A background network diagram consisting of numerous light blue nodes of varying sizes connected by thin lines, creating a complex web-like structure. A solid light blue horizontal line is positioned near the top of the page, and a solid light blue vertical line is on the right side, forming a partial frame.

ISSUE BRIEF: JANUARY 2019

THE HIGH COST OF DOING NOTHING ON NET NEUTRALITY

 **BUSINESSFORWARD**

INTRODUCTION

Business Forward has organized hundreds of briefings across the country on technology and innovation, collecting recommendations from local business leaders on a range of issues, from how to protect IP to helping small businesses use the internet to find new markets. Few issues are as important – or contentious – as net neutrality. This issue brief explains why net neutrality matters and offers a path to achieving it.

The term “net neutrality” was coined in 2003, capturing the belief that the best way to ensure an open and vital internet is to prevent network operators from interfering with traffic to favor data from some sites or applications over others. Without net neutrality, network operators could censor viewpoints, stifle startups by charging exorbitant tolls, or undermine competition by favoring their own web offerings over their competitors’ offerings. With net neutrality, companies operating at the “edge” of the network are more likely to invest in distance learning, telemedicine, media streaming, and other new, data-intensive businesses.

**FOUR DIFFERENT FCC CHAIRS, SERVING TWO PRESIDENTS,
SUPPORTED NET NEUTRALITY PRINCIPLES, POLICIES OR RULES –
BUT THEY LACKED CONGRESSIONAL AUTHORITY TO ENFORCE THEM.**

The FCC began working on ways to promote net neutrality in 2004. Four different FCC chairs (Michael Powell, Kevin Martin, Julius Genachowski, and Tom Wheeler) serving two presidents (George W. Bush, Barack Obama) issued net neutrality principles, policies or rules. But federal courts or subsequent FCC orders struck down these efforts. Martin’s “policy statement” was found to be unenforceable because it wasn’t a formal regulation. Genachowski’s formal rules were overturned because they failed to identify any statutory authority from Congress. In other words, despite general support for the concept of net neutrality from two presidents and four successive chairs, the FCC has failed to create lasting protections because it lacks clear authority from Congress. Federal agencies like the FCC are not designed or intended to legislate net neutrality rights. That’s Congress’s job.

In 2015, after a federal court voided President Obama’s first set of net neutrality rules, his second FCC chairman (Wheeler) proposed a workaround. If Congress was unable to provide specific statutory authority over the broadband industry as an “information service”, he would reclassify broadband as a “telecommunications service”. Reclassifying broadband had unintended consequences, however. It meant the FCC could at any point in the future choose to set broadband prices, force providers to turn open their proprietary network infrastructure to competitors, and impose other regulations on broadband providers. Even Wheeler acknowledged these additional powers were unnecessary; in fact, his order proposed to “forbear” from these more heavy-handed interventions, at least initially. This regulatory overreach prompted President Trump’s FCC chair (Ajit Pai) to overturn Wheeler’s reclassification, but in doing so, Pai voided the net neutrality principles that Powell, Martin, Genachowski and Wheeler had supported.

Today, Obama’s net neutrality protections are gone, and Republicans and Democrats cannot agree on a legislative proposal to reinstate them.

KEY POINTS

Broadband infrastructure is vitally important to local economic opportunity and America's global economic competitiveness.

- Rapid transition from dialup to early broadband to ultra-fast next-generation networks helped drive economic growth
- Widespread access to broadband encourages investment in new companies and new innovations, creating new jobs
- Expanding broadband to underserved communities helps those communities compete economically

Building our broadband infrastructure requires massive investment from a small number of companies.

- Over the past 22 years, broadband providers have invested more than \$1.6 trillion to build our broadband infrastructure; they invested more than \$75 billion last year alone
- In a recent three-year span, 86 percent of the capital investment in the internet economy came from broadband providers; 14 percent came from the large tech companies that deliver services or products on the “edge” of the network
- These companies are simultaneously deploying state of the art infrastructure and developing next generation technologies
- Investment is driven by (1) rapidly increasing consumer demand and (2) competition across the broadband industry

Sound broadband policy balances the interests of the companies that build the network and the companies that use it.

- If broadband service providers can discriminate by prioritizing certain kinds of traffic, companies operating on the network will have less incentive to develop new products and services
- If we overregulate broadband service providers, they will invest less in the network, which will make it harder for companies on the network to deliver new products and services

The Obama Administration's “Plan A” net neutrality rules in 2010 charted a smart path forward, but were struck down in courts for lack of clear statutory authority.

- The FCC's controversial embrace of Title II utility rules in 2015 was a “Plan B” workaround, chosen only because Congress had failed to pass a clear net neutrality statute.

Unless Congress passes a clear net neutrality law, the issue will remain caught in endless court battles and political fights at the FCC.

The resulting uncertainty represents an ongoing headwind against innovation and investment in the digital economy, and therefore a threat to long-term economic competitiveness. The new Congress should pass permanent, enforceable net neutrality law.

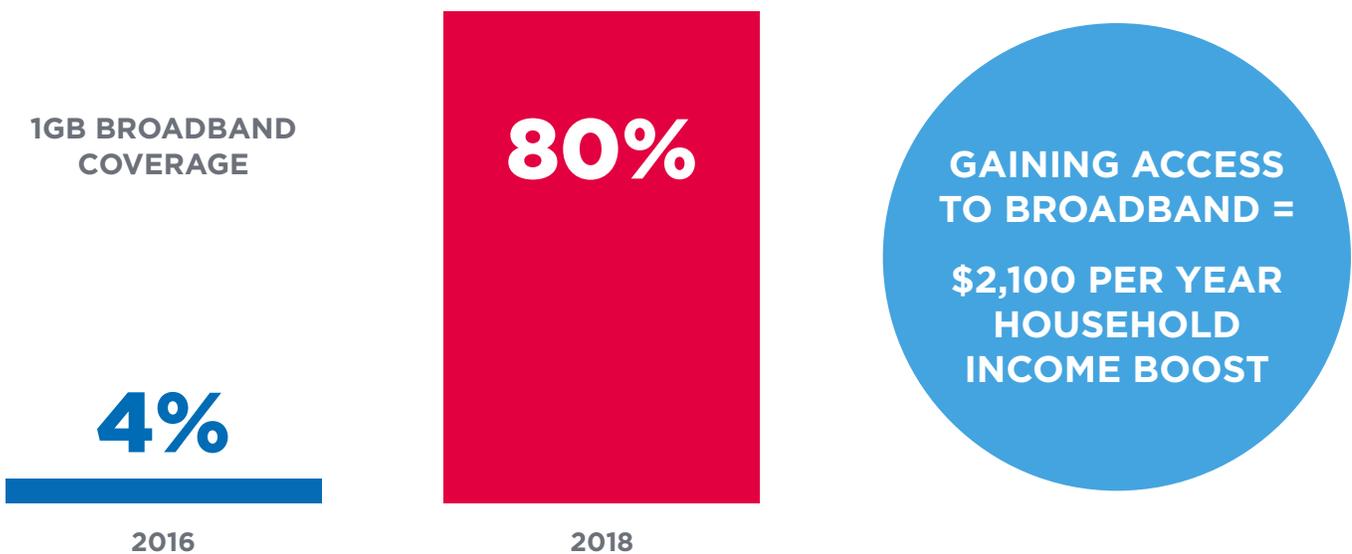
WHY BROADBAND MATTERS

The growth of U.S. broadband over the past generation is a remarkable economic success story. In just over twenty years, we've advanced from primitive dial-up connections to lightning-fast fiber optics. The pace of progress shows no signs of slowing. Two years ago, 4 percent of American homes had access to gigabit speed broadband. Today, 80 percent of American homes do.¹

This broadband buildout and the digital revolution it fuels are among the foremost drivers of American prosperity and growth. The digital economy accounted for nearly a third of all U.S. economic growth in 2016; over the past decade, the digital sector has grown at almost four times the pace of the economy as a whole.²

Broadband access is also critical to broadening economic opportunity and equity within the U.S. Numerous researchers have documented the growing economic divide between fast-growing coastal innovation hubs and the stagnating smaller cities and rural areas in between. Broadband is a critical step in leveling the playing field. A 2013 report by Ericsson found that gaining access to broadband correlates with a \$2,100 per year boost to household income³, while an earlier Brookings study concluded that each 1 percent increase in a state's broadband penetration increases employment by up to 0.3 percent per year.⁴

Part of a sound national broadband policy is to extend existing technologies to currently underserved areas. But sound policy also lays the foundation for deploying the next generation of technologies in time to meet the exponential growth in bandwidth that tomorrow's applications (such as connected homes and autonomous vehicles) may demand.



1. [HTTPS://WWW.CABLELABS.COM/GIGABIT-INTERNET-SPEEDS](https://www.cablelabs.com/gigabit-internet-speeds)

2. [HTTPS://ECONOMIA.JCAEW.COM/OPINION/OCTOBER-2018/HOW-DIGITAL-IS-DRIVING-US-ECONOMY](https://economia.jcaew.com/opinion/october-2018/how-digital-is-driving-us-economy)

3. [HTTPS://WWW.ERICSSON.COM/ASSETS/LOCAL/NEWS/2013/9/IMPACT-OF-BROADBAND-SPEED-ON-HOUSEHOLD-INCOME.PDF](https://www.ericsson.com/assets/local/news/2013/9/impact-of-broadband-speed-on-household-income.pdf)

4. [HTTPS://WWW.BROOKINGS.EDU/WP-CONTENT/UPLOADS/2016/06/06LABOR_CRANDALL.PDF](https://www.brookings.edu/wp-content/uploads/2016/06/06LABOR_CRANDALL.PDF)

SCALE OF INVESTMENT, RELIANCE ON BROADBAND PROVIDERS

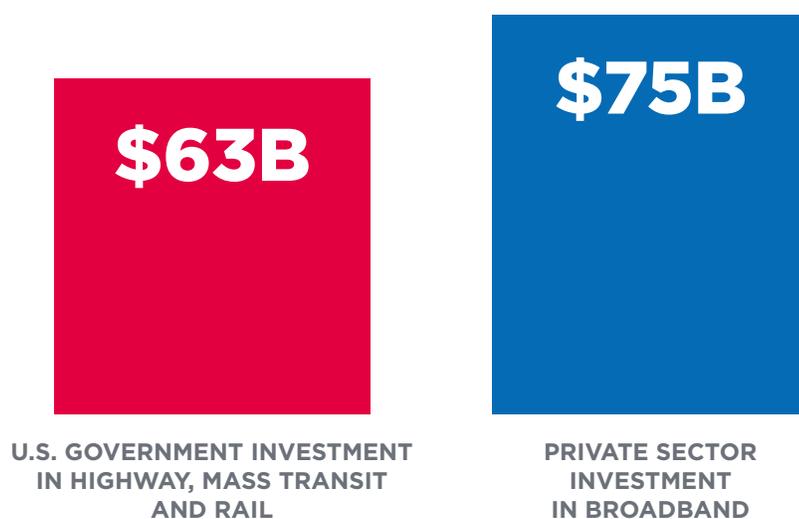
This continual upgrading of our digital infrastructure to meet the needs of tomorrow's economy requires massive investment in R&D and deployment. Since 1996, broadband providers have invested \$1.6 trillion to create our current network infrastructure⁵. That averages to about \$73 billion per year. By comparison, the U.S. government invests \$64 billion per year in America's highways, mass transit, and rail infrastructure, combined.

According to the Communications Workers of America and NAACP, in a recent three-year span, eighty-four percent of the capital investment in our internet economy came from broadband providers, like AT&T, Comcast, and Verizon. Sixteen percent came from large edge companies like Amazon, Google, and Microsoft. Not surprisingly, broadband providers support a lot of jobs (869,000)⁶.

Broadband providers are willing to invest so much because of growing consumer demand for ever-faster service. This demand is fueled by a growing number of data-intensive apps, services, and sites available across the web. Fifth-generation (5G) wireless broadband networks, which began rolling out in 2018⁷, promise speeds well in excess of 100 mbps on your smartphone⁸ – more than four times the bandwidth required to stream a Netflix movie in 4K UltraHD⁹.

They are also motivated by the sector's highly competitive nature. Broadband providers compete both within their technology modes (e.g. cable, fiber, fixed wireless, mobile wireless, satellite, etc.) and across these modes. Cable providers are already looking past their current gigabit buildout to a goal of deploying 10gig speeds across their entire footprints within the next decade¹⁰. Meanwhile, researchers are already looking past existing commercial technologies to develop next-generation alternatives – from low-orbit satellites to stratospheric balloons¹¹ – that will impact the future marketplace in ways no one can predict.

ANNUAL INFRASTRUCTURE INVESTMENT



5. <https://www.ustelecom.org/broadband-industry/broadband-industry-stats/investment>

6. <https://ecfsapi.fcc.gov/file/7521479438.pdf>

7. VERIZON: <https://www.theverge.com/2018/9/11/17847640/verizon-5g-first-home-broadband-internet-service-installations-october-1>

AT&T: <https://www.zdnet.com/article/at-t-to-launch-5g-across-19-cities/>

8. <https://www.theverge.com/2018/2/25/17046346/qualcomm-simulated-5g-tests-san-francisco-frankfurt-mwc-2018>

9. <https://help.netflix.com/en/node/306>

10. <https://www.ncta.com/media/media-room/introducing-10g>

11. <https://www.fastcompany.com/40542241/this-new-wave-of-satellite-broadband-could-challenge-cable-and-fiber>

CONTRAST WITH PUBLIC INFRASTRUCTURE

To understand the importance of private investment in our internet infrastructure, just compare it to the crisis-level underinvestment in other infrastructure sectors: The American Society of Civil Engineers reports that our nation's transportation, energy, and water infrastructure – sectors all dominated by either public sector funding or utility-regulated firms – faces a \$2 trillion funding shortfall over the next ten years.¹² Overall, America's public infrastructure was graded a 'D+' in ASCE's most recent Infrastructure Report Card.¹³

**1 IN 10
BRIDGES IS
STRUCTURALLY
DEFICIENT**

**1 IN 5
MILES OF
HIGHWAY IS
IN POOR
CONDITION**

BALANCING POWER BETWEEN THE NETWORK AND EDGE

In order to encourage innovation across the internet, we must encourage investment by both the companies that build the network and the companies that use it. If we allow broadband providers to block or throttle access, we discourage edge companies from developing new applications and services. No one is going to try to compete with Netflix if Netflix can use its market power to buy faster delivery speeds.

However, if we regulate broadband providers too much (or unwisely), we discourage them from making the massive infrastructure investments those edge companies' products and services will require. If a government agency can later decide to place a cap on broadband rates or require broadband providers to share their networks at a discount, those providers will slow their capital spending. That means slower deployment of broadband services to rural areas and slower upgrades to next-generation technologies everywhere. Because a typical broadband investment decision weighs large, front-loaded costs against the much longer-term revenues spread over many years or even decades, rapid and erratic swings in policy (from one Administration or court decision to the next) can have a big impact undermining long-term certainty and making marginal investments much less attractive.

12. [HTTPS://WWW.INFRASTRUCTUREREPORTCARD.ORG/SOLUTIONS/INVESTMENT/](https://www.infrastructurereportcard.org/solutions/investment/)
13. [HTTPS://WWW.INFRASTRUCTUREREPORTCARD.ORG](https://www.infrastructurereportcard.org)

A HIGHER STANDARD

The core principles of network neutrality aim to ensure that broadband service providers treat all traffic equally. Providers should not be allowed to block or throttle consumers' access to lawful sites or services, nor discriminate against anyone on the edge of the network (e.g., sites, apps, or other web-based services) by prioritizing or discriminating against their traffic.

PROVIDERS SHOULD NOT BE ALLOWED TO BLOCK OR THROTTLE CONSUMERS' ACCESS TO LAWFUL SITES OR SERVICES, NOR DISCRIMINATE AGAINST ANYONE ON THE EDGE OF THE NETWORK BY PRIORITIZING OR DISCRIMINATING AGAINST THEIR TRAFFIC.

Net neutrality is often simplified by the analogy of banning broadband providers from charging websites a “toll” to gain access to a “fast lane” and thus turning the rest of the internet into a “slow lane.” The analogy is problematic, because HOV lanes, E-Z pass lanes, and special toll lanes make sense for most cities. By comparison, fast lanes on the internet could be dangerous. Absent net neutrality rules, network operators could theoretically censor controversial viewpoints, stifle startups by charging exorbitant tolls, or even undermine competition by favoring their own web offerings over those of competitors (for example, if a broadband provider also offered a streaming video service). By preventing such abuses, net neutrality promotes ongoing innovation and investment on the edge of the network.

HOW CONGRESS DROPPED THE BALL ON NET NEUTRALITY

Net neutrality enjoys widespread and bipartisan public support. Yet, since the concept was first introduced in 2003, Congress has never acted to pass net neutrality protections into law. In the absence of specific direction from Congress, the FCC has spent the better part of 15 years trying – and, to date, failing – to find a sustainable and lasting solution. This is the crux of the problem: Agencies are not designed or intended to create and implement rights. That's Congress's job.

The FCC's effort began in 2004 under Republican FCC Chairman Powell and continued under Chairman Martin, who led the Commission to adopt a “policy statement” establishing that consumers are entitled to access the content, applications, and services of their choice. But a court eventually ruled that these policy guidelines, however well intentioned, were not formal regulations and so could not legally be enforced.

President Obama's first FCC Chairman, Julius Genachowski, took his turn at the plate in 2010, passing the 2010 Open Internet Order (“Genachowski Order”), which prohibited blocking, throttling, and anticompetitive discrimination, while giving the FCC the power to enforce violations. But the Genachowski Order was eventually struck down in the courts – not because of any objection to the substance of the FCC's goals, but because the FCC had failed to identify the specific statutory authority that allowed it to impose this level of regulation on “information services” like broadband.

CONGRESS HAS NEVER ACTED TO PASS NET NEUTRALITY PROTECTIONS INTO LAW.

To put the problem more precisely – in the Telecommunications Act of 1996, Congress and the Clinton Administration jointly reached a bipartisan consensus that digital “information services” like broadband should be lightly regulated, reflecting the uncertainty of how such offerings might evolve over time. This “Title I” classification didn’t include any specific authority to uphold net neutrality, because “net neutrality” didn’t even emerge as a topic of debate until several years after the passage of the 1996 Act. By contrast, well-established “telecommunications services” (like legacy telephone networks) were classified under Title II of the Act, a utility-style framework dating to 1934 that permitted much more intrusive regulation. The decision to classify broadband as a lightly regulated Title I information service was upheld by the Supreme Court in the 2005 *Brand X* ruling and provided the governing framework for broadband during the incredibly rapid deployment and acceleration of our nation’s internet infrastructure from 1996 to 2015.

After the *Genachowski Order* was rejected in court, Obama’s second FCC Chairman, Tom Wheeler, launched a proceeding in late 2014 that aimed to find an alternative legal footing for neutrality rules. (Again, an effort that would have been unnecessary if Congress simply passed legislation creating net neutrality rights.) The resulting 2015 Open Internet Order (“Wheeler Order”) attempted to solve the legal conundrum by reclassifying broadband from a Title I information service to a Title II telecommunications service, which the FCC has the authority to regulate much more intrusively.

The switch created unintended consequences, however. For example, the FCC’s newly claimed authority meant that future FCC administrations could set prices, regulate service requirements, or impose line-sharing obligations, even if Wheeler’s order proposed to forbear from such extremes for now. This new, ever-present threat of overregulation – exactly what the Title I light-touch classification aimed to avoid – threatened to discourage the level and speed of private investment, which would slow deployment and the development of new technologies. This move to a utility-style framework effectively guaranteed the rules would last only as long as Democrats held the majority at the FCC. Republicans, consistent with their general anti-regulation approach, promised to reverse the switch to Title II.

Sure enough, when Republicans regained a majority on the FCC after the 2016 election, the Commission quickly moved to overturn the Wheeler Order and restore broadband to its traditional Title I footing. But in so doing, Chairman Ajit Pai’s Restoring Internet Freedom order (“Pai Order”) also removed the blocking, throttling, and discrimination prohibitions in the Wheeler Order, leaving consumers and entrepreneurs without any enforceable net neutrality rules.

The public outcry against Pai’s gutting of net neutrality protections¹⁴ – and 14 years of FCC struggles and court setbacks – ought to encourage Congress to finally act. Deferring to regulatory agencies has failed to provide lasting, long-term, enforceable protections. Congress has the authority to enact net neutrality through statute, avoiding the questions over authority that have repeatedly undone FCC efforts in court.

14. <https://itif.org/publications/2017/11/28/how-technology-based-start-ups-support-us-economic-growth>

TITLE II: FROM MEANS TO END

Many proponents of net neutrality at our briefings argue for “going back to Obama’s rules” without realizing that the Obama administration proposed two solutions for net neutrality. Plan A was the Genachowski Order, which instructed the FCC staff to implement net neutrality rights and enforce them under its existing authority under Title I of the 1996 Telecommunications Act. Democrats in Congress favored this approach as well. Their net neutrality legislation, driven by Congressman Henry Waxman, would have made net neutrality permanent while preserving broadband’s Title I designation.

The Wheeler Order, which reclassified broadband from information services to telecommunications services (from Title I to Title II) was Plan B. It was a workaround. Wheeler did not intend to use the full suite of Title II controls over broadband. He stated publicly that they were not necessary, and his order forbore from many of the most extreme provisions.

TITLE II WAS THE OBAMA FCC’S PLAN B, A WORKAROUND – NOT AN END IN ITSELF.

Wheeler’s reliance on Title II had two significant drawbacks. The first was economic: even with Wheeler’s promise not to overly regulate broadband providers, by opening the door for future FCC administrations with less restraint to directly regulate prices or force open proprietary networks, the Wheeler Order effectively forced broadband providers to begin weighing these threats in their investment decisions.

The second drawback was political: ramping up regulation over broadband angered the Republicans in Congress and was strongly opposed by the Commission’s Republican minority; these dynamics effectively guaranteed that net neutrality would remain a political football at the FCC, with rules changing every time the Commission’s majority shifted from one party to the other.

For some Democrats, Title II evolved over time from a means to net neutrality to an end in itself. But Title II is a non-starter with Republicans, and any insistence by Democrats on making utility-style regulation the centerpiece of a net neutrality bill effectively ensures it will not become law. In the face of broad public support for net neutrality, partisans in both Parties are blocking compromise – and putting much-needed investment in both network infrastructure and edge innovation at risk.

COST OF DELAY FOR SMALL BUSINESS

The digital revolution has changed the American small business landscape over the past generation. These gains and opportunities could be endangered if broadband providers began charging extra tolls for businesses to reach their customers online or discriminating against some online services in favor of others willing to pay for the privilege. And while all the major internet providers have pledged not to do these things, there is no substitute for clear, stable, and predictable rules of the road. Only a Congressional statute can provide such clarity.

COST OF DELAY TO HIGH GROWTH STARTUPS

A recent study found that the number of technology-based startups increased 47 percent from 2007 to 2016, while total employment and real annual wages at these new firms both grew by 20 percent over this decade.¹⁵

For entrepreneurs and high-tech startups, the risks of a net neutrality impasse are acute. Massive Silicon Valley tech behemoths might be able to afford access to fast lanes or have the negotiating heft to avoid being shunted to second-tier networks, but few aspiring startups would. The prospect alone might be enough to starve startups of the venture capital they need to grow; investors will be less likely to invest in bandwidth-intensive distance learning, media streaming, or telemedicine startups if the potential for future “fast lane” tolls hang over their investment decisions.

A PATH FORWARD FOR CONGRESS ON NET NEUTRALITY

With a Democratic majority in the House of Representatives and Republicans controlling the Senate and White House, most contentious issues seem likely to end in stalemate. Net neutrality could be an exception. It remains broadly popular among both Democratic and Republican voters. Rules prohibiting blocking, throttling, or paid prioritization are almost universally supported, including by the broadband providers themselves.

Also, both parties have a lot to lose if they fail to strike a deal. Democrats want to deliver on net neutrality promises they made to voters. Republicans understand their bargaining power could fall if Democrats win the White House in 2020 and gain a majority at the FCC.

The sticking points in any bipartisan negotiations on net neutrality seems likely to be the questions of Title II utility classification and a “general conduct standard.” But they needn’t be. Neither is necessary to implement clear, enforceable net neutrality rules. Congress can create clear prohibitions against blocking, throttling, and paid prioritization, enforceable by the FCC, while preserving the Clinton-era light-touch framework better suited to a still-evolving marketplace. And such clear, unambiguous rules – with meaningful enforcement powers and penalties – are preferable to a vague “conduct standard” that would create massive uncertainty by giving future FCC administrations the power to effectively redefine the rules and undermine the will of Congress at some point in the future.

Given the massive amount of investment and innovation that flooded into the broadband sector during the Bush and Obama years, it’s hard to argue against the success of the light-touch framework. The FCC dropped the light-touch consensus in 2015 in favor of this more complex utility route not because it viewed it as inherently preferable, but because it offered the path of least resistance to a quick fix on net neutrality after the courts’ rejection of the Genachowski Order. Congress has no such constraints; it has freestanding authority to enact clean net neutrality without the unnecessary baggage of dated and ill-fitting regulatory classifications. So, while Title II is likely a political non-starter with Republicans, it’s also unnecessary to get the job done.

In other words, the battle over Title II should not decide the war over net neutrality.

15. [HTTPS://ITIF.ORG/PUBLICATIONS/2017/11/28/HOW-TECHNOLOGY-BASED-START-UPS-SUPPORT-US-ECONOMIC-GROWTH](https://itif.org/publications/2017/11/28/how-technology-based-start-ups-support-us-economic-growth)

TIME TO ACT

After 15 years of stops, starts, court challenges, and political reversals at the FCC, action is painfully overdue. More than \$75 billion in annual broadband investment is at risk. Gridlock is hurting startups trying to raise seed capital and large network operators allocating capital for long-term R&D and deployment investments. The connectivity and services these two groups provide is growing more important to our economy, in general, and economic opportunity, in particular. Passing a net neutrality law will end the 15-year cycle of uncertainty and failure and help ensure continued investment in the next-generation networks our economy needs to remain competitive.

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