

# Opportunities for Transatlantic Cooperation on Technology Standards

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## Background & Problem Statement

The contest between autocracies and democracies will define the 21<sup>st</sup> century, with technology competition a key battleground. Over the coming decades, innovations in artificial intelligence, telecommunications, the internet of things, and more will fundamentally reshape our societies. Liberal democracies must jointly create standards surrounding the use of these new technologies and ensure that autocracies are not able to set the rules of the road. Given the increasing role of Beijing in standard-setting bodies through companies and direct government involvement, the time is now for transatlantic partners to reclaim the agenda and set democratic standards for our future. The EU-U.S. Trade and Technology Council has elevated the issue of and provided a forum for standard-setting on the transatlantic technology agenda. This brief will first focus on transatlantic opportunities to set standards for three pivotal technologies – telecommunications, artificial intelligence, and IoT devices. Then, it will outline how the United States and Europe should shape technology standards in international organizations.

## Telecommunications

Over the past decade, telecommunications standards have been primarily viewed through the lens of competition with China. This area will continue to be contested with the implementation of 5G wireless, the development of 6G technologies, and the increasing adoption of 5G alternatives such as open radio access networks (open RAN). Industry primarily sets telecommunications standards across a number of bodies, with 5G technology standards primarily set in the 3rd Generation Partnership Project (3GPP) and open RAN standards set in the O-RAN Alliance. Currently, Qualcomm (United States), Huawei (China), Nokia (Finland), Ericsson (Sweden), and Samsung (South Korea) lead standard setting in the 3GPP, due to their leading market position.<sup>1</sup> Securing democratic telecommunications standards requires a dual-pronged approach: running faster than the competition and fostering transatlantic coordination. The United States and Europe should:

- **Run faster.** The transatlantic partners must continue to innovate in the telecommunications space and explore opportunities to do so jointly. Among transatlantic companies, Nokia and Ericsson are best poised to compete with Huawei, while the United States leads in a fundamental rethink of 5G, with the advent of open RAN technologies. With standard setting, it is crucial to be the first to develop the technology, as companies are then better positioned to draft the technical standards. The transatlantic partners should dedicate more resources to research and development of 6G to be a first mover in this critical technology.
- **Coordinate and vote together.** Standard-setting activities often involve voting by participating companies, with a majority vote leading to a standard being adopted. Beijing often directs its companies to vote in a block, advantaging Chinese-drafted standards that are often not the best technological standard. The United States and the European Union, leveraging its 27 member states, should coordinate and encourage their respective companies to vote together in bodies like 3GPP and the O-RAN Alliance for the best standard, regardless of country of origin.
- **Ensure U.S. and European companies can fully participate in standard-setting activities.** Recently, Nokia temporarily halted its activities in the O-RAN Alliance, the

industry working group that creates standards for open RAN technology. Nokia cited concerns they were violating U.S. export controls by working alongside three Chinese companies on the U.S. Commerce Department's Entity List— Kindroid, Phytium, and Inspur. Although Nokia resumed its work in the alliance, the U.S. Commerce Department should create a carveout to allow companies to fully engage in standard-setting bodies alongside all Chinese counterparts.

## Artificial Intelligence

Artificial intelligence is currently regulated through a patchwork of regulation in the United States. In the European Union, the Artificial Intelligence Act (AIA) was introduced in April 2021. The AIA puts forward a risk-based model to regulate AI applications in Europe. Although the EU is reluctant to adopt an anti-China frame in its AI regulation, the AIA would de facto ban Beijing's high-risk applications of AI, which contribute to building a surveillance state and repressing China's Uighur minority. The United States and Europe must align their regulations to push back on Beijing and develop an affirmative transatlantic agenda. The transatlantic partners should:

- **Utilize risk-based approaches.** The United States should develop a risk-based approach to regulate AI applications. The patchwork of U.S. regulations and standards vary by industry and state. rather than developing a risk-based framework for AI applications writ large. The United States should consider a unified approach, since the fragmented approach hinders cooperation with Europe.
- **Establish joint transatlantic regulatory sandboxes.** The United States and Europe should develop joint regulatory sandboxes – closed testing environments to develop joint regulatory frameworks that balance innovation and consumer protection.<sup>2</sup> The EU recommends regulatory sandboxes as a means for companies to test AI technology to ensure regulatory compliance.<sup>3</sup> Joint U.S.-EU regulatory sandboxes would ensure the regulation of AI systems does not diverge across the Atlantic. The transatlantic partners should learn from Norway's recent experience establishing AI regulatory sandboxes.<sup>4</sup>
- **Build data privacy into AI systems.** The U.S. and EU's differing approaches to data privacy threaten transatlantic cooperation on AI systems. To pave the way for transatlantic cooperation on AI, the United States and Europe should explore the use of federated learning techniques, a privacy-preserving technology that trains an algorithm on decentralized devices holding local data samples, rather than on a centralized network.<sup>5</sup> Federated learning technology would ensure the integrity of data and uphold GDPR in AI systems. Since using federated learning is often cost prohibitive, the partners should consider creating an accelerator fund for federated learning technology.<sup>6</sup>

## Internet of Things

Internet of Things (IoT) devices are currently subject to two types of regulations in the United States and Europe: data privacy and cybersecurity. In the United States, President Trump signed the IoT Cybersecurity Improvement Act of 2020, which authorizes the National Institute of Standards and Technology (NIST) to mitigate cybersecurity risks for IoT devices sold to the federal government.<sup>7</sup> While there is no federal U.S. privacy legislation, there are state-based privacy regulations in select U.S. states, including California. In Europe, in June 2020, the European Telecommunications Standards Institute (ETSI) released a new cybersecurity standard – Cyber Security for Consumer Internet of Things products.<sup>8</sup> Additionally, businesses are expected to

comply with the General Data Protection Regulation (GDPR) to ensure data protection. Given the nascent regulations on both sides of the Atlantic, standards for IoT devices is an area ripe for transatlantic cooperation, The transatlantic partners should:

- **Pursue horizontal cybersecurity rules that would apply across industries and applications.**<sup>9</sup> While the United States has regulations for government applications of IoT devices, there are no regulations for consumer applications. The United States should learn from the EU and develop a cybersecurity standard for consumer applications. Additionally, the transatlantic partners should focus on cybersecurity rules that apply across industries and applications.
- **Bring in the private sector.** Most cybersecurity rules focus on product requirements, such as passwords. It is necessary to bring in private industry to broaden the rules to focus on organizational requirements, such as establishing a vulnerability disclosure policy to enable employees to report security vulnerabilities.<sup>10</sup>

### **Agenda for Standard Setting in Global Governance**

Beijing's leadership in international organizations, in particular the UN's International Telecommunications Union (ITU), garners a transatlantic response. Beijing filled the leadership vacuum in international standards organizations left by the United States during the Trump era. To reclaim the agenda in these organizations, the United States and Europe must:

- **Show up.**<sup>11</sup> The United States and Europe must bolster their presence in international standard-setting organizations, such as the UN's ITU. To compete with China, the United States and Europe must jointly develop an agenda and assemble a broad coalition of democratic partners to support that agenda.
- **Prioritize U.N. leadership elections.**<sup>12</sup> The United States and Europe must coordinate on candidates for leadership and jointly campaign for these candidates. The WIPO elections present a good case study of the United States and Europe working together to secure victory for the Singaporean candidate over Beijing's candidate.<sup>13</sup>
- **Foster talent.** The United States and Europe must develop talent with technical expertise in the United Nations and multilateral organizations. The transatlantic partners cede ground to Beijing by failing to prioritize the UN institutions. The United States and Europe should develop specialized career tracks for multilateral experts to attract technical experts to serve in these roles.<sup>14</sup>

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## Endnotes:

<sup>1</sup> Elsa Kania, “Securing Our 5G Future” (Washington, D.C.: Center for a New American Security, November 17, 2019), <https://www.cnas.org/publications/reports/securing-our-5g-future>.

<sup>2</sup> Julianne Smith et al., “Charting a Transatlantic Course to Address China” (Washington, D.C.: Center for a New American Security, October 20, 2020), <https://www.cnas.org/publications/reports/charting-a-transatlantic-course-to-address-china>.

<sup>3</sup> Florina Pop and Lukas Adomavicius, “Sandboxes for Responsible Artificial Intelligence - EIPA Blog,” September 2021, <https://www.eipa.eu/sandboxes-for-responsible-artificial-intelligence/>.

<sup>4</sup> Dan McCarthy, “To Regulate AI, Try Playing in a Sandbox,” Morning Brew, May 26, 2021, <https://www.morningbrew.com/emerging-tech/stories/2021/05/26/regulate-ai-just-play-sandbox>.

<sup>5</sup> Zoe Stanley-Lockman, “Military AI Cooperation Toolbox” (Washington, D.C.: Center for Security and Emerging Technology, August 2021), <https://cset.georgetown.edu/publication/military-ai-cooperation-toolbox/>.

<sup>6</sup> *Ibid.*; Andrew Imbrie et al., “Agile Alliances: How the United States and Its Allies Can Deliver a Democratic Way of AI” (Washington, D.C.: Center for Security and Emerging Technology, February 2020), <https://cset.georgetown.edu/wp-content/uploads/CSET-Agile-Alliances.pdf>.

<sup>7</sup> Thales, “IoT Cybersecurity: EU and US Regulations (2021) - Thales,” June 2021,

<https://www.thalesgroup.com/en/markets/digital-identity-and-security/iot/inspired/iot-regulations>.

<sup>8</sup> ETSI, “CYBER; Cyber Security for Consumer Internet of Things: Baseline Requirements” (ETSI, 2020), [https://www.etsi.org/deliver/etsi\\_en/303600\\_303699/303645/02.01.01\\_60/en\\_303645v020101p.pdf](https://www.etsi.org/deliver/etsi_en/303600_303699/303645/02.01.01_60/en_303645v020101p.pdf).

<sup>9</sup> DigitalEurope, “Setting the Standard: How to Secure the Internet of Things” (Brussels, Belgium: DigitalEurope, n.d.), [https://www.digitaleurope.org/wp/wp-content/uploads/2021/09/DIGITALEUROPE\\_Setting-the-standard\\_How-to-secure-the-Internet-of-Things.pdf](https://www.digitaleurope.org/wp/wp-content/uploads/2021/09/DIGITALEUROPE_Setting-the-standard_How-to-secure-the-Internet-of-Things.pdf).

<sup>10</sup> *Ibid.*

<sup>11</sup> Julianne Smith et al., “Charting a Transatlantic Course to Address China.”

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*