

# Alabama Broadband Stakeholder Workshop

*Alabama Department of Economic and Community Affairs (ADECA)*

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**ctc technology & energy**

engineering & business consulting

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- 1. Provide strategic and technical guidance** to Alabama broadband stakeholders and ISPs to develop strategy and potential public-private collaboration
- 2. Support broadband stakeholders and private partners** to understand federal funding programs
- 3. Provide guidance** to compete for federal grants
- 4. Collect and assess** stakeholder and stakeholder community needs to consider in Alabama Statewide Broadband Plan

# Today's Agenda

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- Alabama Broadband Accessibility Fund
- ABC for Students Update
- Statewide Broadband Mapping Program
- Stakeholder Broadband Needs Assessment and Community Planning
- Statewide Broadband Plan

# Alabama Office of Broadband Development



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April 2017

Gov. Ivey issued Executive Order 704, establishing ADECA as the agency to assume all powers, duties, responsibilities, authority, and obligations belonging to the Office of Broadband Development

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March 2018

Gov. Ivey signed the Alabama Broadband Accessibility Act, creating the Alabama Broadband Accessibility Fund

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May 2019

Gov. Ivey signed Act #2019-327, amending the original Act

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As of May 2021

\$38,236,746.86 in ABAF funds have been awarded to 92 projects. These projects represent approximately 47,460 new services at an average grant cost of \$805.66 per service

# Office of Broadband Development

## Coordination with Federal Programs

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- One of the functions of the office is to provide support to ISPs applying for federal funds for broadband deployment
- This office has developed a process for ISPs applying for USDA ReConnect funds to request a Governor's letter, documentation of the state plan, and expedited approval process
- This process has allowed many Alabama applicants to be more competitive by receiving bonus points in the applications process
- Yesterday the office hosted a webinar on current federal funding opportunities

- In July of 2019, ADECA issued a request for proposals for planning and mapping services
- Eight responses were received
- CTC Technology and Energy received the highest score in the evaluation process
- The contract was reviewed and approved by the Contract Review Committee
- The amount was \$1.5 million, and the contract period is January 1, 2020, through December 31, 2021, The contract was amended to include the ABC for Students program and additional mapping services
- Additional planning and mapping requirements will be identified through this process – the scope of work for phase 2 will be determined as a result of phase 1

# Alabama Broadband Accessibility Fund

Funds	Speeds	Eligible Projects	Eligible Areas	Eligible Entities
<ul style="list-style-type: none"><li>• Awards of up to \$1.5M or 35% of project cost</li><li>• Combined with federal funding, cannot exceed 60% of project cost</li></ul>	<ul style="list-style-type: none"><li>• Must provide services of 25/3 Mbps</li></ul>	<ul style="list-style-type: none"><li>• Last Mile Projects, to provide services to residential, business, &amp; institutional end users</li><li>• Middle Mile Projects, to connect other service providers to enable them to reach end users</li></ul>	<ul style="list-style-type: none"><li>• Unserved with 25/3 broadband &amp; no funding before March 2023</li><li>• Outside any incorporated city or town with population over 25,000</li></ul>	<ul style="list-style-type: none"><li>• Non-governmental entities that are cooperatives, corporations, LLCs, partnerships, or other private entities</li></ul>



- **27 applications** were received during the **Fiscal Year 2019** application cycles and **15 were awarded**
- **61 applications** were received during the **Fiscal Year 2020** application cycles and **38 were awarded**
- **41 applications** were received during the **Fiscal Year 2021** application cycle and **39 were awarded**
- **Funds awarded/Expended total \$38,156,624.72** with a matching private investment of **\$83,222,946.29**
- The **average grant dollar cost per new service** is **\$805.66**

- No changes to the program at present
- Next round will be announced in next fiscal year
- Please sign up for email notifications to receive updated information, application guidelines, and deadlines when they become available

The Alabama Broadband Accessibility fund is among the most historically consistent and well-funded grant programs in the region, especially when compared to non-COVID-related grant programs.

# ABC for Students Program

No-Cost Broadband to Low-Income K-12 Students Across State

Alabama  
Broadband  
Connectivity  
for students

- Connected eligible families quickly
- Included rural families

- Voucher program stood up in a few weeks
- Communications tools sent to schools
- 42 ISPs contracted

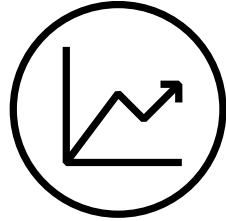
- 100,000 students connected in first 6 weeks
- Over 200,000 connected by the end of the program
- Close to 80% were transitioned to the EBB program
- Rural ISPs made incredible efforts to reach as many families as possible



# ABC for Students Program

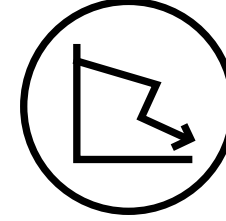
## Additional Goals and Results

Alabama  
Broadband  
Connectivity  
for students



### Promoted Participation by as Many ISPs as Possible

- 42 ISPs participated in the program
- Promoted Alabama's own economy
- Single invoicing process for ISPs



### Minimized Burden on Schools, Families

- Direct to family program
- Outreach, sign-up events
- Schools relieved of burden to contact directly to ISPs
- Partnered to advocate for families and encourage participation
- Assisted with outreach

# Connect Alabama Act of 2021



# Connect Alabama Act of 2021

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- Creates the **Alabama Digital Expansion Authority** to oversee broadband expansion
- Establishes the **Alabama Digital Expansion Division** within ADECA to develop a statewide connectivity plan
- Creates the **Alabama Digital Expansion Finance Corporation** to help fund broadband projects

# Statewide Broadband Mapping Program



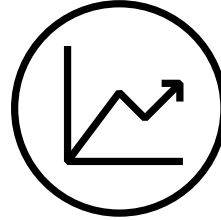
# Statewide Broadband Mapping Program

## Goals and Objectives



### Identify Unserved Areas

- Identify the remaining areas lacking 25/3 coverage
- Identify areas yet to be built using funds from current programs (Alabama and federal)
- Identify key locations and anchor institutions lacking broadband



### Tool for Serving Unserved Areas

- Help to improve broadband planning efforts
- Encourage participation by minimizing ISP effort
- Prepare ISPs for the FCC mapping requests



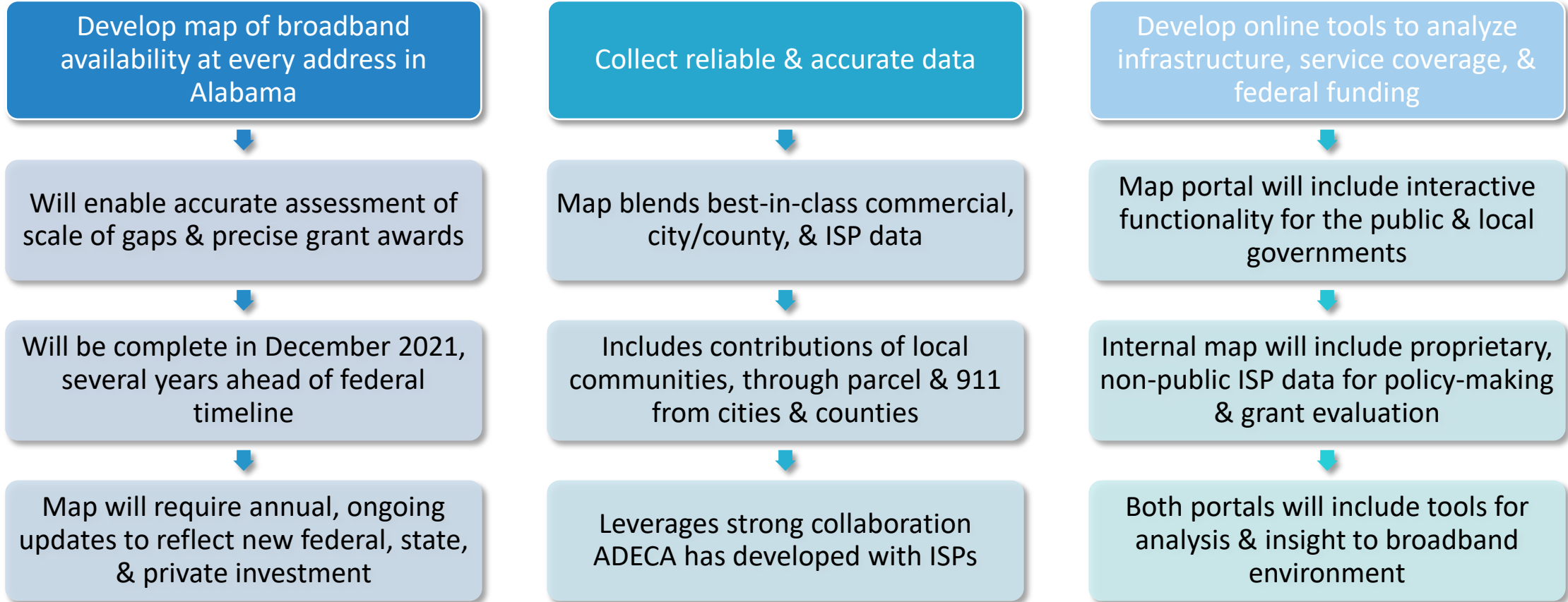
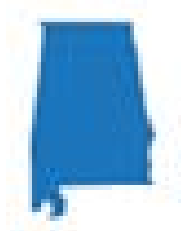
### Supports Collaboration with ADECA and Among ISPs

- Data sharing by both ADECA and ISPs builds a viable map
- Help to avoid future conflicts between ISPs and between an ISP and the State or locality



# Mapping and Data Efforts Underway

A “Public Facilitation of Private Investment”



# The Statewide Mapping Program...

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- Will provide useful information to current and potential broadband service providers
- Will provide useful information that helps local and regional governments understand what they might do to make deployments easier
- Will allow top-level data to be combined with other data sets, like conduit maps, utility pole and attachment point maps
- Works hand-in-hand with community efforts
- Provides address-level granularity, which is universally recognized as the gold standard for broadband connectivity maps (and is not matched by efforts in most of the states we evaluated)

# Mapping Program Deliverables

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- Website
  - Facilitates access to maps by different entities (ISPs, individuals) for different functions (check for unserved, check federal funding, etc.)
  - Will contain information about the program
  - Additional functionality includes access to forms, challenges
- Maps
  - Public-facing
  - Internal-facing
- ISP Data Sharing Agreement and Data
  - Bound by non-disclosure/data sharing agreement between ISPs and ADECA
  - Initial data collection followed by annual or semi-annual updates

# Public-Facing Map

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- Served and unserved addresses within census blocks
- A served census block shown
  - Has 80% of addresses within the census block served by 25/3 or better
  - Can be a combination of two or more ISPs within the census block
- Designates technology - wireline, mobile, fixed wireless, satellite
- Areas funded by other programs (ADECA Accessibility Program, RDOF, ReConnect, etc.)
- Anchor institutions
- No ISP details

# Internal-Facing Map

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- All layers in public-facing map
- ISP detail within census block
  - List of ISPs who serve
  - Highest speed associated with each ISP
  - Latency performance
- Will be used by ADECA for
  - Policy guidelines
  - Investment decisions

# ISP Data Sharing Request Process

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- Simplified version of what ISPs will be required to submit to the FCC for the Digital Opportunity Data Collection (DODC) program
- Address-based information
  - ADECA provides the addresses estimated to be within each ISPs service area
  - ISPs provide:
    - Corrected address list (add/delete addresses)
    - Technology type
    - Maximum download speed in Mbps
    - Maximum upload speed in Mbps
    - Whether latency is less than or greater than 100 ms
- Protected by a Data-Sharing/Non-Disclosure Agreement (DSA)

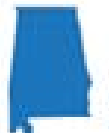
# Data Requested from ISPs

Similar to Current FCC Requirements



- **TechCode** - Category of technology for the provision of Internet access service used by the portion of the connection that would terminate at the end-user location (premises).
- **MaxDownload** - The maximum download speed in Mbps that is currently available at the specified location or that can be made available at that address within 10 days upon customer request with no additional installation cost to end user
- **MaxUpload** - The maximum upload speed in Mbps that is currently available at the specified location or that can be made available at that address within 10 days upon customer request with no additional installation cost to end user
- **Latency100ms** - Whether the network round-trip latency associated with each maximum speed combination reported for a particular address is less than or equal to 100 ms, based on the 95th percentile of measurements

# TechCode Categories, Plus Mobile Wireless



Same as FCC's Categories, Downstream Technology

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- Asymmetric xDSL
  - ADSL2, ADSL2+
  - VDSL
  - Symmetric xDSL
  - Other Copper Wireline (all copper-wire based technologies other than xDSL; Ethernet over copper and T-1 are examples)
  - Terrestrial Fixed Wireless
  - Mobile Wireless – 4G LTE
  - Mobile Wireless – 5G
  - Mobile Wireless - Other
- Cable Modem – DOCSIS 1, 1.1 or 2.0
  - Cable Modem – DOCSIS 3.0
  - Cable Modem – DOCSIS 3.1
  - Cable Modem – DOCSIS 4.0
  - Cable Modem other than DOCSIS 1, 1.1, 2.0, 3.0, 3.1 or 4.0
  - Optical Carrier / Fiber to the end user (Fiber to the home or business end user, does not include “fiber to the curb”)
  - Electric Power Line
  - Satellite
  - Other



# Data Sharing/Non-Disclosure Agreement

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- Executed by both ISP and ADECA prior to the State's data request submission
- Voluntary disclosure of data to ADECA
- Mutual confidentiality
  - ISP will protect address level information and not use address data for any other purpose
  - State will protect address level performance data and ISP company information, and will not use data for any other purpose
- Defines what will be made public
- Address-specific information from ISPs will be used for the development, refinement, and maintenance of the Mapping Program

# Map Data Location Review and Challenges

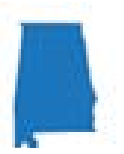
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- Process for both individual and multi-address challenges to map
- Streamlined method to challenge reported speed data
- Website will include directions and forms
- Challenges will be shown on map
- Burden of proof on challenger and challenged

# Location Review / Challenge Process

Based on FCC's Digital Opportunity Data Collection (DODC) Challenge Process



# Location Review / Challenge Process



- ***Multi-address challenges***

- Complete form
- Provide info about methods used to identify availability

- ***Individual address challenges***

- Complete form
- Provide evidence of contacting ISP(s) and been denied service at claimed speed (screengrabs, records, etc.)

# Location Review / Challenge Process



- **Multi-address challenges**

- Complete form on website
- Provide info about methods used to identify availability

- **Individual address challenges**

- Complete form on website
- Provide evidence of contacting ISP(s) and been denied service at claimed speed (screengrabs, records, etc.)

- **ADECA**

- Reviews submission for completeness
- Evaluates merit of challenge
  - **Challenger's data** must meet minimum burden of proof
- Notifies challenged ISP
- Provides challenger and challenged ISP with next steps

# Location Review / Challenge Process



- **Multi-address challenges**

- Complete form on website
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- **Challenged ISP** cooperates with challenger or disputes challenge

- **Challenged ISPs** are encouraged to work with challenger
- Once notified, **challenged ISP**
  - Has 30 days to respond with an agreed to solution
  - Or the challenge is shown on the map

# Location Review / Challenge Process



- **Multi-address challenges**

- Complete form on website
- Provide info about methods used to identify availability

- **Individual address challenges**

- Complete form on website
- Provide evidence of contacting ISP(s) and been denied service at claimed speed (screengrabs, records, etc.)

- **ADECA**

- Reviews submission for completeness
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## 30-Day Period to Address Challenge

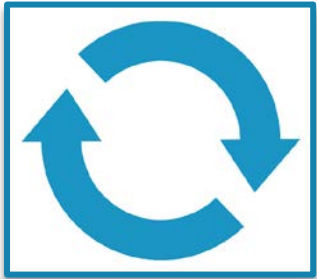
- **Challenged ISP** cooperates with challenger or disputes challenger
- **Challenged ISPs** are encouraged to work with challenge
- Once notified, **challenged ISP**
  - Has 30 days to respond with an agreed to solution
  - Or the challenge replaces prior data

## 30-Day Period Submit Proof

- **Challenged ISP submits proof of its initial service claim; may include**
  - Engineering diagrams
  - Network equipment info
  - Proof of service at claimed speeds
- Confidential elements may include
  - Evidentiary documents
  - Strategic info
  - Some discussions
- **ADECA evaluates and makes decision after 30 days**
- Results incorporated in map

# Stakeholder Needs Assessment and Community Planning

## Statewide Broadband Planning





# Needs Assessment -> Broadband Planning

## Internet Service Providers



- Interviewed several ISPs about their current networks
  - Services provided, technology, speeds
  - Service area current and planned
  - Funding
  - Technical challenges
  - How can the State help
- Will continue working with ISPs individually and in a group
- Have established relationships through ABC for Students

# Needs Assessment -> Broadband Planning

## Individual Broadband Stakeholders

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- Interviewed stakeholders to understand their statewide broadband roles and needs
  - Alabama Supercomputer Authority (pre- and post-COVID for an update) to understand their network and operations
  - ALAHA interviews to examine the unique needs of telehealth
  - AARP to understand the needs of those 50 and older
- Plan to conduct more individual interviews based on this workshop and community needs

# Statewide Strategic Planning Underway



Data	Information collected over course of 15 months
	Data from mapping & existing programs & grants
	Extensive consultation with ISPs, cooperatives, communities, state agencies
Tasks	Determine scale of broadband gap and related challenges
	Estimate cost to fill infrastructure gap under multiple technology scenarios
	Develop options for public-private collaboration
Recommendations	Strategy to maximize federal grants to Alabama
	Framework for State grant program
	Programmatic solutions for access to devices, training for digital skills

# Other Current Efforts

## ISPs and Broadband Stakeholders

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- Targeted sessions with ISPs and state broadband stakeholders
  - Informative and information discovery
  - ISP workshop to introduce Mapping Program; sent NDA/data sharing agreement
  - Federal Funding Opportunities webinar yesterday; recorded and available online
  - Statewide Broadband Mapping program review with ISPs
  - This meeting to update you on programs, share tips on collaborating with ISPs, and gather information that will be
    - Captured in the Statewide Broadband Plan
    - And will drive recommendations and action plans

# Strategies to Encourage Broadband Expansion

## Technical Strategies



- Select most future-proof technology feasible
- Facilitate access to key assets
  - Build and lease fiber assets
  - Build and lease conduit resources
  - Lease facilities space
- Facilitate underground construction
  - Develop a “dig-once” policy to promote conduit and fiber constructions
  - Make it future-proof with robust specification and flexibility to add fiber in the future
  - Place conduit banks in congested areas
- Facilitate aerial construction
  - Work with pole owners to clear space and secure access for new entrants
- Facilitate construction to and within buildings
  - Availability of conduit from street to building
  - Installation of in-building pathways and cabling

# Strategies to Encourage Broadband Expansion

## Information Access Strategies



- Publish data regarding available conduit, fiber, existing utilities, other assets
  - Make GIS data sets available
  - Create useful maps
  - Document your fiber and conduit assets

# Strategies to Encourage Broadband Expansion

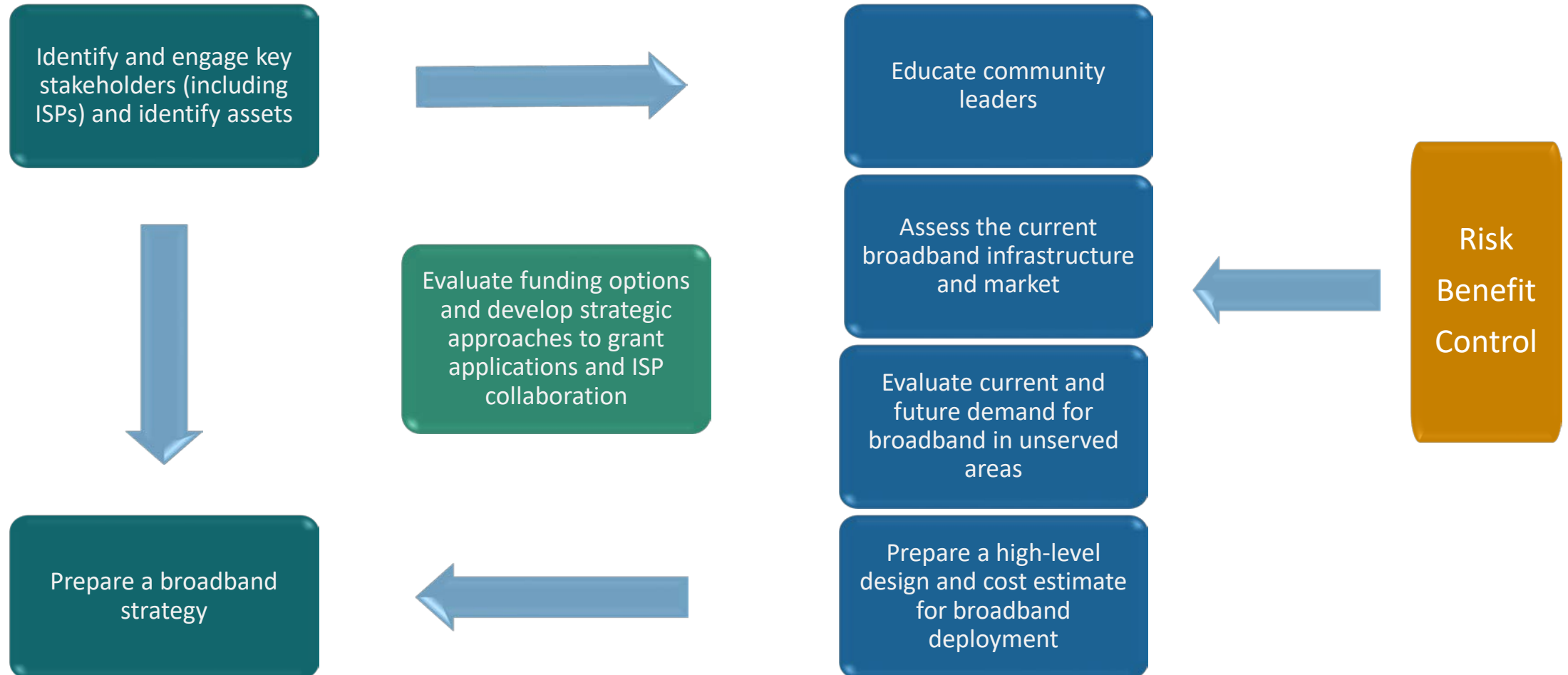
## Process Efficiency Strategies



- Build broadband into planning and staffing
- Streamline permitting and impaction where possible
- Provide transparency and predictability regarding permitting and inspection process and timelines
- Engage ISPs in processes
  - Industry meetings to discuss rules, fees
  - General discussions regarding expansion plans

# Steps to a Broadband Strategy

Communities Take Unique Paths, Steps Executed by Community and/or ISP





# Links to Resources

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- [GIGABIT COMMUNITIES - Technical Strategies for Facilitating Public or Private Broadband Construction in Your Community](#)
- [Public Infrastructure/Private Service: A Shared-Risk Partnership Model for 21st Century Broadband Infrastructure](#)
- [Welcome To CLIC's Library On Broadband Public-Private Partnerships](#)
- [Weighing Your Options: An Analysis of Recent Federal Broadband Funding](#)
- [Initial Guidance and Analysis: Treasury Announces Preliminary Guidance for Broadband Projects Funded by the \\$350B Coronavirus State and Local Fiscal Recovery Funds](#)
- [Developing a Grant Strategy in an Evolving Funding Landscape](#)
- [How Localities Can Monetize Broadband-Enabling Assets and Expand Connectivity](#)



- Can you share your community/region/department's broadband planning.
- What is your role in broadband?
- What are your technical challenges?
- What are your operational challenges?
- Are there plans for continuing any COVID response initiatives?
- How can the State help?
- What are your thoughts about the benefits and challenges of the Accessibility Fund program?

# Thank you!

[Maureen.Neighbors@adeca.alabama.gov](mailto:Maureen.Neighbors@adeca.alabama.gov)  
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A recording of this workshop will be available on the ADECA Broadband Alabama website.  
<https://adeca.alabama.gov/broadband/>

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# Glossary

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- **ISP** – internet service provider
- **Broadband** – internet access providing 25 Mbps download speed and 3 Mbps upload speed
- **Served Area/Address** – a location that has at least one ISP that offers broadband
- **Unserved Area/Address** – a location that does not have at least one ISP that offers broadband
- **Wireline Network** – a network providing communications services using technologies over a fiber strand or cable that is either buried underground or strung aurally
  - **Fiber optic** – Uses bundled fiber optic strands; symmetrical speeds offered up to 2 Gbps
  - **DSL** – Digital subscriber line; uses traditional telco infrastructure; typical fastest download speeds in the 100 Mbps range
  - **Cable** – Uses cable infrastructure; typical fastest download speeds in the 200 Gbps range
- **Fixed Wireless Network** – a network providing communications services using radio frequency (RF) technologies from an antenna site to one or more fixed locations such as homes or offices
- **Mobile Wireless Network** – a network providing communications services using radio frequency (RF) technologies from an antenna site to one or more mobile devices