



June 5, 2019

## ITI Response to NIST-2019-0001 on Artificial Intelligence Standards

### Introduction

The Information Technology Industry Council (ITI) welcomes the opportunity to provide comments to NIST's request for information via NIST-2019-001 regarding the development and use of artificial intelligence (AI) standards. With respect to standardization in AI, it is important that U.S. industry and the U.S. government see each other as essential partners. While technology and innovation leadership comes from industry, government should be an active participant in and supporter of standardization processes, the products of which the government will be a significant customer. ITI appreciates NIST's emphasis on industry-led, voluntary, consensus-based international standards and encourages continued reliance on [OMB Circular A-119](#), *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*.

### About ITI

ITI represents over 65 of 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 top innovation companies from all corners the technology sector, including hardware, software, digital services, semiconductor, network equipment, and internet, as well as "technology-enabled" companies that rely on ICT to evolve their businesses.

### Support Established Processes and Let Technology Develop

As governments and industry consider the best path forward regarding laws, regulations and policy for AI, the role of standardization is one key factor that will help bridge written rules and practical implementations. ITI advocates that any related policy considerations adopt the long-standing principles of voluntary, industry-led standardization. Even with respect to emerging technologies, established international standards processes will enable the development of international standards that are most appropriate for the current technology and consumer demands, without prejudice or favoritism to any nation. However, *the technology must first be allowed to develop prior to initiating efforts to standardize it*. Governments should, therefore, maintain technology neutral policies that limit mandatory implementation requirements (e.g. for public safety considerations) in favor of voluntary implementation and self-attestation. To the extent compliance

#### Global Headquarters

1101 K Street NW, Suite 610  
Washington, D.C. 20005, USA

+1 202-737-8888

#### Europe Office

Rue de la Loi 227  
Brussels - 1040, Belgium

+32 (0)2-321-10-90

 info@itic.org

 itic.org

requirements are established once technology has been developed, they should adhere to international best practices of conformity assessment.

Premature standardization is even more important to avoid given the rapid rate of innovation. In fact, there is currently limited work to develop AI-specific “technical interoperability standards,” since AI technologies and applications are in early phases of development. ITI notes that governments have raised concerns regarding AI standards development, especially by China; however, the work in question is representative of a top-down, government model that prescribes technical capabilities that may act as a limitation on innovation by market competitors.

In the United States, open source software (OSS)<sup>1</sup> projects currently provide an essential avenue for companies to leverage for purposes of collaboration on research, innovation, interoperability, and implementation solutions. Yet industry also needs standards that establish foundational concepts, management practices and other technical aspects that will support the responsible creation and use of trustworthy and interoperable AI.

ITI recommends that NIST focus its efforts on participating in the existing international standards efforts in established international standards development organizations such as the ISO/IEC Joint Technical Committee 1 (JTC 1). At present, SC42 (Artificial Intelligence) under JTC 1 is the primary standards development technical committee in which foundational AI standards are being developed. The United States is represented in the committee by the American National Standards Institute (ANSI), which also serves as the secretariat of SC42. ITI also notes that discussions regarding AI Ethics-specific standards are taking place within the Institute of Electrical and Electronics Engineers Standards Association (IEEE) and the P7000 standards.

U.S. government stakeholders can and should participate in and support these and other relevant standards fora. Their participation is critical so that the needs of the U.S. government as a significant consumer of IT services are represented appropriately. Participation will also inform how the U.S. government can better support the global competitiveness of U.S. industry. In the near-term it will be important for industry to engage consistently in international standards organizations to provide stable, competent committee leadership to drive successful standardization. ITI also encourages any U.S. government participants in these fora to prioritize *consistent* participation, as it is important to remain engaged in order to both track and influence developments. However, we caution against the U.S. government attempting to designate any specific fora in which

---

<sup>1</sup> OSS is specific software code - a specific technical implementation that can be used by anyone – while a standard is a document that provides a set of common requirements for diverse implementations. OSS projects are created in response to specific market needs, and often compete with other market-driven options as part of a dynamic and competitive marketplace.

they believe AI standards should be developed, as industry is best positioned to determine what types of standards are developed through which venues. ITI points out that the standardization practices defined under the WTO TBT Annex 3 Code of Good Practice, which all international standards organizations follow, establishes processes that prevent any one company (or country) from gaining a strategic advantage in standards development.

## Data “Interoperability” and AI Standardization

Data plays the central role in enabling all AI solutions. All machine learning is predicated on access to large sources of data in order to produce valuable trained AI models. All organizations are responsible for protecting data based on obligations to consumers, their business models, as well as governments.

While it may be tempting to consider creating new standards for data used in AI solutions, ITI recommends that NIST look to existing data standards for acquisition, storage, access and use. There are numerous standards that are broadly adopted by industry sectors that can be used or evolved within the new context of AI solutions. The areas that may need new research and work by government include standards that will establish what responsible behaviors and governance practices should be related to data no matter what technical interoperability measures are used.

Open access to big data will facilitate the development and implementation of AI applications. Data is essential for purposes of research and development, yet often very difficult for small players, academics, and startups to obtain. The U.S. government’s ability to motivate industry leaders in various sectors –including finance, health care, transportation, and IT– to make such data available would be exceptionally useful in developing technologies such as machine learning. Access to broader data sets would also help ensure a diversity of data that could help mitigate the risks of bias in AI algorithms generally. These issues are worth consideration by government in conjunction with private sector experts.

## Resist Initiatives to Speed up the Standards Process

Governments, including the U.S. government, should resist considering standards to establish barriers to trade or to advance only U.S. industries or objectives, including notions of “winning the AI standards race.” The value of the international standards process is that it enables the development of international standards that are most appropriate for the current technology and consumer demands, without prejudice or favoritism to any nation. The process is not subject to a “first-mover advantage” through proposing new standards first; rather, it ensures that the most suitable proposals are adopted while others are weeded out. “Success” in the standards context should be viewed in terms of the weight of new work U.S. industry has started and the overall acceptance of

U.S. industry contributions into the final drafts of standards, not in terms of sheer numbers of proposals or participants.

## Defining Key Terms and Leveraging Research

One of the key tasks for the U.S. government should be defining “safety-critical” and “non-safety-critical” AI. This will help identify areas to which the U.S. government should dedicate additional focus.

In assessing the development of standards for AI, governments and other stakeholders should distinguish between broader concepts covered in legislation and regulations from voluntary technical standards intended for AI applications.

NIST and others in the U.S. government must also assess when and how government should be engaged in ensuring privacy, cybersecurity and reliability. This should be done in coordination with the U.S. interagency process and public-private sector discussions to ensure that such efforts are aligned with existing cybersecurity, privacy and data-related policies and practices.

## NIST's Convening and Research Roles

NIST should continue its work as a neutral convener for collaboration between the U.S. government and the private sector. Working with ANSI and other industry standards organizations and stakeholders, NIST is well-positioned to facilitate public-private partnership approaches that focus on cross-sectoral needs. NIST is also well-positioned to inventory and elaborate upon the needs of the U.S. government in AI.

Additionally, NIST can leverage its research into measurement (among other issues), which will be important to international standards work focusing on computational aspects of AI such as benchmarking. NIST research around tools to assess standard data sets would also help increase interoperability and access to data for AI. ITI encourages NIST to continue this work, in close coordination with industry.

Thank you for your consideration of our comments.