

## **SmarterCape Smarter Government**

The SmarterCape Vision includes seven specific areas of focus to include Smarter Government. The Smarter Government Vision is as follows:

*“Smarter Government harnesses technology to collaborate across historical boundaries, providing efficient services, a sustainable revenue model, and a vibrant participatory civic governance, while supporting the SmarterCape goals to provide the best possible quality of life for our residents, the best possible experience for our visitors, and increasing the overall economic output of our region.”*

The delivery of Smarter Government services through the development of a Regional Umbrella Services System for the delivery of aggregated telecommunications and technology services, as well as shared applications is essential to achieving the Smarter Government Vision. Achievement of this underpinning goal will support a plethora of potential applications and services to benefit the Cape Cod Community.

### **Regional Umbrella Services System**

A Regional Umbrella Services System (RUSS) is envisioned for Cape Cod to support counties, municipalities, school districts, libraries, and other public sector entities in the development and delivery of regional information technology solutions and services.

RUSS will take advantage of the OpenCape Municipal Regional Area Network (Municipal RAN) and Regional Collocation Center (RCC) to enable local and regional public sector entities to aggregate communications service purchasing and develop regional applications. Aggregated services may include Internet and Internet2 access and telephone services. Initial shared regional applications may include a Regional Permitting, Licensing and Inspections Solution (E-Permitting), Regional Geographic Information System (Regional GIS), the Cape Cod Strategic Information Data Warehouse, and Shared Assessor Databases.

### Underpinning Infrastructure – OpenCape

OpenCape is creating a Municipal RAN for the county, municipalities, schools and libraries of Cape Cod and the Islands as part of the OpenCape project. The Municipal RAN uses fiber optics on Cape Cod to create a one gigabit-per-second (1Gbps) shared circuit within each town that is part of a higher capacity regional network that terminates at the RCC. A microwave link to Martha’s Vineyard, and leased undersea fiber optic capacity to connect Nantucket will be used to permit communities on the Islands to gain access to the Municipal RAN. The Municipal RAN shall also provide an aggregated 1Gbps Internet connection for the shared use of all public entities in these communities and an Internet2 connection for use by schools and libraries.

OpenCape is creating the RCC in the former Barnstable County Public Safety Building as an integral part of the OpenCape system. This facility will include a ground floor 2500sqft Regional Collocation Data Center within which 100sqft is reserved for the installation of servers and equipment associated with the development of regional government applications. OpenCape will provide and install server equipment within the space to support the regional government applications. The third floor of the building will serve as an operations center for the development of regional umbrella services within the Barnstable County Strategic Information Office (SIO).

OpenCape is absorbing the entire capital cost of constructing the underpinning infrastructure to include fiber optic connections and associated equipment to nearly seventy (70) town hubs, schools, libraries and water towers as interconnection points to the Municipal RAN. OpenCape is also absorbing all costs associated with the RCC and the initial outfitting of server equipment to deliver regional government applications.

### RUSS Administration

On February 22, 2012 the Barnstable County Commissioners made a formal decision to move forward with the implementation of the RUSS. This decision followed a supporting recommendation of the Special Commission on County Governance on February 16, 2012 that the County Commissioners “develop a Regional Umbrella Services System (RUSS) for the aggregation of telecommunications and technology services and the delivery of common applications among municipalities, schools, libraries, and public safety departments.”

On March 21, 2012 the Barnstable County Commissioners made an additional decision to create a Strategic Information Office (SIO) with Barnstable County temporarily under the authority of the Executive Director of the Cape Cod Commission. Its final organizational placement and subordination will be determined at a later time. The Executive Director of the Cape Cod Commission was tasked to create the SIO, staff it with a director, and begin the general implementation of the RUSS with a focus on creating an inclusive governance model and sustaining financial model.

### SIO Organization

The SIO Director will lead the development of the SIO, implementation of the RUSS, and provide contractual and financial management.

The SIO will likely evolve functionally to deliver services to include Application Integration and Analytical Services. Support functions of administration, finance, human resources, and technical support will likely come from Barnstable County or be provided by contract services. The ultimate development and evolution of the SIO will be the purview of the Director of the SIO and a Governance Committee.

### SIO and RUSS Governance

A Governance Committee shall be formed by the SIO Director. The Governance Committee should consist of at least a Barnstable County Representative and one member appointed by each town. The Governance Committee shall be the primary decision making body regarding the RUSS services to be offered and supported and shall provide guidance to the SIO Director in this regard. The SIO Director shall act as the Chairman of the Governance Committee at least initially.

Sub-Committees may be formed by the Governance Committee to develop, implement and support specific services and applications and may include ex-officio members with particular expertise or knowledge related to the service or application.

### Development Funding

The creation of a new model of aggregated services and shared regional applications requires leadership, collaboration, and funding for the initial implementation. A variety of resources shall be pursued for initial implementation of the SIO office and applications.

The Cape Cod Commission and Barnstable County shall provide base level funding of the SIO. An initial startup budget of \$75,000 to support implementation and an additional \$25,000 from District Local Technical Assistance (DLTA) funding will be applied. An additional request for funding of this initiative in the amount of \$150,000 per year for three years has been forwarded to the Secretary of Housing and Economic Development by the Cape Cod Commission with the endorsement of the Smarter Cape Partnership.

The Cape Cod Economic Development Council (EDC) issued a request for proposals (RFP) in January, 2012 to identify a contractor to conduct a technology audit of all municipal and school entities in the fifteen towns of Cape Cod to determine precisely the technology and telecommunications services and applications used within the communities and the costs of those services. The information collected will be used to assess and measure the effectiveness of regional umbrella services. Up to \$160,000 has been allocated for this purpose.

Cape Cod and Nantucket towns and the Cape Cod Commission, with the support of the Cape's State Legislative Delegation, the Barnstable County Commissioners, the SmarterCape Partnership was awarded the maximum possible Community Innovation Challenge (CIC) grant award of \$500,000 from the Massachusetts Executive Office for Administration and Finance for the proposed regional Permit, Licensing, and Inspection (E-permitting) application implementation as the first of the shared applications to be implemented under RUSS.

### Operating Costs

There will be continuing operating costs associated with the RUSS. The precise model for payment of these costs shall be determined by the Director of the SIO and the Governance Committee in conjunction with the Cape Cod Commissioners. The operating costs can be divided into two categories:

***Municipal RAN Services.*** Connecting the communities together into a common network with aggregated Internet has an ongoing cost for operation, administration, and maintenance.

***Application Services.*** Administering, operating and maintaining servers and software associated with the applications that will be regionally deployed must be supported on an ongoing basis.

An Enterprise Account is proposed to be established by Barnstable County to account for ongoing operating costs.

Barnstable County should budget for the payment of the Municipal RAN service (estimated at \$175,000 per year) on behalf of all of the communities of Cape Cod. This model is considered necessary to ensure the initial participation of all of the communities of Cape Cod.

Application Services shall be charged to participating towns and entities for each application implemented. Typically, participating entities will be a transaction fee to be further defined and assessed by the SIO Director and Governance Committee.

It is anticipated that operating costs will be offset by a number of factors such as the reduction or elimination of existing Internet connections, inter-building connectivity costs (e.g. T1 lines), and telephone services, etc. However, the true efficiencies will come from the aggregation and consolidation of telecommunications, network and Internet services, and common applications within a community and across the region. Independent and isolated services currently purchased by departments independently will be rolled into a single service for all departments with a single expense line item. Currently, these services are purchased independently by municipal, school, public safety, and other departments.

Subsidies such as the Universal Service Fund (ERate) to which schools and libraries are eligible may also play a role in offsetting these costs. School departments and libraries on the Cape are generally eligible for a 40-50% federal ERate subsidy for telecommunications and Internet services based on the percent of students eligible for free or reduced lunch. Schools and libraries will be the largest users of the Municipal RAN service and therefore can apply ERate funds to those costs.

Finally, the SIO Director shall establish a sustaining business model that includes the delivery of application services to off-Cape communities in a manner that subsidizes the costs of Cape communities.

### **Linkage to Public Safety**

The development of public safety communications solutions in the region are dependent on the creation of an underpinning Municipal RAN. Public Safety elements within these communities will participate in the fiber optic based Municipal RAN with further linkage to the Executive Office of Public Safety and Security (EOPSS) of the Commonwealth of Massachusetts and other state and federal law enforcement and criminal justice systems. The SIO Director will coordinate with public safety officials to ensure the Municipal RAN resource is used in a manner that supports all users appropriately and effectively.

OpenCape is also building a microwave public safety backup system. This system will be integral to the fiber optic network, but be able to operate independently should the fiber optic system and its redundant systems be overcome in a crisis event.

On January 14th, 2012 the Barnstable County Regional Emergency Planning Committee released the results of a 911 Dispatch Study performed under a \$135,000 state grant. Any change of 911 Dispatch on Cape Cod is dependent on telecommunications infrastructure and the Municipal RAN would be the likely access point.

OpenCape anticipated that 700Mhz mobile public safety systems will dominate the future of public safety mobile communications. On February 22, 2012 President Barack Obama signed into law the payroll-tax-cut extension legislation, which provides \$7 billion in federal funding to help pay for the build-out of a nationwide LTE network for first responders. The OpenCape infrastructure, both fiber and microwave, is designed to ensure rapid installation of 700Mhz, placing the region in a very good position to receive early funding.

### **Civic Engagement**

The SIO shall develop and implement applications and services at the intersection between the citizens of Cape Cod and their local and regional government. The citizenry has never before been more able to participate directly in its government. Increasingly, other communities, such as the City of Boston, through its Office of New Urban Mechanics, are finding innovative ways to engage the community and these examples should be examined for applications that will specifically benefit Cape Cod.

### **Ubiquitous Fixed and Mobile Broadband**

Barnstable County and municipal governments of Cape Cod have an obligation to ensure that the citizens of the region have the best possible infrastructure to support economic development and civic engagement. Ultimately, fiber optics to every home and a five bar cellular environment is desired, as well as five bar WiFi within all village centers.

Barnstable County and the municipal governments of Cape Cod should develop strategies and actions to foster the development of ubiquitous fixed and mobile broadband throughout the region to include the creation of public-private partnerships that advance this goal, and the development of universal utility planning as a method for distributing fiber optics to homes throughout the region.

### **Conclusion**

The SmarterCape Government Vision is reliant on the creation of an underpinning network infrastructure and associated data systems, an organization to implement the concept, a governance structure, the allocation of resources for successful implementation, and a great deal of leadership and collaboration from Barnstable County and the municipalities of the region. The creation of a Regional Umbrella Services System, administered by a Strategic Information Office, and governed by a representative model is the core of that vision.