

January 2, 2024

Information Technology Industry Council
700 K St NW
Washington, DC 20001

Via Electronic Submission

National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave NW
Washington, DC 20230

Re: ITI Comment in Response to Notice of National Spectrum Strategy Implementation Plan Request for Input

The Information Technology Industry Council (ITI) appreciates the opportunity to submit our response to the Notice of National Spectrum Strategy (NSS) Implementation Plan Request for Input.

ITI represents the world's leading information and communications technology (ICT) companies. We promote innovation worldwide, serving as the ICT industry's premier advocate and thought leader in the United States and around the globe. ITI's membership comprises companies that operate in almost every layer of the wireless ecosystem stack that depends on spectrum allocation, including semiconductor and network equipment designers and manufacturers, software, and digital services companies, as well as those that will harness wireless technologies to evolve their businesses.

We appreciate NTIA's focus on the NSS and that NTIA continues to engage the private sector and other key stakeholders in the development of the strategy as we look forward to expanded spectrum opportunities. In the NSS, NTIA acknowledges the need for better coordination and management of spectrum and includes objectives geared towards improving spectrum efficiency by utilizing existing and new wireless technologies that can transmit data more efficiently and securely, developing standardized protocols for sharing spectrum among different applications and users, and establishing effective mechanisms for resolving conflicts and managing interference. We are supportive of NTIA's steps through the NSS to promote ongoing research and development to ensure that spectrum policies, technologies, and workforce development continue to evolve to meet the changing needs of a diverse wireless ecosystem.

Spectrum Pipeline. The next generation of wireless technologies (e.g., mobile, Wi-Fi, LEO satellite – all next gen wireless technologies requiring spectrum) will be transformative for our society, offering opportunities to companies, consumers, and innovators to expand connectivity and transform sectors across our economy. Rapidly increasing the availability of a robust amount of spectrum in various suitable ranges is vital for the United States’ continued technological leadership. Federal policymakers have a critical role to play in achieving this vision.

We appreciate NTIA’s identification of 2,786 MHz across five bands to study for new uses. Study of these bands for a wide variety of commercial uses is encouraging. ITI supports increasing access to licensed, unlicensed, and shared spectrum for wireless technologies and hopes NTIA will soon identify additional bands for study for commercial use.

Studies should be started and finished as quickly as possible, making sure there are adequate opportunities for the public and private sectors to weigh in, while also keeping an open mind about sharing technologies and methodologies where appropriate. The Implementation Plan and its deliverables should provide early clarity regarding the study processes, methodologies, and principles for the bands under study, including their timing, inputs, and outputs. Such processes should be data-driven—consistent with this Administration’s focus on data-based decision making—and increase transparency into current and future federal and non-federal spectrum use. The Implementation Plan should set decision dates for the spectrum identified in the Plan as well as when new bands will be added to the pipeline to keep pace.

ITI supports reaffirming existing policy to encourage the United States Government (USG) to procure commercial products and services in support of its operations when feasible and appreciates NTIA’s work to establish an assessment process when a federal agency identifies a need for additional spectrum resources.

Collaborative Long-Term Planning. ITI supports NTIA’s efforts to establish a framework for regular consultations between the private sector and government regarding spectrum allocation, policy, and ongoing technical issues that consistently accompany the identification of new spectrum bands for commercial use. This type of long-term planning allows for a sustained, comprehensive strategy and proactive anticipation of potential conflicts before they arise.

Past undue delays have come from lack of early coordination and participation by all interested parties. Both the Presidential Memorandum on Modernizing United States Spectrum Policy and Establishing a National Spectrum Strategy (PM) and the NSS reaffirm NTIA’s authority over federal spectrum matters and the FCC’s complementary jurisdiction over commercial spectrum. It is crucial that NTIA be able to speak as the single authoritative voice on behalf of federal spectrum users, rather than having individual agencies pursue their own interests at the expense of the broader federal enterprise or policy objectives. Both the PM and the NSS make great strides to address coordination issues and develop challenge processes to prevent confusion, delays, and interrupted deployments.

Technology Development. ITI appreciates the NTIA's focus on new technologies including requirements for efficiency in design, improvements in receiver performance, and "evolving to a 'designed to share whenever feasible'" mindset. The USG's continued prioritization of R&D into areas foundational to next-generation wireless technologies is also laudable. As part of the Implementation Plan, studies on federal systems should be planned to determine where there are opportunities to modernize those services or supplement them with commercial spectrum technologies or resources. This would also assist in reaffirming the USG's policy of encouraging procurement of commercial products. Increased funding is essential for the highly technical USG labs, such as those at the DoD, DoE, NIST, ITS, etc., as they conduct R&D into key foundational and applied research areas. This work can bring USG R&D on to more equal footing with the wireless technology investments made by global competitors, as well as with other important telecommunications R&D efforts.

We look forward to NTIA's "moonshot" effort "in collaboration with industry, to advance research, create investment incentives, and set forth measurable goals for advancing the state of technology for spectrum access, with an emphasis on dynamic forms of spectrum sharing for all users" using a set of sharing technologies within 12-18 months. ITI has called for additional testbeds for wireless research and development and supports the establishment of a national testbed for dynamic spectrum sharing. ITI also supports leveraging of existing testbed facilities, such as the NSF PAWR program consisting of four existing testbeds and the Colosseum channel emulator. NTIA's efforts in the Implementation Plan should include improvement and upgrade of existing testbeds for use by academic and industrial experimentation and should involve continued development of state-of-the-art technology.

Spectrum Expertise. In addition to the known needs for tower technicians and telecom crews servicing wireless and backhaul infrastructure, future networks will also require more datacenter technicians, cloud systems administrators, cybersecurity experts, and other workers with the technical skills to advance virtualization. As NTIA also rightly notes, there is a need for more engineers that understand radiofrequency radiation and can engage in the studies and development of solutions that allow for the introduction of new commercial services while ensuring incumbent missions are sustained. We appreciate NTIA's prioritization of funding training and retraining for workers to prepare for and meet these workforce needs. This training and retraining should be conducted in consultation and conjunction with industry to ensure support for required skillsets. NTIA can also collaborate with universities to establish a suitable curriculum in addition to current engineering degrees.

Thank you for the opportunity to provide comments on NTIA's National Spectrum Strategy. ITI looks forward to working with you throughout this process. Should you have any questions, or if we can be helpful in anyway, please reach out to Katie McAuliffe, Senior Director of Telecommunications Policy, kmcauliffe@itic.org.

Sincerely,

The Information Technology Industry Council