

# ArcGIS for Broadband Outreach

John Ruffing

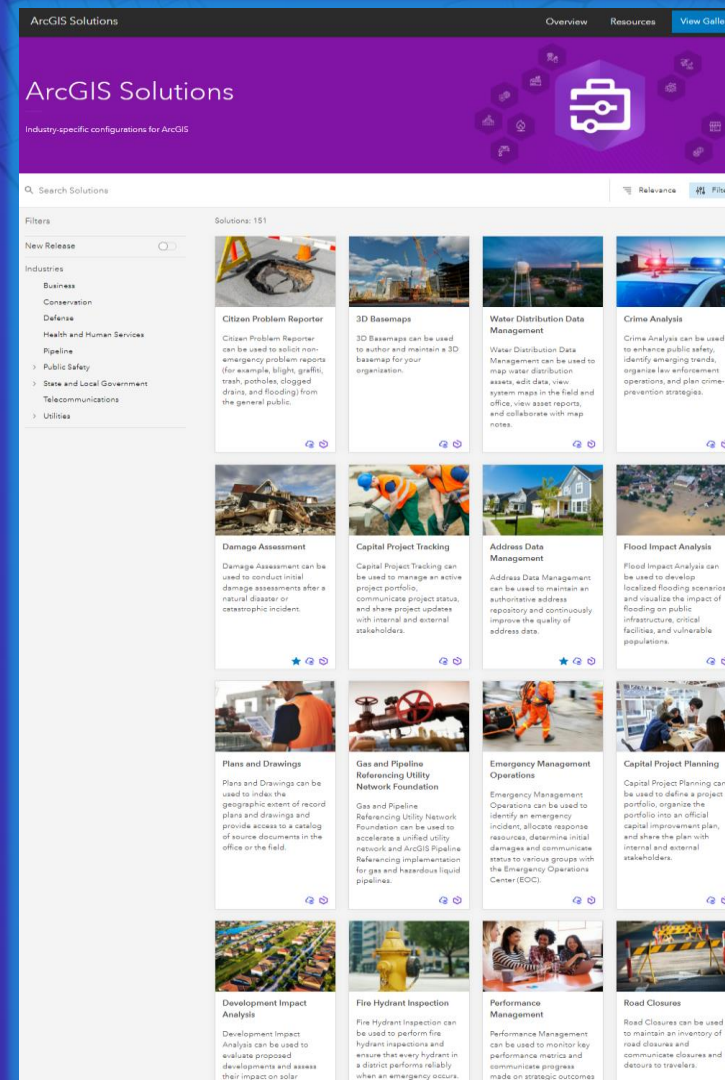
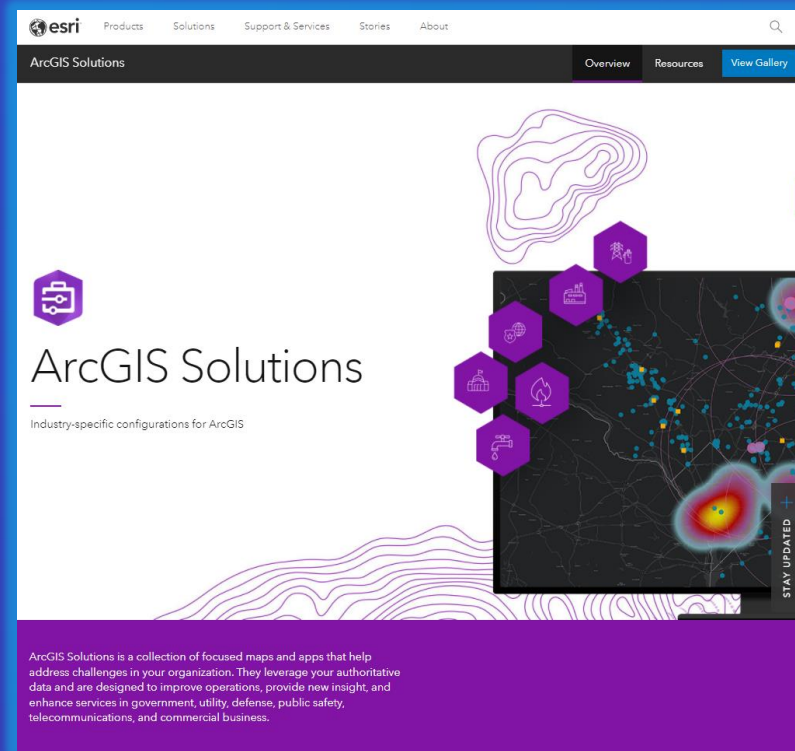


Esri Public Sector CIO Summit

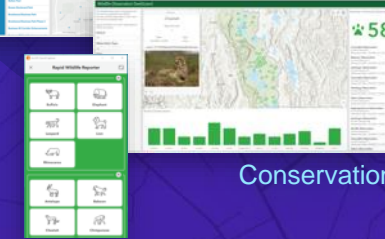
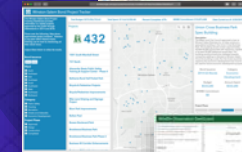
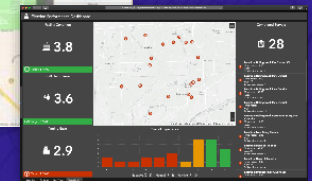
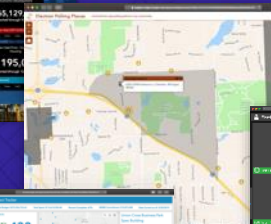




# Solution Overview



## Local & State Government



## Conservation

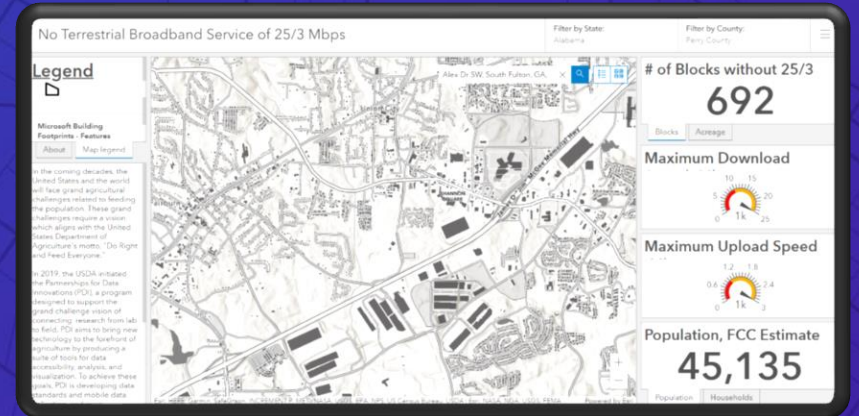
<https://www.esri.com/en-us/arcgis/products/arcgis-solutions/overview>

# National League of Cities—Partner Challenge

## Broadband is a Critical Infrastructure

### Bringing Affordable, Reliable Broadband to All Residents Through GIS with Esri – Cedar Rapids, IA – Butte-Silver Bow, MT – Purcellville, VA

[Esri](#) worked with three municipalities to pilot geographic information system (GIS) solutions to address broadband availability. Cedar Rapids, Purcellville, and Butte-Silver Bow launched an ArcGIS Survey123 app, incorporating Ookla's Speed Test app, that allowed them to crowdsource internet speed tests from households. With foundational, authoritative data captured, the three cities leveraged Esri's new [Social Equity Analysis solution](#), allowing them to understand gaps in broadband coverage in relation to vulnerable populations using key indicators such as Census demographics. The output from the tool helps cities identify the areas within the community that are adversely affected by lack of reliable broadband access. These insights will help the cities apply for state and federal dollars and identify a strategic target area to fund and execute their broadband expansion.



Broadband is a critical infrastructure that supports effective economic growth, education, workforce development, telehealth, and more. Strong broadband is a requirement for cities to compete in the global economy and provide equitable opportunities for its residents.

[No Terrestrial Broadband of 25/3 Mbps - Overview \(arcgis.com\)](#)



# Broadband is a Geographic Problem

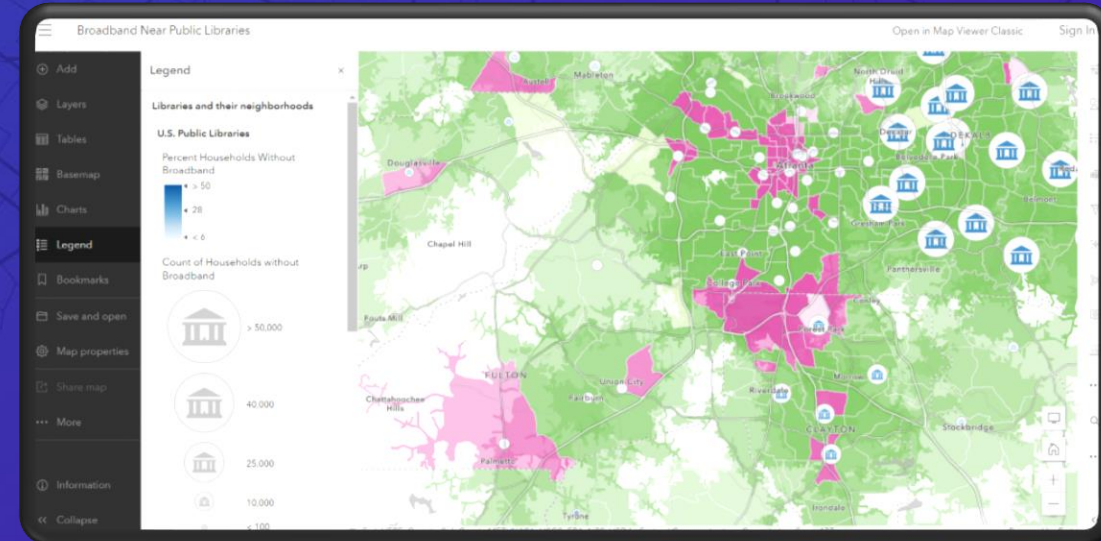
Understand...

- *Where there is existing access?*
- *Where is service or access lacking?*
- *Where is existing broadband infrastructure?*
- *Where are the students, teleworkers, businesses or residents who can't afford service?*

Where *could* dollars be spent to make the biggest impact?

vs.

Where *should* dollars be spent to make the biggest impact?



<https://livingatlas.arcgis.com/en/home/>

# How GIS Informs Equity of Expansion & Investment

## Broadband's Value Proposition

- Improve quality and confidence in broadband coverage maps
- Evaluate community conditions and actions
- Rationalize grants/funding
- Improve partnership with providers (relationships)
- Increase transparency, citizen inclusion and public trust

Planning and Engineering  
Effective infrastructure siting and design

Address Equity  
Equitable and affordable access for all

Provide for  
Economic Mobility  
Ensuring jobs, business,  
and growth for all

Civic Engagement  
Establishing two-way  
communication with residents



*The Fourth Tenet of a Smart Community is the ability to address Equity*



# Solution Overview

## Residents



Broadband Outreach Site

- Understand Equity
- Understand FCC coverage maps
- Review current broadband projects



Broadband Speed Test



FCC Broadband data / Broadband projects



Broadband Equity Analysis



Coverage Manager

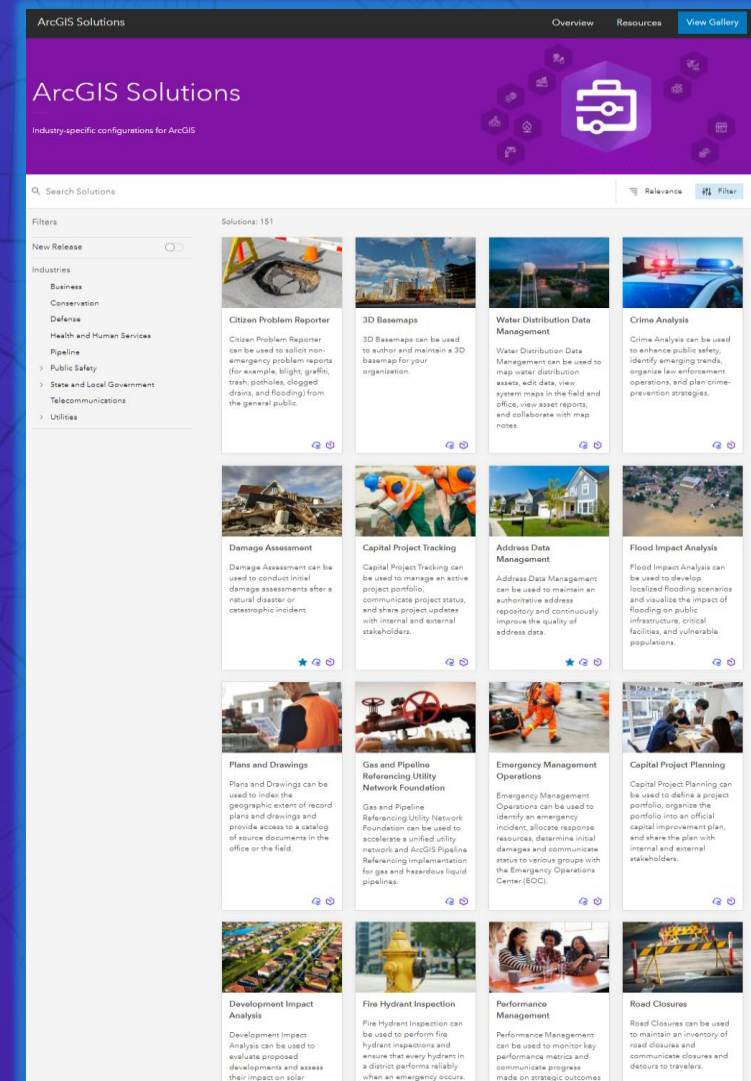


Broadband Interview



ArcGIS Online

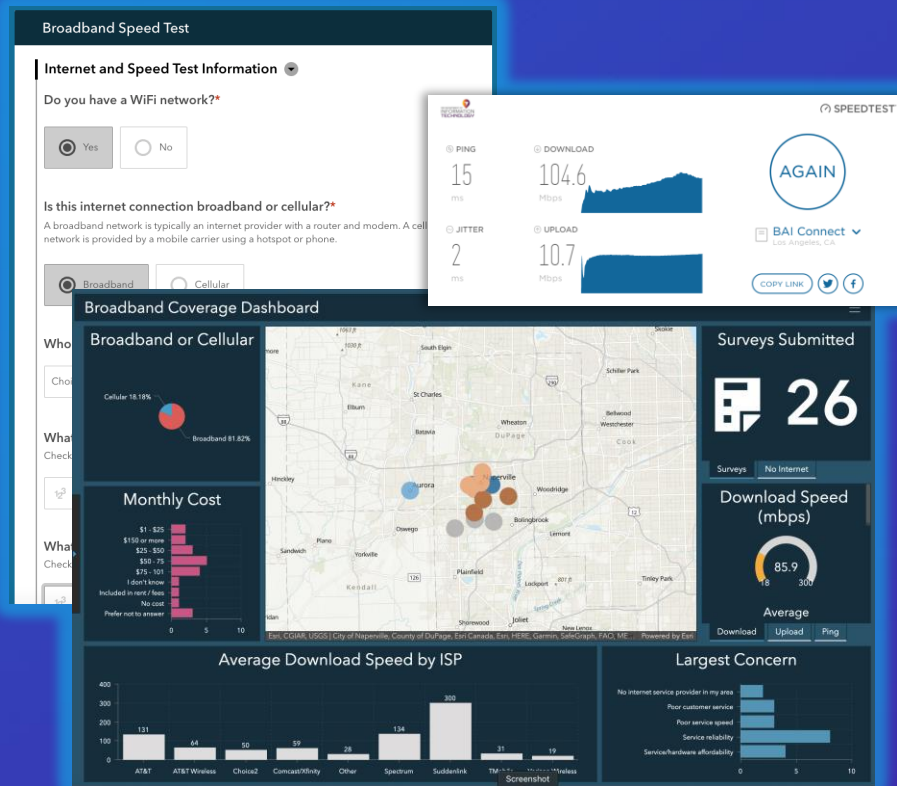
## Program Analyst



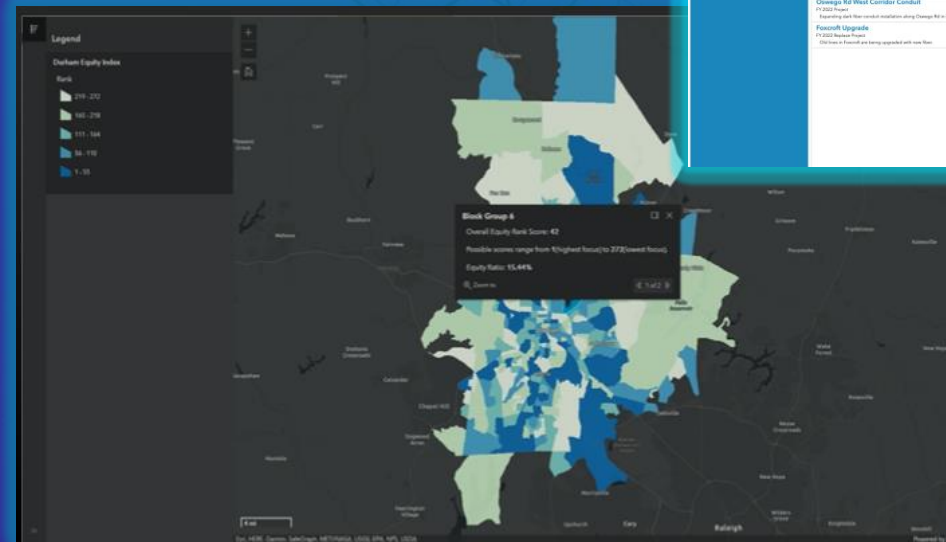
<https://www.esri.com/en-us/arcgis/products/arcgis-solutions/overview>

# Solution Overview

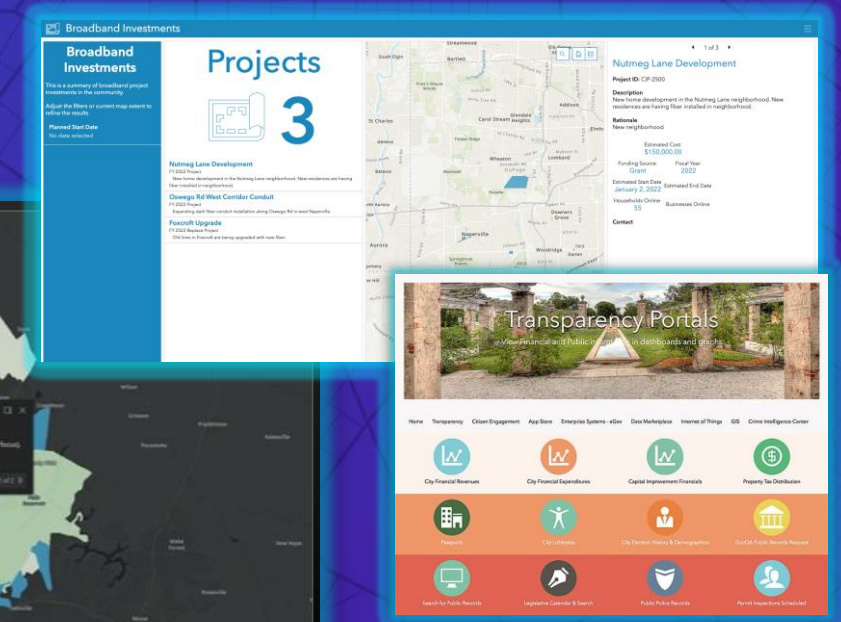
## Broadband Outreach



Understand Neighborhood-Level Broadband Coverage



Identify & Analyze Demographics (model Equity)



Optimize Plans (& Funding) for Investment



## Upcoming Funding Opportunities

### FCC Broadband Programs

- \$3.2 B Emergency broadband Benefit Fund (EBB)
- \$7.2 B Emergency Connectivity Fund – Applications closed August 2021
- \$1.9 B Rip and Replace – Applications closed October 2021

### NTIA Broadband Programs

- \$288 M Broadband Infrastructure Deployment Program
  - Application window closes August 17
- \$1 B Tribal Broadband Connectivity Program – Applications Closed September 2021
- \$285 M Connecting Minority Communities Pilot Program
  - June 15 Program Final Rules – NOFO Release TBD
- \$2.5 B – State Tax Financing Bonds

### American Rescue Plan Act of 2021

- USDA Broadband Programs \$635 M – 1 B for Reconnect Broadband Loan & Grant Program

### U.S. Treasury

- \$350 B for State and Local Fiscal Recovery Funds
- \$10 B for Capital Projects Fund

### Infrastructure Bill of 2021

- 42.5 B - Broadband Equity, Access, and Deployment (BEAD)
- \$2 B – NTIA – Tribal Broadband Connectivity
- \$2.75 B – NTIA – Digital Equity Act
  - \$1 B – NTIA Middle Mile Program
- \$12.75 B – FCC – Affordability EBB Supplemental
- \$2 B – FCC Device Voucher Program
- \$2 B – USDA – Reconnect
- \$2.5 B – State Tax Financing Bonds



# Other Hot Topics

- UC follow up
- ORMAP DOR training for Counties (Parcel Fabric)
- ARPA and Infrastructure Funding
  - [CIO Summit](#)
  - Reporting systems – [Portland example](#)
- IMGIS 2022 – Esri Infrastructure Conference end of October
- OR User Group – Re-activation or kickstart

# County Role

- Community considers internet as essential and very important
- Poor reviews of how current providers meet current needs
- Strong support for community involvement

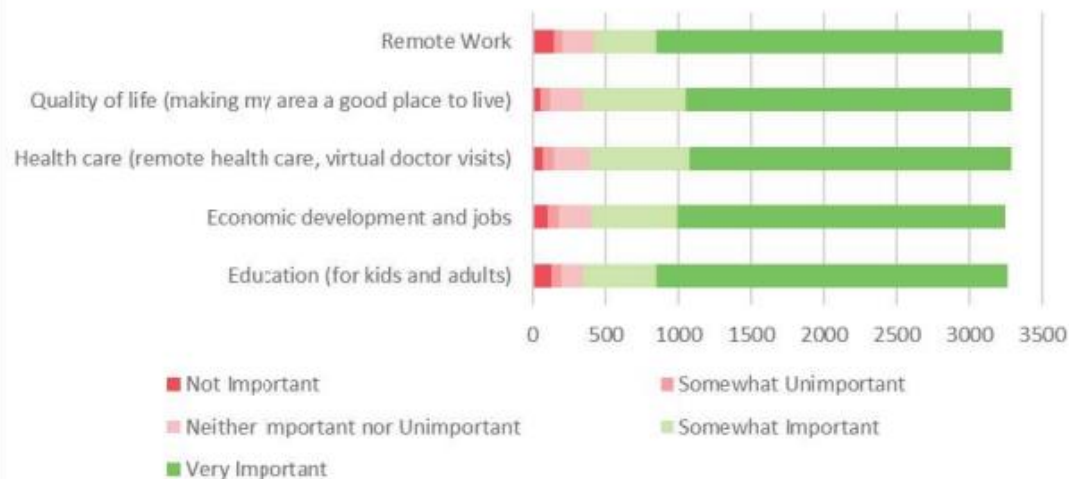
DO YOU CONSIDER INTERNET TO BE AN ESSENTIAL PUBLIC INFRASTRUCTURE SIMILAR TO ELECTRICITY, WATER, AND TRANSPORTATION?



HOW STRONGLY DO YOU FEEL THAT THE COUNTY NEEDS TO HELP FACILITATE BETTER BROADBAND?



HOW IMPORTANT IS FAST HOME INTERNET FOR THE FOLLOWING PURPOSES?



HOW WELL DO YOU THINK THE CURRENT PROVIDERS MEET THESE NEEDS?

