

## Implementing ARRA

Design Snapshot

# Cape Cod and Southeastern Massachusetts Modernize with New Broadband Infrastructure: Advancing Regional Connectivity

August 2009

To modernize and expand the inadequate communications infrastructure in Southeastern Massachusetts, the region’s leaders are pursuing \$40 million in ARRA funding for a regional broadband network that would boost business growth, enhance education and scientific research, improve public safety services, and reliably provide for emergency communications in times of crisis. The [OpenCape](#) concept relies on a public-private partnership to build out the region’s fiber optic backbone, sustain the network financially into the future, and create a shared, multi-purpose regional data center.

Broadband in Southeastern Massachusetts	
<b>Purpose:</b>	To build-out and sustain a new broadband network enhancing inter- and intra-region connectivity
<b>Lead entity:</b>	Nonprofit/Community College lead
<b>Partners:</b>	Private communications firm, state and local governments, and educational and research institutions
<b>ARRA focus:</b>	Broadband Technology Opportunities Program
<b>Scale:</b>	Regional
<b>Strategies:</b>	Reflects a long-term regional vision; adopts multi-jurisdictional and multi-sectoral approaches; catalyzes market and private investment
<b>Point of Contact:</b> Dan Gallagher President OpenCape Corporation dgallagher@capecod.edu (508) 362-2131 ext. 4701	

During spring 2006, well before the passage of ARRA, leaders of several nonprofits convened roughly 100 stakeholders from across their region at Cape Cod Community College (CCCC) to discuss the need and opportunity to bring broadband service to Southeastern Massachusetts and Cape Cod. Out of this gathering of government, business, educational, and nonprofit representatives, ultimately emerged OpenCape Corporation, a new 501(c)(3) entity that is now leading the region’s \$40 million grant application for ARRA’s competitive [Broadband Technology Opportunities Program](#). With a governing board representative of Cape Cod both geographically (in terms of jurisdictions) and functionally (in terms of institutions), OpenCape has, for the last two years, been developing the analysis, plans, and partnerships necessary for a comprehensive broadband system for the entire region.

OpenCape’s ARRA proposal calls for installing approximately 300 miles of fiber optic cable across the region; building a wireless backbone that spans the Cape and connects to points further beyond; developing a backhaul network across Southeastern Massachusetts that links up to the internet backbones

in both Boston and Providence; and establishing a new regional data center serving both public and private sector needs. Commercial providers would be able to use the new infrastructure to profitably deliver services to residents, businesses, and government entities. With enhanced communications bandwidth, OpenCape leaders expect the new broadband system to better facilitate commerce, increase productivity, and drive innovation. For example, added data handling capacity would benefit the roughly 1,000 scientists operating from the region's Woods Hole Oceanographic Institute (WHOI) and put them in a better position to compete for national research grants. Furthermore, local police forces would have better connections to important criminal search databases that have become routine tools for maintaining public safety but are currently difficult for them to access. Moreover, the planned data center would serve as an aggregation point for storing and sharing maps, data and other information from local municipal offices, cost-effectively combining the learning management systems of different area school districts, and pooling together local library catalogues into one regional resource.

The regional ARRA broadband proposal by OpenCape enjoys both multi-jurisdictional and multi-sector support. The concept itself originally evolved from input from CCCC, WHOI, the University of Massachusetts/Dartmouth, the Cape Cod Technology Council, as well as various area leaders in education, government, and business. Since then, all 15 municipal governments on Cape Cod and their school districts and a coalition of the region's police and fire chiefs have submitted letters of support for the project. The [Cape Cod Economic Development Council](#), recognizing regional broadband service as a core economic development need, provided \$50,000 in early seed funding, which was supplemented by another \$150,000 in grants from the state-level [John Adams Innovation Institute](#) to support some of the necessary groundwork to the ARRA proposal, including engineering studies, topology designs, and market analysis, and legal work. The [Massachusetts Broadband Institute \(MBI\)](#) also provided \$50,000 to aid OpenCape in its grant preparation and will invest another \$5,000,000 in matching funds to the initiative from its Incentive Fund. MBI is also helping the region's broadband leaders secure rights of way on state-owned roads and rail lines.

Private sector partnership is a particularly crucial element of the OpenCape vision, as encouraged by ARRA's BTOP guidelines. Through a recent solicitation process, OpenCape selected [RCN Metro Optical Networks](#) to build and manage operations for this regional open access communications system. Having RCN Metro as a private sector partner brings a level of technical and business-specific expertise that lends weight to OpenCape's ARRA proposal, and, just as importantly, helps to ensure the long-run success and sustainability of this regional initiative.

Indeed, sustainable business practices are a guiding principle of the OpenCape concept. To ensure that a new broadband network will be successfully maintained into the future, OpenCape has, from the outset, planned for the long-term. Retaining ownership of all the physical assets of the proposed broadband system, OpenCape intends to charge RCN Metro a licensing fee for the right to operate the network and a portion of the gross revenues it earns from being the contracted operator. OpenCape intends to direct these expected revenues to covering its operating costs and capitalizing a reserve fund dedicated to replacing and replenishing the broadband infrastructure over time—estimated at \$10 million over 25 years. Any excess revenues would be used to help the region's government and nonprofit entities exploit the capabilities of the new network for their maximum benefit. Free from the day-to-day responsibilities of operating the network, OpenCape can focus its efforts on preserving the new communications infrastructure for regional benefit, managing relationships, and aiding public and nonprofit sector users in finding ways to use the broadband resources to better serve the region.

## **The Implementing ARRA Series**

America's current economic crisis is not only a national crisis. It is also a metropolitan crisis. Therefore, it is critical to monitor the progress of creative metropolitan leaders who are leveraging the myriad resources provided by the \$787 billion American Recovery and Reinvestment Act of 2009 (ARRA). To that end, the Metropolitan Policy Program's Implementing ARRA Series is tracking the implementation work of metropolitan leaders, assessing their progress and struggles, and extracting from the innovators' experiences ideas for short- and long-term federal policy reforms. Ultimately it is hoped the series will serve as a resource for best-practice exchange among regions and a source of ideas for designing the next generation of metro-friendly federal policies.

### **For More Information**

Mark Muro  
Fellow and Policy Director  
Metropolitan Policy Program at Brookings  
[mmuro@brookings.edu](mailto:mmuro@brookings.edu)

Sarah Rahman  
Policy Analyst  
Metropolitan Policy Program at Brookings  
[srahman@brookings.edu](mailto:srahman@brookings.edu)