

The Vermont Community Broadband Implementation Atlas and Explore VCBB Hub Website

STONE
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Services / Expertise

Geospatial Data and Solutions
GIS Application & Dashboard Development
Spatial Data Integration & Management
Automated Data Workflows
Data Visualization & Decision-Support

Technology

ArcGIS Online
ArcGIS Hub
ArcGIS Web App Builder
ArcGIS Experience Builder
ArcGIS Dashboards
Javascript and NodeJS
ArcGIS Pro

Markets

Local and Regional Planning
State Government

Project Location

Vermont (Statewide)

Date Completed

2021–Present

Project Owner

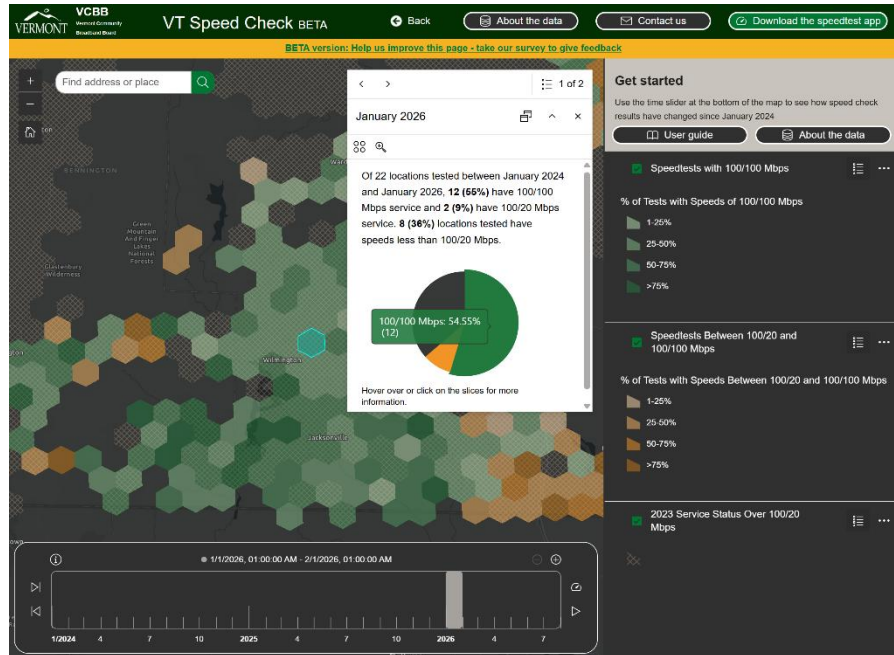
Vermont Community Broadband Board

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VT Speed Check is an interactive map showing broadband speed test results over time from Ookla. The map is used as a measure of broadband performance across Vermont.

STONE partnered with the Vermont Community Broadband Board (VCBB) to design, develop, and maintain the Explore VCBB Hub Website, the Vermont Community Broadband Implementation Atlas, and VT Speed Check. Together, these platforms form an integrated suite of GIS tools and web applications supporting Vermont's goal of universal, affordable, high-speed broadband access. This work is central to the state's broadband expansion, digital equity, and infrastructure investment initiatives.

Our team developed [Explore VCBB](#) using Esri ArcGIS Online, ArcGIS Hub Premium, Experience Builder, Dashboards, and StoryMaps to provide a centralized, accessible platform for coordinating broadband planning, implementation, monitoring, and public transparency. At the core of the platform is the [Broadband Implementation Atlas](#), a comprehensive interactive mapping environment integrating more than 70 curated datasets, including broadband serviceable locations, fiber build-out status, funded projects, utilities, municipal boundaries, transportation infrastructure, and demographic indicators. We developed custom dashboards and StoryMaps to track fiber construction, funding distribution, and broadband service coverage, supporting both internal program management and public reporting. Collectively, these tools allow VCBB, Communications Union Districts (CUDs), state agencies, and the public to visualize, analyze, and track broadband deployment progress across Vermont.



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Underlying the Atlas and Hub is a robust set of automated data workflows developed by Stone using Python, ArcGIS Notebooks, and Microsoft Power Automate to ingest, clean, validate, and update broadband infrastructure and service data from the FCC, Internet Service Providers (ISPs), Communications Union Districts (CUDs), and state agencies. Stone also established data standards and provided tailored training and technical support to VCBB staff, CUDs, and project partners on data integration, reporting workflows, dashboard use, and effective application of the Atlas and Hub, helping ensure the platform remains accurate, accessible, and responsive to evolving program needs.

Stone also developed the Vermont BEAD Challenge Portal, an ArcGIS Online-based solution that integrates Experience Builder, Survey123, Microsoft Power Automate, and SharePoint to support the Broadband Equity, Access, and Deployment (BEAD) Program. The portal manages complex challenge and rebuttal workflows, including submission of claims for served locations with supporting evidence, automated file translation, data validation, and quality control. Throughout this work, we facilitated collaboration among CUDs, private firms, and state agencies to manage spatial data in diverse formats and support interoperability. Our support for Vermont's BEAD planning and challenge processes contributed to the state securing \$228.9 million in federal BEAD funding and \$5.3 million for the Digital Empowerment Program.

This work is ongoing as broadband implementation continues across Vermont. We continue maintaining and improving the platform through regular updates, user support, and the addition of new features and datasets. The platforms' modular and scalable design allows VCBB to respond to changing requirements, add new applications, and support evolving program needs over time.

The screenshot shows the 'Explore VCBB' website. The header includes the Vermont logo and navigation links: 'Vermont Community Broadband Board', 'BEAD', 'Explore Data', and 'About the Data'. A search bar is in the top right. The main heading is 'Explore VCBB' with a star icon. Below this, there are three key statistics: 'WHAT IS THE VCBB?' (The Vermont Community Broadband Board was established by Act 71 (2021)), 'RECOGNIZING THE SUPPORT OF 218' (Towns united through the Communications Union District model to deploy broadband), and 'REPORTING PROGRESS ON \$473.9' (Million in federally mandated broadband funding programs on behalf of Vermont). A green box states 'ADVANCING THE STATEWIDE GOAL OF 100/100' (Miles symmetrical broadband for Vermonters). A link for 'OFFICIAL POLICY & DOCUMENTATION' is also present.

FEATURED MAPS & TOOLS

Explore the state's broadband implementation status through interactive maps and tools.

Three featured maps and tools are shown: 1. 'Historical Vermont Broadband Status' (Historical view of broadband service status by the entire State of Vermont, Communications...), 2. 'VCBB Broadband Atlas' (Version 2. Explore data related to broadband in Vermont), and 3. 'Communications Union Districts' (Accessible on the VCBB hub page).

EXPLORE THIS SITE

Three 'EXPLORE THIS SITE' cards are shown: 1. 'BEAD Program' (This program connects states, communities, and partners to build broadband infrastructure. Learn how Vermont is using BEAD to reach unserved households...), 2. 'Explore Data' (Explore interactive maps, dashboards, and downloadable datasets tracking broadband coverage, funding programs, and deployment progress across Vermont.), and 3. 'About the Data' (Learn about the data we use to track broadband status and our standards for sharing data. Access documentation, schemas, and template geodatabases.).

A video player for 'A Vermont Broadband Story'. The title is 'Connected: Vermont's Grassroots Effort for Rural Broadband'. The description says: 'The inspiring story of Vermonters coming together to solve the lack of rural internet connectivity, and the CUDs they established to do it. Understanding the broadband landscape in our state provides essential context for the data and maps you'll find on this site.' There is a 'Watch' button.

The footer includes the Vermont logo, navigation links: 'Home', 'Catalog', 'Policies', 'Contact Us', and a disclaimer: 'Some of the datasets on this website are very complex and may require a professional or academic background to fully understand them. If you require assistance or accommodations to access this content, please contact our Accessibility Accommodation Contact for support.' It also includes 'Copyright © 2022 State of Vermont. All rights reserved.' and links for 'Explore Feeds' and 'Manage Privacy'.

Stone organizes all the public tools and data created and collected during this project in an ArcGIS Hub website called Explore VCBB: <https://explore-vcbb.hub.arcgis.com>, which allows the VCBB, staff, and the public to draw conclusions and complete quick analyses.

