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## Why broadband is so essential in today's economy

One-third of N.H. businesses surveyed said they lacked adequate Internet connectivity to conduct core business operations

BY CHARLIE FRENCH



Erik Dodier and Thomas Obrey, known as TJ by his friends, co-founded a multimedia communications, marketing and media firm 20 years ago out of a garage-sized office in Dover. Today, their company, PixelMEDIA, has grown to a multimillion-dollar firm employing close to 70 people at its Pease International Tradeport offices.

Obrey says they picked their Pease location because, among other things, "it had infrastructure that we needed to grow – especially broadband Internet."

It's not just technology firms that need high-speed Internet. Hospitals, legal and financial firms, even educational institutions do as well. The fact is, you can't compete in any of these professions today without high-speed Internet. Moreover, what was considered fast five years ago — two or three megabits per second download — does not suffice for today's uses.

Today, fast means more than 25 megabits per second download and 3 megabits per second upload. That is the Federal Communication Commission's newly updated definition of broadband. With that speed, one can connect to work remotely through a virtual private network, or VPN, stream high-definition video content and videoconference with colleagues and clients in remote locations.

But even that isn't fast enough for some key business functions, such as transferring large databases from a pharmaceutical production facility to another facility, or serving high-definition videoconferencing through a bridge to multiple sites.

And it is insufficient to allow high-quality, real-time medical imaging and consultation between a health practitioner and a patient at a remote site.

Broadband access isn't a luxury. In fact, one study found that businesses that use broadband are three times more profitable than those that don't. Yet one-third of businesses surveyed in New Hampshire said that they did not have sufficient Internet connectivity to conduct core business functions.

## Looking ahead

Today, PixeIMEDIA deals with data-heavy web applications that have to be transferred to clients all around the world – something that wouldn't be possible without high-speed Internet.

But if Pease and the city of Portsmouth want to keep fast-growing companies like Pixel, they need to be thinking about even faster Internet.

In fact, it won't be long before technology companies require gigabit capacity. A gigabit is 1,000 megabits, which means we are talking an increase in the order of tens, if not hundreds, of times the capacity currently available at an affordable price.

Take the health care sector: Northern Human Services, which provides health services to Carroll and Coös counties, faced huge challenges serving its largely rural population. Thanks to a new network set up by ConnectNH at the University of New Hampshire, people in rural parts of these counties have access to experts through a new telehealth network.

According to ConnectNH's director, George Fryburg, "We are using two-way interactive video, which can be a live feed from one's desktop or videoconferencing system, so patients can get consultation from experts and specialists who can provide diagnosis and make recommendations on the next level of care."

In order to get really, really fast Internet, businesses need the support of the communities in which they reside, the service providers that serve them, and state and national policymakers who set the policy direction and direct resources.

Communities that are thinking ahead about their Internet needs will be the ones, 20 years down the road, attracting the technology jobs, the communications firms and the manufacturing plants. In fact, they will probably be attracting jobs and industry sectors that don't even exist yet.

Charlie French is program leader for Community & Economic Development at UNH Cooperative Extension, which last year, worked with 2,000 New Hampshire businesses in industries ranging from technology and healthcare to fishing and forestry. This article is part of a collaboration between UNH Cooperative Extension and NHBR.