Broadband for All Andrew Michael Cohill, Ph.D.



MAKING MAIN STREET WORK

DUCT AND FIBER

The Main Street commercial district needs duct and fiber to every building.

2 SYMMETRIC BANDWIDTH

Equal upstream and downstream data capacity should be available at business and commercial locations to support business network needs.

3 WIRELESS MOBILE ACCESS

Wireless service provides local business people access while out of the office, and allows business travelers to stay connected.

4 CLASS A OFFICE SPACE

Class A office space attracts businesses to the Main Street area, close to restaurants, professional services, and shopping.

5 BUSINESS MEETING SPACES

Libraries, restaurants, and coffee houses can provide both formal and informal meeting spaces.

6 GOOD COFFEE

Good coffee is a catalyst for business meetings, marketing, and early morning and after work social gatherings.

7 PROFESSIONAL SERVICES

Knowledge Economy businesses outsource as much as possible, including accounting, bookkeeping, legal services, copying, printing, and shipping.

8 ATTRACTIVE STREETSCAPE

High quality street and sidewalk rehabilitation, historic building facade renovations, and creative re-use projects help sell Main Street.

Getting our communities connected

The New Main Street

All over America, communities are investing in Main Street upgrades: new sidewalks, street repaving, new streetlights, and flowers. But these improvements do not always have the hoped-for economic impact. Smaller communities with traditional Main Streets have a bright future as more businesspeople seek small towns to reduce or eliminate costly commuting and seek the quality of life that small towns offer. But these new Main Streets have to have the right amenities and services to attract entrepreneurs and Knowledge Economy businesses, which operate in fundamentally different ways and have very different needs than the businesses that were on Main Streets forty years ago.

Duct and Fiber

Main Street and downtown areas that lack fiber and duct infrastructure are at a serious disadvantage. Businesses are increasingly basing relocation decisions on the availability of fiber infrastructure because business bandwidth needs frequently exceed the capacity of legacy copper telecom infrastructure.

The size of the business often has little or no relationship to bandwidth needs. I recently met with a business owner with less than a dozen employees who was extremely frustrated because he was forced to buy seven (7) Tr lines to handle his online business. He was paying too much and getting too little, and was keenly interested in relocating to a building with fiber service.

Many communities are spending substantial sums on Main Street facelifts

that often include sidewalk and street renovations, but are failing to install telecom duct and/or fiber at the same time. If the streets or sidewalks are being rebuilt, adding duct is a small incremental expense compared to retrofitting duct at a later time.

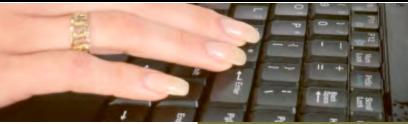
Symmetric Bandwidth

The size of the connection is important, but there are two parts to a broadband connection--upstream and downstream capacity. Broadband services intended primarily for casual use often have much more downstream capacity than upstream capacity, however, this is usually inadequate for business use. Businesses need symmetric bandwidth-with the same capacity upstream and downstream. As more and more people work from home part time (e.g. nights and weekends) or run businesses from home full time, symmetric bandwidth is essential. With the rising cost of fuel, downtown neighborhoods, close to office space and shopping, will become increasingly attractive if the right kind of broadband services are available. Revitalized downtown neighborhoods that offer walkable commutes to Main Street will help bring new life to downtown areas.

Wireless Mobile Access

Visiting businesspeople need convenient WiFi hotspots to check mail, read the news, and connect to corporate networks while traveling. Conduct an audit of WiFi hotspots by checking with coffee shops, restaurants, and libraries to make sure there are a variety of hotspots in convenient locations. The hotspots





should be easy to find, list hotspots on the home page of the community Web portal and encourage local establishments to use prominently displayed signs to publicize availability.

Class A Office Space

Main Streets can be home to vibrant professional and high tech business communities if Class A office space is available. Many downtown buildings can be rehabbed to Class A office standards, and as more businesses and office workers move to downtown buildings, retail businesses will follow. Downtown workers will buy lunch and coffee at local establishments and will appreciate walking access to retail stores and services.

To bring more activity back to Main Street, develop a downtown incubator office facility. Norton, Virginia rehabbed an old, historic hotel into Class A office space and filled all six floors quickly. Fiber to the building was a key success factor in attracting high tech businesses, and Main Street retail businesses flourished as hundreds of office workers were on Main Street every day.

Business Meeting Spaces

Many smaller businesses lack the office space to accommodate business meetings of more than three or four people. Work with coffee shops, restaurants, and libraries to provide affordable, private meeting spaces that meet Class A office space standards. Fiber services and multimedia features like speakerphones, LCD projectors, whiteboards, and projection screens enhance the value of the meeting spaces.

Good Coffee and Good Food

Much business gets done at informal meetings, and coffee is part of the fuel of the Knowledge Economy.

Local coffeehouses can be an important business tool if they offer quality food and beverage services and comfortable, attractive dining and meeting spaces.

Coffee shops should open early for breakfast meetings, and a restaurant or coffee shop that can offer a hot breakfast will draw business people and travelers downtown.

A good quality restaurant for business lunches and dinners is also important, and the ability to walk to an upscale restaurant with a client saves time and can help close business deals.

Professional Services

Small entrepreneurial businesses and start up enterprises outsource many kinds of work that was formerly done inhouse. Downtown areas should have a range of professional support businesses needed by these firms. Copy centers, shipping stores, accountants, lawyers, bookkeeping services, office supply companies, marketing firms, and graphic design firms are examples of what should be available on Main Street to help attract high tech firms and business startups.

Attractive Streetscape

An attractive streetscape enhances the appeal of commercial and retail buildings in downtown areas. Brick sidewalks, seasonal flowers, improved street-side parking, convenient off-street parking for workers, and greenspaces help create walkable communities that attract businesses looking for small town amenities and good quality of life.

BRINGING BUSINESSES BACK TO MAIN STREET

- A strong focus on quality for every project.
- Careful attention to the needs of high tech firms, entrepreneurial start ups, and professional service businesses.
- A wide choice of competitive broadband services with both fiber and wireless access.
- Integrated and collaborative economic development, tourism, and local merchant strategies.
- Willingness to treat Main Street as an area of mixed use, including high quality office space, business incubator space, a variety of excellent quality dining establishments, and retail.

ABOUT DESIGN NINE

Dr. Cohill is President of Design Nine, which specializes in designing and implementing next generation fiber and wireless broadband infrastructure, with more than seventy years of staff experience. The firm offers broadband planning, design, and project management services, including early stage needs assessment, financial analysis, business model development, organizational design, network design and project implementation.

Design Nine, Inc.

2000 Kraft Drive, Suite 2180 Blacksburg, VA 20460 540-951-4400 info@designnine.com www.designnine.com