Imagine students in rural Georgia learning from Atlanta’s top instructors without leaving their kitchen table. Or a doctor monitoring a patient miles away prescribing instant treatment with a click. Envision an energy grid that allows consumers to not only access data but manage their energy use.

Once a luxury, broadband Internet has become an essential utility, what The Brookings Institute calls “essential infrastructure for our global information economy.” But broadband may also prove pivotal in generating jobs. A mere one percent increase in broadband penetration can create 300,000 new U.S. jobs, including the infrastructure workforce, IT management and support for new services.

For instance, shifting to electronic health records and remote medical monitoring could cut costs $700 billion during the next two decades.

Despite such promise, too many Americans still lack access. Only 65 percent of U.S. households currently boast broadband. In urban areas of Georgia, the number is comparable — 66.8 percent, according to the National Telecommunications and Information Administration (NTIA).

Compare those statistics to the 90 plus percent of homes boasting broadband in tech giant Korea. The U.S. also falls behind the Netherlands, Sweden, the United Kingdom and Canada in broadband penetration. In July, broadband access becomes a legal right for every citizen of Finland. Our broadband speeds – currently averaging less than 10,000 kilobits per second – pale in comparison to many other nations, with Japan’s average download speed nearly 10 times this number.

The FCC’s National Broadband Plan aims to address these inequities, with a goal of raising high-speed Internet penetration from 65 percent to 90 percent, providing the digital infrastructure for competition and creating the world’s fastest broadband system.

Georgia Tech has prioritized broadband adoption and actualizing its rich potential. We’ve corralled the many areas of broadband expertise on campus into two organizations that have successfully driven adoption and enterprise statewide.

The Georgia Tech Broadband Institute (GTBI) melds high-end research from academia with policy makers and industry to paint a progressive portrait of where broadband is headed. GTBI is pushing Optical Wireless Convergence, which involves increasing home broadband bandwidth and carrying that service seamlessly to the wireless needs now defining our lives. Wireless connectivity can deliver broadband services to rural areas without the infrastructure high-speed fiber optic lines require.

TechSmart works with communities, enterprises and agencies to promote economic success and innovation through broadband development. Last year, TechSmart consulted on the North Georgia Network Cooperative, a $33 million stimulus project that is providing high-speed broadband to 42,000 Georgia households and businesses along with schools, hospitals and other public institutions.
We’ve only begun to tap the potential of broadband. But to define this arena, we must work to ensure that it continues to flourish.

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