

# **Broadband: Today's Critical Infrastructure (A US Perspective)**

**Don Welch**  
**President and CEO**  
*Merit Network*

- | American Reinvestment and Recovery Act  
Broadband Round 1
  - | Program
  - | Merit's Award
- | American Reinvestment and Recovery Act  
Broadband Round 2
  - | Program
  - | Merit's Submission
- | The Good
- | The Bad
- | The Ugly



# ARRA Broadband Program

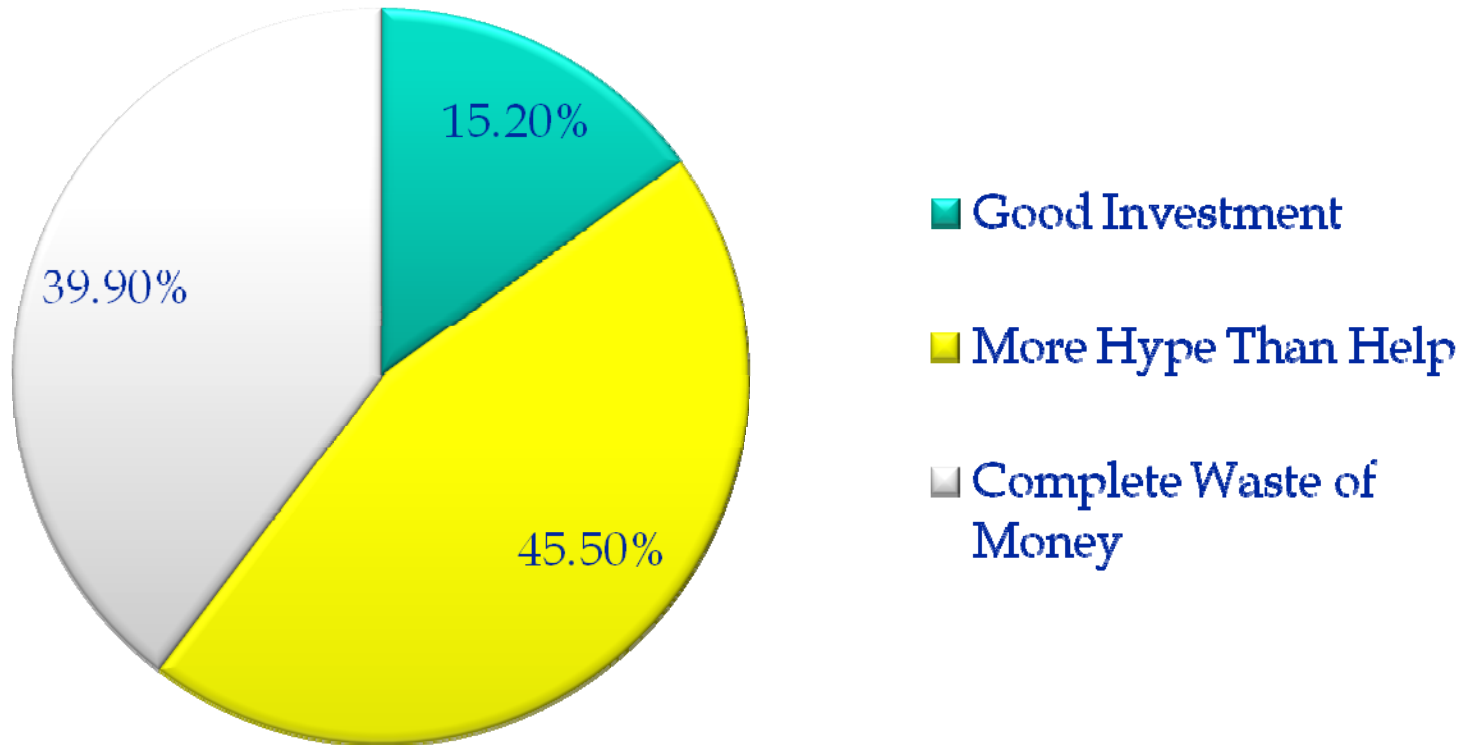
- | **\$7.2 Billion**
  - | Infrastructure, Mapping, Adoption, Computer Centers
  - | Last Mile and Middle Mile
  - | Underserved > 40% have 768k down, 200k up
- | **BTOP \$4.7 Billion Total**
  - | 80% Grant/20% Matching
  - | Administered by NTIA (FCC) up to \$1.6 Billion grants first round
  - | Does not have to be rural
- | **BIP \$2.5 Billion Total**
  - | 50% Grant/50% Loan
  - | Administered by RUS, up to \$2.4 Billion grants and loans first round
  - | Rural focus



- | Owned fiber optic backbone throughout the state
- | Bring rural and remote Michigan
  - | Better performance
  - | Lower costs
  - | Scalability
  - | Private network
  - | Network based services
- | Lower Merit's backbone costs and provide cost-effective scalability
- | Commercial partners
  - | Serves all parts of society
  - | Brings competition in the same sheath



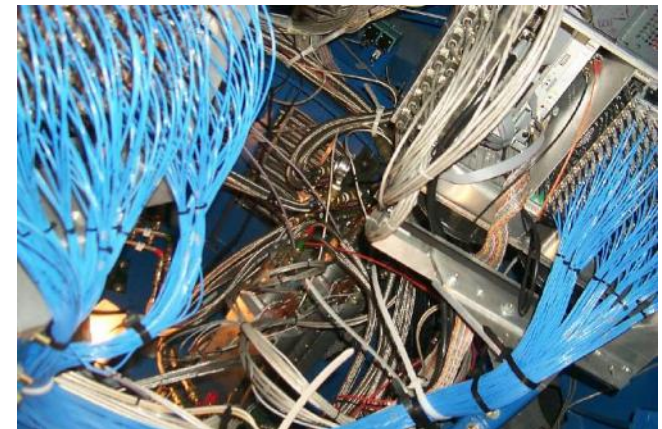
## Chief Executive Magazine Survey of CEOs 1 Year Later

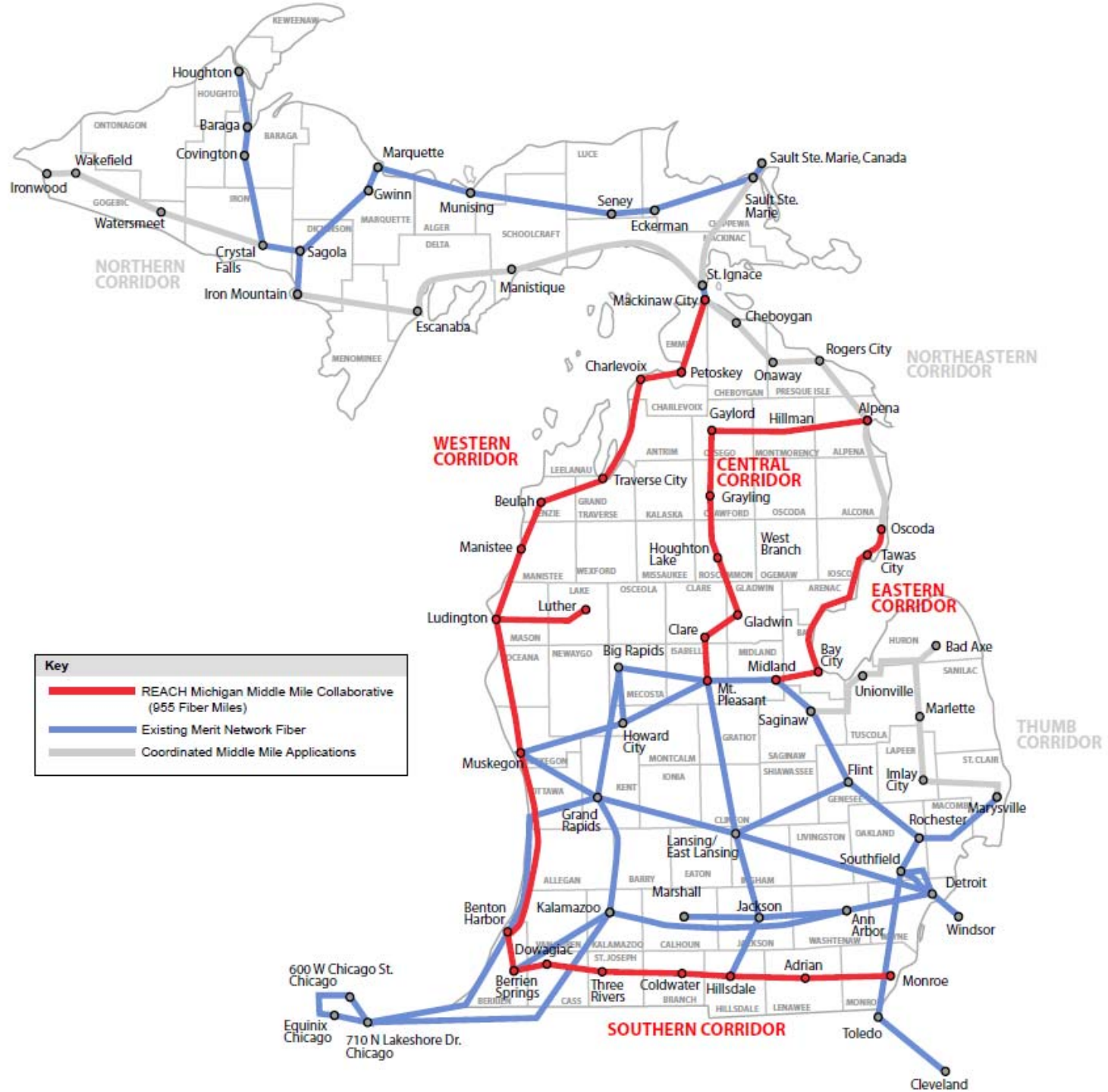


- | > 2,200 Applications
- | Asking for \$28 Billion



- | \$41.6 Million 80%/20%
- | 4 Partners
  - | Lynx, ACD.net, Iserv, TC3Net
- | 72 Strands
- | 955 Miles
- | 32 Counties
- | Immediately Connect 38 Anchor Institutions
  - | Member and Non-member
- | Close to 379 others





- | About 3000 hours
- | < 45 days
- | Battled the system
- | Struggled to squeeze our plan into their application
- | Due Diligence
  - | 500 hours
  - | 2 months
  - | Same questions from different people







- Compliance Process
- Environmental Assessment
  - EA firm has been selected
- National Environmental Policy Act (NEPA)
- Agencies
  - Tribal Historic Preservation Office (THPO)
  - State Historic Preservation Office (SHPO)
  - Federal Fish and Wildlife
- Cooperation
  - Utilities
  - Townships
  - County
  - State
- RFPs
  - Engineering
  - Materials
  - Construction
  - Equipment



- EA approval
  - June 2010
- Engineering Completion
  - June 2010
- Permitting
  - June 2010
- Construction start
  - July 2010





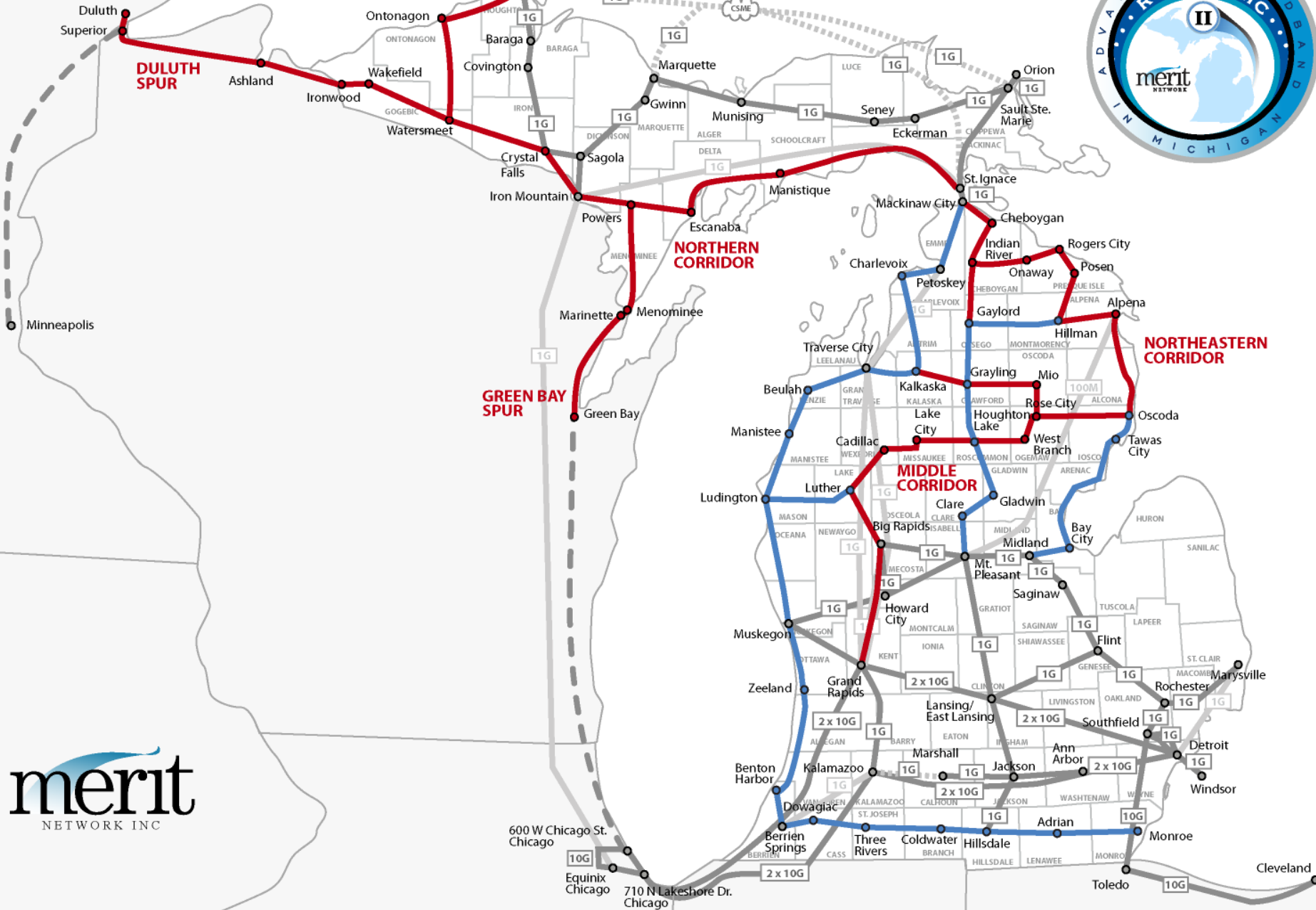
- | BTOP Round 2 \$2.6 Billion
  - | \$2.35 Billion for CCI
  - | \$150 Million for PCC
  - | \$100 Million for SBA
- | Applications due 26 Mar
- | 865 Applications
- | Purpose
  - | Unserved/Underserved
  - | Community anchor institutions
  - | Public safety
  - | Economic Development

- | Priority
  - | Middle mile to community anchor institutions
  - | Public/private partnership
  - | Middle mile to economically distressed areas
  - | Middle mile to community colleges
  - | Middle mile to public safety
  - | Middle mile to last mile underserved areas
  - | Middle mile with 30% match









**merit**  
NETWORK INC



- | 1270 Miles (Michigan, Wisconsin, Minnesota)
  - | Higher speeds, lower cost middle-mile (dark fiber, 10 GigE, TDM)
  - | Diverse paths
- | Merit and 7 Commercial Providers
- | Coordinated with 21 other applications
- | Letters of Support
  - | 187 Anchor Institutions
  - | 31 Leadership Orgs
- | Serves
  - | 38 counties (29 MI)
  - | 29+7 Economically distressed and 29+8 underserved
  - | 732,237 Homes, 49,661 Businesses
  - | 61 Anchors directly connected, 759 potential
  - | 119 Wholesale customers
- | Project \$87,049,114
  - | \$69,639,291 Grant
  - | \$4,730,809 Merit Match

- | CCI - 335 applications
  - | \$8.4 Billion Requested
  - | Completing for \$2.35B
    - | 3.57x “oversubscribed”
- | SBA - 251 applications
  - | \$1.7 Billion Requested
  - | Completing for \$100M
    - | 17x “oversubscribed”
- | PCC - 261 applications
  - | \$922 Million Requested
  - | Competing for 150M
    - | 6.15x “oversubscribed”



# *The Good, the Bad & the Ugly*



- | We had a vision, and a strategy to build fiber throughout the state
  - | No realistic way to fund it
- | Fulfills many plans for state-wide networks
  - | 911, State and Local Governments, K-12, etc that had no chance of getting funded
- | Brings lower cost high performance to anchor institutions
- | Merit plus commercial partners will serve all segments of society
  - | Putting together a partnership like this takes a trusted non-profit
- | Open Access is real
  - | At least 3 providers at every access point



- | Incumbents claim they must now compete with government subsidized networks
  - | Fairpoint Communications fought \$25 M award in Maine.
    - | They get to “tax” users of the new system.
  - | North Georgia Cooperative
  - | Hays, Kansas
- | Claim that 2/3 of the funded networks serve areas that are already served
  - | Networks need to connect to other networks
  - | Other networks are in “served areas”



- | Using last mile definitions for middle mile service
  - | Cost
  - | Real performance
- | Last mile applications are difficult to sort out
- | Everybody can benefit from middle mile
  - | It just takes a little education

- | Funded applications from
  - | Organizations that don't exist – yet
  - | Educational puppets
  - | Commercial providers that had no intention of following open access
  - | Single commercial providers



