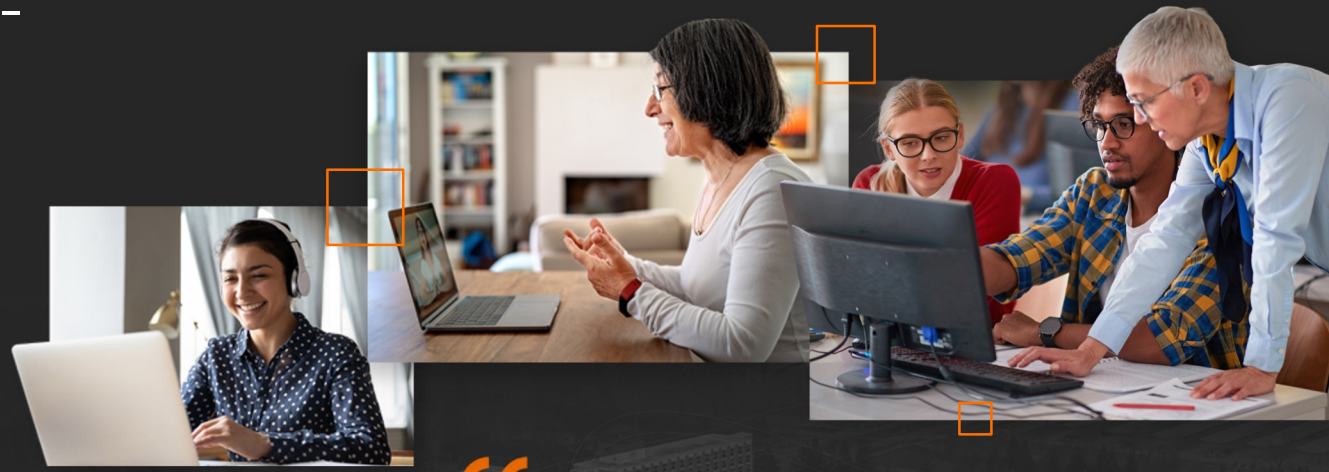
# Configuring Solutions: Building information and decision-making tools

Justin Anderson – Esri
Brian Baldwin – Esri
Keith Weber – Idaho State University
Michael Ferris – Cal State Dominguez Hills



> The willingness to experiment with innovative approaches to GIS has yielded benefits for numerous field-based teaching and research activities across the university.
>
> – *Peter Knoop | University of Michigan*

**CAMPUS OPERATIONS WEBINAR SERIES – Session #2**

Advancing GIS & *The Science of Where*

Engineering and Science Focused

# esri SERVING OUR USERS

Strong and Growing

*…Working Together to Make a Difference*

# Webinar Housekeeping

- Please enter your questions in the chat box
- Microphones will be muted
- Q&A session at the conclusion of the webinar
- Webinar & slides will be available
- Survey following the webinar

# Welcome to the 'Campus Operations' webinar series!

- **From CAD to GIS:** The value of spatially enabling utility and facility information
  - (March 18th at 1pm EST)
- **Configuring Solutions:** Building information and decision-making tools
  - (April 8th at 1pm EST)
- **Smart Campus Operations:** Integrating GIS with facility, work, and space management systems
  - (April 29th at 1pm EST)

# Your Geospatial Journey

***Success can be realized at any phase!***

## Phase 1

**CAD to GIS**

## Phase 2

**GIS format**

- Central location
- Authoritative
- Spatial views
- Standards
- Attributes
- Feature links

## Phase 3

**Configurable apps**

- Explore Data
- Data editing
- Data collection
- Mobile tools
- Mobile viewing
- Dashboards
- StoryMaps
- Map Galleries

## Phase 4

**Indoor Mapping**

- Navigation
- Wayfinding
- Tracing
- Indoor positioning
- Mobile tools
- Mobile viewing
- Dashboards
- Work management
- Asset management
- Space management
- 3rd party integrations

**Utility Networks**

# Configuring Solutions: Outline

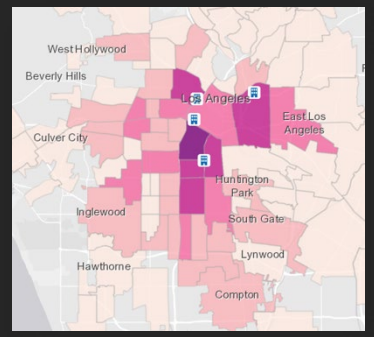
- Brian Baldwin – Configuring Applications
- Keith Weber – Idaho State Univ
- Michael Ferris – Cal State Dom Hills
- Esri Resources
- Q & A

# Configuring Applications

Brian Baldwin

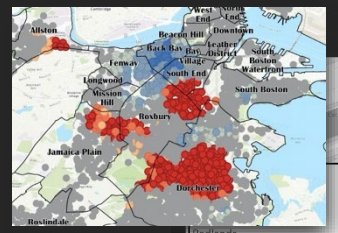
# GIS today

## Racial and Ethnic Disparities



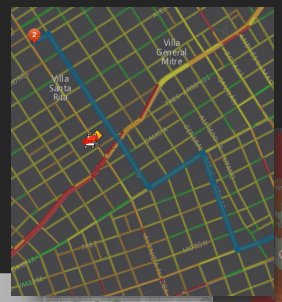

USC
California

## Hot Spot Patterns




Northeastern University
Boston, Massachusetts

## Emergency Routing




## Travel Analysis

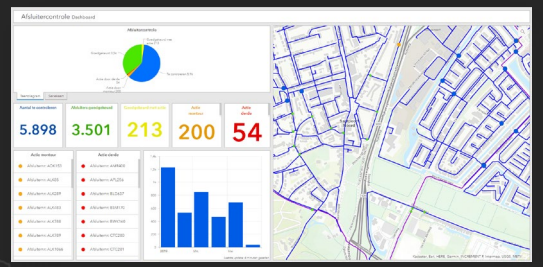
## Sidewalk Ramp Status

## Wi-Fi Planning

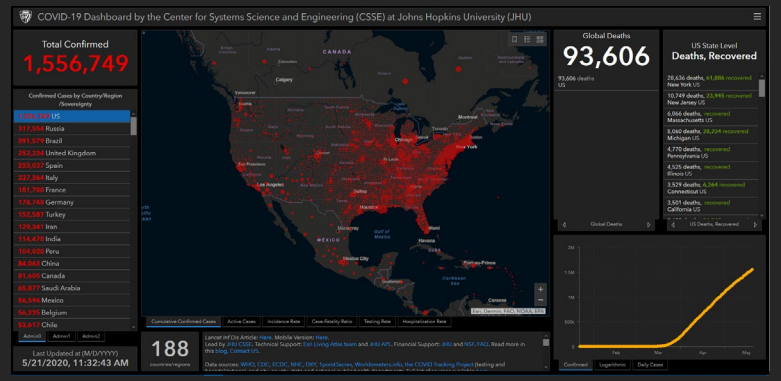
Chicago

## Tree Inventory

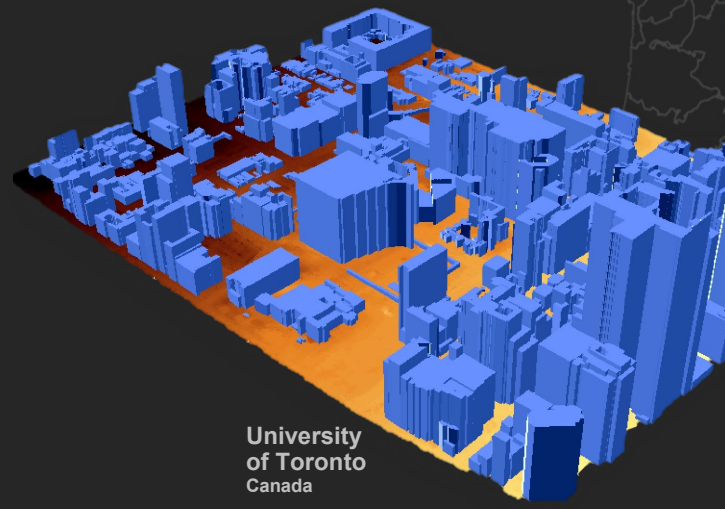
## Water Management




## COVID-19 JHU Dashboard



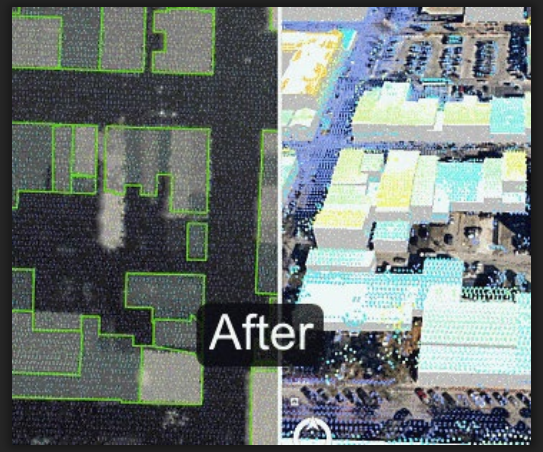

## Campus Visualization



University of Toronto
Canada

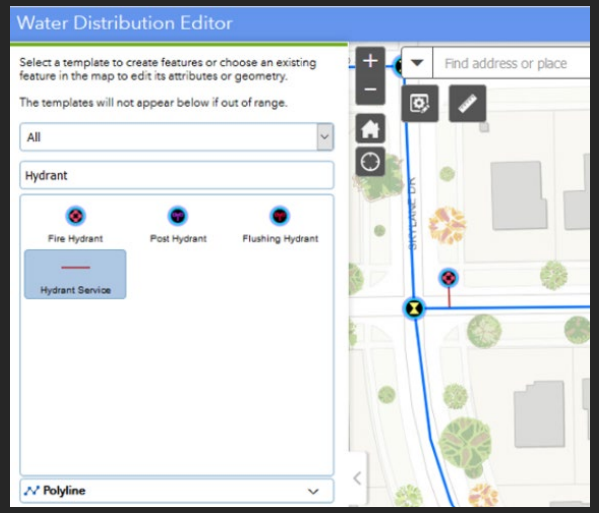
# ArcGIS Solutions – Esri supported templates/configurations

1 3D Basemaps




2 Hydrant Inspections

3 Water Data Management



# **Esri Applications** – customizable for any workflow

1 Field Maps

MOBILE GIS

2 Experience Builder

WEB APPS

3 Dashboards

KPI's & METRICS

# Keith Weber

Idaho State University

Idaho State University

# Campus GIS @ ISU

Keith T. Weber, GISP
GIS Director, ISU

ROAR

Idaho State University

# Keith Weber

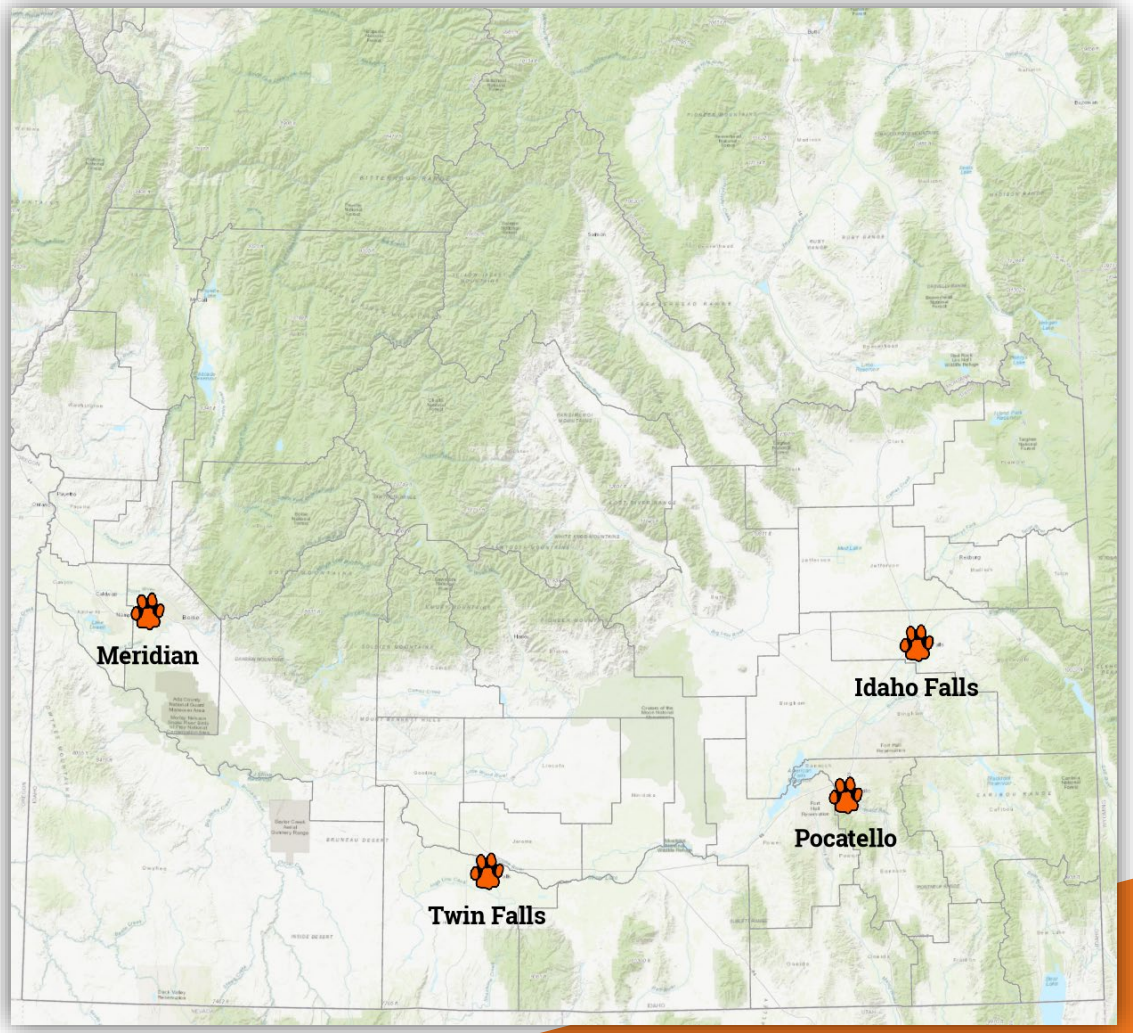
- Working in the Geospatial industry since 1988
- Founding Director of the GIS TReC (1998)

ROAR

Idaho State University

# Idaho State University

- Founded in 1901, Idaho State University offers more than 250 degree programs and is the state's designated lead institution in health professions.
- Largest campus in Pocatello
- Other campuses in Idaho Falls, Twin Falls, and Meridian
- *https://www.isu.edu/*



Idaho State University

# GIS @ ISU

- I began teaching the first dedicated GIS courses at ISU
- Academics/education in GIS were the initial emphasis
- Followed closely by research
- Today, we have both undergraduate and graduate degree programs in Geotechnologies, Geomatics, and Geographic Information Science.
- The **GIS Center at ISU** leads these efforts

ROAR

Idaho State University

# Campus GIS

- A much more recent emphasis
- After 20 years of trying…
  - GIS Day
  - Community Maps Program
  - Ambitious students

Idaho State University

# What Made the Difference?

- People
  - Champions in Facilities Services
  - The **need** to answer spatial questions
  - “Campus Trees”
  - “The 6,259 answer”

ROAR

Idaho State University

# Today

- Campus GIS has its own email address, web page, and is the source for all ISU's interactive web maps
- We work closely with:
  - Facilities Services
  - Public Safety
  - Emergency Management
  - Student Affairs
  - Marketing & Communications

ROAR

Idaho State University

# Organizational Structure

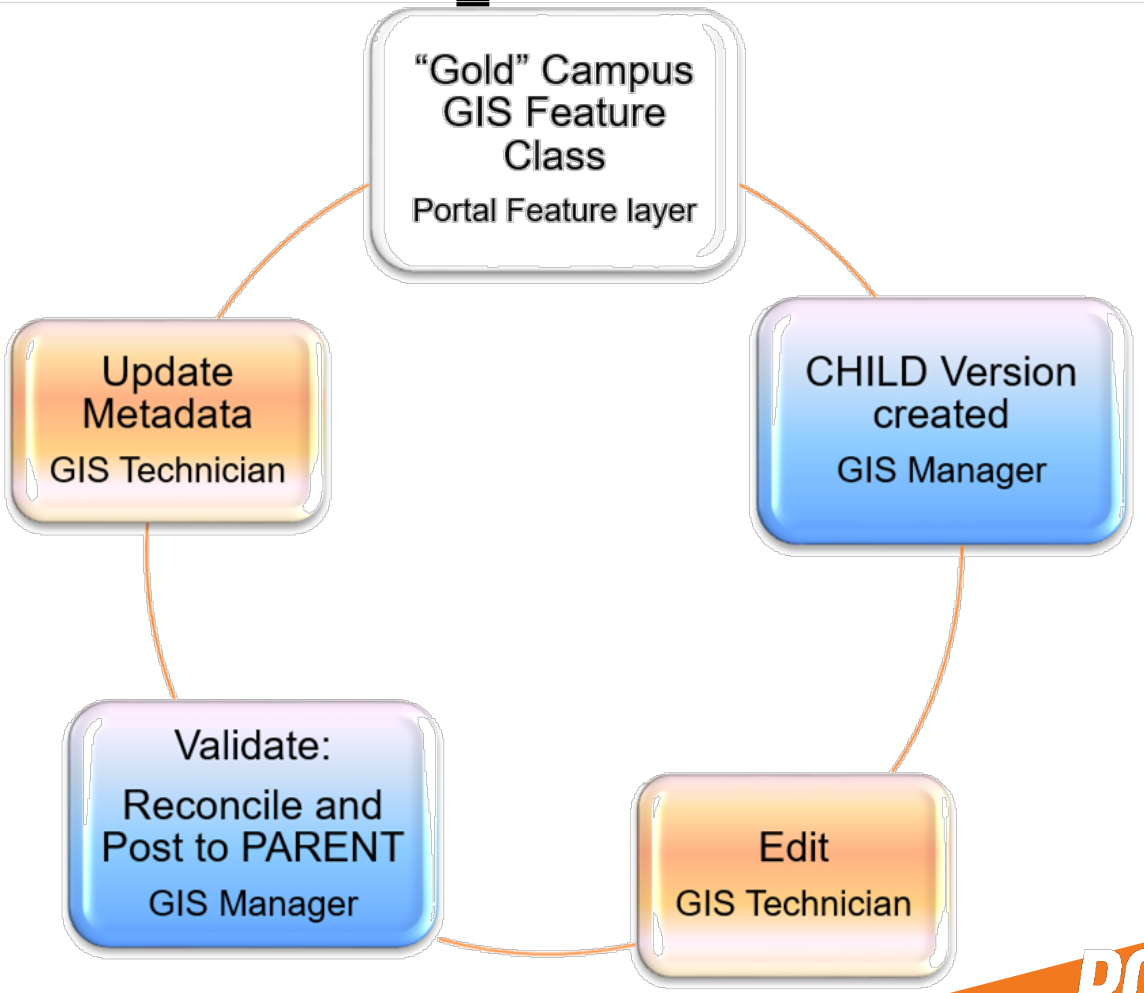
- GIS TReC
  - Primarily a research center (https://giscenter.isu.edu/)
- Campus GIS Team
  - Bi-weekly meetings
- Who is doing the work?
  - Work-study students (Jessalyn Bartholamew)
  - Career Path Interns (Shanon Brailsford)

ROAR

Idaho State University

# How We Built Our Campus GIS

- Geodatabase
  - Feature layer consolidation
  - Attribute Domains
  - Aliases
  - Definition queries
- ArcGIS Pro
- Portal
- Branch versioning
- AGOL

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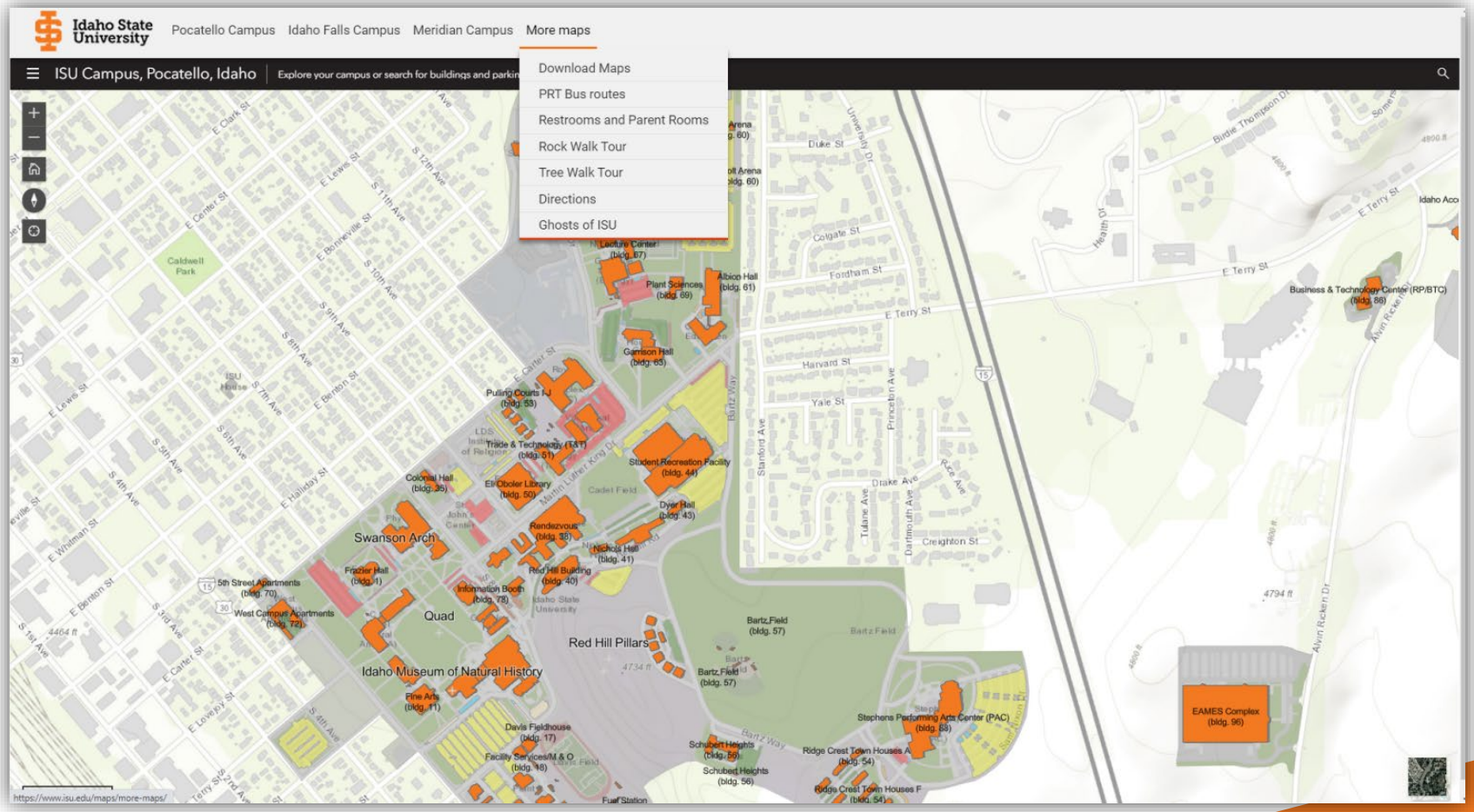
# Showcase Apps

- Interactive Campus Maps

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# ArcGIS Urban

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# Story Maps

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# Challenges

- Funding
- Improve the student experience
- Improve safety and efficiency at ISU
  - “Safety at Night” map
  - AED locations
    - Public-facing
    - Editable facilities maps
  - COVID testing sites

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# What's Next?

- Begin self-service map making
  - Currently, the GIS TReC makes all maps
    - Planning to offer some indoor maps
    - Continue development of ArcGIS Urban/3D scenes
    - Real-time under construction service
    - Apply the best solution
  - Ideally, I want to empower others to make maps using the authoritative data we make available on Portal and AGOL
    - Upcoming workshop "AGOL for Everyone"

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Idaho State University

# Questions?

- webekeit@isu.edu
- CampusMaps@isu.edu
- https://giscenter.isu.edu/research/Techpg/CampusGIS/

ROAR

# Michael Ferris

Cal State – Dominguez Hills

# Configuring Solutions: Building information and decision-making tools

California State University, Dominguez Hills

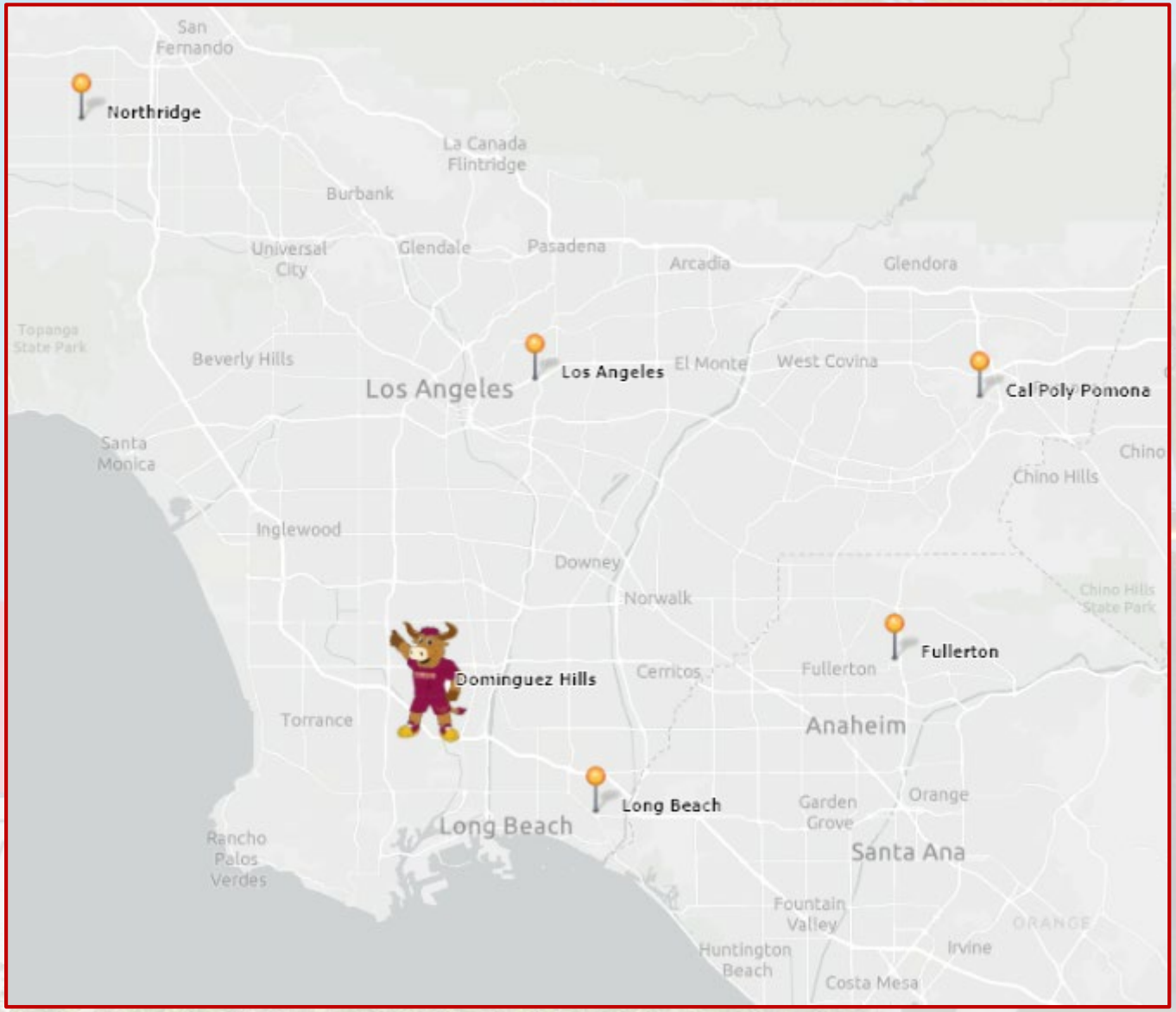
Mike Ferris

Geographic Data Analyst

# CSU Dominguez Hills

- Located in Carson CA
- One of 23 campuses in the California State University system.
- Ranked 13 of the 23 in enrollment with 17,763 students in fall 2020 semester
- 1774 Employees (1180 FT and 567 PT)
- 80-85% of students come from areas 20-25 mi

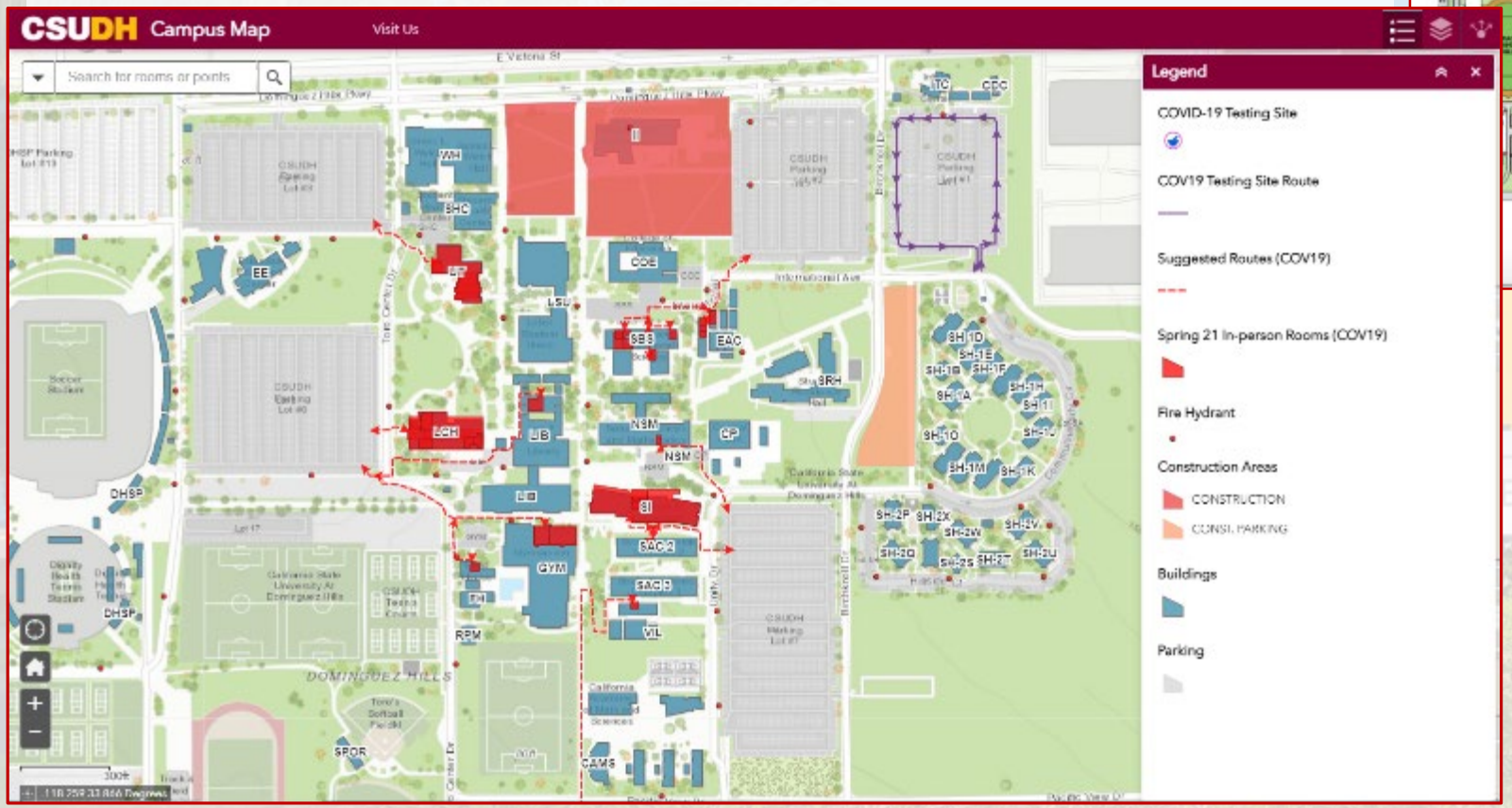
- Campus GIS is part of IT Division (UEPA).
  - One FT analyst
  - Two PT student assistants



# Web Applications Examples

# Campus Map Application

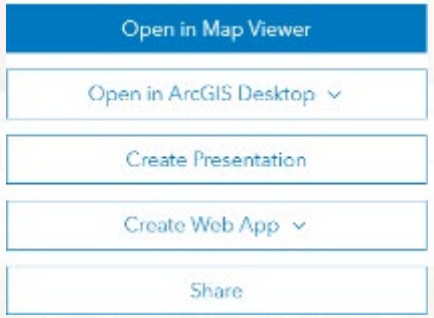
- Original campus map was accessed as PDF
- Created an interactive campus map with App Builder

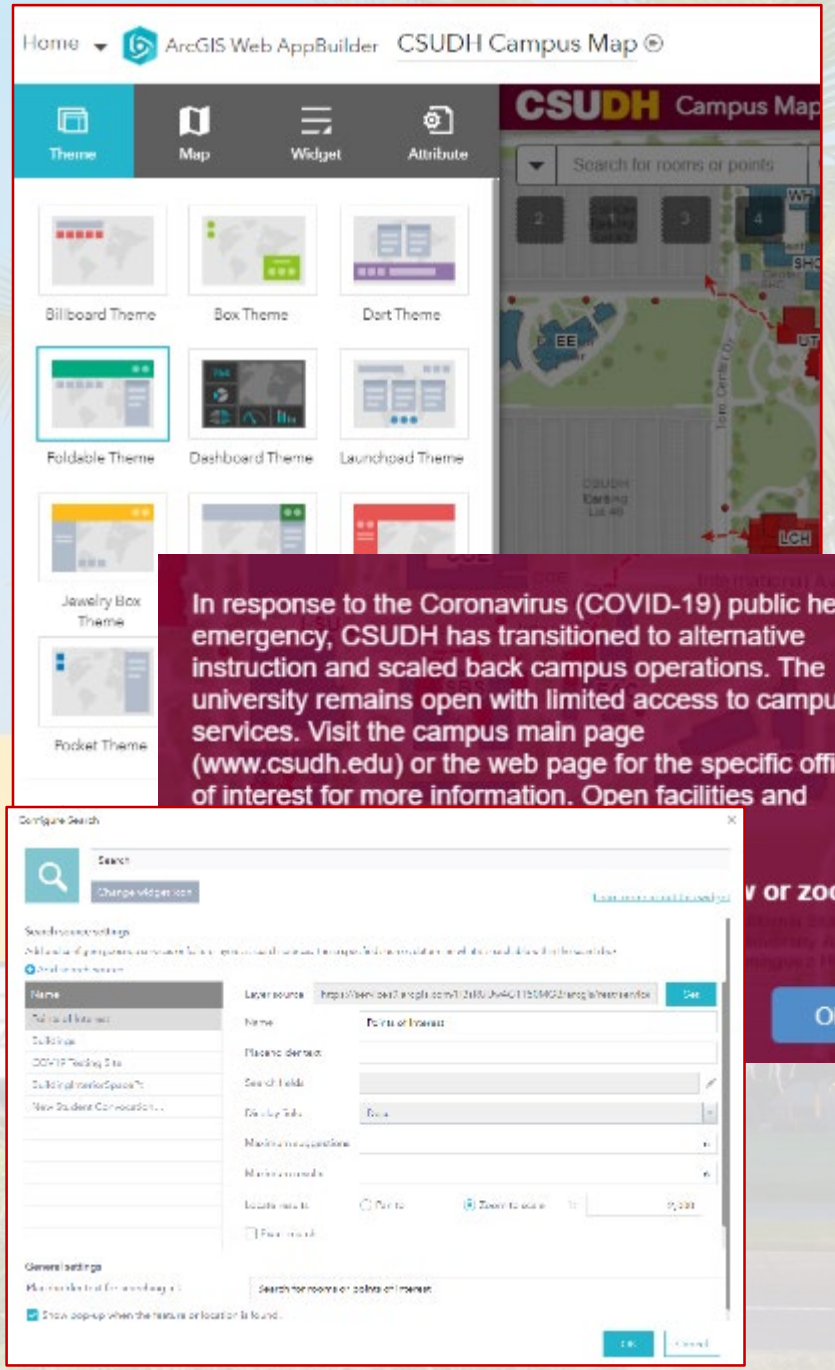


# Campus Map Application

- Created map using desktop and shared to AGOL
- App Builder
  - Splash screen with basic info and instructions
  - Search Widget to find buildings, rooms, POIs, etc.
    - POI attributes include links to the various office web pages
  - Parking information (e.g. disabled spaces, charging stations, pass dispensers)
  - Basemap (Community  Maps Program)

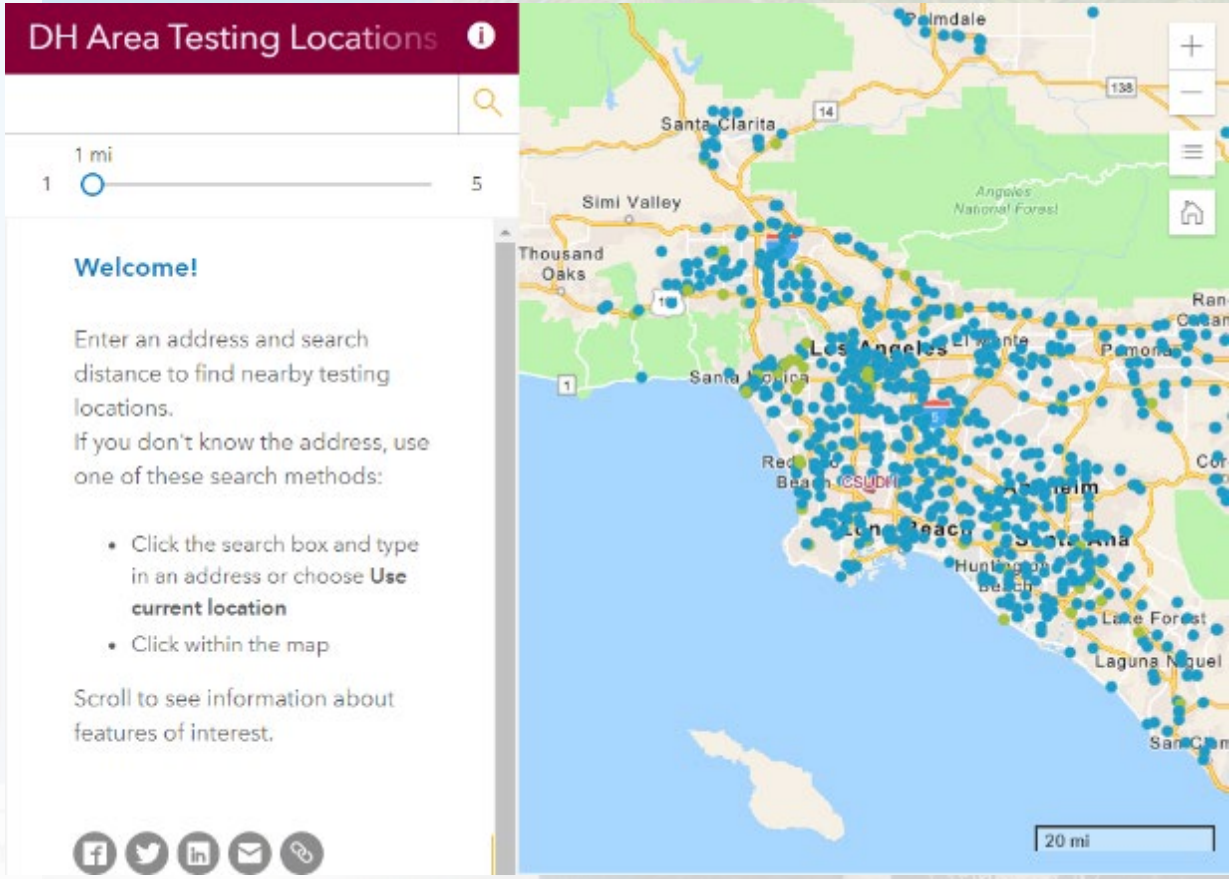
- https://arcg.is/04fmj8



# COVID-19 Testing Web App

- Created a COVID-19 dashboard to show pandemic data for cities near campus.
- Campus EOC committee asked for a way to display testing locations
- Configurable apps – Nearby template
  - GISCorps COVID-19 (Molecular (PCR) and Antibody) Testing Locations for DH Area
    - Molecular (PCR)
    - Molecular (PCR) and Antibody
  - DH campus polygon for reference
  - Navigation Basemap

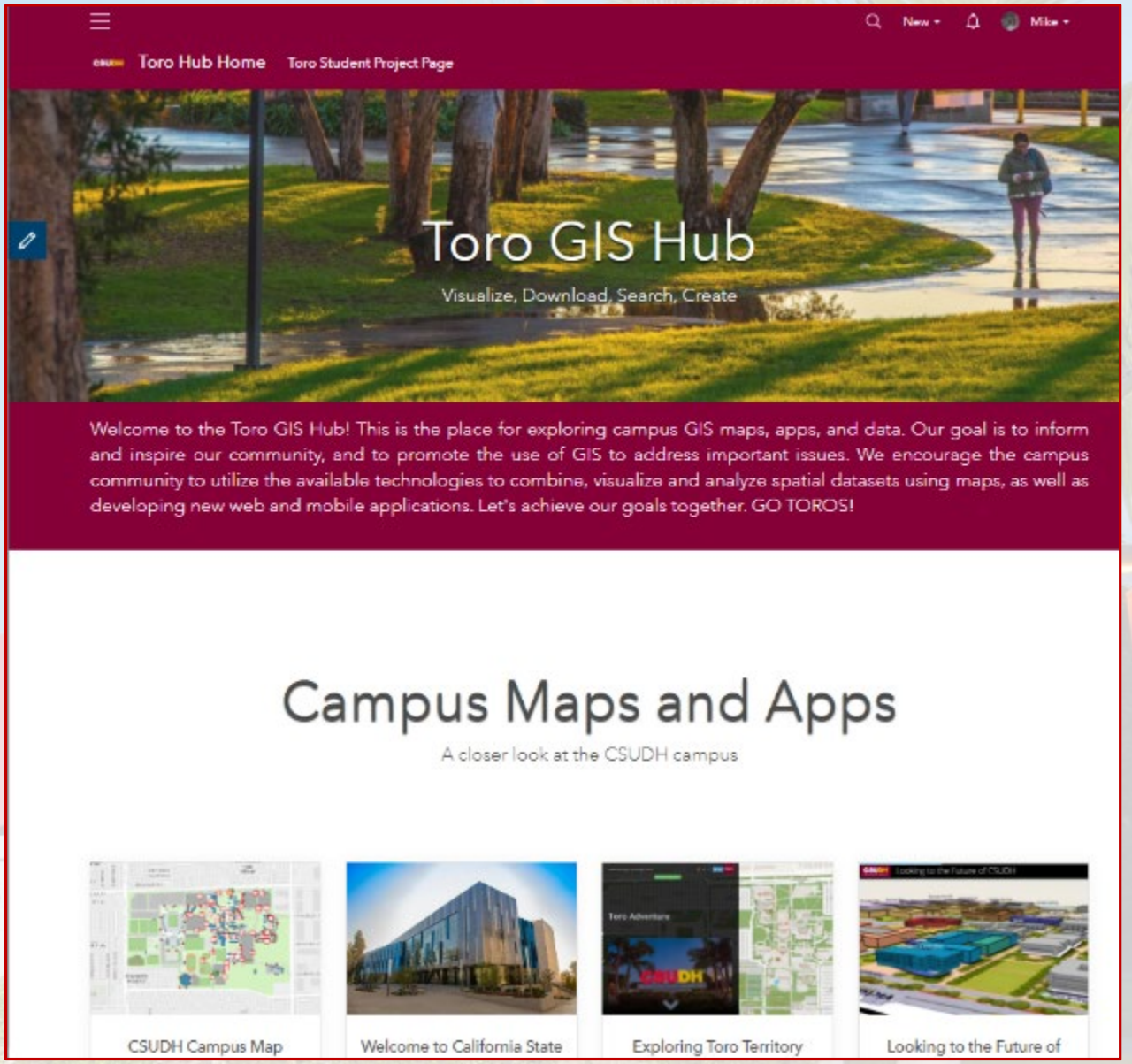



- https://arcg.is/1GbWLT0

# Toro Hub

- Provides starting point for campus GIS
- Examples of GIS applications
- Campus GIS data layers
- Share campus GIS events and information
- Learning plans
- Training and promotional videos

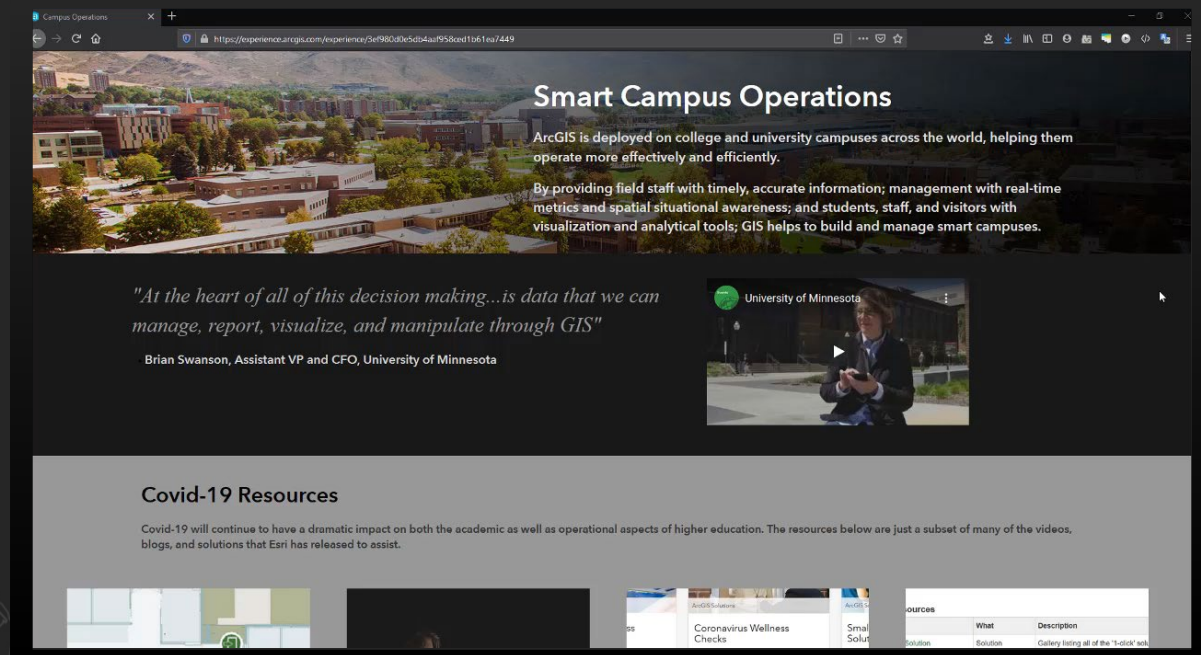
- https://toro-maps-csudh--maps.hub.arcgis.com/

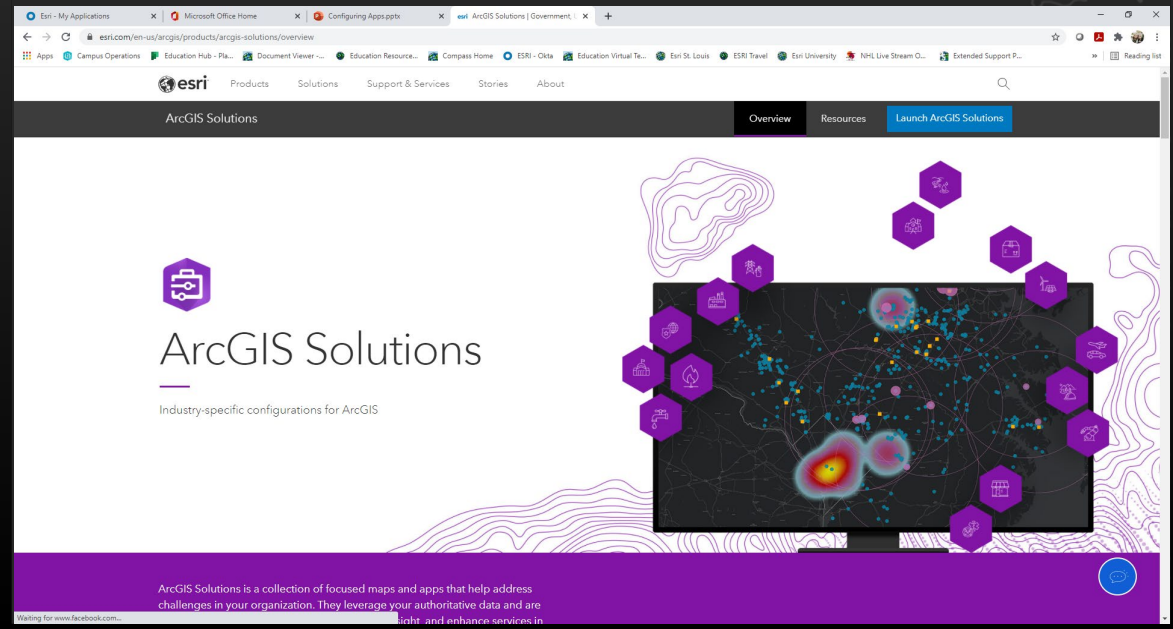


# Thank you

- Contact Info:
  - Mike Ferris
  - mferris@csudh.edu

# Resources


Campus Operations
Smart Campus Operations
ArcGIS is deployed on college and university campuses across the world, helping them operate more effectively and efficiently.
By providing field staff with timely, accurate information; management with real-time metrics and spatial situational awareness; and students, staff, and visitors with visualization and analytical tools; GIS helps to build and manage smart campuses.
"At the heart of all of this decision making...is data that we can manage, report, visualize, and manipulate through GIS"
Brian Swanson, Assistant VP and CFO, University of Minnesota
University of Minnesota
Covid-19 Resources
Covid-19 will continue to have a dramatic impact on both the academic as well as operational aspects of higher education. The resources below are just a subset of many of the videos, blogs, and solutions that Esri has released to assist.
Coronavirus Wellness Checks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Launch ArcGIS Solutions
ArcGIS Solutions
Industry-specific configurations for ArcGIS
ArcGIS Solutions is a collection of focused maps and apps that help address challenges in your organization. They leverage your authoritative data and are

# Actions

- Contact account managers
  - Where do I start?
  - What's my licensing?
- Survey
  - Let's talk!
- Questions/Issues:
  - Justin Anderson – justin_anderson@esri.com

# Q&A

Justin Anderson –
justin_anderson@esri.com

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