



From Fiber to FirstNet: Building Broadband Through Partnerships in Marathon County

Situation

Twelve years ago, Marathon County, Wisconsin, faced a critical challenge: slow, expensive internet service that hindered the operations of key public institutions including schools, technical colleges, and local government. At the same time, a federal broadband grant opportunity emerged, prompting local leaders to consider how they could collaborate to improve connectivity. The need for high-speed internet was not just about convenience—it was about enabling education, public safety, and economic development in both urban and rural areas.

Response

Recognizing the opportunity, a coalition was formed between North Central Technical College (NTC), the local school district, UW Extension, and other community stakeholders. Together, they applied for and secured a \$50 million grant to build Integrated Community Area Networks (ICANs), with matching funds from the city and county. In Wausau, this led to the construction of an 11-mile fiber loop connecting 24 anchor institutions, including schools, hospitals, and government buildings.

The team strategically partnered with private providers like Astrea and Insight (Cellcom's parent company), negotiating fiber swaps and shared conduit installations to expand the network's reach and resilience. A governance structure was established with a board of directors and a sustainable funding model, where member institutions contributed annually for maintenance and upgrades.

Building on this success, the team turned its attention to rural broadband and public safety. Collaborating with Bug Tussle Wireless, they mapped fiber routes to connect 11 public safety towers across the county, enabling better communication for 138 squad cars and 11 law enforcement agencies. They also addressed poor cell coverage by working with AT&T FirstNet, resulting in eight new towers and significantly improved emergency response capabilities.

Outcomes

- **Infrastructure Expansion:** Over 11 miles of fiber built in Wausau, connecting 24 anchor institutions.
- **Public Safety Enhancement:** 11 towers connected with dark fiber for law enforcement communications; 8 new FirstNet-capable towers added.
- **Sustainable Governance:** A shared ownership model with annual contributions ensures long-term viability.
- **Improved Emergency Access:** Remote campgrounds now have reliable 911 access thanks to strategic tower placement.
- **Community Safety:** Surveillance cameras installed in high-risk areas using existing fiber infrastructure.

Lessons Learned

- **Partnerships Are Everything:** Success hinged on strong relationships across public, private, and nonprofit sectors. Knowing the right people—and being willing to ask, "How can we solve this together?"—was key.
- **Leverage Every Opportunity:** From conduit sharing to fiber swaps, creative deal-making maximizes resources and expands impact.
- **Plan for Sustainability:** Establishing a governance structure and funding model early on ensured the network's longevity.
- **Stay Engaged:** Active participation in state-level broadband and public safety committees opened doors to new opportunities and resources.

- **Learn from Others:** Early consultations with more experienced networks, like the one in Eau Claire, provided valuable insights and avoided common pitfalls.

Learn More

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