

# Distributed Work Centers

Broadband is more than just Internet access. To take full advantage of broadband's benefits, communities must broaden their broadband horizons.

By Michael B. Shear / *Strategic Office Networks*

**T**he greatest opportunity to create competitive, sustainable communities lies in understanding how to adapt to the revolution and character of information technologies rather than merely applying these technologies to the current ways of doing things.

The creation of the Internet is, without question, one of the most powerful constructs of broadband and Internet technologies. However, one negative consequence of the Internet's rapid growth and adoption is that it obscures other potentially innovative ways to assemble and apply its pieces. In other words, people can't see the broadband for the Internet.

Addressing critical community needs with broadband requires two essential changes in the way people think and behave. They must

- Understand the ability of broadband technologies to distribute information and the benefits of identifying aggregate community and regional requirements to attain economic efficiencies
- Think about broadband technologies beyond Internet connectivity and consider focused applications of, and adaptations to, their unique distribution character.

## BROADBAND PLANNING FROM THE COMMUNITY OUT

To be viable in today's economy, every community requires a core set of elements to a greater or lesser degree.

**Jobs and access to jobs:** To grow, communities have long relied on one approach –

attracting jobs by attracting employers one at a time. This approach pits neighboring communities against one another; in addition, relying on one or several major employers is often devastating when the employer moves, is acquired or goes out of business. As jobs move, so do people.

Moreover, for many households, finding, financing, owning and selling homes has become more problematic. People make decisions about where to live by balancing the cost and affordability of a home against the desirability of its community and its proximity to job opportunities.

**Education:** Access to quality, affordable education at all levels has become more fundamental to the economy and society. Education no longer stops after graduation from high school or even from college; rather, lifelong education is needed to sustain and grow a career. Academic and technical schools can stimulate economic growth. Well-planned community networks permit widespread deployment of distance learning centers that provide access to advanced technology tools.

**Medical services:** The need for medical services is growing as the population ages. Timely access to quality medical services will greatly enhance quality of life through telemedicine and networks of remote clinics.

**Government and public services:** As community revenues fall, leaders seek cost-effective approaches to inform the public and respond to its needs. Telecommunications

plays a central role in coordinating deployment of personnel and resources.

**Affordable housing:** Few communities can exist unless affordable housing is available to a broad socioeconomic spectrum. Diversity of the workforce is necessary. As people’s social and economic lives become dependent on information and communications technologies, communities require both housing options and affordable, high-speed connectivity.

**Basic infrastructure:** Key building blocks of today’s society include roads, transit, water, sewer, electricity and information technologies. Information infrastructure has a unique status in that it performs monitoring and control functions for the other infrastructures.

### ADAPTING TO NEW TECHNOLOGIES

Achieving maximum social and economic benefits from advanced information and communications networks requires assessing aggregate community demands for information technologies and identifying opportunities to adapt. One likely place to start is the location of jobs.

Jobs and job access are crucial to economic and social vitality. Communities and individuals spend a great deal of time and resources on one

*“It is adaptive rather than allocative efficiency which is the key to long run growth. Successful political/economic systems have evolved flexible institutional structures that can survive the shocks and changes that are a part of successful evolution. But these systems have been a product of long gestation. We do not know how to create adaptive efficiency in the short run.”*

– Douglass C. North, “Economic Performance Through Time,” 1993 Economics Nobel Prize lecture

### BENEFITS OF NETWORKED COMMUNITY HUBS



Locating workplaces in hubs distributed across metropolitan areas yields benefits of many types..

method of getting people to work – transit and transportation. Many people believed that greater Internet access would provide congestion relief by allowing teleworking. Unfortunately, current remote work processes have not yielded the congestion mitigation impact expected or necessary given the rate of growth occurring in many major metropolitan areas.

If these information technologies are so transformative that they quickly move jobs across the globe, why not apply them to help reduce congestion and the substantial costs it imposes?

Three key institutional behaviors stand in the way:

- Communities’ bidding against one another and incenting employers to locate in specific places
- Employers’ selecting a single location for a work site
- The way “solutions” are identified for transportation in extended metropolitan areas and for rural development

All these models are largely fixed in the past.

Some advocates of telework believe everyone should work from home or from a coffee shop. A portion of the workforce is successful using home workspaces. However, the data regarding the potential for remote working is clear: Only a small percentage of the potential remote workforce can or will work remotely under the current approaches.

The lower-than-expected level of telework participation is often attributed to middle-management resistance. However, given the complex, changing dynamics of the workplace, it is more likely that there is no *one* problem. Rather, there are a number of issues associated with the way people work, their behaviors at work, the nature of social (not cybersocial) interaction and the real need for the majority of people to preserve a separation of work life and home life.

Remote working, or teleworking, has remained predominantly a privilege of the better-educated, higher-paid and senior employees of most organizations. For the vast majority of potential remote

On any given day, fewer than 3 million of the 120 million daily commuters in the United States are working remotely. Home offices and telework centers don't work for most people.

workers, the daily commute is the only way to get to the job and keep the job.

Of the approximately 120 million daily commuters in the United States, about 45 million to 50 million are knowledge workers – meaning they theoretically could perform their jobs from anywhere. On any given day, however, fewer than 3 million of them do work from home or remotely. Telework or drop-in centers work for some people. Certain communities have incubators that cater to entrepreneurs. However, society has yet to discover a model for the vast majority of knowledge workers.

## DISTRIBUTED WORKPLACE

Distributed workplace is a community work model that seeks to change the current single-location workplace

model of major area employers and their workers by distributing and localizing access to more jobs. It is a network of strategically based work centers, each supporting multiple suites. Each suite is dedicated to, perhaps, 25 to 200 employees from one company or agency.

With a dozen or more tenant organizations, each work center supports 300 to 2,000 employees. Each work center connects to other work centers and each employer's primary location using dedicated, secure broadband technologies. Leveraging economies of scale, a central support technical staff provides infrastructure, training and security to all the work center clients. An employee can work for a major business or government

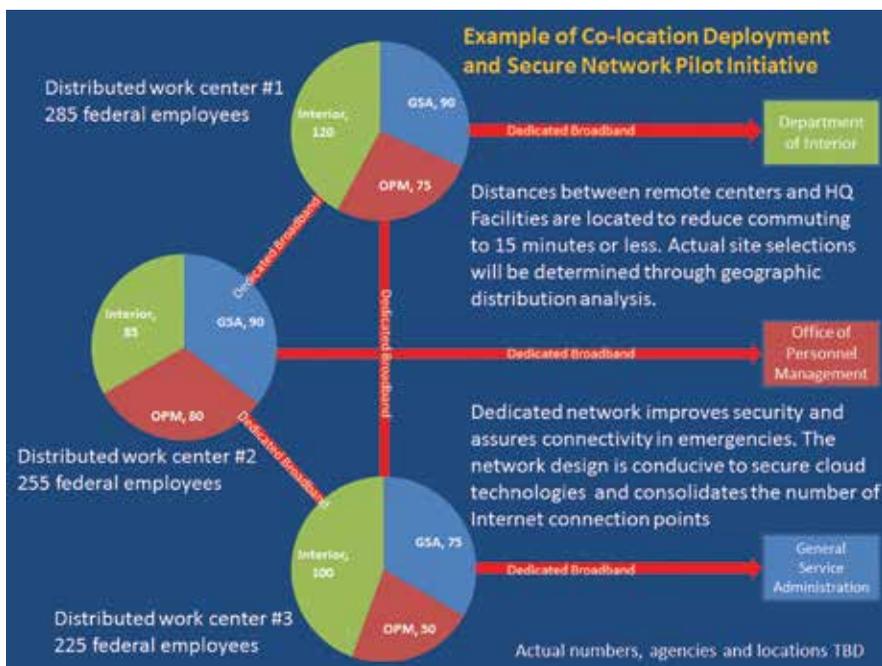
employer in the metropolitan area or region from a networked work center located in his or her community. Broadband technologies such as virtual presence make it easy to meet with colleagues in other workplaces, and cloud services allow employees to share systems.

These strategic office networks can achieve economies of scale and create secure, scalable platforms for rapid geographic expansion to other suburban and rural communities, providing residents local access to jobs. In addition, there are peripheral economic incentives to develop distributed work centers that extend employment opportunities to part-time working parents, students and individuals with disabilities.

Locating work centers in residential communities puts underutilized commercial real estate to work and can improve employee productivity and employers' abilities to attract, retain, mentor and manage quality employees. Distributed workplace is a permanent deployment of employees that produces measurable and predictable reduction in transportation congestion while immediately converting gasoline dollars into "local economy" dollars. Furthermore, this new approach can provide higher-level security and privacy for data, systems and employees than do current methods.

Distributed work centers can do for area employers what retail malls did for retailers in the past – expand access. In this case, rather than expanding access to customers, they expand access to knowledge workers from a greater number of communities throughout the area.

The architecture for distributed workplace networks and community-based centers is designed to integrate the other essential building blocks of distance learning, telemedicine, day care and after-school programs, government services and emergency preparedness based upon the needs of each community. Creation of networked centers not only enhances access to existing jobs but also creates



How a distributed work pilot program might be set up in a metropolitan area

# Regional Growth Centers

We need a unifying set of themes and templates to address our regional transportation challenges



Possible locations for distributed work centers in the Baltimore-Washington area

new technology jobs to support this infrastructure.

The multilocation, distributed workplace model takes advantage of the changing nature of work and balances deployment with security and management oversight while enhancing economic growth and competitiveness. As an adjunct to transportation, transit and land use planning, this broadband methodology may offer more timely relief, may be expanded in a shorter period and can easily be extended into exurban and rural communities.

## FEDERAL LEADERSHIP

In communities where the federal government is a major employer, government agencies can take the lead in creating distributed workplaces.

For all the pressures to change, including congressional legislation to support telework, most agency

and department heads have been unsuccessful at attaining acceptable levels of remote work compliance (currently less than 20 percent of the 2004 objective). Although these are discretionary laws, increased emphasis on cybersecurity, emergency preparedness and continuity of operations planning requires a more effective and strategic workforce deployment strategy.

At a time when pay freezes and high gasoline prices affect federal workers the most, a distributed workplace initiative can provide an equitable method to improve their condition. By adapting an aggregated approach to the needs of agencies and departments, the federal government has the opportunity to reduce real estate and IT infrastructure costs and increase security and control while positioning federal employees to be vastly more

effective to deal with emergency situations. Not all emergencies provide advance warning or can be predicted.

Many agency and department heads argue the effectiveness of the work-from-home approach to address emergencies but do not differentiate between, for example, forecasted snow outages (notification events) and terrorist attacks (non-notification events). Current telework practices result in less than 3 percent of the federal workforce working remotely on any given day (and that is not the same 3 percent every day). In an event of a non-notification emergency, the likelihood is that too few employees will be positioned to respond and that they may be precluded from being effective because of interruptions in power and connectivity. Depending on where a ground-zero event occurs, federal employees will likely face the

Federal, state and local government agencies, as well as government contractors, law firms, insurance companies and call centers, would be good candidates for distributed work.

daunting challenge to evacuate, arrive at an alternative work facility (most likely home) and ensure that power and connectivity are available for them to operate under these circumstances.

Given these realities, the federal government as employer is in a unique position to lead by example by working with communities to demonstrate a more holistic application of information and communications technologies. A pilot project could start with three to five locations in a metropolitan area – or even with one.

### CONCLUSION

Now is the time for communities to seize the opportunity to effectively use broadband technologies to increase their competitiveness and sustainability. Assessing the geographic distribution of a region's knowledge-based workforce and major area employers is a first step; another is identifying key chokepoints that could benefit from reduction of traffic congestion. Communities with a federal employment presence have a particularly good opportunity to work with their congressional delegations

and federal managers to create distributed workplace centers.

Ultimately, these centers can include private-sector as well as state and local employers. Communities without a federal presence can work with local employers and real estate owners to establish distributed workplace centers. Organizations that have knowledge workers or clerical workers who spend substantial time at the computer or on the phone – government contractors, insurance companies, financial services, major law firms and even call center operations – would be good candidates for distributed work. ❖

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