

April 17, 2023

National Telecommunications and Information Administration  
Department of Commerce  
Herbert C. Hoover Building  
1401 Constitution Ave. NW  
Washington, District of Columbia 20230

**RE: Comments of ACT | The App Association to the National Telecommunications and Information Administration on the Development of a National Spectrum Strategy (NTIA-2023-0003)**

ACT | The App Association appreciates the opportunity to provide comments to the United States Department of Commerce's National Telecommunications and Information Administration (NTIA) to inform the development of a national spectrum strategy.<sup>1</sup> We support NTIA's commitment to developing a national spectrum strategy to fully address the needs of spectrum reliant services and missions, including fixed and mobile wireless broadband service, next-generation satellite communications, and more.

The App Association is a global trade association for small and medium-sized technology companies. Our members are entrepreneurs, innovators, and independent developers within the global app ecosystem that engage with verticals across every industry, powering an ecosystem the App Association represents approximately \$1.7 trillion annually and that is responsible for 5.9 million American jobs, while serving as a key driver of the \$8 trillion internet of things (IoT) revolution.<sup>2</sup>

The App Association supports coordinated federal spectrum policy changes to enable next generation innovations in America. App Association economic analysis shows that deployment of 5G wireless networks will create 8.5 million jobs in the United States over the coming years, enabling improvements in economic productivity, employment, and consumer value.<sup>3</sup> 5G will affect the labor market through direct and indirect means;

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<sup>1</sup> 88 FR 16244, <https://www.federalregister.gov/documents/2023/03/16/2023-05406/development-of-a-national-spectrum-strategy#addresses>

<sup>2</sup> ACT | The App Association, State of the U.S. App Economy: 2020 (7th Edition) (Apr. 2020), available at <https://actonline.org/wp-content/uploads/2020-App-economy-Report.pdf>

<sup>3</sup> James Prieger, "An Economic Analysis of 5G Wireless Deployment: Impact on U.S. and Local Economies" (Feb. 2020), *available at*

while the additional labor required to build out the network to deploy 5G will certainly create the most immediate demand for new jobs, the broadest impact on the labor market comes from new employment opportunities through the way access to 5G will enable new applications, services, ways of doing business, and general growth of businesses. Workers enabled by this will earn more than \$560 billion during that time, create \$1.7 trillion in additional output, and add over \$900 billion to U.S. gross domestic product (GDP).<sup>4</sup>

The App Association continues to support coordinated federal efforts to bring broadband to Americans by opening more spectrum for both licensed and unlicensed uses, as well as supporting infrastructure deployment. The small business tech developer community we represent is committed to advancing an equitable digital ecosystem that provides the opportunities for entrepreneurship for, and enhanced access to, America's underserved communities. The App Association therefore supports NTIA's efforts to develop a national spectrum strategy that will improve spectrum access and advance American innovation, connectivity, and competition by creating high-paying and highly skilled jobs and producing improvements to the overall quality of life.

We urge the United States' updated spectrum strategy to align with the following:

- **Streamline Spectrum Evaluation and Auction Processes:** The prospect of countless connected devices entering our communications networks through nodes in homes, workplaces, or other last-mile connectivity endpoints will dramatically increase data flows across communications networks. NTIA's national spectrum strategy should set the identification of new opportunities for reallocation and/or new sharing arrangements across spectrum bands consistent with interference protection principles, including for government-owned spectrum bands that may be ideal for commercial IoT use, particularly mid-band and millimeter wave bands. The App Association urges NTIA to support certainty in the spectrum pipeline through a modernized process for evaluation of the most efficient uses of spectrum bands in which federal users operate, as well as in supporting a procedure for repurposement (and, where appropriate, auctions) that will free up new spectrum across low, mid, and high bands consistent with sound interference protection principles. Furthermore, the Challenge should embrace new artificial intelligence software-driven solutions to dynamic spectrum sharing solutions.
- **Spectrum Policy's Role in Addressing Unserved and Underserved American Communities:** The App Association applauds NTIA for promoting diverse spectrum access opportunities including widespread, intensive, and low-cost access to spectrum-based services that will expand availability and

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<https://ecfsapi.fcc.gov/file/10417521421416/ACT%20Ex%20Parte%20Notice%20re%205G%20Economic%20Analysis%202020.pdf>.

<sup>4</sup> *Id.*

accessibility in unserved and underserved communities. Given the integral role of small tech firms in advancing equity and diversity in digital communication services and products, who have been historically underserved, NTIA's programs must prioritize helping consumers and entrepreneurs adversely affected by persistent poverty or inequality, to access, leverage, and benefit from the wide range of opportunities made possible by advanced connectivity capabilities. In our annual State of the App Economy report,<sup>5</sup> we explore how the ever-evolving IoT ecosystem affects companies, even those unaffiliated with the information and communication technology sector. Many App Association members are located in, and support, underserved communities across the country. The future of the app economy will depend on the strength and density of next generation networks, which are supported by myriad spectrum bands and different types of infrastructure, including small cell deployment, that seamlessly work together.

For example, for rural communities whose download speeds rely on low-band spectrum capacity, we urge the national strategy to expand availability of the 600 MHz band to improve rural broadband speeds by 30 to 50 percent.<sup>6</sup> Failure to adequately develop U.S. infrastructure and finite spectrum resources will harm both the economy and consumers.

- **Continued Coordination and Collaboration with Other Agencies:** With the 2021 agreement in place between the Federal Communications Commission (FCC), National Science Foundation (NSF), and NTIA to support NSF's Spectrum Innovation Initiative,<sup>7</sup> NTIA should continue to collaborate with the FCC and NSF to ensure that the spectrum national strategy aligns with and builds on the latest approaches to efficient infrastructure deployment. The strategy should also ensure that it maximizes the benefits of competition into next generation wireless capabilities by welcoming new entrants. The App Association also commends NTIA and other U.S. policymakers for collaboration and coordination in advance of and during the upcoming 2023 World Radiocommunication Conference. For example, the strategy should prioritize leveraging the efforts of the O-RAN Alliance, which has developed an architecture for building the virtualized radio access network (RAN) on open hardware and cloud with embedded AI-powered radio control.<sup>8</sup> O-RAN, and open standardization processes like it, stand to

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<sup>5</sup> *Id.* <https://actonline.org/wp-content/uploads/2020-App-economy-Report.pdf>

<sup>6</sup> GSMA, *Vision 2030: Low-Band Spectrum for 5G* (June 2022), available at <https://www.gsma.com/spectrum/wp-content/uploads/2022/07/5G-Low-Band-Spectrum-1.pdf>

<sup>7</sup> Press Release, Federal Communications Commission, *FCC Joins Federal Partners in Spectrum Innovation Cooperation Agreement: FCC, NTIA, and NSF Sign Agreement to Support NSF Spectrum Innovation Initiative* (Feb. 1, 2021) <https://docs.fcc.gov/public/attachments/DOC-369633A1.pdf>.

<sup>8</sup> <https://www.o-ran.org/>.

revolutionize America's communications networks by enabling network virtualization capabilities and removing vulnerabilities in the networks.<sup>9</sup>

The App Association appreciates the opportunity to provide its recommendations on the development of a national spectrum strategy and looks forward to collaborating with NTIA to expand broadband internet access and adoption in America, expand the use of spectrum by all users, and ensure that the internet remains an engine for continued innovation and economic growth.

Sincerely,



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<sup>9</sup> See., e.g., <https://www.fcc.gov/news-events/events/forum-5g-virtual-radio-access-networks>.