



AI Standards

Standards can play a key part in developing and using AI systems in responsible ways. BSA urges governments to support the development of AI-related standards through international standards organizations, rather than pursuing a country-by-country approach to AI standardization. Governments should then leverage these international standards to drive policies that support responsible AI.

What Are Standards?

Standards are like formulas that describe the requirements, specifications, guidelines, or characteristics of a product, service, process, or system. Standards are used across industries to help companies provide reliable, secure, and high-quality products. International standards govern an enormous range of activities, from managing medical devices to balancing the weight of passenger airplanes, to ensuring devices made by different technology companies can communicate with one another. Although the format and length of standards varies, international standards may be anywhere from 10–1,000 pages long, with enough technical detail that companies can implement them.

Who Makes Standards?

International standards organizations like the International Organization for Standardization (ISO) and Institute of Electrical and Electronics Engineers (IEEE) create new standards as needs arise. Before a new standard is proposed, there is often significant foundational work by a range of experts, including technical research, to explore the activities that ought to be standardized. A proposed standard is then developed by global experts who lead an open,

transparent, consensus-driven multi-stakeholder process to understand how a standard would apply in different settings across a diverse set of users worldwide. If a standard achieves consensus, it will be published and made available. But that isn't the end—standards are living documents that are often revised and updated over time by standards development organizations.

Why Do Standards Matter for AI?

Standards can create uniform expectations around predictable, repeatable behaviors—creating a common approach to addressing key AI topics. Standards can focus on granular issues, support good governance practices, and promote interoperable approaches to technology. Because standards move faster than laws, they can address critical areas of quickly evolving technologies while complementing and supplementing established laws and regulations. Standards can also serve a range of purposes relevant to AI, including helping companies implement the technology, create a basis for contracting between organizations, and adopt measures to support regulatory compliance. In some cases, standards also create shared terminology, such as ISO/IEC 22989, which identifies key terms and concepts for AI.

IN FOCUS: UNITED STATES

In the United States, the government's longstanding position on standards is to support international standards development—rather than supporting the creation of country-specific standards. The US Government therefore engages through foundational research, coordination, education, and participation in standards development processes as one of many stakeholders. This position is outlined in [OMB Circular A-119](#), which emphasizes the importance of (1) relying on private-sector leadership in international standards setting, (2) supplementing private-sector participation with government participation in discrete standardization processes, and (3) leveraging available international standards domestically once they become available.

Why Should Governments Leverage Internationally Developed Standards?

Governments should leverage internationally developed standards that can promote the responsible development and use of AI technologies—and avoid creating country-specific standards. Using standards developed by international standards bodies has many benefits, including:

- » Supporting interoperable standards that promote globally aligned technical requirements;
- » Focusing a government's limited resources, rather than duplicating consensus-based standards that already exist;
- » Leveraging the expertise of private-sector and other stakeholders who have already contributed to developing international standards; and
- » Reducing market friction in global technologies, creating efficiencies for both buyers and sellers.

How Can Governments Support the Development of AI Standards?

Governments should support the development of AI standards by prioritizing engagement in international standards organizations, such as the ISO. Specifically, BSA recommends:

- » **AI standards should be created through the same international standards development process that governs other technologies.** Several international AI standards development activities are already underway. For example, the [ISO/IEC JTC1/SC 42](#) is tasked with developing technical standards and guidelines for AI and has already published more than 20 AI-related standards. Governments should support standards development by prioritizing their participation in these ongoing processes.
- » **Governments should leverage internationally developed standards—not create country-by-country standards.** A country-by-country

WHAT'S THE DIFFERENCE?

- » **Standards.** Standards are documents that establish expectations around how something will perform. Almost all products, services, and technologies used today are developed, connected, or enabled in some way by standards. International standards development organizations like ISO and IEEE lead open, transparent, consensus-driven, and multi-stakeholder processes to develop new standards.
- » **Guidance and Policies.** Governments and organizations may develop voluntary guidance and policies that help companies meet various goals or objectives. In some cases, standards can help organizations better achieve the goals of such guidance or policies.
- » **Legal Requirements.** Laws and regulations create binding and enforceable requirements on organizations. Although some standards may help companies implement legal requirements, the effectiveness of standards depends in large part on companies voluntarily implementing them—which increases as companies find new standards workable and useful.

STANDARDS ARE EVERYWHERE

There are millions of standards used everyday across all sectors of the economy, including food safety, construction safety, heavy equipment capabilities, railroad switching, and energy production. Examples include:

- » **Car seats.** ISO 13216 describes a universal system for anchoring child restraint systems to cars, so that car seats will be compatible with cars made by different manufacturers.
- » **Trains.** IEEE 16 specifies design requirements for electronic controls to help make trains and other railway vehicles more reliable.
- » **Wi-Fi.** IEEE 802.11 creates a framework that enables various devices from different vendors to communicate with one another using Wi-Fi.
- » **Cameras.** ISO 516 sets standards for shutter speed and light exposure on cameras.
- » **Encryption.** ISO/IEC 18033 creates a suite of standards that support encryption, including by setting out definitions and describing the use and properties of encryption algorithms.

approach to standards creates fragmentation and conflicting requirements. Instead of creating country-specific AI standards, governments should leverage internationally developed standards to help achieve policy goals, such as promoting the responsible development and use of AI systems.

- » **Champion good governance to promote democratic principles in standardization.**

Countries can also encourage good governance through standards and support hosting activities of standards development organizations in their country.

- » Identifying and promoting new international standards that are ready for adoption;
- » Consulting with stakeholders about AI-related standardization priorities;
- » Supporting more diverse participation in standards development organizations, including encouraging participation by stakeholders from all regions and backgrounds; and
- » Contributing to a global scientific network of AI standards experts.

What Else Can Governments Do?

In addition to participating in international standards development organizations, there are other areas in which government agencies can contribute to the development of international standards relating to AI. These include:

- » Identifying areas that would benefit from pre-standardization activities, like foundational research;
- » Increasing funding for research and development in pre-standardization research that provides technical contributions to international standards development;
- » Using strategic partnerships with global allies to discuss standardization issues;

Further Resources

For more information about the role of standards organizations in developing international standards and the US Government's approach to standardization, please see:

- » ISO—Benefits of ISO Standards, <https://www.iso.org/benefits-of-standards.html>
- » IEEE—Standards Development: An Introduction, <https://standards.ieee.org/develop/>
- » OMB Circular No. A-119, <https://www.whitehouse.gov/wp-content/uploads/2017/11/Circular-119-1.pdf>
- » NIST—AI Standards, <https://www.nist.gov/artificial-intelligence/ai-standards>