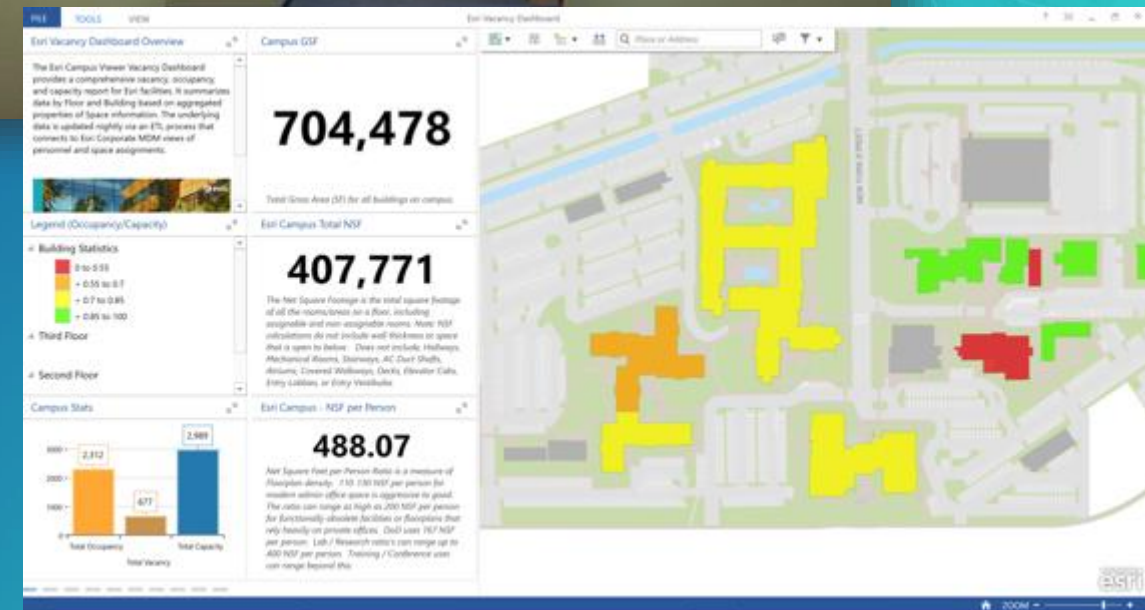
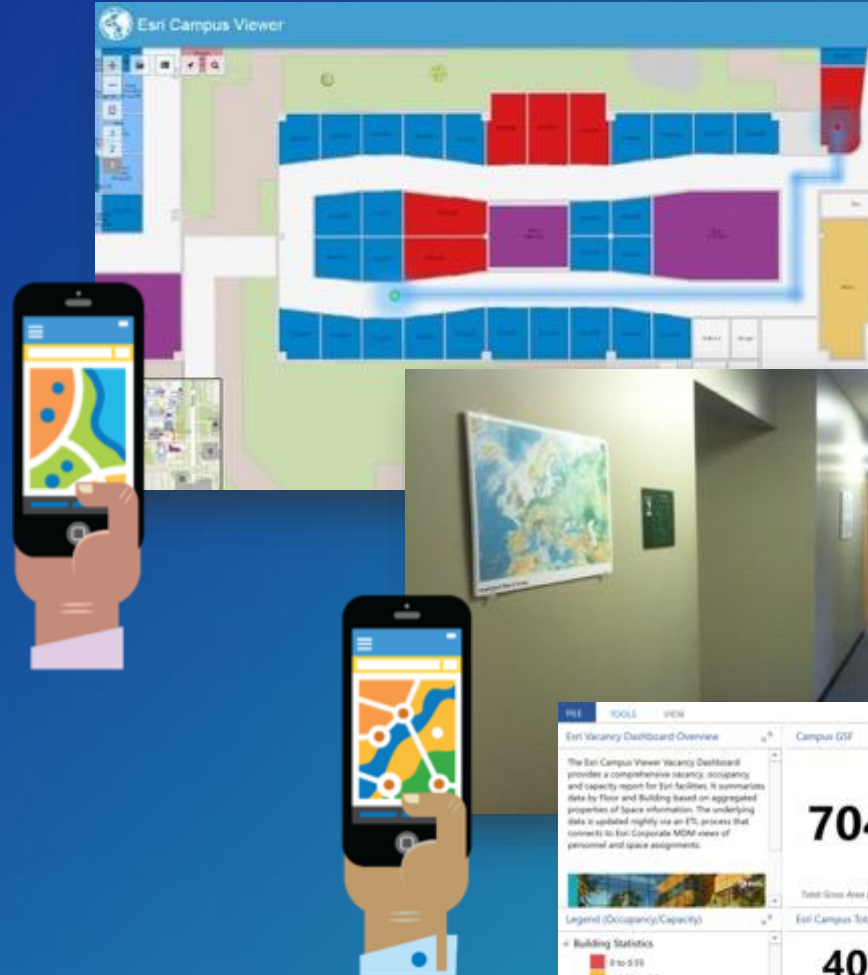


3D Indoor Routing Web App

JavaScript 4.4

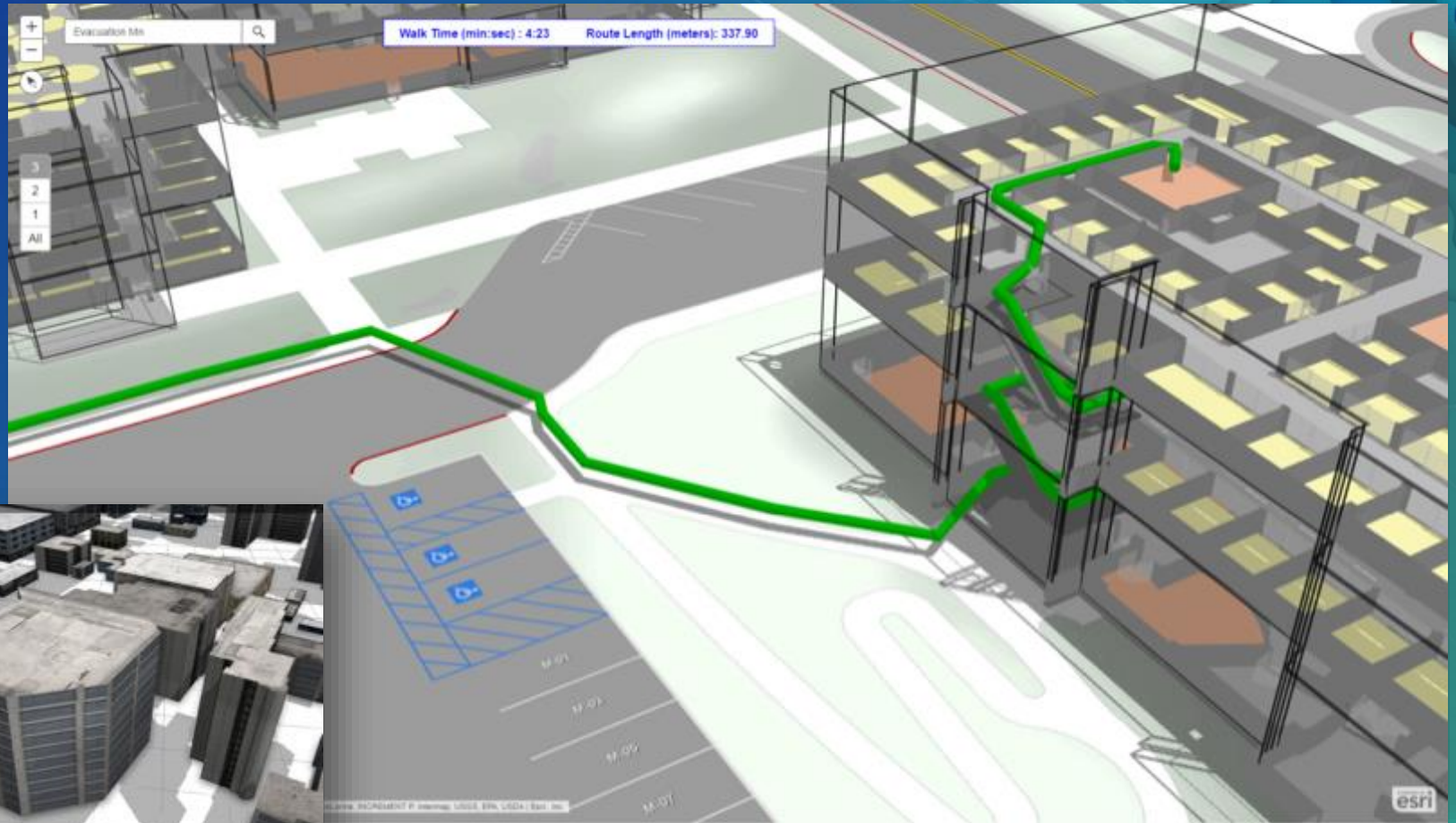
Why Indoors?

- Owner/Operator
 - Planning
 - Operations
 - Staffing
 - Safety/Security
- Guests
 - Students
 - Customers
 - Shoppers



Foundational Data

- Foundational Layers
 - Basemaps
 - Building floorplans
 - Outdoor spaces
 - Utilities
 - Transportation
- 3D
 - Facades
 - Vertical places
 - Trees



Content Creation

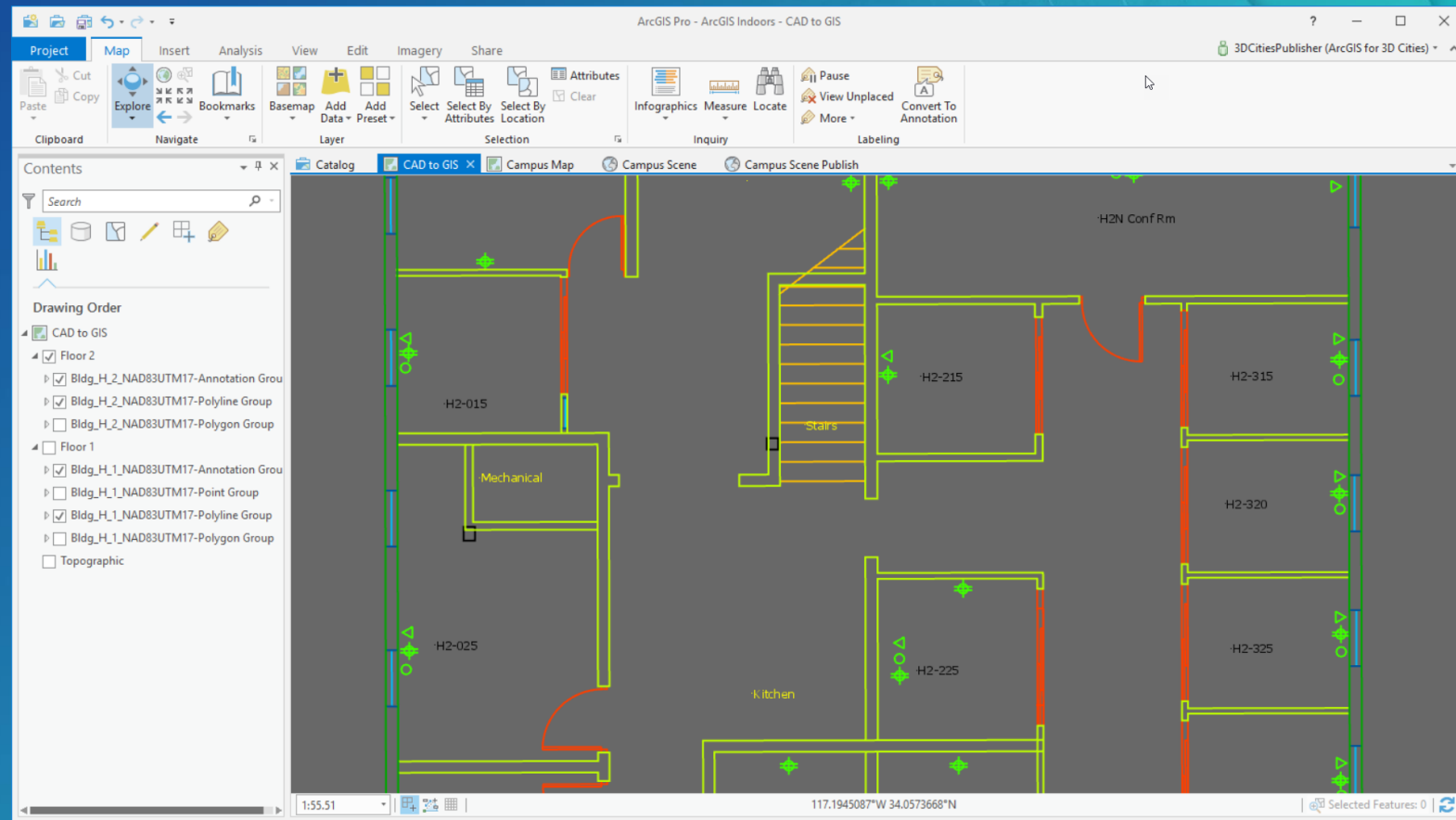
Foundational Campus Layers



CAD to GIS

Content Creation

- Need to start with good CAD
- Full spectrum of solutions
- BIM also a story
- Walls are coming down
 - Pro helps

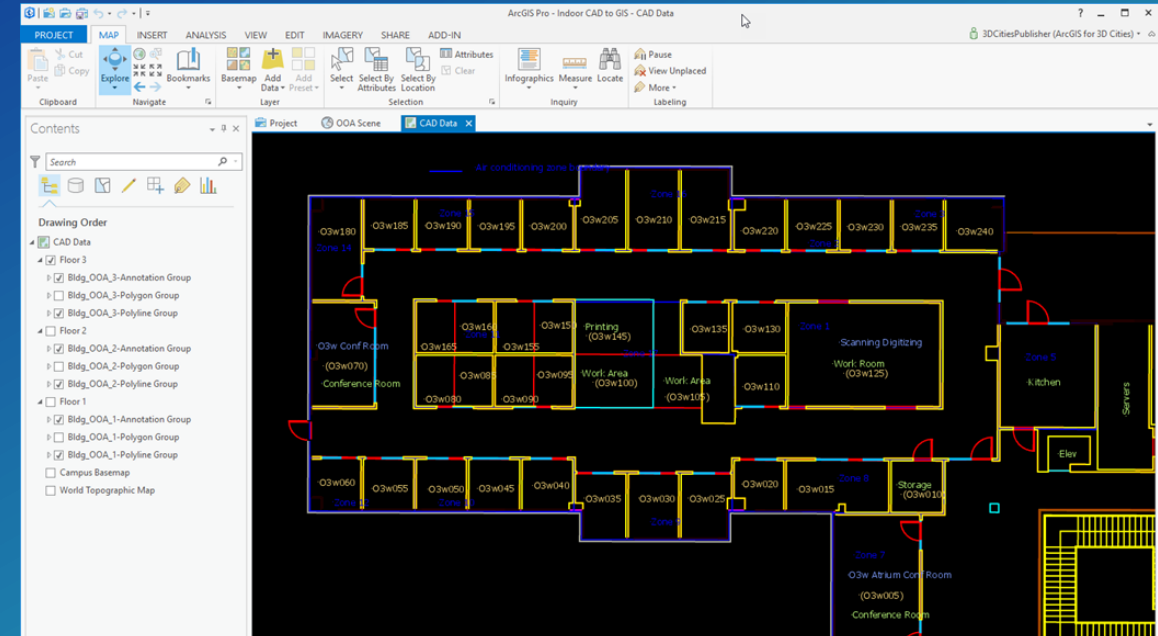


ArcGIS Indoors – CAD and BIM

How can we address some of the traditional problems?

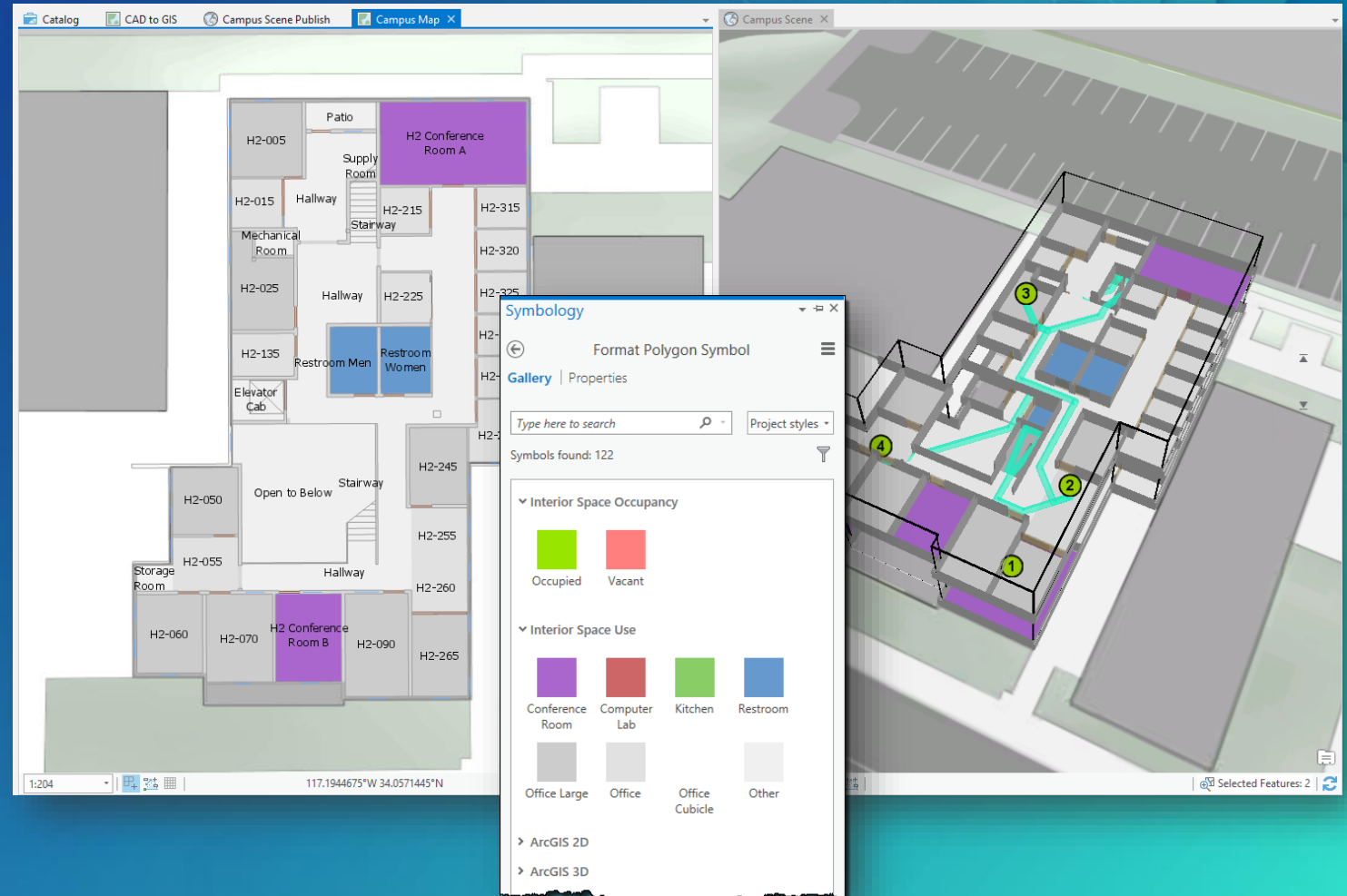
- Attribution
- 3D
- Poor quality CAD
- Inconsistent drawings
- Those annoying swinging doors

What about BIM?



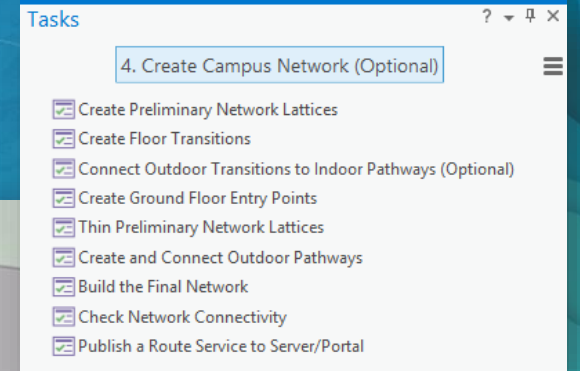
Symbology & Styling

- ArcGIS Pro Project
 - Interior space styles
 - Façade wireframe RPK
- 2D and 3D floorplans
- Provided sample data
 - Esri Campus Building H

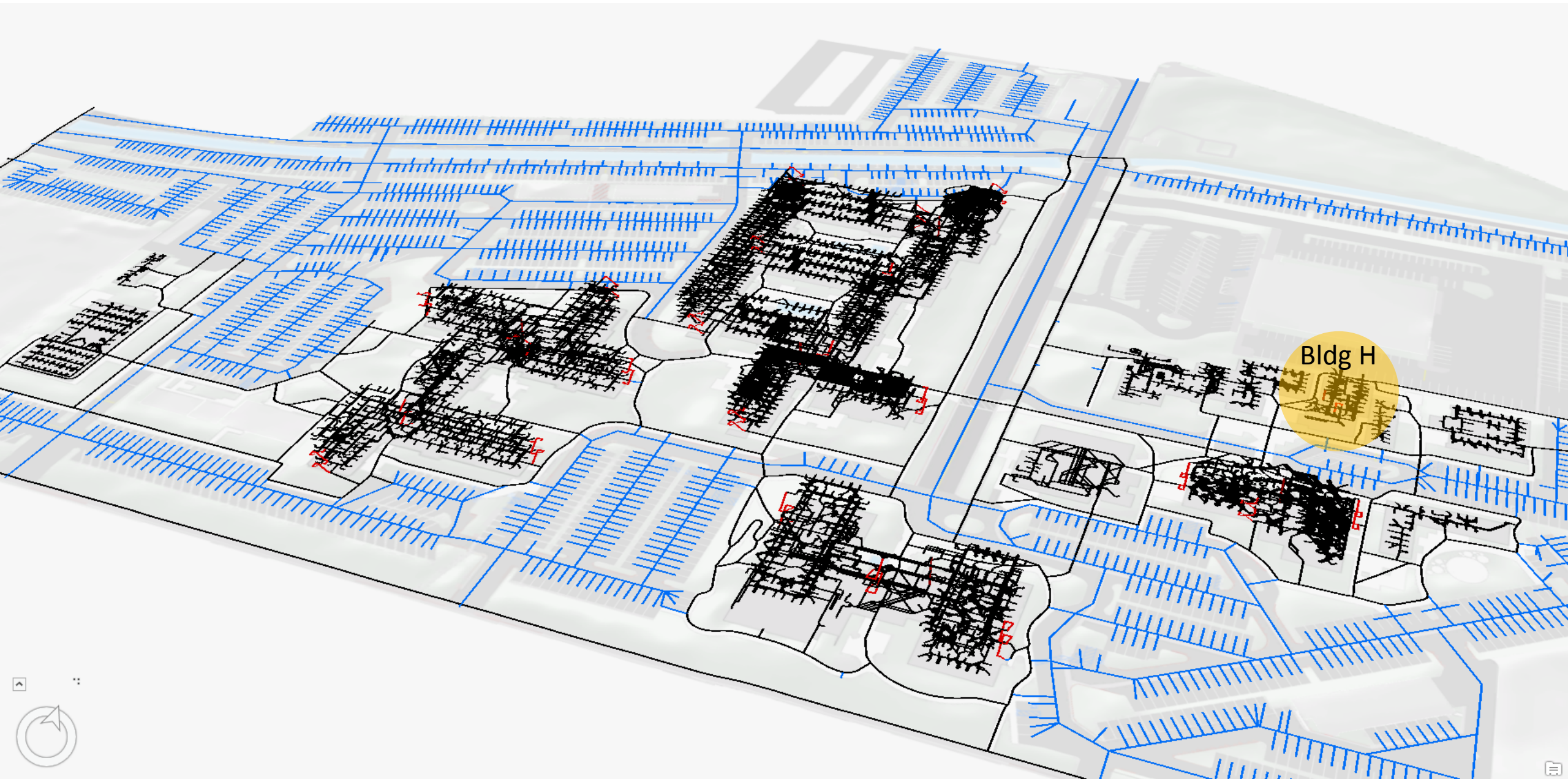


Indoor Transportation Networks

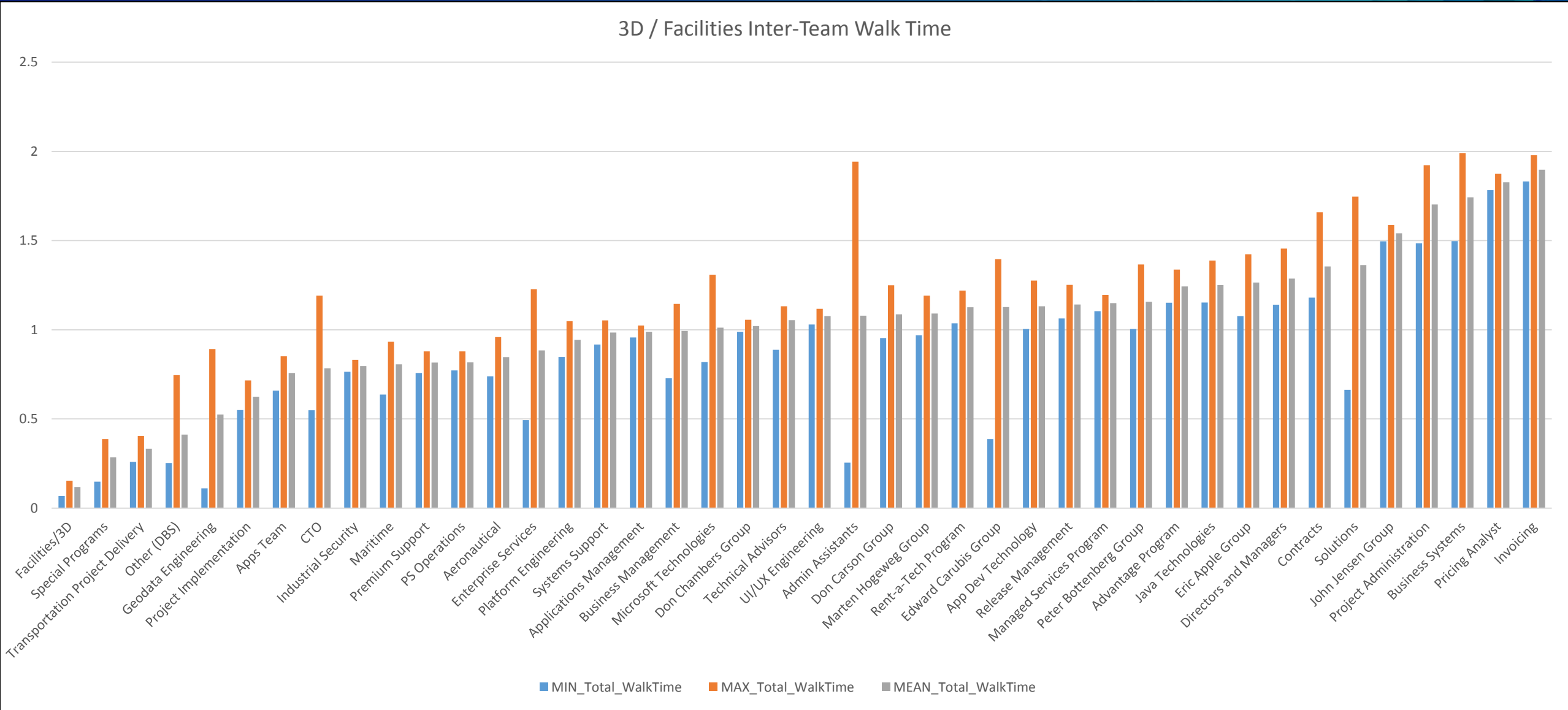
- Lattice-based indoor network
 - Pathways (hallway centerlines)
 - Transitions (stairs, elevators)
- Semi-automated creation
- Inputs:
 - Building (poly)
 - Floor (poly)
 - Space (poly)
 - Space (point)
 - Floorplan Lines (line)



Full Esri Redlands Campus Network

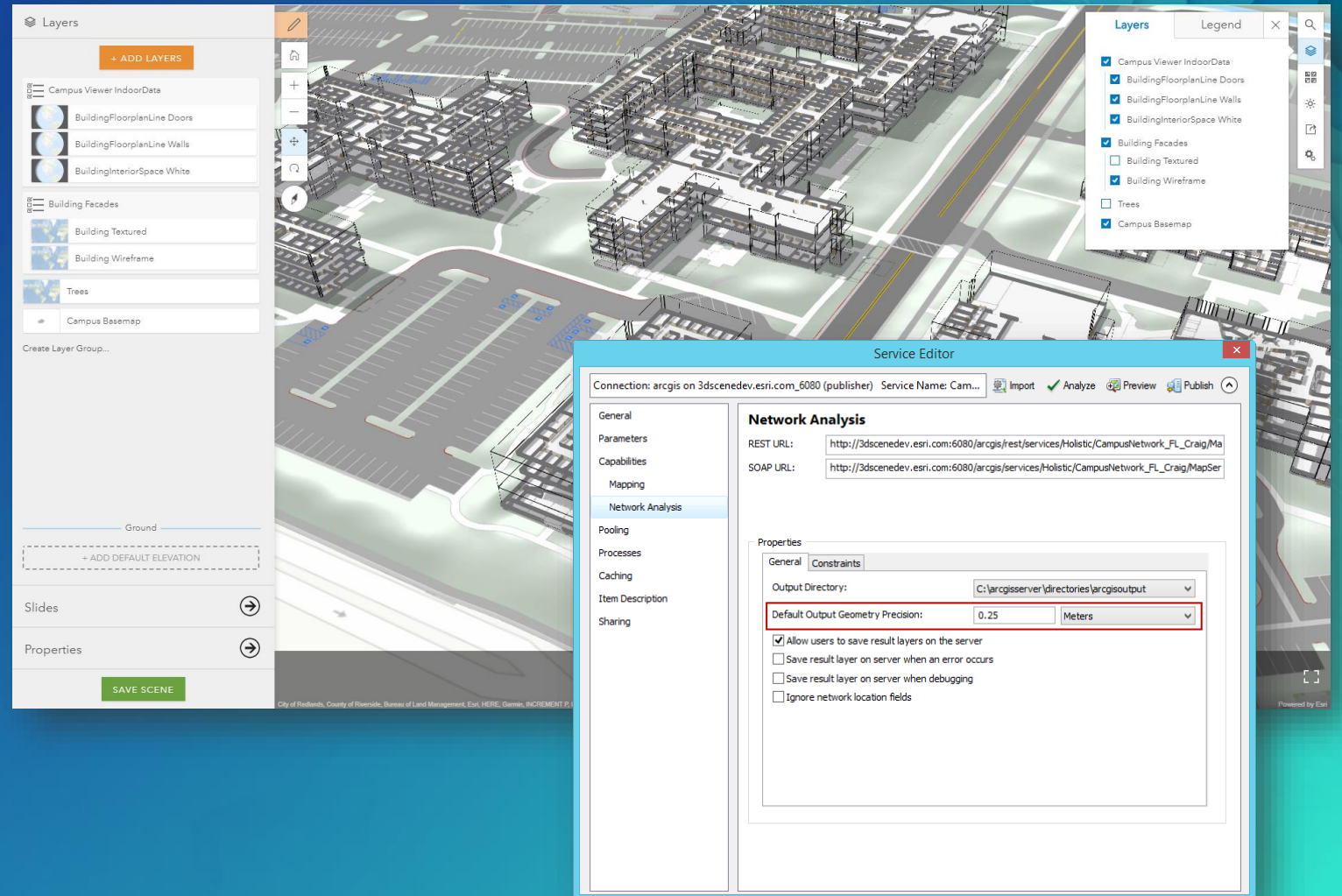


OD Cost Matrix – Esri Team Fragmentation



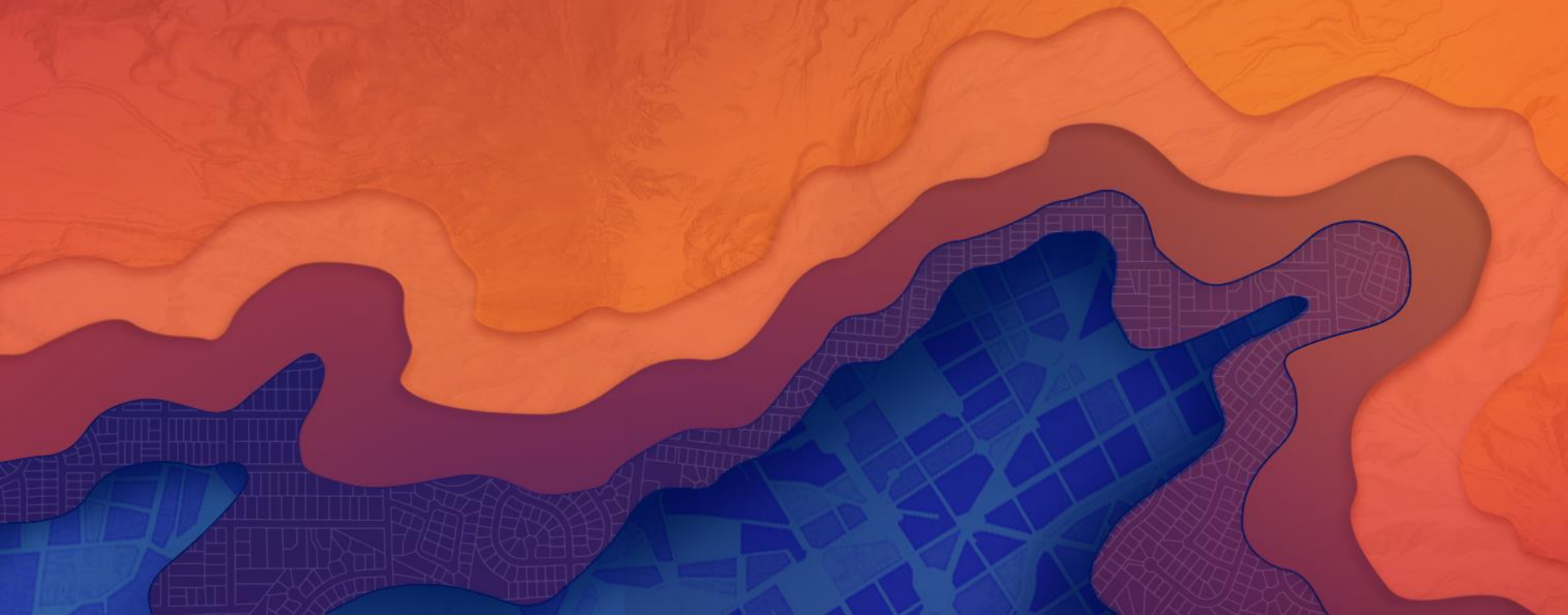
Publishing

- Publish Campus Services
 - Indoor 3D layers
 - Spaces, walls, doors
 - Façade 3D layers
 - Textured, wireframe
 - Locator point layers
 - Spaces, people
 - Symbology poly layers
 - Space use, occupancy
 - Route service
- Configure Web Scene



Deploying Apps

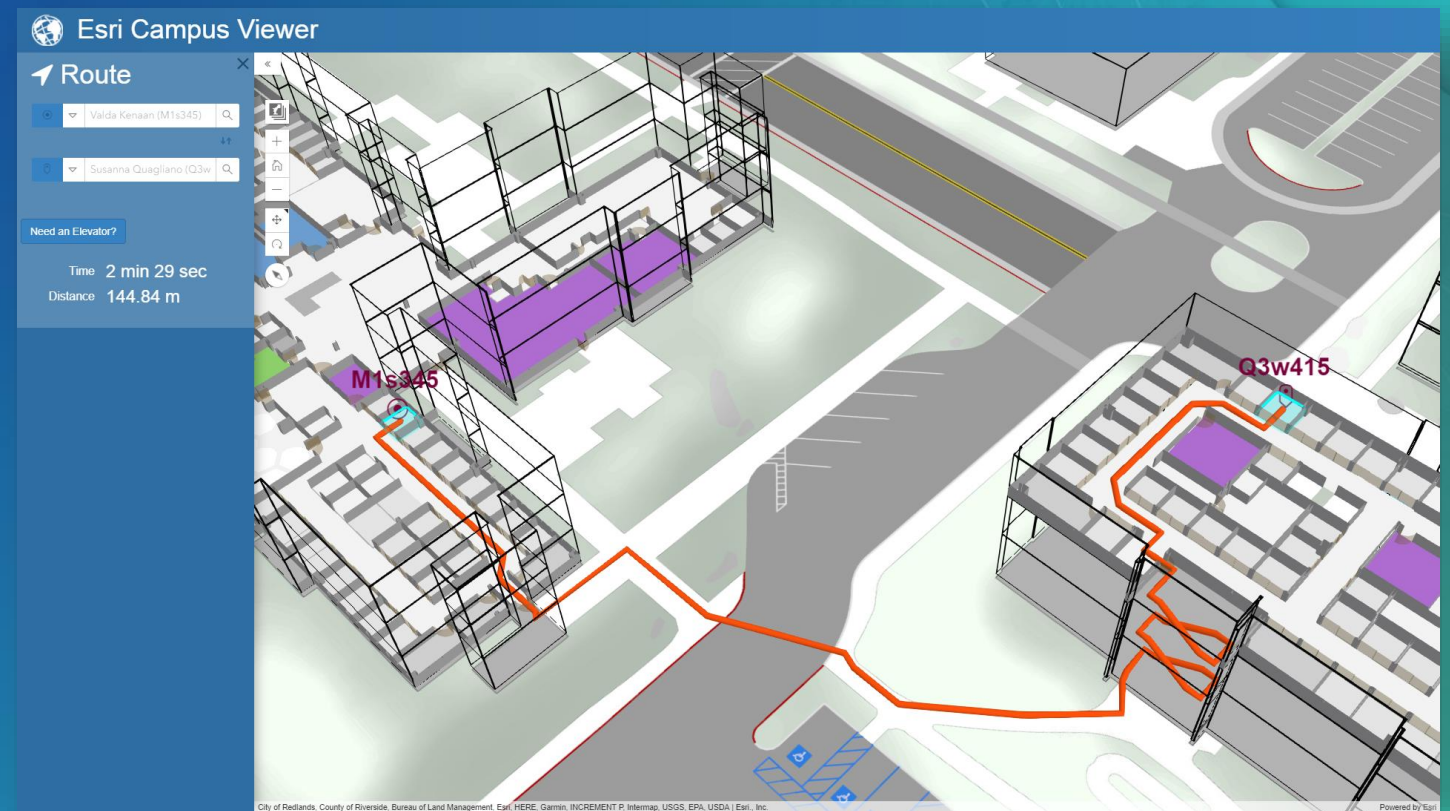
3D Web and 2D Mobile



3D Web Routing App

JavaScript 4.4 API

- 3D web app using the latest JavaScript 4.4 API
 - Incorporates scene layer filtering
- Works as a *Finder* or *Router*
- Customizable
- Configure Web Services





Esri UC 2017 3D Web App

Locations + Schedules



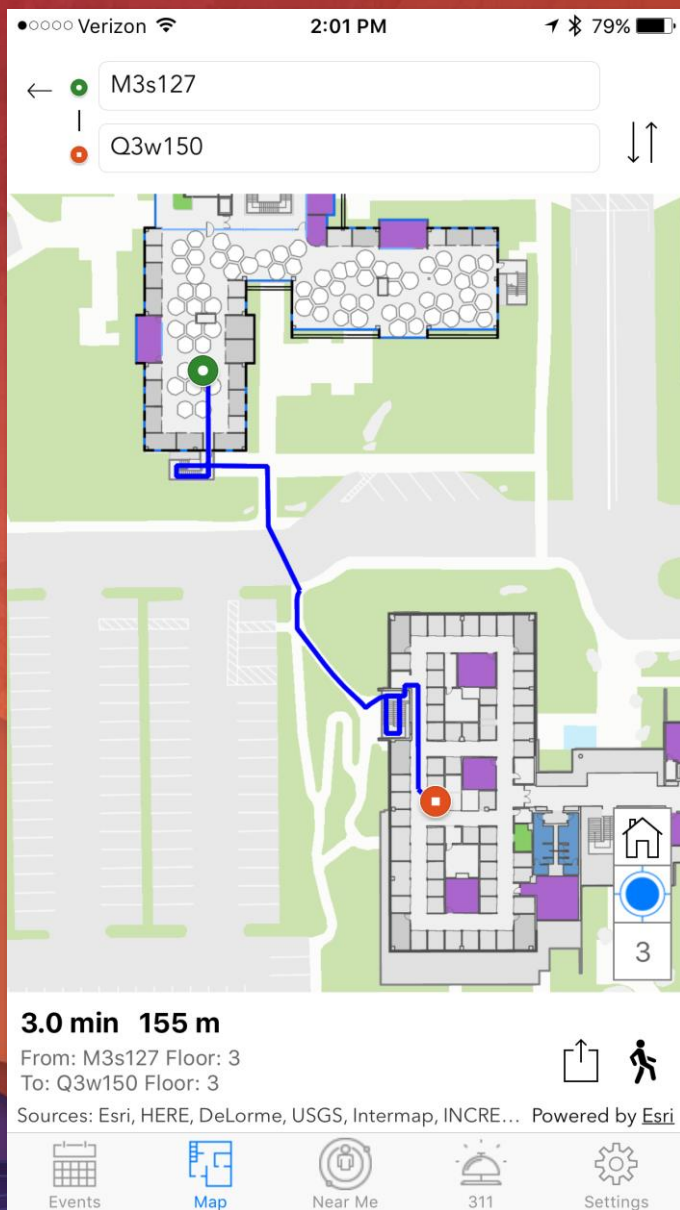
Indoor Routing iOS App

Built with Xamarin & .NET
Runtime SDK 100.1

2D Mobile Routing App

Xamarin iOS

- Configurable
- Open Source
- Same data as 3D app
- Example apps: <https://developers.arcgis.com/example-apps/>



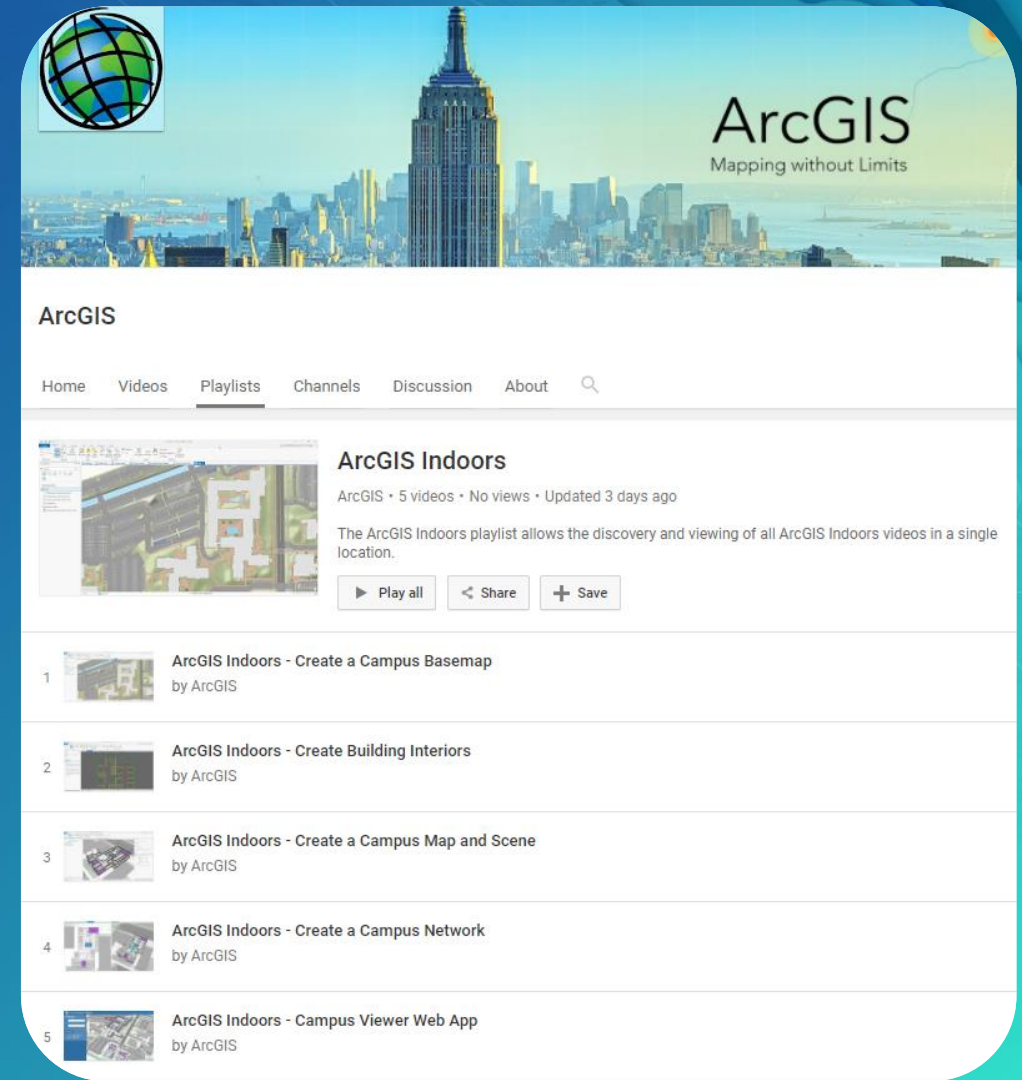
Companion App Preview

Built with Runtime SDK 100.1 for iOS

Resources

ArcGIS Indoors

- Download the ArcGIS Indoors Tech Preview
bit.ly/indoors2017uc
- Download the Xamarin Indoor Routing App
<https://github.com/Esri/indoor-routing-xamarin>
- ArcGIS Indoors YouTube Playlist ➡
- Stop by and see us at the 3D Island!



Upcoming Facilities / Indoor GIS Sessions @ UC

Facilities and Indoor GIS Demo Theater Presentations

Wednesday, July 12

11:30 – 12:15 PM	Facilities + Indoor GIS: Envisioning	SDCC, Esri Showcase: Envisioning Center 2
4:30 – 5:15 PM	BIM and GIS: An Introduction	SDCC, Demo Theater 13 – 3D GIS

Thursday, July 13

9:30 – 10:15 AM	3D Enable Your Campus and Workplace	SDCC, Demo Theater 13 – 3D GIS
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Moderated Paper Presentations

Thursday, July 13

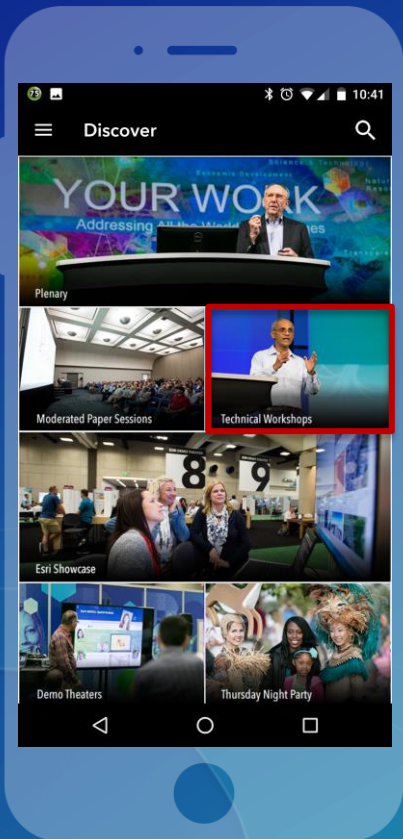
8:30 – 9:45 AM	Experimenting with Advanced Technology for Facilities Management	SDCC, Room 30 B
10:15 – 11:30 AM	Universities Leveraging GIS for Facilities Management	SDCC, Room 30 B
1:30 – 2:45 PM	Managing Your Facility's Customer Experience with GIS	SDCC, Room 30 B
3:15 – 4:30 PM	Enterprise Facility Management with GIS	SDCC, Room 30 B
3:15 – 4:30 PM	Interior Spaces and Facility Management	SDCC, Room 26 A

The background features a complex, abstract design. It consists of several layers of wavy, organic shapes in various shades of blue and teal, creating a sense of depth and movement. In the center, there is a large, textured area that resembles crumpled paper or a topographical map, with fine lines and ridges. The overall color palette is cool and monochromatic, with the word 'Questions' standing out in white.

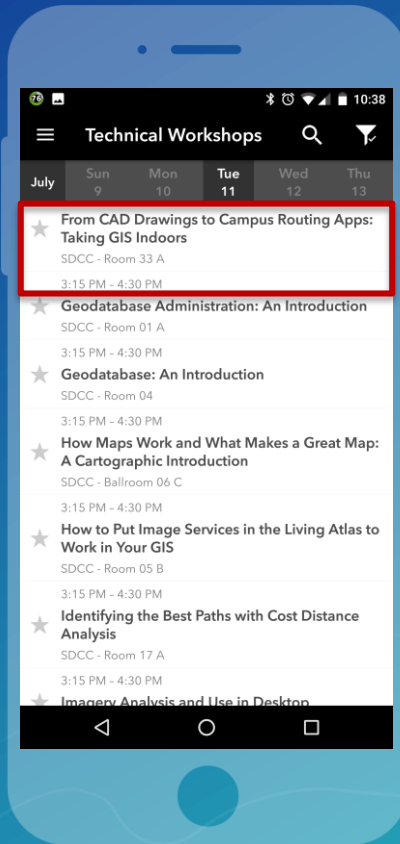
Questions

Please Take Our Survey on the Esri Events App!

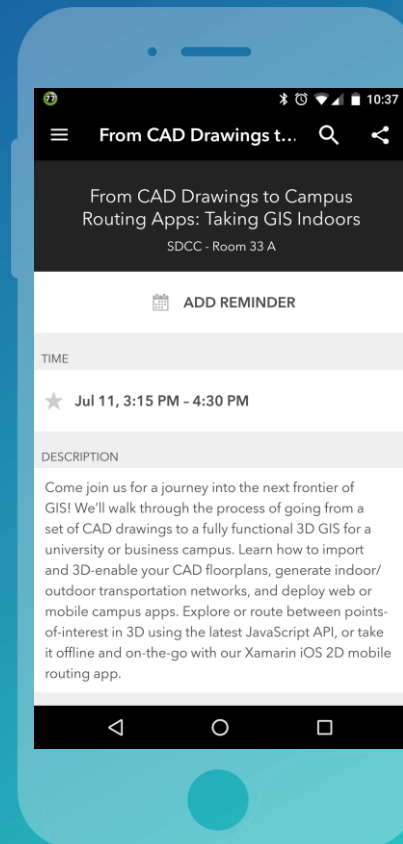
Download the Esri Events app and find your event



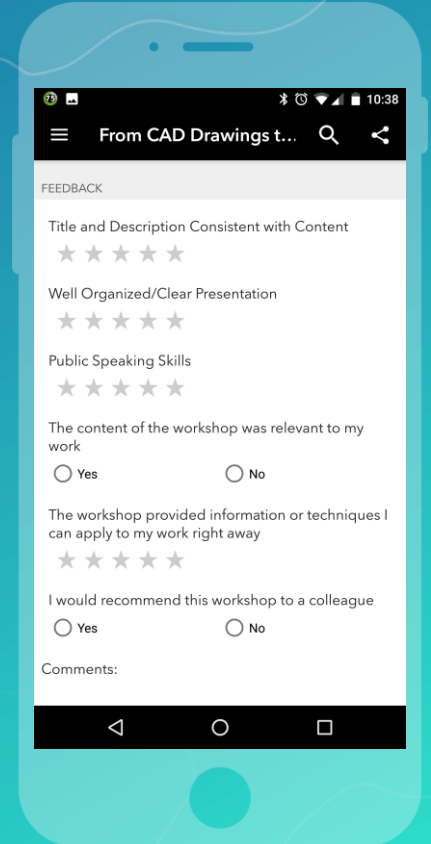
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"





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