# Could It Be Me?
# Should It Be Me?

## UNDERSTANDING WHAT MAKES BROADBAND CHAMPIONS

**By Pierrette Renée Dagg, PhD**

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**BENTON INSTITUTE for BROADBAND & SOCIETY**

Broadband Delivers Opportunities
and Strengthens Communities

1041 Ridge Road, Unit 214
Wilmette, IL 60091
benton.org

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# Executive Summary

Broadband champions can be the decisive factors in efforts to improve community connectivity. The work of broadband champions has been shaped by the particularities of their broadband contexts: the local political will, the existing providers, the topography, and the wide-ranging motivations and strategies. What they have in common is their dedication, which has proved to be crucial in helping their communities get high-speed broadband.

Since June 2023, I have published six profiles from various Michigan communities, showcasing how eight broadband champions adapted to the distinct needs and situations of their communities. This analysis categorizes the champions based on traits and actions such as technical expertise, formal roles, and leadership self-identification. We have classified their activities based on how they educated, communicated, and inspired stakeholders, collaborators, and the community.

This report examines the broadband champions, drawing from the research presented in the previously published profiles. Analyzing across the profiles, I developed a taxonomy of the different kinds of broadband champions: connectors, multipliers, and visionaries.

**CONNECTORS** are adept at creating significant personal connections, acting as the social adhesive in communities.

**MULTIPLIERS** are skilled strategists who leverage relationships, knowledge, and resources to methodically achieve their objectives.

**VISIONARIES** stand out for their forward-looking plans, aiming for a clear goal and persistently moving toward it.

Champions do not fit neatly in a single category but tend to emphasize one model of leadership over others. The research identifies three key secrets to success. These broadband advocates effectively act as storytellers, validate the importance of ongoing commitment, and demonstrate both resilience and humility in their efforts.

This examination of the qualities and approaches of broadband champions aims to help others who may be considering an active role in improving connectivity for their community. By understanding qualities and archetypes of champions, those who want to improve connectivity can understand context-specific strategies and tactics that are effective and adaptable to their local communities. They can also, hopefully, see the many ways to be effective broadband champions and realize that yes, it could be them.

# Introduction

The Infrastructure Investment and Jobs Act (IIJA) has allocated billions of dollars for states to improve broadband deployment across the nation. As more communities devise their own broadband solutions, leveraging the IIJA's upcoming Broadband Equity, Access, and Deployment (BEAD) funding, what makes for successful efforts that are responsive to community needs?

This project, supported by the Marjorie & Charles Benton Opportunity Fund at the Benton Institute for Broadband & Society, sought to understand the stories of broadband community champions and the factors that contributed to their success. This is of particularly timely importance given BEAD funding scoring mechanisms; the National Telecommunications and Information Administration (NTIA) allocates points for local support.

Through my work at Merit Network with the Michigan Moonshot, I observed that in every community that has shown significant advancement in ubiquitous connectivity, a broadband champion has been present. Broadband champions are individuals who play pivotal roles in promoting and enhancing broadband access within their community, through efforts such as advocacy, community education, leadership, strategy, and community engagement. Many people seeking to enhance broadband connectivity in their communities often feel overwhelmed, believing they lack the necessary expertise or qualifications to make an impact, or that their efforts might be ineffective as they do not hold official municipal roles. Through studying the commonalities and differences that contributed to community champions' approaches, and the lessons and tactics they utilized, this report illustrates how anyone can emerge as a broadband champion in their own community.

The work of broadband champions is important, but what my research revealed is that technical know-how was not the determining factor in their success. What mattered most were the personal qualities they brought to bear, how they worked with partners and overcame opposition, and finally, their commitment to the cause.

This report begins by introducing the champions. Subsequently, there will be an analysis of various approaches. This leads to the introduction of a classification system for broadband champions, into which the champions will be categorized. To conclude, the paper will highlight three key strategies for enhancing community connectivity. Appendices include a discussion of the methodology and a description of Merit Network and its Michigan Moonshot initiative. Finally, we reprint the six profiles of the communities and their champions that the Benton Institute published in 2023–24.

# What Is a Broadband Champion?

## Meet Some Champions From Michigan
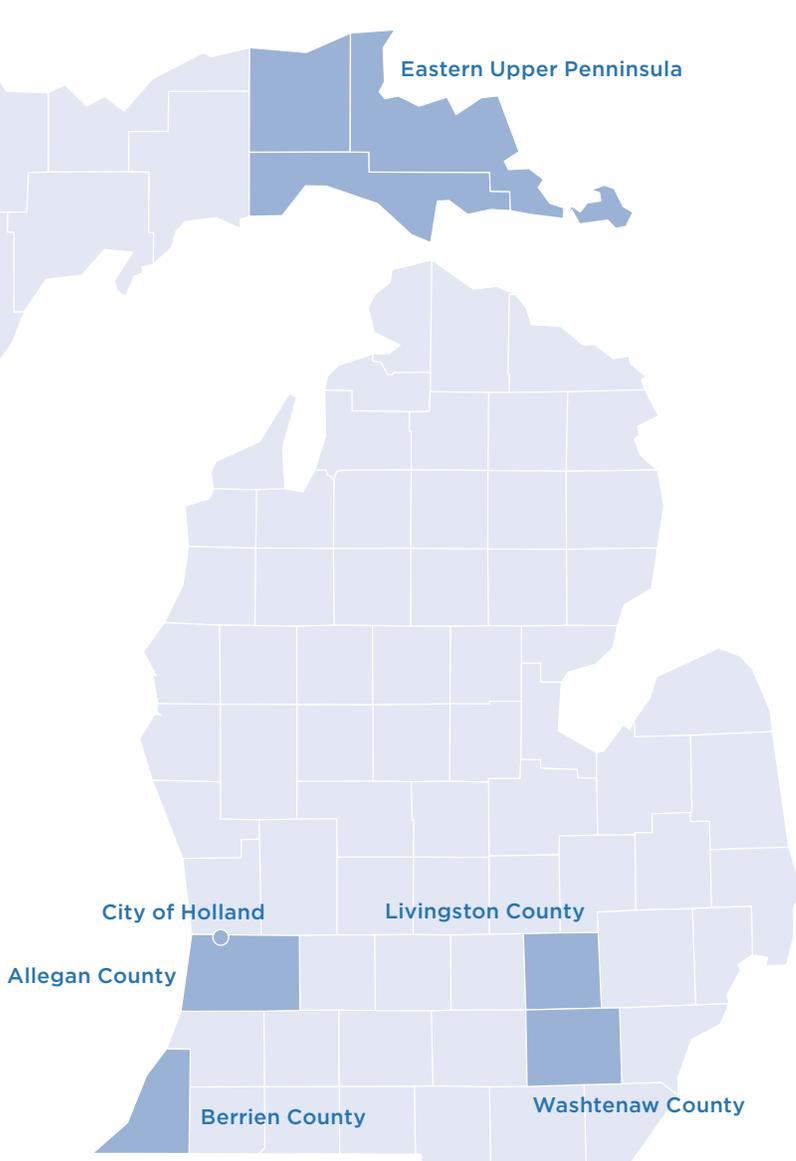


Figure 1: Map of Michigan Communities Studied

Champions in this study included:

**Jill Dunham**, Broadband Project Manager at Allegan County Government

**Teri Sue Freehling**, Berrien County Commissioner for the 8th District

**K. John Egelhaaf**, Executive Director of the Southwest Michigan Planning Commission (including Berrien County)

**Jason Kronemeyer**, Director of Technology at Eastern Upper Peninsula Intermediate School District

**Pete Hoffswell**, Broadband Services Superintendent at the Holland Board of Public Works

**Kris Tobbe**, Chief Information Officer at Livingston County

**Barb Fuller**, former chair of the Washtenaw County Broadband Task Force

**Gary Munce**, Lyndon Township Deputy Supervisor (supported Washtenaw County)

# What Do Champions Do?

While every champion played a crucial role in enhancing community connectivity, their achievements varied widely, ranging from passing local funding measures to obtaining substantial investments worth tens of millions, to making use of existing middle-mile infrastructure. Their tactics differed, but similarities emerged among the champions. As the individual profiles demonstrate, the ability of each leader to educate, communicate, and inspire those around them was critical to the success of their efforts.

## EDUCATE

Whether through public information campaigns, data-driven storytelling, or one-on-one conversation, educating the community about broadband is one way for champions to demonstrate need and support the understanding of solutions. This education includes the benefits and value of broadband to individuals, communities, and organizations, along with information about the technologies, deployment, ownership models, and other facets of the broadband ecosystem.

In Berrien County, Teri Sue Freehling took a matchmaking approach to community education. "Because they have no internet here, they've learned to live life in a way that's OK without it. Trying to convince them to see the value in investing in broadband for the longer purpose of improving the economy and well-being has been challenging," she says. Freehling immersed herself in her community, continually educating residents about broadband and the ways it could specifically improve their lives, as an extension of her daily interactions at gas stations, coffee shops, and restaurants.

# PROFILES of the BROADBAND CHAMPIONS

Champions in this study differed in their profiles, career stages, and backgrounds, and hailed from diverse communities across Michigan. One commonality among the group was champions' fervent desire to improve broadband availability in their communities. However, whether or not they had prior technical knowledge, had official responsibilities within their municipality, or saw themselves as a leader varied considerably.

**JILL DUNHAM**, broadband project manager in Allegan County, overcame a number of obstacles: accurately determining the extent of connectivity gaps, exploring potential strategic solutions, and tackling costs in a manner palatable to the community. Dunham was driven to this work as a way to take advantage of her deep industry knowledge and a strong connection to the community. She acted as a leader who refused to take no for an answer and demanded that incumbent internet service providers work with her, rather than against her. PROFILE: A Leader for Allegan County's Broadband Journey

Berrien County secured funds from Michigan's Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) grant program to connect 95 percent of residents to broadband infrastructure. Critical to these efforts were sixth-generation family farmer and county commissioner **TERI SUE FREEHLING** and landscape architect turned regional

In Holland, Pete Hoffswell took a different approach. As the community prepared to vote on a **millage** for a municipal network, Hoffswell launched a public information campaign to provide residents with a comprehensive understanding of broadband, the advantages of fiber technology, and the implications of the proposed millage, with the goal of empowering residents with the knowledge to make informed decisions regarding the future of broadband in Holland.

A MILLAGE rate is a tax rate that is levied on the assessed value of property within a municipality. In general, for every $1,000 of property value, a certain amount of tax is due, and that is based on the millage rate. As an example, a millage rate of 20 mills would result in $2,000 of property taxes for a home worth $100,000. These taxes are used to fund public projects and programs. Millages are often voted on by residents.

Jason Kronemeyer took a data-driven approach to community education. He participated in studies to investigate the relationship between connectivity and student performance in 15 rural school districts, championed a citizen-scientist household-level survey and speed test to support expansion planning, and facilitated a hardware-based measurement study of end users' quality of experience as a way to draw public focus to the infrastructural voids in the region.

Educating decision-makers is also instrumental to success. Barb Fuller chaired a 2020 task force study in Washtenaw County that was key in informing commissioners and township authorities about significant access disparities within the county, which had been previously unknown to many.

All the champions shared the traits of acknowledging their knowledge gaps and being willing to learn by seeking advice from experts and colleagues. It was essential for them to prepare themselves before attempting to persuade the wider community.

planner **JOHN EGELHAAF**. Freehling, motivated by the impact of poor connectivity on her own family farm, harnessed her exceptional skill of establishing a personal rapport with people from diverse backgrounds. As a planner, Egelhaaf recognized the implications that digital inequities had across other sectors in the region, such as transportation and housing. His unwavering conviction of the importance of sharing information also played a pivotal role in Berrien County's initiative to provide broadband access to all its residents. PROFILE: Building Broadband Momentum in Berrien County

**JASON KRONEMEYER**, the director of technology at Eastern Upper Peninsula Intermediate School District (EUPISD), had a fervent desire to accelerate student learning, coupled with unconventional strategies of "connecting the dots" over decades that have played an essential role in attracting infrastructure construction and driving broadband adoption. According to Kronemeyer, "Connectivity at the schools—that's a job responsibility. Connectivity in our students' homes is my personal responsibility." PROFILE: The Multiplier: Connecting to Community to Connect to Networks

**PETE HOFFSWELL**, broadband services superintendent in the city of Holland, overcame personal challenges and obstacles that impeded the vision for improved access in the community. He was driven by the desire to leave a lasting positive legacy in Holland. "Our town is awesome because people made it that way. I want to be one of those people," he says. Hoffswell also tackled the hurdles of educating the community and countering a misinformation

# COMMUNICATE

Effective communication plays a crucial role in gaining allies, establishing partnerships, and securing the support of residents and team members. Some champions did one-on-one convincing, scheduling meetings to sell their vision, while others focused on mass communication.

Jill Dunham's first challenge in Allegan County was to persuade township trustees that ubiquitous connectivity was possible. Within her first three days as broadband project manager, she had had discussions with all 24 townships to begin dispelling cynicism.

In Washtenaw County, Barb Fuller saw constant communication as a motivator. "I'm a never-ending nag," she says. "I didn't let up. I sent communications, meeting notices, and kept in touch with the commissioners to give them a sense of our momentum and build awareness." This direct communication played a pivotal role in achieving agreement among officials on the allocation of federal American Rescue Plan Act (ARPA) funds.

Conversely, other leaders prioritized broad communication methods over individual outreach. In Livingston County, Kris Tobbe collaborated with Allison Nalepa, the county's communications manager, to create a high-participation strategy for a connectivity survey. Their methodology included enlisting more than 250 trusted local partner organizations known for their credibility to engage with community members. A key aspect of their strategy was the use of low-cost, often humorous communications to capture the interest and involvement of the residents.

Pete Hoffswell also engaged with the Holland community through listening tours and town-hall meetings to better understand the needs of the citizens and provide an outlet for two-way communication.

campaign spearheaded by existing internet service providers. Today, Holland is constructing a community-owned network that will be completed in the next three years. PROFILE: [A Passion for Community Drives Broadband Forward in Holland, Michigan](#)



In Livingston County, **KRIS TOBBE**, the county's chief information officer, views bettering his community through technology as both a professional duty and a point of personal pride. He set out to develop an approach that could balance minimal government intervention with effective access to critical infrastructure for residents. The solution: The county directed $12.5 million in American Rescue Plan Act (ARPA) funds to a middle-mile solution that brings fiber to within three miles of all residents. PROFILE: [Out-of-the-Box Thinking in Livingston County](#)
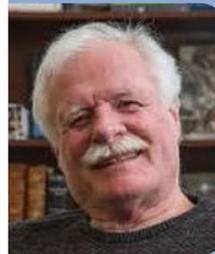


**BARB FULLER** is a former dental hygienist and political activist. **GARY MUNCE** is a musician and retired library manager of information systems. Driven by a spirit of paying it forward, and inspired by personal experiences, together they have worked to address the digital divide in Washtenaw County. Thanks in part to their efforts, by early 2025, every home in Washtenaw County is set to be connected with



high-speed, fiber-based broadband. PROFILE: [Paying It Forward in Washtenaw County](#)

# INSPIRE

Inspiring residents and leaders to work toward universal broadband connectivity in a community requires more than just an individual; it involves a collective effort to build strong relationships and actively involve others in the pursuit of a shared long-term vision.

Gary Munce of Washtenaw County emphasized the importance of rallying people who are deeply invested in the project's success, highlighting that such individuals possess a resilience that drives them to persist without yielding to setbacks.

Engaging the community and elected officials also requires effective leadership—so much so that Pete Hoffswell of Holland undertook intensive leadership training to bolster his skills.

In Berrien, Teri Sue Freehling and John Egelhaaf showcased the significance of recognizing the social aspects of broadband as a motivator. Egelhaaf focused on how broadband can foster social cohesion and bring about comprehensive improvements in life quality. Freehling, meanwhile, leveraged the essential role of connectivity in enabling a sense of community and facilitating critical activities like business, education, and personal connections to inspire others to action.

In addition, the relentless pursuit of a vision, as demonstrated by Kris Tobbe in Livingston County, underscores the effectiveness of embracing challenges with a problem-solving attitude. Tobbe's personal mantra—"Tobbes don't quit"—mirrors his approach to not only his family life but also to overcoming obstacles and encouraging a culture of perseverance and adaptability in the community. Together, these perspectives underline the necessity of strong leadership, community engagement, and a steadfast commitment to a common goal for inspiring and achieving universal broadband connectivity within a community.

# About the Typology

All broadband champions in this study demonstrated characteristics that fit into one of three categories: connectors, multipliers, and visionaries. While no individual operated strictly in a single classification capacity, the champions did tend to exude characteristics of primarily one type. Classifying champions and their behaviors into a typology is a way to think about the wide range of approaches that potential champions can choose from based on their unique circumstances.

| TYPOLOGY | WHO | WHY | IN A NUTSHELL |
|---|---|---|---|
| CONNECTOR | Barb Fuller<br><br>Teri Sue Freehling<br><br>Jill Dunham | Connectors master the art of building personal, meaningful relationships, skillfully weaving networks like a tapestry, and merging individual interests with communal goals through their authentic and diverse approaches. | "I talked to the media, service organizations, regional chambers, the Farm Bureau, in restaurants, anywhere I thought I could explain the 'why' of broadband." <br><br>– Teri Sue Freehling |
| MULTIPLIER | Kris Tobbe<br><br>Jason Kronemeyer<br><br>Gary Munce | A multiplier is a strategist who excels in leveraging relationships, knowledge, and assets to amplify collective success and drive reciprocal support, thereby magnifying the impact and achievements of their network and beyond. | "…Things like negotiating with government entities, financing, and navigating laws are what's difficult." <br><br>– Gary Munce |
| VISIONARY | John Egelhaaf<br><br>Pete Hoffswell | A visionary is a resilient and adaptive strategist who, with unwavering focus on a long-term goal, inspires and mobilizes collective action through their ability to see and seize emerging opportunities, driving transformative change. | "You have to anticipate being an old man or woman before you see your plan implemented." <br><br>– John Egelhaaf |

Figure 2: Table of Broadband Champions

# CONNECTORS

## FOSTERING SUPPORT and COLLABORATION by BUILDING RELATIONSHIPS ONE PERSON at a TIME

Connectors are unique individuals who excel in forming meaningful one-on-one relationships, acting as the human glue that binds people together. Their approach is deeply rooted in the belief that individual connections are powerful, using passion and conviction to spark a sense of urgency and relevance in others. By aligning broader needs with personal benefits, Connectors are adept at showing why others should care, effectively linking the macro goals with micro-level engagement. Their ability to weave intricate networks of relationships, akin to a tapestry, is a testament to their deep understanding of community members on a personal level. This skill allows them to revisit and strengthen these bonds repeatedly. Their social nature and genuine authenticity, exemplified by figures like Fuller with her straightforward attitude, Freehling with her empathetic heart, and Dunham with her unconventional charm, make them indispensable in any community.

Barb Fuller's successful career in assisting progressive Democratic women in their campaigns for public office has sharpened her relationship-building skills, enabling her to advocate effectively for causes such as broadband expansion. She describes herself as "sticky"—gathering the people around her to move things along. The one-on-one relationships she had forged with county commissioners established the credibility necessary for persuading them to support broadband expansion initiatives. Fuller played a pivotal role in facilitating consensus on the allocation of ARPA funds, underscoring the significance of personal connections in securing meaningful policy achievements. "I'm a never-ending nag," she says. "I didn't let up. I sent communications, meeting notices, and kept in touch with the commissioners to emphasize urgency, give them a sense of our momentum, and build awareness."

Teri Sue Freehling's success stems from her remarkable ability to forge personal connections with individuals from all walks of life and engage with their concerns. One of the initial challenges she encountered was persuading both residents and county officials that broadband was more than just a luxury. She notes, "Convincing them of the value in investing in broadband for the long-term betterment of the economy and overall well-being has been a challenge." To overcome this, Freehling immersed herself in the community through daily interactions, tirelessly educating people about the benefits of broadband and its impact

on their quality of life. Whether she was joining farmers for their morning coffee outside the gas station, meeting with service organizations and regional chambers, or conversing in restaurants, her efforts were relentless. To elucidate the importance of broadband, Freehling linked the concept to individuals' personal experiences, highlighting how it could transform their livelihoods, enhance their children's education, and help maintain close family connections.

Jill Dunham leveraged personal relationships to build trust and overcome wariness from township trustees about whether ubiquitous internet access was possible and worth the effort in Allegan County. "It was essential to get to know them to start communicating and dispelling their cynicism," she explains. "Most of the townships were incredulous that this could happen, and they didn't believe we could do it at first." Building relationships with providers over time was also instrumental in gaining access to accurate infrastructure and service maps. Ultimately, a majority of the providers did share current infrastructure maps after Dunham's unrelenting one-on-one pressure.

By forming personal connections, these individuals grasped the specific challenges faced by residents and guided them in recognizing the ways in which broadband could enhance their unique circumstances. They addressed worries and garnered support for a unified vision, fostering a sense of urgency and building momentum to drive improvements in broadband connectivity within their communities.

# MULTIPLIERS

## STRATEGICALLY SCANNING for NEW OPPORTUNITIES WHILE LEVERAGING EXISTING RESOURCES

Multipliers are strategic thinkers who excel at utilizing various resources—be they relationships, knowledge, or material assets—to strategically advance toward their community's goals. They possess a talent for seeing beyond their personal capabilities, identifying and harnessing the potential in people and situations around them. By supporting the goals and needs of others, Multipliers cultivate a reciprocal environment where those they have aided are often inclined to offer support in return. This approach not only accelerates their own objectives but also amplifies the abilities and contributions of those within their network.

Acting as a funnel, Multipliers gather and channel resources and skills, achieving outcomes that surpass expectations. Their vision extends to applying successful strategies from past experiences to new challenges, effectively creating a snowball effect whereby each success builds upon the previous ones. This ability to see the bigger picture and to multiply the impact of available resources makes them invaluable in any team or organization. They are constantly looking for ways to leverage every asset, idea, and connection, turning them into greater opportunities and achievements. This transformative approach not only propels their objectives forward but also elevates the capabilities and accomplishments of the entire group they are part of.

To effectively connect the Eastern Upper Peninsula (EUP) community, Jason Kronemeyer connects to the community, multiplying the expertise and resources around him. Deeply involved in his community, Kronemeyer was raised with the belief that, as he puts it, "If you support others, they'll in turn help you when you need it." To drive progress in the EUP, he spearheaded the creation of the EUPConnect Collaborative. This initiative brought together more than 45 stakeholders, including K-12 entities, higher-education institutions, local governments, health care organizations, and others. Each committed a portion of its ARPA funds toward developing solutions aimed at ensuring that every 911 service address has access to a minimum of 1 Gbps fixed broadband service. By rallying a larger group, Kronemeyer didn't just extended his influence and knowledge across the community. He also channeled the storytelling opportunities that were presented by participating in data and research initiatives that highlighted the crucial role of home internet. Kronemeyer also worked to interconnect hundreds of community anchor institutions in the community by

leveraging E-Rate funding, which comes from the Federal Communications Commission's Universal Service Fund and provides discounted telecommunications services to eligible schools and libraries. This reduced the capital investments needed by ISPs to extend their networks through the last miles by connecting the dots for them.

Kris Tobbe effectively multiplied the collective skills, assets, and insights within his community to significantly enhance broadband connectivity in Livingston County. By educating himself and the community on the complexities of broadband access, analyzing data, and consulting with experts and established partners, he laid the groundwork for strategic development. "I realized how much we at the county didn't know about broadband," Tobbe explains. He spoke with consultants, nonprofits, and other municipalities that had pre-existing relationships with Livingston County. "I wanted to learn how to build a network, more about service options, how to measure network speed, and how to determine which residents actually had access."

His collaborative efforts with Allison Nalepa, leveraging more than 250 trusted local organizations—including schools, churches, and small businesses—enabled a successful community engagement strategy that was instrumental in achieving one of the highest U.S. Census response rates nationwide. This success was subsequently applied to a broadband survey, ensuring widespread dissemination of crucial information. A key aspect of their strategy was the use of low-cost, often humorous communications like memes to capture the interest and involvement of the residents. Moreover, Tobbe's innovative approach to utilizing the county's existing 70-mile fiber-optic public safety and education network and aligning it with detailed survey and population data exemplified his ability to identify and exploit available resources to bring high-speed internet access closer to the majority of the county's residents. This network served nearly every anchor institution in the county. With the help of Livingston's Geographic Information Services (GIS) team, he layered survey data with population density information and the fiber ring to plan a network that would place fiber-optic infrastructure no more than three miles from 89 percent of residents.

Gary Munce was well positioned to help Washtenaw pursue ubiquitous fiber options because of lessons he learned from connecting Lyndon Township, one of the first municipal networks in Michigan. He and a handful of residents realized that no existing provider was interested in offering service in their small community and decided to solve the internet access challenge for their community themselves, building a community network that serves 90 percent of residents. Leveraging the lessons learned in Lyndon, Munce set his sights on Washtenaw County. "As much as we want to think about broadband as a technical exercise of cables and switches, that's the easy part," he says. "Other things like negotiating with government entities, financing, and navigating laws are what's difficult." These experiences served as a roadmap for Washtenaw County's efforts.

When considering transformative progress within communities, individuals like Jason Kronemeyer, Kris Tobbe, and Gary Munce stand out as quintessential examples of Multipliers.

Their stories embody the impact that strategic thinking, collaboration, and the effective leveraging of resources can have on community development, especially in the context of enhancing broadband connectivity. These Multipliers demonstrate an exceptional ability to transcend traditional boundaries, harnessing the collective potential of their communities to not only meet but exceed shared objectives.

Kronemeyer's initiative in the Eastern Upper Peninsula, Tobbe's endeavors in Livingston County, and Munce's achievements in Washtenaw County highlight the power of communal effort and the significant role of strategic resource allocation in realizing ambitious goals. Their approaches—rallying stakeholders, employing innovative communication strategies, and leveraging existing assets—exemplify the essence of Multiplier leadership. By cultivating environments that thrive on mutual support and shared knowledge and amplify the potential surrounding them, they not only advanced broadband connectivity but also reinforced the foundational strengths of their communities.

# VISIONARIES

## EXUDING a BIG-PICTURE, LONG-TERM VISION FOCUSED on a DEFINED END GOAL

Visionaries are distinguished by their long-term strategic thinking, setting their sights on a definitive end goal and steadfastly progressing toward it. Their focus remains unwaveringly fixed on this ultimate objective, allowing them to identify and seize new opportunities that align with their vision, often ones that were not initially apparent. This clarity and relentless forward motion not only propel their own endeavors but also serves as a powerful inspiration for others, motivating collective action toward a shared goal.

One of the key strengths of Visionaries lies in their systematic approach to overcoming obstacles. Unfazed by challenges, they exhibit remarkable resilience and tenacity to make persistent progress. "We just keep going," says Kris Tobbe. Their ability to adapt to changing circumstances, understanding that tactical plans may evolve, further accentuates their resilience. Visionaries are unflappable; they are not deterred by setbacks, confident in their ability to find alternate routes to their destination.

Their unwavering commitment to the end goal renders them both believable and influential. Visionaries' unflappable nature reassures others of the feasibility and attainability of the vision. They integrate emerging opportunities into their strategy, akin to fitting pieces into a puzzle, always keeping the big picture in mind. This singular focus, combined with their adaptive and resilient approach, makes Visionaries pivotal figures in driving transformation and achieving long-term, impactful change.

John Egelhaaf embodies the systematic characteristics of Visionaries. He describes his role at the Southwest Michigan Planning Commission as building plans for 10 to 30 years in the future. "The trajectory of making solutions is a little flat," he says. "You need to have the determination to get things done given the pace of change. You have to anticipate being an old man or woman before you see your plan implemented." With this perspective, and his role in the planning commission, Egelhaaf needed to be comfortable with the idea of ubiquitous broadband being taken up slowly in the counties he served. Over time, Egelhaaf strategically leveraged his position to build momentum for the cause. He believed that the power of a strong idea, such as universal broadband access, would prevail, but acknowledged that successful implementation required collaboration and a collective approach. Rather than leading and dictating every step, he recognized the need to tackle connectivity as a member of that collective. He accomplished this by first educating himself, speaking with every expert he could find. Using that information, Egelhaaf collected a

compendium of information about broadband solutions and benefits, and he continually shared that information with decision-makers in his community to inspire them to action.

Pete Hoffswell's unrelenting pursuit of ubiquitous access began in the mid-2000s. After two decades of advocacy, Hoffswell's dream of widespread internet access in Holland is finally becoming a reality. Hoffswell's strategy included a thorough campaign to educate the community about the advantages of broadband, believing that informed residents would support a millage for a community-owned network. However, existing ISPs felt threatened and spent heavily on political ads to oppose what they dubbed an "internet tax" for a public fiber network. Despite these challenges, Hoffswell's resolve never wavered. He continued to share facts, convinced that transparency would keep the community from being influenced by misinformation—a tactic that ultimately proved successful.

# Conclusion

## Three Secrets to Success

The individuals highlighted in this study exhibit a range of skills, knowledge, and career paths. Their methods vary and include leveraging personalized interactions, strategically allocating resources, and persistently pursuing long-term goals. Each leader, in their unique manner, educated, communicated with, and inspired their peers, driving progress forward. Despite their differences, common themes emerge across the profiles, revealing three key strategies for success:

- **Successful champions are storytellers.**

- **Successful champions understand that the work of universal connectivity is a marathon, not a sprint.**

- **Successful champions have the skills and political acumen to navigate roadblocks.**

Whether it was done one on one or developed for a wide audience, all of the champions were **expert storytellers**. For example, in the Eastern Upper Peninsula, Jason Kronemeyer leveraged data for storytelling by participating in multiple research studies. These included a pilot study conducted by the Quello Center for Media and Information Policy that investigated the relationship between home internet access and student performance, as well as two studies with Merit Network, including a citizen-scientist survey and speed-test study and a hardware-based network-quality project. From Kronemeyer's perspective, these studies that educated the public acted as a compelling narrative to demonstrate the extensive need in the community. Meanwhile, in Berrien, Teri Sue Freehling took a personal approach to storytelling, dedicating her time to deeply engaging with the community members. She listened to their individual stories, reassuring them that their struggles were common and shared across the community, and illustrated how broadband could address their issues.

All of the champions recognized that **the work to build ubiquitous internet access is a marathon, not a sprint.** Although the timelines for access to BEAD funding are starting to count down, this work will require a long-term commitment. In Allegan, a mere 472 out of 44,000 households are left without a plan for high-speed internet access, marking significant progress yet highlighting the challenges ahead. These remaining households are scattered

in hard-to-reach areas, making infrastructure development expensive and complex, but Jill Dunham is determined, saying, "I'm going to hunt them all down."

Resilience in the face of uncertainty and adoption of an attitude of humility are also critical for broadband champions. In 2016, few Michigan communities had embarked on building a municipal network, but Gary Munce was determined that Lyndon Township own and operate its own. He notes, "It was a moment that was both frightening and empowering. We had to go through a lot of dark alleys to figure it out. There was no model to follow." In Livingston County, Kris Tobbe has spearheaded the expansion of the county's 70-mile fiber-optic public safety and education network to bring fiber to within three miles of 89 percent of residents. He is currently facing challenges in working with existing internet service providers. "All the telecom companies want their own monopolies," Tobbe explains. "They want to control their infrastructure and own their own middle-mile network even though it's not cost-effective and will cost the citizens huge amounts of money." The county is currently seeking successful private partnerships to deliver last-mile service to residents utilizing the trunk line that is currently under construction.

In addition, each of the champions approached the connectivity challenges in their community with humility, recognizing what they didn't know and seeking information from expert sources, whether through self-directed learning or by harnessing the strengths of both public and private partnerships.

**Mastery of political strategy was essential for each champion's endeavors.** Barb Fuller, drawing on her background as a political activist, navigated the political landscape in a conventional manner by forging relationships that contributed to the townships agreeing to pool their ARPA funds for broadband infrastructure. In Holland, Pete Hoffswell rose to the challenge of making a publicly owned network appealing to the Board of Public Works, known for its aversion to risk. Without directly promoting the approval of a millage, Hoffswell initiated public information campaigns to equip residents with the knowledge to make an educated decision on the millage, while the advocacy efforts were carried out by the Holland Fiber Yes Committee, which was organized by a grassroots committee that Hoffswell had been a part of. Kris Tobbe, in Livingston, crafted a strategy that aimed to limit government involvement while ensuring that residents had access to essential infrastructure. Their political activities also involved informal efforts to demonstrate to residents, ISPs, and local governments the importance and benefits of working collectively to expand broadband access, striving to devise solutions that would be agreeable and beneficial from various political perspectives.

From my work with communities across Michigan and the insights gained from this study, it is clear that the key factor distinguishing communities that have successfully reduced the digital divide is the presence of one or two dedicated individuals committed to pursuing widespread broadband access. Each community presented its own set of challenges, needs,

and barriers to connectivity, including differing political climates, socio-demographic profiles, and levels of cooperation from existing service providers. Consequently, the strategies employed by each broadband champion, whether as a Connector, a Multiplier, or a Visionary, were specifically tailored to address these unique circumstances, although their ultimate goal of enhancing connectivity remained consistent.

This research aims to convey that making a significant impact on the digital divide does not require a technical background, an official position within local government, or specialized leadership training. Instead, individuals need to carve out their own path, focusing on educating, communicating, and inspiring in their own way to drive and foster change. By familiarizing themselves with the different champion archetypes, those aspiring to improve connectivity can reflect on their community's specific needs to develop a strategy that is both effective and adaptable to their local context.

# Appendix A

## Methodology

This research project employed a mixed-methods case-study approach that integrated qualitative and quantitative research techniques within profiles. I conducted interviews with champions and their colleagues to capture their motivations, lived experiences, and techniques, aiming to identify their contribution to momentum in broadband initiatives. I collected quantitative data about infrastructure, connectivity, households, and more from public, municipal datasets, maps, and crowdsourced connectivity measurements and sentiment analysis.

The project leveraged previous work by my organization, Merit (Michigan Educational Research Information Triad) Network, the nation's longest-running nonprofit research and education network.

As the director of research at Merit, I was involved in Merit's collaboration with communities throughout Michigan. It became apparent that communities who progressed more quickly toward their connectivity goals were those with strong advocates and leaders for their efforts. I developed a convenience sample of participants from among these communities for this study. I sought to ensure diversity among the champions, in terms of demographics, the progress their communities had made toward universal broadband, and the paths they took to get there. The map below shows the communities selected for the study.

I executed the study in three phases for each case study. In the first phase, community background inquiry, I investigated previous digital inclusion efforts, municipal resolutions, and task force appointments, and collected sentiment and speed-test data, examining results alongside demographic and socioeconomic information. The second phase involved conducting qualitative interviews with community champions and collaborators. In the final phase, I analyzed the data, produced outputs, and reported the findings.

I coded data about the champions based on emerging themes in qualities and activities. I categorized qualities by technical background, official responsibilities, and self-perception as leaders. Activity categories included participants' approaches to educating, communicating, and inspiring stakeholders, collaborators, and the community.

# Appendix B

## Merit Network

Merit is owned and governed by the public universities in Michigan. Merit was created to implement a network of mainframe computers at the founding universities of Michigan State University, the University of Michigan, and Wayne State University in 1966. The organization operated the National Science Foundation Network (NSFNet), the precursor to the commercial internet, at its inception. Today, Merit connects the higher-education, K-12, municipal, and community anchor institutions in the state.

The organization has recently dedicated sizable resources to research and initiatives to reduce digital inequalities in urban, rural, and tribal communities and schools. Hundreds of counties, municipalities, and higher-education institutions in Michigan have collaborated with Merit Network's Michigan Moonshot to reduce the digital divide through crowdsourced data-collection projects to identify shortcomings in federal broadband datasets (Michigan Moonshot, 2023), digital equity and education events, national and international research collaborations, the development of a statewide Broadband Equity, Access, and Deployment (BEAD) Program challenge platform, and communities of practice since 2018.

## Merit Network's Michigan Moonshot

Merit Network's **Michigan Moonshot** was the first Research & Education network in the United States to set its sights on improving home internet service to residents. Its efforts began in 2018, years before the pandemic amplified the need for broadband. Today, many R&E networks have begun similar efforts. In 2018 Merit began to address the problem of insufficient broadband by developing a tool for crowdsourced household-level speed-test data. These speed tests were conducted from 2018 to 2024, with a companion survey throughout the state to better understand the true picture of connectivity disparities, device needs, and resident sentiment throughout Michigan communities. These canvassing efforts were key in informing state and local leadership about significant access disparities, which had been previously unknown to many. The data also supported grant efforts in communities and helped convince townships to pool ARPA funds for infrastructure in many cases. Merit has also collaborated on numerous research projects, including studies on **broadband and student performance gaps** with the Quello Center at Michigan State University, and studies on the implications of home network quality with the University of Chicago Data Science Institute, among others.

Today, the Michigan Moonshot initiative continues to guide communities in addressing broadband access challenges through educational efforts like the **Michigan Broadband Summit**, **resource guides**, and webinars. Merit actively collaborates with policymakers and funding bodies to mitigate broadband inequities across Michigan. Through innovative strategies such as the **MOON-Light** project, Merit is expanding community networks by leveraging its sophisticated network infrastructure. It has also launched a **state mapping challenge** to enable residents to correct inaccuracies in Michigan's state BEAD eligibility map. Through the Michigan Moonshot, Merit remains committed to ensuring that no student or resident is left without access to necessary broadband services.

# A Leader for Allegan County's Broadband Journey

Allegan County's journey to universal connectivity has overcome a number of obstacles: accurately determining the extent of connectivity gaps, exploring potential strategic solutions, and tackling costs in a manner palatable to the community. Advancing this initiative required a leader with deep industry knowledge and a strong connection to the community. A leader who would refuse to take no for an answer and would demand that incumbent internet service providers work with her, rather than against her.

Jill Dunham, the broadband project manager for Allegan County, has been instrumental in the county's journey. Currently, only 472 of 44,000 households remain without a funded plan for a high-speed internet connection, and Jill continues to drive the efforts to connect these remaining homes, too.

Situated on the shores of Lake Michigan in the southwestern region of the state, Allegan County is primarily rural, with a few small urban areas. The majority of its inhabitants are White, but Latino and Black populations are growing. The local economy is bolstered by sectors such as agriculture, manufacturing, and tourism.

For almost two decades, Allegan County has been actively pursuing widespread broadband internet access, engaging in public discussions, and conducting surveys among residents. The U.S. Census reported that by 2022, 89 percent of households in Allegan County had a broadband internet subscription. With a career history in telecommunications and knowing Allegan County very well, Jill knew this could not be accurate. While internet connectivity in urban areas of the county was generally reliable, rural areas relied on high-cost satellite service or cell phone hotspots—neither of which qualify as high-speed.

## A DETERMINED, PERSISTENT ADVOCATE

In 2021, Allegan County decided to use all of its federal American Rescue Plan Act (ARPA) funds for infrastructure improvements, focused on broadband and water systems. When the county established the role of broadband project manager, Jill Dunham knew this was her "dream job." As the chair of the Allegan County Democratic Party, Jill had been voluntarily aiding in assessing the community's connectivity issues. With her 40-year background in telecommunications, Jill longed for a role that would connect her more closely with her community and allow her to use her extensive expertise to help her neighbors in need. She

believed she was the ideal candidate, and the county agreed. Known for her commitment to community organizing, Jill has a proven track record of collaboration, including serving on her local school board and leading bond initiatives. She attributes her success to her belief in the importance of incorporating diverse viewpoints in discussions, saying, "I'm successful because I believe all perspectives need to be included in conversations to see what each other doesn't see."

Jill's goal was to build a comprehensive plan that would account for 100 percent broadband infrastructure access in Allegan County. While Jill favored municipal broadband as a solution, it didn't make sense, from a business perspective, for the county to run a network that would either overbuild existing areas that had internet or only serve the least desirable areas. She was willing to put aside her standpoint to find a pragmatic answer. As a next step, she met with one of the leading incumbent providers in the community to better understand the cost of building broadband infrastructure to the unserved homes. The incumbent's number, $45 million, was much less than the county anticipated, so it decided to open a Request for Proposals (RFP) for any provider to bid on.

To develop the RFP, Jill needed a granular map of unserved households. This was more difficult than she anticipated. In her role with the Allegan County Democratic Party, Jill worked with the Michigan Broadband Cooperative to understand the Federal



ALLEGAN COUNTY BROADBAND UPDATE

Jill Dunham
Project Manager
Monday, October 9, 2023

Communications Commission's connectivity maps. Later, she leveraged provider connectivity data, county survey results, and RFP responses to build a case that the community could support.

After the county signed a nondisclosure agreement with the nine providers that responded to the RFP, it was evident that the data that came back greatly overstated coverage. Places that county leadership personally knew had no infrastructure were represented as served by the incumbents. Jill was determined to understand the real state of connectivity. For example, during a teleconference, she convinced a sales representative from a provider to screen share its internal coverage maps, and Jill secretly took photos of the screen, which showed different information than what she initially had been given. She pushed back on the provider by focusing on her own township, where she knew firsthand that the coverage was significantly overstated. With Jill stressing the importance that no residents be left out, the provider came back with a much more accurate version of its map. Ultimately, a majority of the providers shared current infrastructure maps after Jill's unrelenting pressure. The accurate data allowed Allegan County to release the RFP to get a reasonable estimate of the cost of the project.
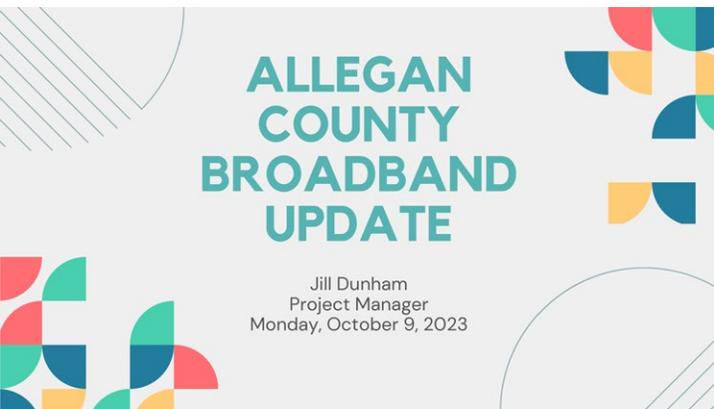
Jill attributes much of her success to her ability to build relationships. Within her first three days as the broadband project manager, she had talked with all 24 townships in the county.

"It was essential to get to know them to start communicating and dispelling their cynicism," Jill says. "Most of the townships were incredulous that this could happen, and they didn't believe we could do it at first."

Building relationships with providers over time was also key, along with her "indomitable spirit" and refusal to back down from a challenge. "When I decide to do something, it will happen," she says. "I'm a git-er-done farm girl."

Jill started with a belief that she could find a way. She began with a vision and resolved to fill in the gaps in Allegan County over time. "I listen to my detractors, and just keep moving obstacles when they show up," she says. This persistent vision, strong connections with individuals and the community, and an openness to all viewpoints motivated the townships and locals to work together and back her strategy for achieving total broadband connectivity.

## WHAT'S NEXT?

The RFP was released in 2022. 123Net responded to the 2022 RFP and was ultimately chosen to construct infrastructure throughout the county. Allegan is contributing $17.7 million in ARPA funding. 123Net is contributing 25 percent of the cost of the build itself, and it won $29 million in Michigan's Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) grant program. Eleven thousand households will be served through ROBIN funding, and approximately 4,500 more households will be connected by several other providers who were awarded Rural Digital Opportunity Funds from the Federal Communications Commission or ReConnect funds from the U.S. Department of Agriculture.

In November 2023, 123Net began providing service to its first customers in Allegan County who had lacked connectivity. The project is expected to be completed by 2025. However, there are still a few areas with no infrastructure and no funded plan to reach them. Jill is committed to securing more federal funds and relentlessly pursuing cooperation with service providers to ensure that all remaining locations are connected, down to a six-household area in Saugatuck Dunes State Park that is still unconnected. She expresses her characteristic determination, stating, "I'm going to hunt them all down."

# Building Broadband Momentum in Berrien County

Berrien County's 580 square miles encompass 39 villages, townships, and cities. The county, situated on Lake Michigan's eastern shore, is dominated by agriculture and tourism; many Chicago residents' vacation homes are located here.

A lack of broadband infrastructure in the county is actively threatening industrial innovation and hampering quality of life for residents as needs and demand for connectivity increase. As of today, the county has made substantial progress toward universal access within the community. Critical to these efforts were two behind-the-scenes champions: sixth-generation family farmer and county commissioner Teri Sue Freehling, and landscape architect turned regional planner John Egelhaaf. Together, Teri and John provided the momentum necessary to capitalize on recent funding opportunities and deliver an actionable plan for improving broadband connectivity for their community.

Teri's acute ability to ignite a personal connection with residents from every walk of life and John's persistent belief in the power of information have been critical drivers of Berrien County's efforts to connect everyone in the county to broadband.

## HISTORY of CONNECTIVITY in BERRIEN

As early as 2013, the Southwest Michigan Planning Commission (SWMPC) identified inadequate broadband access as a threat to the region's quality of life and economic development. After conducting an assessment of connectivity in the county, efforts were paused in 2015 due to fallow funding and low levels of interest from government officials. As recent state and federal funding opportunities became available, SWMPC and a group of Berrien County commissioners banded together to advocate for the prioritization of broadband equity in their community. The Berrien County Board of Commissioners passed a resolution in April 2019 identifying the critical need of county residents and businesses to access reliable, affordable, high-speed broadband, kicking off efforts in earnest.

While Federal Communications Commission industry-provided data found that 88 percent of the county had access to a broadband internet connection, Merit Network, Michigan's research and education network, conducted citizen-driven, household-level research in 2020 that found that fewer than 36 percent of residents had access to broadband internet connections, and 36 percent of residents had no access to the internet at all. Furthermore,

a majority of unconnected households reported that they were willing to pay for internet service at their properties if it were available.

The Berrien County Broadband Internet Task Force, a county sub-committee focused on increasing broadband access, contracted with DCS Technology Design as a next step. DCS conducted a study that identified nearly 6,500 unserved parcels in the county that were not slated to receive future service through existing funding programs. To ensure countywide access, a partnership was formed between Berrien County, 18 municipalities, and four broadband providers to apply for Michigan's Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) grant. The ROBIN grant is a $238 million competitive last- and middle-mile grant program that provides funds to ISPs and public-private partnerships and is funded by Michigan's American Rescue Plan Act (ARPA) Capital Projects Fund award. Berrien County's ROBIN grant application requested $19 million to connect the remaining unserved households. Berrien County, the municipalities, and the providers have pledged $19 million in matching funds. No awards have been made at the time of this report for the ROBIN grant; however, a successful grant would be sufficient to connect all of the unserved residents in Berrien County.

## BERRIEN'S BROADBAND CHAMPIONS

"I'd run into farmers in a circle drinking their morning coffee at the gas station, complaining about how far behind they were with technology because of the internet problems where we live."

Berrien County Commissioner for the 8th District Teri Sue Freehling realized she needed to bring attention to the issue of inadequate connectivity in rural areas after experiencing its consequences on her own family's farm. She had slow and unreliable satellite internet, which led her to canvass the community and discover that the problem was widespread: "I'd run into farmers in a circle drinking their morning coffee at the gas station, complaining about how far behind they were with technology because of the internet problems where we live." She noted that a lack of reliable internet was hindering farmers from implementing precision agriculture techniques (which leverage technology to enhance sustainability and efficiency), causing them to fall behind in their yields. These conversations highlighted the urgent need to improve Berrien's internet infrastructure to support local businesses' growth and competitiveness.

The need for connectivity in the region was noticed concurrently within the SWMPC. As funding became more attainable and needs escalated in the county due to the pandemic, SWMPC Executive Director John Egelhaaf recognized the opportunity to improve many quality-of-life metrics through broadband equity. "Broadband cross-cuts across the prominent issues facing our community, like mobility, food access, and housing," John notes.

Teri and John banded together with another commissioner and the county administrator to form the "Berrien Broadband Brain Trust," which later evolved into the Berrien County Broadband Internet Task Force. Teri operated within the community to advocate for connectivity and understand residents' needs, while John worked to facilitate commissioners' understanding of the broadband landscape in support of a connectivity blueprint. John describes his role as setting the table—he organized meetings, built agendas, shared notes, and organized the group. "I felt like I was building a roadmap," he says.

## APPROACHES

"Early on, I had the feeling that I was alone in a forest. The environment was vast and virtually unknowable."

Teri and John differ in their backgrounds, strategies, and leadership philosophies. However, the two share analogous qualities integral to their success. Progress in this community can be attributed to the ability of the two non-technical, semi-reluctant leaders to educate, communicate, and inspire.

Overcoming some commissioners' initial resistance to prioritize broadband access and convincing them that connectivity was not a luxury was a challenge for John and Teri. John realized the first step was to educate himself: "Early on, I had the feeling that I was alone in a forest. The environment was vast and virtually unknowable." Over time, he developed a compendium of notes, data, and contacts that he shared in Berrien County planning meetings. John strategically leveraged his position to build momentum for the cause. He believed that the power of a strong idea, such as universal broadband access, would prevail, but he acknowledged that successful implementation required collaboration and a collective approach. Rather than leading and dictating every step, he recognized the need to tackle connectivity as a member of that collective. "I was confident that sharing the progress we were making and the information we were learning would trigger enough interest from the commissioners that they would want to join us," he says.

"Because they have no internet here, they've learned to live life in a way that's OK without it. Trying to convince them to see the value in investing in broadband for the longer purpose of improving the economy and well-being has been challenging."

Persuading many in the community was a second challenge. According to Teri, this can in

part be attributed to the lack of connectivity in the region: "Because they have no internet here, they've learned to live life in a way that's OK without it. Trying to convince them to see the value in investing in broadband for the longer purpose of improving the economy and well-being has been challenging." Teri worked to persuade people by immersing herself in her community, continually educating residents about broadband and its influence on quality of life as an extension of her daily interactions—much to the dismay and embarrassment of her teenage daughters. Similar to John, Teri refrained from labeling herself as a leader. Instead, she held the belief that it's the responsibility of individuals to step up and fill a gap as it arises. "I talked to the media, service organizations, regional chambers, the Farm Bureau, in restaurants, anywhere I thought I could explain the 'why' of broadband," she says. Teri shared the connections between individuals' lived experiences and the transformative power of broadband for residents' livelihoods, children's education, and the ability to keep close to family.

Both Teri and John value the social components of broadband and leverage this to inspire those around them toward action. From a planning perspective, John understands the interconnectedness of broadband and social cohesion to impact holistic improvements to quality of life. Teri acknowledges that connectivity allows us to feel a sense of belonging even when we can't be physically present. Without it, she says, "Tasks like conducting business, attending school, and connecting with loved ones would be nearly impossible."

## PIVOTAL MOMENTS of TRIUMPH

Teri and John were driven by several crucial turning points in their efforts. Teri describes the watershed moment when the board was swayed and passed Berrien County Resolution F1904199, which prioritized broadband infrastructure, saying that the community's COVID-19 experiences "helped make the 'why' more relevant and understandable" and may have contributed to passing the resolution. John identifies a second moment of euphoria when he realized that the goal of countywide broadband could be achieved. During a Berrien County Broadband Internet Task Force meeting, broadband providers interested in applying for the Michigan ROBIN infrastructure grant presented their intentions to cover 95 percent of the county with broadband. When reflecting on the moment, John describes a keynote presentation he attended the previous fall, during which Peggy Schaffer, then director of the ConnectME Authority, stated that working on broadband may be the most important thing one could ever do as a professional: "That comment hasn't left me. I may turn around to see a different world someday." The ROBIN applications, to John, were a step toward that.

As they await a decision on the ROBIN grant, John and Teri have begun to extend their aspirations beyond connectivity. Digital equity, the deployment of precision agriculture, longitudinal investment, and efficacy studies are among their next horizons.

# The Multiplier:
# Connecting to Community
# to Connect to Networks

Jason Kronemeyer, the director of technology at Eastern Upper Peninsula Intermediate School District (EUPISD), has been relentlessly working toward enhancing educational outcomes in the region. Along the way, he has grown into the role of a broadband champion. Jason's fervent desire to accelerate student learning, coupled with unconventional strategies of "connecting the dots" over decades, have played an essential role in attracting infrastructure construction and driving broadband adoption. His dedicated efforts have contributed to millions in infrastructure grant awards, attracting multiple internet service providers (ISPs) to the Eastern Upper Peninsula.

## INSPIRATION and INCEPTION

The Eastern Upper Peninsula (EUP) in Northern Michigan encompasses Mackinac, Chippewa, and Luce counties and is home to 53,000 residents, nearly half of whom live below the ALICE (Asset Limited, Income Constrained, Employed) poverty line. For years, this extremely rural region's progress and educational opportunities have been hindered by the scarcity of broadband infrastructure and ISPs.

EUPISD began working to leverage the internet to improve education in 1992, when a distance learning project commenced that connected all the high schools with a fiber cable modem that allowed up to three remote classrooms at a time to connect. Jason was hired in 1999 as a computer technician on this network, and the power of connectivity for education resonated with this introductory experience.

"I was inspired early on. I could see the promise of what access to the internet really meant—a self-directed learner could know anything they wanted," he says. Encouraged by this initial revelation, Jason has spent the remainder of his career devising creative solutions to connect students to broadband both in and outside of the classroom.

Whereas previous broadband champions in this series of profiles have led by marshaling forces and resources in their community, Jason's strategy has been distinctly different—identifying opportunities to attract new providers, creating demand in the community, and telling stories through data. Jason's efforts have culminated in millions in infrastructure grant awards and expanded service provider options in the EUP.

## CONNECTIVITY as a CALLING

Jason is convinced that broadband access significantly boosts students' learning speed and capacity. His desire to enhance educational results fuels his dedication to expanding internet connectivity throughout the community—something that stretches beyond his official role at the ISD, which ends at the school premises. According to Jason, "Connectivity at the schools—that's a job responsibility. Connectivity in our students' homes is my personal responsibility."

The cornerstone of these endeavors, Jason points out, is cultivating and inspiring strong relationships. Growing up on a dairy farm, Jason had parents who instilled in him the significance of community involvement, being an active member of the church, and contributing to one's industry. "Building relationships involves assisting others," he explains. "If you support others, they'll in turn help you when you need it." In leadership, he notes, this principle is known as "multiplying." To effectively connect the community, Jason connects to the community, by multiplying through educating others, communicating, and inspiring neighbors to action.

As a part of his strategy to increase community demand for the internet and reduce barriers for new ISPs, Jason saw the National Telecommunications and Information Administration (NTIA)'s Broadband Technology Opportunities Program (BTOP) as an opportunity to create initial market need for students' home broadband access. "We knew that we had to increase demand for the internet; otherwise, nobody was going to build it," Jason says. In 2010, EUPISD's BTOP application was successful and NTIA awarded the district $3.8 million to purchase computers for every seventh- through 12th-grader. However, while every student thereupon had a computer, large swaths of the community had no available internet service. Tom McKee, superintendent of Rudyard Area School District, recalled this in a 2019 video interview: "It's like we bought a brand-new vehicle for every kid to access what they need to, but we don't have the gas to get them there."

Frustrated with the lack of practical steps in national models for community action plans, Jason then turned his attention to service availability. He worked to address the issue in a more coordinated manner through cooperative partnerships with regional planning groups: "All the guidance was focused on population centers—there wasn't a broad conversation about grasping what the barriers were in areas like ours."

Educating others has been key to expanding this availability. As a data scientist and consummate learner, Jason recognizes the power of data for telling the story of the essentiality of home internet for students in the EUP to potential service providers and grant funders. He has continually leaned on community sentiment and infrastructure data as storytelling mechanisms to support grant narratives and attract providers. Jason actively pursues research collaborations to shed light on the detrimental effects of internet absence on students' academic trajectories, future prospects, and societal integration.

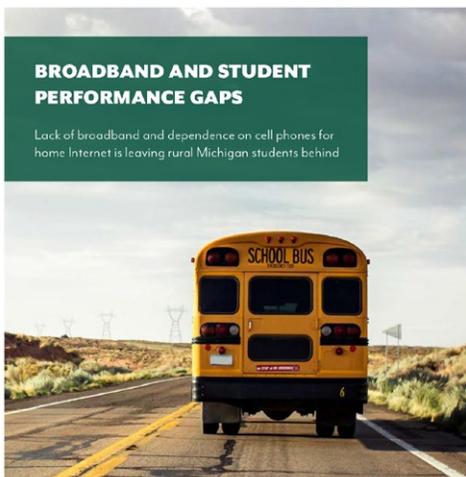## REGIONAL PLANNING and the EUPCONNECT COLLABORATIVE

In an effort to better understand the digital divide, Jason partnered with the EUP regional planning group in household-demand and service-availability survey efforts from 2013 to 2016. In 2018, Jason led the EUP Broadband Infrastructure planning initiative with funding from the Economic Development Administration (EDA). As a part of this effort, the EUPISD and the regional planning and development group identified more than 200 strategic community anchor locations throughout the EUP to interconnect with high-speed, secure infrastructure.

"We gathered hundreds of key facilities across the EUP and made an infrastructure plan to work towards interconnecting all of those points," Jason notes. "You can reduce the capital investment that is needed by an ISP to extend their networks through the last miles by connecting these dots for them."



**BROADBAND AND STUDENT PERFORMANCE GAPS**

Lack of broadband and dependence on cell phones for home Internet is leaving rural Michigan students behind

FOR FURTHER INFORMATION ON THIS REPORT:

**Keith N. Hampton,** Professor, Department of Media and Information, Michigan State University
**Laleah Fernandez,** Assistant Director, Quello Center
**Craig T. Robertson,** PhD Student, Department of Media and Information, Michigan State University
**Johannes M. Bauer,** Professor and Director, Quello Center          quello@msu.edu | broadbandgap.net

quello center    MICHIGAN STATE UNIVERSITY

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Also in 2018, the Quello Center for Media and Information Policy conducted a pilot study in collaboration with EUPISD to measure rates of home connectivity among students and investigate the relationship between connectivity and student performance among 15 rural school districts. Jason was a member of the focus groups that designed the pilot study. This research showed that students who did not have access to the internet at home performed lower on a range of metrics, such as homework completion, grade point average, standardized test scores, and interest in STEM-related careers. In 2019, Merit Network conducted a follow-up investigation on the effects of limited broadband access on educational results in Michigan's Eastern Upper Peninsula through video interviews to complement the Quello study. Jason also championed a citizen-scientist survey and speed-test investigation in partnership with Merit's Michigan Moonshot in 2022 in order to support access expansion planning. This study found that only 22 percent of all residents had access to the internet at broadband speeds and 29 percent of survey respondents with school-age children in the home had access to broadband internet. From Jason's perspective, these studies that educated the public about students' needs, along with the compelling narratives communicated via video testimonials, marked a watershed moment in drawing public focus to the infrastructure void in the region.

Relationship building, connecting others, and Jason's approach to "multiplying via educating others" were critical in instigating community action. Just as indispensable was his approach to facilitating discussion and communicating with residents, service providers, and organizations within the region. In response to the American Rescue Plan Act (ARPA) funding availability, Jason facilitated the development of the EUPConnect Collaborative in

2021. "Everyone is trying to do it on their own—this is a causal factor of the digital divide," Jason says. "I solve problems by getting the right people in a room to talk together." More than 45 K-12 entities, higher-education organizations, local units of government, health care organizations, and others pooled portions of their ARPA allocations in order to jointly address the lack of available service in the EUP. The collaborative's goal is to achieve connectivity to every 911 service address with speeds of 1 Gbps minimum fixed broadband service. The EUPConnect Collaborative communicates the progress of its strategic initiatives with the community through webinars, videos, economic reports, and a blog.

## A CHAMPION'S LEGACY

Jason's work has been instrumental in five major infrastructure investments in the region totaling approximately $67 million, including: an EDA grant under the Coronavirus Aid, Relief, and Economic Security (CARES) Act to support construction of 70 miles of middle-mile fiber-optic infrastructure in the Upper Peninsula in 2022 (won by Merit Network and EUPConnect Collaborative together); a Rural Digital Opportunity Fund award from the Federal Communications Commission in 2021 to Highline Internet; and three U.S. Department of Agriculture ReConnect grant applications that were awarded in 2023, in addition to significant private investment. The EUPConnect Collaborative has also pooled more than $750,000 to support community goals of connecting every 911 service address.

The Quello Center conducted a follow-up homework-gap study in the EUP that found a reduction in both the number of students with no internet access and the number of students dependent upon cell phones for internet access.

Despite these improvements, much work remains in the EUP. "We still have a huge need for middle-mile, and many of our schools are still connecting to the internet on a metered capacity," Jason says. He has encouraged the schools to leverage the federal E-Rate program to improve connectivity. To Jason, E-Rate presents the greatest opportunities for schools and libraries to close the digital divide by supporting middle-mile build-outs in coordination with other investments, such as Broadband Equity, Access, and Deployment (BEAD) Program.

Jason recently disclosed his plans to retire in the near future. As he reflects on his career, his achievements in the Eastern Upper Peninsula are entwined with a measure of regret. "I'm into the second half of my 25th year, and it seems like we're just getting started," he remarks. Jason strongly believes that his ability to educate, communicate, and inspire has had a substantial influence and has empowered students to excel: "I'm confident that I've made a significant impact, and I hope that my successor will be as deeply committed to the community as I have been."

# A Passion for Community Drives Broadband Forward in Holland, Michigan

Unlike many communities in Michigan, every resident in Holland is served by one of two incumbent internet service providers (ISPs). However, available speeds, network quality, and provider options negatively impacted educational outcomes, work-from-home opportunities, and overall quality of life in the area, particularly during the pandemic.

Today, Holland has taken a significant step forward by awarding a contract to develop and construct a publicly owned open-access fiber network that will span across the entire city. Public fiber to every home in Holland by 2027 was furthered significantly by the dogged determination of an individual who sought to leave a lasting legacy of a united and well-connected community. This champion built upon the community's history of promoting the common good while acknowledging and surmounting his own personal limitations.

Pete Hoffswell, broadband services superintendent at the Holland Board of Public Works, has been a serious factor in getting Holland to commit to a publicly owned open-access fiber network. By engaging with the community to understand the needs of residents, creating educational initiatives highlighting the advantages of dependable broadband, and prioritizing personal growth and leadership development, Pete has helped bring about the successful approval of a millage, which funded the provision of public broadband for every household in the community.

## BUILDING UPON a HISTORICAL VISION of PUBLIC GOOD

Holland, located on the eastern shore of Lake Michigan, spans both Ottawa and Allegan counties. The city boasts strong Dutch heritage and leverages it for tourist attractions and festivals. Holland's 35,000 residents are primarily White, and their median yearly household income mirrors the state's average at just under $64,000. According to U.S. Census data, greater than 88 percent of residents subscribe to broadband internet service.

Although two existing providers offered residential services in Holland, residents were unsatisfied. A 2018 study conducted by the Holland Board of Public Works (HBPW) revealed that residents who did have connectivity faced issues related to reliability, cost, and limited provider options. In response to the increasing demand for connectivity due to the pandemic, the City of Holland and the HBPW embarked on a journey to explore options for expanding internet services throughout the community.

Holland has demonstrated a commitment to promoting connectivity for the betterment of the public. In the early 1990s, the HBPW constructed a fiber ring to enhance communication between electric substations. Concurrently, a team of future-thinking community volunteers initiated Macatawa Freenet (MacNet), a nonprofit ISP, in 1994 with the support of a local grant. The City of Holland offered city hall as a host site, and 16 dial-up modems were installed that enabled residents to enjoy 30-minute sessions of dial-up internet. In the initial month, more than 300 individuals seized the opportunity for free access, and by the second month, this figure had surged to surpass 3,000 users.

In 2017, shared gigabit fiber was extended from the existing fiber network to businesses located in the downtown corridor. The residents of the area recognized the value of the broadband services provided by the HBPW and expressed their desire to have access to similar options. To explore the feasibility of community-owned, open-access fiber, the Holland City Council established a task force in 2019. A study conducted by this task force in 2021 revealed that 70 percent of residents believed that the internet should be treated as a public utility. The HBPW already provided essential services like electricity and water at competitive prices and prioritized the well-being of residents. The study showed that residents embraced the idea of treating broadband as a utility in the same manner. Additionally, 72 percent of residents stated that community-owned fiber would significantly enhance their quality of life, and 65 percent of residents agreed that a community-level investment was necessary to ensure access to every resident. In August 2022, the residents of Holland approved a broadband millage. Construction is expected to be finished within the next three years.

## HOLLAND'S BROADBAND CHAMPION

Pete Hoffswell has been a steadfast advocate for connectivity in the community for two decades. His commitment to achieving citywide access is a long-standing pursuit that originated from his position as a board member at MacNet in the 1990s. Initially, networking served as a technical fascination for Pete. But while working with MacNet, he came to recognize the impact his efforts had on improving people's lives. "I'm a big believer of 'make a living, make a life, make a difference,'" he says. "It was at this point in my career that I got to start making a difference." To Pete, an online community enables people to engage and connect with humanity in ways that would otherwise be unattainable.

Pete joined Holland Fiber, the community's broadband advocacy group, in the mid-2000s, and he continually leveraged this platform to lobby the HBPW to increase access in the community. The HBPW recognized Pete's dedication, hiring him in 2016 as the broadband services superintendent. Pete was charged with leading a department that seeks to provide competitive, reliable, and ubiquitous internet services to improve quality of life.

Pete was well aware of the positive impact that reliable, high-speed fiber internet had on economic growth. A prime example was LG's choice to construct a billion-dollar battery plant in Holland, which was partly driven by the city's affordable electric rates and dependable broadband services for businesses. Pete expressed his desire for all residents to prosper by having access to necessary resources and the best possible connectivity, aiming to make the town the most attractive in the state or even the country. Unfortunately, frequent service outages and insufficient speeds were hindering this progress. Pete was determined to improve access and reliability in Holland. However, he encountered both internal and external challenges while building upon previous efforts to address the issue.

## PIVOTAL MOMENTS of CHALLENGE and TRIUMPHS

The HBPW and the City of Holland frequently leverage community engagement and two-way feedback to better understand residents' perspectives on regional issues. So communication with residents and city officials was a critical first step. Pete coordinated community outreach and interaction via the broadband task force, using methods like listening tours and surveys, including the one conducted in 2021. These efforts were geared toward comprehending the issues the residents faced—affordability and provider choices, for instance. Communicating the feedback from the residents to the HBPW was key in helping both the HBPW and the City Council understand the public's interest in a community-owned fiber network and, subsequently, formulate an appealing value proposition for the residents.
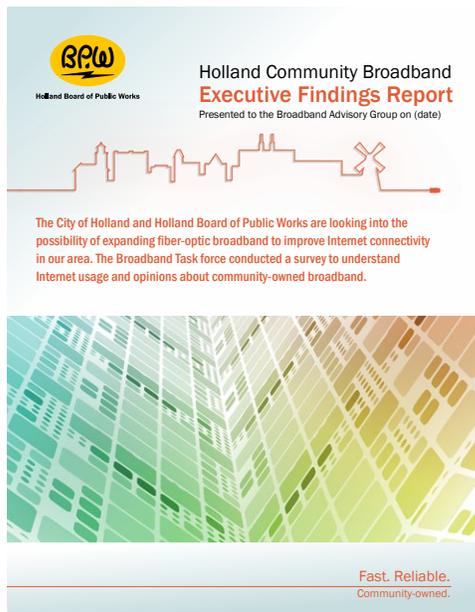


Financially cautious, the HBPW was meticulous in its decision-making to support the ubiquitous construction of fiber throughout the city. The HBPW agreed to build and operate an open-access network if residents demonstrated their commitment by voting for a small tax increase through a millage that would pay for the bonds to finance construction. This would create a financing model that would introduce less risk to the HBPW and the City of Holland. A millage is structured in a way that individual tax expenses are determined by the taxable value of each home. As an example, an owner of a $200,000 home in this millage could anticipate a monthly tax increase of $12.50 over a 25-year period to fund the construction of the infrastructure. A pro forma developed by the HBPW's city manager and the owner's engineer estimated that residents' monthly internet service charges would be approximately $45.

Community education was a critical next step that required a collective effort by Holland's broadband advocates. Pete initiated the Holland City Fiber program under the umbrella of the HBPW. This program aimed to provide residents with a comprehensive understanding of

broadband, the advantages of fiber technology, and the implications of the proposed millage. Educational materials included websites, flyers, brochures, community meetings, webinars, and videos. An FAQ helped residents understand why Holland was pursuing a community-owned network, how long the investment would last, and the benefits of operating a broadband utility, among other points. The goal was to empower residents with knowledge, enabling them to make informed decisions regarding the future of broadband in Holland.

Pete's ability to explain the intricacies and benefits of shared infrastructure and the rationale of public ownership was fundamental to this community education initiative. "Pete is the kind of person that can help you understand how the watch is made, not just what time it is," says Dean Whittaker, a member of the Holland Fiber advocacy group.

However, as the millage vote approached, incumbent ISPs recognized the threat that publicly owned fiber construction posed to their business interests. In response, they invested significant amounts of money in political advertisements to sway public opinion against an "internet tax" for construction of a publicly owned fiber network. To counter this well-funded marketing campaign, the Holland Fiber Yes Committee was organized by the Holland Fiber grassroots group that Pete had been an active member of. This committee advocated for the passage of the millage and publicly countered the arguments put forth by the incumbent ISPs. It worked to educate residents in ways that the HBPW and Holland City Fiber program alone could not achieve—for example, through op-eds, yard signs, blog posts, and articles directly addressing misinformation campaigns. In August 2022, the millage passed with a vote of 51.2 percent in favor. While many voters were satisfied with the provider options and choices available at their homes, a close majority favored public investment to create more broadband options. Pete attributes the success of the millage to his ability to communicate a consistent vision that is reflective of the community's desires and inspires consensus.

## HOLLAND'S PRIORITIES
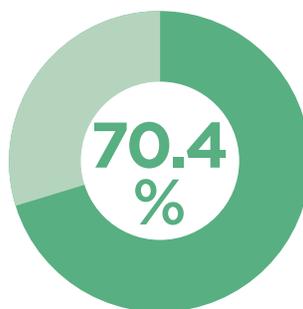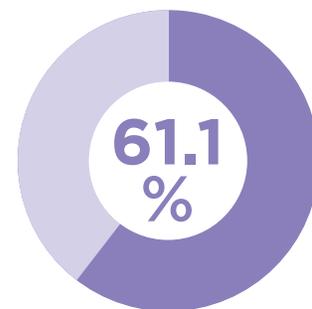
### UBIQUITOUS ACCESS

**75%**
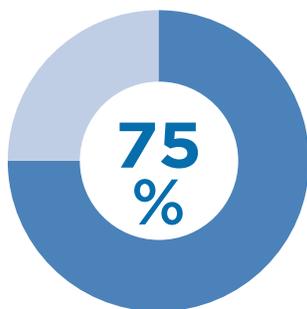
report that they support all residents having access to the internet.

### COST

**70.4%**

report that they want lower internet costs.

### RELIABILITY

**61.1%**

report that they want more reliable internet.

While Pete attributes much of his success to qualities such as passion and tenacity, certain personal obstacles were hindering the realization of his vision for improved access in the community. He calls this his "cowboy mode," when his commitment to his own point of view could lead him to disregard others' perspectives and act independently. Although sometimes this approach worked for him, it often also hindered his progress. "That's gotten me burned many times," Pete concedes.

He set out to address this shortcoming and became the leader his community needed. Pete enrolled in a yearlong leadership program, aiming to enhance his conflict management and public speaking and to learn strategic methods of inspiring strong teams in order to systematically overcome hurdles standing between himself and his vision. "You can't be a leader if you have passion without skill," he notes.

## PERSONAL DEVELOPMENTS

Pete firmly believes that effective leadership played a vital role in bringing about significant change in Holland. From the early days of MacNet to the city's ability to fulfill its own needs through public infrastructure, and even in the initial aspirations for open access, the progress in Holland depended on individuals willing to guide and nurture the endeavors.

Pete expresses an aspiration to leave a lasting impact on his town. "My legacy is going to be my town. When I look back at the people that I want to emulate, it's the ones who have given back to the city to make it a better place," he explains. "Our town is awesome because people made it that way. I want to be one of those people."

According to Pete, understanding his "why," developing a clear vision, and removing obstacles are the key success factors in his ability to educate, communicate, and inspire action in Holland. Construction of Holland City Fiber is slated to begin this fall and will be complete within the next three years. Advance recruitment of customers for the community-owned network will commence this spring. Pete remains committed to the growth of his team at the HBPW and to his personal leadership development in the coming years in order to execute a vision of providing affordable, reliable access to empower citizens, enhance business, and facilitate educational opportunities throughout the community.

# Out-of-the-Box Thinking
# in Livingston County

The county government in Livingston, Michigan, was very clear—it was not going to become an ISP. Long committed to principles of lean government, elected officials were certain that although 56 percent of households in this region do not have access to fixed broadband, the ideal solution should not be government-owned infrastructure.

County Chief Information Officer Kris Tobbe set out to develop an approach that could balance minimal government intervention with effective access to critical infrastructure for residents. The solution: The county directed $12.5 million in American Rescue Plan ACT (ARPA) funds to a middle-mile solution that would bring fiber to within three miles of all residents. The county is now waiting to see whether last-mile providers will deliver the final piece of the puzzle: They're building it; will ISPs build off it?

## DRIVE and EXPERIENCE

In southeastern Michigan, Livingston County is composed primarily of bedroom communities. Proximate to major urban areas such as Lansing, Flint, and Detroit, the region stands out for its relative affluence, boasting the lowest Asset Limited, Income Constrained, Employed (ALICE) poverty percentage in the state. Home to approximately 195,000 residents, this area exudes economic prosperity; however, it faces a significant challenge in terms of digital connectivity. According to a 2022 study, a majority of households in this region do not have access to fixed broadband, highlighting a critical gap in infrastructure.

Kris Tobbe has a drive to better his community through technology. He views enhancing connectivity as both a professional duty and a point of personal pride, approaching it with an engineer's mindset. This mindset involves avoiding inefficiencies and believing that infrastructure costs versus returns on investment are the largest barriers to broadband service availability in the community. His educational background in public administration and business management has shaped his views on government. Moreover, his two decades of experience in information systems at the Huron-Clinton Metropolitan Authority have given him insights into the synergy between engineering, planning, and IT. These experiences have been instrumental in guiding Kris in leading connectivity initiatives for the county. His ability to leverage the expertise of his colleagues has significantly advanced efforts to bridge the digital divide in the area.

## A STRATEGY for UNIVERSAL SERVICE

As in many communities, the pandemic's impact on economic development and educational opportunities demonstrated the need for sufficient broadband infrastructure and service in Livingston.

Kris's challenge was to develop a strategy to serve all residents in the county without becoming an ISP. Although the county government has developed small funding mechanisms to spur private-sector and nonprofit developments to meet community needs, Kris explained that the county board of commissioners felt strongly that "the path to becoming a broadband utility or ISP would have been time intensive based on the regulatory environment."

Kris views providing broadband access across the county as part of his professional responsibilities, yet his conviction that connectivity serves as a leveling force for all citizens drives him to exert extra effort in his work.

His first step toward connecting the community was to educate himself and his community. He did this by leveraging the expertise around him and through data analysis. "I realized how much we at the county didn't know about broadband," Kris explains. He spoke with consultants, nonprofits, and other municipalities that had pre-existing relationships with Livingston County. "I wanted to learn how to build a network, more about service options, how to measure network speed, and how to determine which residents actually had access," he says.

Kris partnered with Merit Network, Michigan's research and education network, to conduct a survey to accurately measure access and speed within the county to better inform strategy. This survey found that 42 percent of Livingston County residents had no internet subscription, 56 percent lacked access to the internet at speeds of 25/3 and above, and a majority of unconnected residents had no access because no network was available in their area to offer service. The survey provided a reliable picture of the community's broadband access density, provider satisfaction, and price sensitivity. Survey data were reliable due to high participation and response rates.

## A COMMUNITY ENGAGEMENT STRATEGY

Kris acts as a strategic multiplier, leveraging the resources around him to advance toward the county's goals. He communicates the importance of household-level broadband data to residents. Livingston County officials understand that U.S. Census data are instrumental in determining spending for many federal and state programs. During the 2020 Census, Kris collaborated with Allison Nalepa, the communications manager of Livingston County, to create an innovative strategy for community engagement. Their approach resulted in one of the highest Census response rates nationwide. The success of this campaign provided

Kris with valuable insights, which he and Allison later applied to a broadband survey. Their methodology included enlisting more than 250 trusted local partner organizations known for their credibility and deep understanding of community members. Kris and Allison developed outreach materials such as social media posts, newsletter articles, graphics, and flyers for the community partners to share through their channels. These partners included schools, churches, libraries, small businesses, and senior centers, among others. By leveraging these partnerships, they were able to effectively disseminate information to residents, ensuring that the message was consistently echoed throughout the community. A key aspect of their strategy was the use of low-cost, often humorous communications to capture the interest and involvement of the residents.





### STRATEGIC THINKING APPROACH

Kris looks for simple ways to make projects more cost-effective and viable in the long run with the goal of, as he says, "making something bigger happen." Kris was interested in multiplying existing assets within the community, like the county's 70-mile fiber-optic public safety and education network. This network served nearly every anchor institution in the county. With the help of Livingston's Geographic Information Systems (GIS) team, he layered survey data with population density information and the fiber ring to plan a network that would place fiber-optic infrastructure no more than three miles from 89 percent of residents.

Kris used this network design as the basis for a request for proposal (RFP) for engineering and construction of the county's broadband network. Livingston is constructing a 90- to 120-mile underground system to extend trunk lines and is seeking innovative partnerships to help sustain and further build out the infrastructure and deliver home internet. Kris inspires confidence in staff and residents through his ability to set a vision and validate progress via analytical thinking. Remarkably, only 11 months elapsed between the conclusion of the broadband survey and the release of the RFP. Livingston's County Board, according to Kris, has a strong aversion to bureaucracy and favors the logic of data and analytics. Rather than engaging citizens for a subcommittee, the county used data provided by Kris to justify the need and logic for the network and its design.

Another major challenge Kris has faced has been working with some of the internet service providers. "All the telecom companies want their own monopolies," he explains. "They want to control their infrastructure and own their own middle-mile network even though it's not cost-effective and will cost the citizens huge amounts of money."

In some spots, he says, "there are more than 10 cables between underground and aerial. It's ineffective and it looks terrible." Kris believes that this situation also creates network frailty for residents as companies go bankrupt or sell out as time goes on. Common infrastructure, like Livingston's approach, can contribute to service stability and a robust network. Kris believes that the power of data and analytical thinking will result in successful private partnerships in the county.

## WHAT'S NEXT?

Livingston County is using $12.5 million in American Rescue Plan Act funding to support the expansion of the underground trunk lines. The project is 20 percent complete and has a goal of launching service in mid-2024. Livingston intends to allow any service provider to leverage the trunk line as middle-mile infrastructure to reduce costs of infrastructure expansion and increase the efficiency of the network while delivering fiber to the home.

Kris attributes his effectiveness to his willingness to acknowledge his knowledge gaps and approach every challenge with a problem-solving mindset. As the father of four daughters, Kris rewards similar behaviors with his family. "Tobbes don't quit—that's the mantra in our house," he says. "We just keep going."

# Paying It Forward in Washtenaw County

Barb Fuller is a former dental hygienist and political activist. Gary Munce is a musician and retired library manager of information systems. Driven by a spirit of paying it forward, together they have worked to address the digital divide in Washtenaw County. Thanks in part to their efforts, by early 2025, every home in Washtenaw County is set to be connected with high-speed, fiber-based broadband.

Washtenaw County, in the southeast region of Michigan, is home to more than 320,000 residents. Although the county is prosperous and youthful, with a median age below 35, and is home to the University of Michigan, it faced a digital divide, with more than 10,000 households lacking a broadband internet connection in 2018.

## LONG-TERM COMMITMENT

Gary and Barb's motivation to bridge the digital divide stemmed from personal experiences as community members witnessing the impact of inadequate internet connectivity on young people. As a parent, Gary says, "I tried every way of connecting that was available—satellite dishes, modems—it was difficult and unreliable." As a library network manager, Gary also understood who was being left behind by a lack of connectivity and the impact it had on the broader community. "I have a close view of what it means for residents who didn't understand the true benefits of broadband but really needed it," he explains. Similarly, Barb noticed the significant disadvantages faced by students as they struggled to complete schoolwork without home internet. This experience led her to approach the county about access disparities across the community.

Although Barb and Gary's efforts have been successful, countywide connectivity in Washtenaw has been a long-term commitment. Their initial conversations with county administrators began more than ten years ago. County leaders were skeptical at first. However, Barb convinced them to appoint a broadband subcommittee in 2017 to investigate the urgent need to improve infrastructure to support educational outcomes in the community. The subcommittee evolved into the Washtenaw County Broadband Task Force, featuring Barb as the chairperson and including Gary among its members, thereby initiating the county's project in earnest.

## LYNDON'S LESSONS

Gary was well positioned to help Washtenaw pursue ubiquitous fiber options because of lessons he had learned from connecting Lyndon Township, one of the first municipal networks in Michigan. Gary, the current deputy supervisor of Lyndon Township, attended a broadband meeting, the Western Washtenaw Broadband Group, convened by State Rep. Gretchen Driskell and Chelsea District Library in 2013, but grew frustrated with the pace. He and a handful of residents decided to solve the internet access challenge for their community themselves.

Gary and the other volunteers realized that no existing provider was interested in offering service in their small community. "It was a moment that was both frightening and empowering," he says.  "We had to go through a lot of dark alleys to figure it out. There was no model to follow." Gary and others within the township were determined to own and operate their own network. Few Michigan communities had embarked on building municipal networks at that time, and they faced numerous hurdles, such as unfamiliarity with the RFP process, restrictive state laws, and funding uncertainties.

The network was completed in 2020. Now, nearly 90 percent of the town's residents subscribe to the municipal network. The network is primarily maintained by local volunteers and is owned by Lyndon Township. Midwest Energy & Communications (MEC), a nonprofit cooperative based in Cassopolis, Michigan, operates the network under a five-year contract with the township. This contract is up for renewal in 2025. The Broadband Oversight Committee of Lyndon Township supervises the overall management of the network and has begun to solicit proposals from MEC and other service providers for review.

Gary's hands-on experience in Lyndon proved invaluable in educating the Washtenaw County task force and local authorities about the necessary laws, models, and technology for constructing the network. "Grassroots movements are about neighbors," Gary says. "There were a lot of others in our county who were struggling. It was up to us to pay it forward and help the rest of the community."

## AN EXPERIENCED ACTIVIST

Barb also leveraged her history of activism to tackle the county's broadband problem. Barb spent much of her career in assisting progressive Democratic women in their campaigns for public office. Her background and relationship-building skills created credibility that mattered when she advocated for the county commissioners to support broadband expansion. She attributes the county's commitment to ubiquitous infrastructure to her relentless tenacity, in part.

"I am the invisible glue that keeps things moving," she explains. "I'm the tracker. I make sure we hit our deadlines. I keep a legal pad at my bedside to help me remember tasks that occur to me in the middle of the night. It takes someone who is a little obsessive about these things to make it work."

## EDUCATING, COMMUNICATING, and INSPIRING

The pair's personal efforts to educate, communicate, and inspire were paramount to the project. Educating decision-makers about the need for countywide fiber was instrumental. The Washtenaw County Broadband Task Force partnered with Michigan research and education network Merit in 2020 to conduct a household-level connectivity and sentiment survey. This study confirmed broadband disparities in the county, demonstrating 61 percent more unconnected residents than indicated by Federal Communications Commission data. Nearly 10,000 households in the county were unserved at this time.



MAY, **2020**

WASHTENAW
**BROADBAND**
DATA COLLECTION
EXECUTIVE FINDINGS REPORT

quello center    merit

Data from the 2020 task force study revealed that 64 percent of households in the county did not have access to reliable, affordable, high-speed broadband. This information, along with subsequent pre-engineering efforts, was key in informing county commissioners and township leaders about significant access disparities, which had been previously unknown to many.

Any amount of unconnected residents was unacceptable to Barb. She says, "We made the case with these reports. We were ready to actively pursue countywide connectivity when [American Rescue Plan Act (ARPA)] funding became available because of the work we had done along the way to demonstrate the need."

The county partnered with private entities to conduct pre-engineering work and leveraged these plans, along with survey data, to incentivize Rural Digital Opportunity Fund (RDOF) submissions. The ARPA funds replaced the need to apply for RDOF funds. The preparation for an RDOF application laid the foundation for the appeal to the county board of commissioners to allocate a portion of ARPA dollars toward broadband deployment to the 3,300 households without access to reliable, affordable, high-speed broadband.
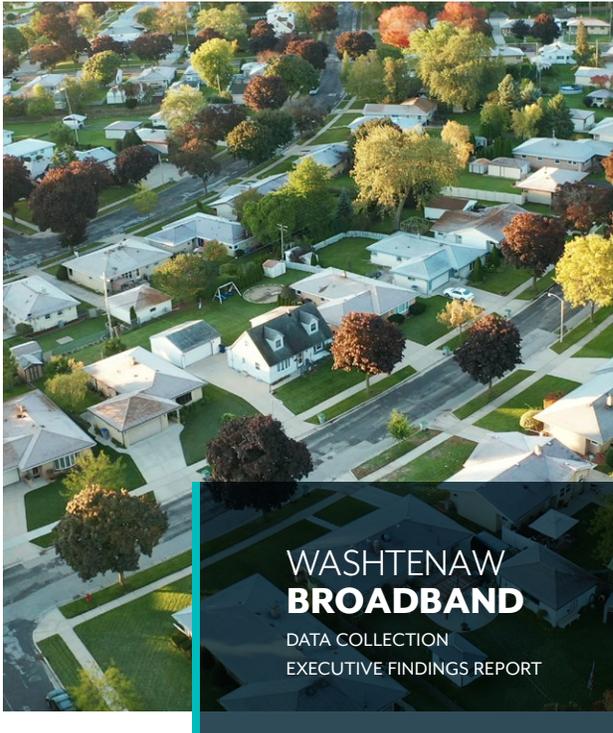
Barb, and the task force, encouraged the Washtenaw County Board of Commissioners to allocate $14.6 million in ARPA funding to private partners to build the remaining infrastructure in the county. In fall 2021, county commissioners approved the use of ARPA funds to achieve 100 percent countywide broadband infrastructure.

In describing her efforts, Barb says, "I'm a never-ending nag. I didn't let up. I sent communications, meeting notices, and kept in touch with the commissioners to emphasize urgency, give them a sense of our momentum, and build awareness." This one-on-one communication was key in officials reaching consensus about allocating ARPA funds.

While Barb focused on politics and relationship building, Gary leveraged his trial-by-fire experience in Lyndon to contribute to Washtenaw's success. "As much as we want to think about broadband as a technical exercise of cables and switches, that's the easy part," he explains. "Other things like negotiating with government entities, financing, and navigating laws are what's difficult." Gary describes himself as versatile: "I have a wide range of skills, a lot of enthusiasm, and the willingness to take anything on."

Barb and Gary worked together to inspire action. To Gary, "The success of a project is the people. You need to find people that are invested in the outcome, because they won't take no for an answer and they won't give up." That sentiment, along with relentless effort and a belief in their ability to connect every resident, inspired more than 20 residents and officials in the county to join the task force and work together to connect the community. Gary's experience in Lyndon had provided a roadmap, but persistence and faith were equally important. Barb says, "When we started, we had no idea how we were going to fund high-speed broadband. We just kept working, and when the money came, we were shovel ready."

## WHAT'S NEXT?

By early 2025, every household in Washtenaw County will be connected to high-speed broadband through various private companies. Several ISPs are currently constructing fiber, targeting completion at the end of 2024. Infrastructure and network validation will be conducted in 2025 to ensure that infrastructure and high-speed service are reaching all of the county's residents.

# Washtenaw County
## Broadband Connectivity Journey

merit

**FALL 2013**
Western Washtenaw Broadband group convened by State Rep Gretchen Driscoll and Chelsea District Library

**SUMMER 2017**
Lyndon Township in Washtenaw County votes to approve Michigan's first township-wide municipal fiber network.

**FALL 2018**
Washtenaw County Broadband Subcommittee issues final report and recommendations

**FALL 2019**
Merit selected to perform Washtenaw County data collection

**SUMMER 2020**
Washtenaw County selects DCS Technology and CTC Energy and Technology to perform pre-engineering and public-private partnership formation

**WINTER 2020**
RDOF awards announced, leaving around 3,300 households not funded for service in Washtenaw County.

**SUMMER 2021**
Washtenaw County issues RFP for private partners to build infrastructure for remaining households. Received viable responses yielding $14.6M plan.

**SPRING 2014**
Western Washtenaw Broadband survey
*(92% want alternative provider options)*

**Fall 2017**
Washtenaw County Broadband Subcommittee formed

**SPRING 2019**
Washtenaw County Broadband Taskforce formed

**SPRING 2020**
Washtenaw County broadband survey shows over 61% more residents lack broadband access vs FCC data. Over 9,000 households are unserved.

**FALL 2020**
Washtenaw County shares data to incentivize Rural Digital Opportunity Fund submissions

**SPRING 2021**
Washtenaw County issues RFI for private partners to build infrastructure for remaining households

**FALL 2021**
Washtenaw County Board of Commissioners approves ARPA and other funds to achieve 100% county-wide broadband infrastructure access.

**"As Lyndon Township has just recently completed its broadband construction, I can attest to how much it improves the quality of life, for everyone. I am grateful for the commitment from each of the members of the Broadband Task Force, their work to gather the information our County Commissioners used to make this historic decision required immense commitment to finding a solution. Funding digital accessibility is the right thing to do as it will provide countless opportunities for those who have been denied access for far too long."**
**– Ben Fineman,** *Vice Chair of the Washtenaw County Broadband Task Force and Lyndon Township resident*

# Author



**Dr. Pierrette Renée Dagg** is the director of research for Merit Network at the University of Michigan in Ann Arbor, Michigan. She oversees Technology Impact Research and R&D.

She serves as a research associate at the Quello Center for Media and Information Policy at Michigan State University and is an adjunct professor at Oakland Community College. Pierrette is also the Area Chair, Intellectual Property and Copyright, at the Pop Culture Association.

She joined Merit from Crain's Detroit Business, where she held the position of creative director. She has been the recipient of multiple awards from the Society of Professional Journalists, PRism, and the National Academy of Television Officers and Advisors, and has received an Emmy nomination.

Pierrette graduated with a B.A. from the University of Toledo in Interdisciplinary Studies with magna cum laude distinction. She was also a member of Phi Kappa Phi and was named the Distinguished Graduating Scholar by the College of Adult and Lifelong Learning.

Pierrette completed her Executive MBA from the University of Toledo (UT) College of Business and Innovation in September 2018. She went on to earn her Ph.D. from UT in the Social and Philosophical Foundations of Education and Education Technology in 2023.

She is a member of the American Educational Research Association, the Michigan Council for Women in Technology, and the Pop Culture/American Culture Association, among others.