



## Amazon submission to Global Symposium for Regulators 2024 Best Practice Guidelines

Access to broadband connectivity is an essential component of modern life and a requirement for social and economic growth and development. Internet use remains tightly linked to the level of a country's development<sup>1</sup> and, as the importance of Internet access has grown, the consequences of being offline have grown even larger. While the number of people offline in 2023 decreased, a digital divide persists around the world, particularly in developing countries and in remote communities.<sup>2</sup>

Government stakeholders bear the responsibility of maximizing affordable access to high-speed broadband connectivity in their countries, and policymakers and regulators have both the challenge and opportunity to acknowledge that embracing transformative technologies can help bridge the enduring digital divide. Far too often, regulatory authorities succumb to regulatory capture by incumbent operators that use legacy technology. Regulators must view incumbents' performance objectively, and consider how innovation and competition can address long-standing challenges.

One transformative technology that regulators around the world should embrace is the new generation of non-Geostationary satellite (NGSO) systems that operate in low Earth orbit (LEO). When paired with an enabling regulatory framework, LEO satellites hold the potential to bridge connectivity gaps, expand network coverage, and enhance Internet adoption in marginalized communities. NGSO systems offer underserved communities around the world the high-speed, high-quality broadband network connectivity they need to participate in the digital era.<sup>3</sup>

NGSO constellations like Amazon's Project Kuiper provide the performance and coverage that can help policymakers reach their connectivity targets. These constellations can deliver broadband service with speeds and latency on par with terrestrial fiber networks, an essential element for remote work and applications like streaming video. Systems like Kuiper can provide service to tens of millions of customers around the globe because they operate close to the Earth (590-630 km), efficiently use the Ka-band spectrum (20/30 GHz), and have the ability to form small spot beams for increased throughput. These capabilities are of particular benefit in areas that are difficult or expensive to reach with terrestrial infrastructure. NGSO systems can provide coverage to the most remote areas on Earth, and are a compelling solution for bridging the digital divide.

The development of transformative technologies such as NGSO systems often outpace the regulatory regimes governing their deployment and use. Complex and opaque administrative processes, foreign direct investment (FDI) restrictions, data localization, equipment tariffs, requirements for local manufacturing, and outdated regulatory frameworks that cannot account for technological innovation limit the potential of transformative technologies and ultimately increase costs to customers.

When it comes to NGSO systems in particular, the ITU has recognized the need to develop a more progressive approach to regulations on their licensing, deployment, and use. For example, Plenipotentiary Resolution 219 (Bucharest, 2022), encourages Member States to recognize that

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<sup>1</sup> ITU Facts and Figures 2023: Measuring digital development.

<sup>2</sup> *Id.* See also, ITU Facts and Figures 2022: Latest on global connectivity amid economic downturn.

<sup>3</sup> See the G7 Industry, Technology and Digital Ministerial Meeting Ministerial Declaration of 2024.

“necessary regulatory frameworks need to be developed for the operation of non-GSO systems.” The Resolution further *instructs the Director of the Telecommunication Development Bureau* “to work with regulators, including through the Global Symposium for Regulators, to encourage non-GSO system licensing expertise and capacity building.”

In keeping with those instructions, the guiding principle that ITU Member States should follow to foster the positive and inclusive impact of transformative technologies is the creation of a flexible, predictable, transparent, and enabling regulatory environment that enables competition, innovation, and long-term investment in transformative technologies. This should be complemented by a technologically neutral approach to meeting connectivity targets that provides consumers and providers flexibility to choose the technology that best fits local needs.

The key regulatory measures required specifically to foster the deployment of NGSO broadband connectivity systems include:

- Employ flexible and streamlined licensing procedures that enable the provision of satellite broadband services and earth station licensing, including blanket licensing of ubiquitously deployed customer terminals.
- Allow for satellite provision of international internet capacity without a requirement for domestic ground stations.
- Reduce or remove import tariffs, quotas, or local manufacturing requirements for satellite user terminals.<sup>4</sup>
- Provide access to Ka-band spectrum for NGSO systems in alignment with the ITU Radio Regulations.
- Enforce clear rules for sharing spectrum with terrestrial and space services in bands where they co-exist, either through power limits or coordination.
- Adopt sensible approaches to ensuring space safety and sustainability.

Amazon encourages the Global Symposium for Regulators to incorporate the measures listed above in its Best Practice Guidelines.

Regulators can drive positive behaviors of market players by viewing them as partners that share their goals, and using their authority and convening power to bring stakeholders together to drive consensus on matters of public importance. Public and private sector space stakeholders from around the world should collaborate and reach agreed-to best practices that help enable a safe and sustainable space environment. Amazon supports the multi-stakeholder Net Zero Space Initiative, a combined effort of industry, civil society, and government authorities that share the goal of safe space operations and the long-term sustainability of space.<sup>5</sup> Voluntary efforts such as this help catalyze interest and understanding around the need for close public and private sector partnerships.

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<sup>4</sup> See Asian Development Bank’s *Digital Connectivity and Low Earth Orbit Satellite Constellations: Opportunities for Asia and the Pacific*.

<sup>5</sup> The Net Zero Space initiative is a multi-stakeholder platform that aims to achieve sustainable use of outer space by 2030 by taking concrete steps to mitigate the production of new orbital debris and remediate existing ones.