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June 10, 2019

AI-Standards

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Comments of the American Bar Association Section of Science & Technology Law regarding RFI: Developing a Federal AI Standards Engagement Plan

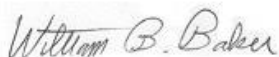
The National Institute of Standards and Technology (NIST) requested information to help NIST understand the current state, plans, challenges and opportunities regarding the development and availability of AI technical standards and related tools, as well as priority areas for federal involvement in AI standards-related activities.

The American Bar Association (ABA) Section of Science & Technology Law appreciated the opportunity to provide input on these matters and submits the attached comments for consideration.

The views expressed herein are presented only on behalf of the Section of Science & Technology Law. They have not been approved by the House of Delegates or the Board of Governors of the American Bar Association and, accordingly, should not be construed as representing the position of the Association.

Sincerely yours,

Best regards.



William B. Baker
Chair, Section of Science & Technology Law

**COMMENTS OF THE AMERICAN BAR ASSOCIATION SECTION OF
SCIENCE & TECHNOLOGY LAW'S REPORT TO THE NATIONAL
INSTITUTE OF STANDARDS AND TECHNOLOGY'S REQUEST FOR
INFORMATION ON ARTIFICIAL INTELLIGENCE STANDARDS**

June 10, 2019

The views stated in this submission are presented on behalf of the Section of Science and Technology Law. They have not been approved by the House of Delegates or the Board of Governors of the American Bar Association and therefore should not be construed as representing the policy of the American Bar Association.

The American Bar Association's (ABA) Section of Science & Technology Law respectfully submits these Comments to the National Institute of Standards and Technology's (NIST) Request for Information (RFI) on Artificial Intelligence (AI) Standards, which was published for public comments. The Section of Science & Technology Law offers these Comments in the hope that they will assist NIST in further considering its work on a plan for Federal engagement in the development of technical standards and related tools in support of reliable, robust, and trustworthy systems that use AI technologies (Plan). The Comments reflect the expertise and experience of the Section members with related laws and jurisprudence. The Section is available to provide additional comments or to participate in consultations with NIST, as it deems appropriate.

Background

The ABA Section of Science & Technology Law provides leadership to the bar, the nation and the global legal community on emerging issues at the intersection of law, science and technology; its mission includes the promotion of sound public policy and understanding on these issues, while enhancing the professional development and knowledge of its members. Relevant to this proceeding, the Section has taken a leading role in addressing emerging legal and ethical issues related to the usage of AI. In addition, in recent years the Section has provided comments to a number of NIST drafting proceedings, including the draft revision of NIST SP 800-171 on the issue of Controlled Unclassified Information, and Revision 5 of NIST SP 800-53.

These comments on the NIST RFI on AI, which are generally geared toward technology, standards, and competitiveness, will address how existing legal and standardization frameworks, whether regulatory or statutory, can facilitate achieving the RFI's goals. In many instances, these comments will address the use of AI in the legal profession as an example. These comments also address standardization needs more broadly, including (a) the related need for the development of international technology standards to support regulatory frameworks on a global basis and (b) how NIST can work with industry players and other stakeholders to contribute to those activities through its participation in those standardization activities.

Preliminary Comments

The Role of Standards. Technical standards and guidelines establish and advance the trustworthy aspects of AI technologies (e.g., accuracy, transparency, security, privacy, and robustness). The U.S. voluntary, industry-led standards system's processes are well suited to setting guidelines for ensuring that accuracy, robustness, security and privacy are key elements of related discussions of AI issues. The standards they produce often are also recognized and deployed internationally, which is important in an era where information and data increasingly flows across borders. Certain U.S. standardization processes also can provide guidelines for ensuring that related safety and accessibility considerations are appropriately addressed. For example, AI frameworks should be designed to permit accessibility for those with disabilities, including, for example, complying with the W3C accessibility standards.

The Role of the U.S. Government. The U.S. Government should provide sustained engagement in AI standardization activities and collaborate with industry on the development of voluntary, consensus-based international standards. In doing so, it should distinguish between appropriate and inappropriate uses and development of standards. Interagency coordination within the government should ensure that efforts are aligned with existing cybersecurity, privacy and data-related policies and practices. Lastly, government agencies should support U.S. experts who serve as chairs of international standards-setting committees or working groups, particularly as such experts typically are engaged in a multi-year commitment that can represent a significant burden for one company to absorb but that benefits all industry players. The federal government support of U.S. leadership will help ensure that international standards organizations remain productive, fair and effective venues for all stakeholders.

The Role of the National Institute for Standards and Technology (NIST). NIST's active participation (in collaboration with industry and civil society representatives) in the development of international AI-related standards is key to achieving success. NIST's role and impact beyond its historical statutory mandate regarding ICT policy and standards development for Federal agencies is welcome. NIST's robust and detailed initiatives in many areas of information and communications technology policy, such as the Risk Management Framework and Cyber Supply Chain Risk continue to provide important models for the entire ICT community. We have observed, however, that this investment also carries the risk of "front-running" the evolution of consensus within industry and other non-government stakeholders; that risk is particularly evident with regard to AI and other related algorithmic tools.

In this regard, we recall that NIST advocates adherence to the principles in Office of Management and Budget (OMB) Circular A119 on "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities," which *inter alia* calls for the promotion and use of voluntary industry standards whenever possible rather than the development of government specifications. While NIST is encouraged to hold workshops, issue public documents and participate in the development of international standards, it should exercise restraint in the development and publication of positions which run the risk of creating technical mandates for single solutions or otherwise handicap U.S. industry's ability to establish broad based consensus standards enabling U.S. stakeholders to innovate and compete in

global markets. When it comes to AI standardization, it is important that U.S. industry and government see each other as essential and effective partners. The technology and innovation lead must come from industry. To the extent that there is a need for international standardization, it is important that government should be an active participant in that process.

The Role of Voluntary, Industry-led Standardization. Industry-led standardization is a key factor that will help bridge any need for written rules for AI and the production of innovative, practical implementations. Any related policy considerations should adopt the long-standing principles of deference to consensus achieved through the voluntary, industry-led standards process. International AI standards should be produced in rules-based, consensus standards development organizations which promote collaboration between both industry and government participants, rooted in vigorous market-based advocacy by competitors, reflecting advances in technology that benefit both public interest considerations, such as consumers' economic interests as well as broad American national security and other policy interests. Governments should maintain technology-neutral policies that limit mandatory implementation requirements (e.g. for public safety considerations) in favor of voluntary implementation and self-attestation of conformance. To the extent compliance requirements are established, they should adhere to international best practices of conformity assessment.

The Appropriate Use of AI Standards. AI standards should establish consensus around AI foundational concepts, management, and governance practices. AI standards should also frame the concepts and recommended practices needed to establish the trustworthiness of AI (including regarding privacy, cybersecurity, safety, reliability, and transparency). These standards should be sector- and application-specific when used for AI evaluation and enable non-discriminatory market access for all interested parties. AI standards should spur innovation in the marketplace and strive to reduce barriers to market entry, to the benefit of market participants, consumers and society. Moreover, AI standards should be performance-based when enabling technical interoperability.

The Inappropriate Use of AI Standards. AI standards should not establish barriers to trade or be designed only to advance the industries or objectives of a single nation, economic bloc or cadre of market participants. AI standards should not be used to impede or replace the development or updating of national laws and regulations applicable to AI, nor impose the culture or ethics of any one nation in evaluating the outcomes/uses of AI solutions. And, finally, they should not limit or impede the pace of AI innovation.

Specific Comments to NIST's RFI on AI

AI Technical Standards and Related Tools Development: Status and Plans

The follow are answers to specific RFIs, but not all RFIs requested by NIST.

1. AI technical standards and tools that have been developed, and the developing organization, including the aspects of AI these standards and tools address, and whether they address sector-specific needs or are cross-sector in nature

Cross-sector principles related to AI usage are currently under development by industry and governments. More broadly there also are international AI-related standardization activities (such as ISO/IEC JTC 1/SC 42) that have begun work on topics such as (a) AI concepts and terminology, (b) AI systems using machine learning, (c) bias in AI systems and AI-aided decision-making, (d) overview of trustworthiness in AI, (e) overview of ethical and societal concerns, (f) assessment of the robustness of neural networks, (g) governance implications of the use of AI by organizations and (h) use cases.

The legal profession in the United States has not yet established or recommended clear technical standards for the use of AI tools, and neither the ABA nor other legal professional bodies have established or recommended specific requirements related to AI usage. However, it is important that when lawyers use AI technologies, those technologies should comply with minimal technical standards to assist lawyers in complying with broader ethical and professional principles. Lawyers must use AI tools in accordance with his or her legal ethical duties, and other rules and regulations relating to their professional obligations in their jurisdiction(s) of licensure and in other jurisdictions where the lawyer is authorized to practice.

LEGAL ETHICAL DUTIES AND AI

Existing and well established legal ethical rules may apply to the use of AI as described below.

A. Duty of Competence

Under Comment [8]¹ to Model Rule 1.1², in order to maintain requisite knowledge and skill as required by the Rule, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology. Attorneys that choose to use AI tools are under a competence obligation that would require them to understand the benefits and risks associated with that technology, and to the extent their obligations under Model Rule 1.4 require, to communicate that to the client.

Standardization will help attorneys meet these obligations by facilitating their understanding of the benefits and risks of AI technology.

B. Duty of Confidentiality

Under ABA Model Rule 1.6³, lawyers owe their clients a generally duty of confidentiality. This duty specifically requires a lawyer to “make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation

¹

https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_1_competence/comment_on_rule_1_1/

²

https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_1_competence/

³

https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_6_confidentiality_of_information/

of a client.” The use of some AI tools may require client confidences to be “shared” with third-party vendors. As a result, lawyers must take appropriate steps to ensure that their clients’ information appropriately is safeguarded.

C. Duty to Supervise

Under ABA Model Rules 5.1⁴ and 5.3⁵, lawyers have an ethical obligation to supervise lawyers and nonlawyers who are assisting lawyers in the provision of legal services to ensure that their conduct complies with the Rules of Professional Conduct. In 2012, the title of Model Rule 5.3 was changed from “Responsibilities Regarding Nonlawyer Assistants” to “Responsibilities Regarding Nonlawyer Assistance.”⁶ The change clarified that the scope of Rule 5.3 encompasses nonlawyers whether human or not.⁷ Under Rules 5.1 and 5.3, lawyers are obligated to supervise the work of the AI utilized in the provision of legal services and understand the technology well enough to ensure compliance with the lawyer’s ethical duties.⁸ This includes making sure that the work product produced by AI is accurate and complete and does not create a risk of disclosing client confidential information.

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https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_5_1_responsibilities_of_a_partner_or_supervisory_lawyer/

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https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_5_3_responsibilities_regarding_nonlawyer_assistant/

⁶ (“The Commission is also proposing amendments to both the title of Model Rule 5.3 (changing it from ‘Responsibilities Regarding Nonlawyer Assistants’ to ‘Responsibilities Regarding Nonlawyer Assistance’) and its Comments to underscore that lawyers should make reasonable efforts to ensure that nonlawyers outside the firm provide their services in a manner that is compatible with the lawyer’s own professional obligations, including the lawyer’s obligation to protect client information.”) The ABA Commission on Ethics 20/20 Summary Report, p. 12, available at https://www.americanbar.org/content/dam/aba/administrative/ethics_2020/20120508_ethics_20_20_final_hod_introduction_and_overview_report.pdf

⁷ (“It is important to note that in 2012, the title of rule 5.3 changed from ‘Nonlawyer Assistants’ to ‘Nonlawyer Assistance’ – signaling the rule applies to more than human assistants and to ensure the rule is still relevant as technology continues to advance.”) Michael A. Patterson and Rachel P. Dunaway, Senior Lawyers Division/Young Lawyers Division, Understanding the Ethical Obligations of Using Artificial Intelligence (May 17, 2019) at p. 12, available at <https://fluxconsole.com/files/item/128/46566/AI-CLE-2019.pdf>; (“In 2012, the ABA approved the Ethics 20/20 Commission’s recommendation to change the title of Rule 5.3 from ‘Responsibilities Regarding Nonlawyer Assistants’ to ‘Responsibilities Regarding Nonlawyer Assistance.’ This change shows that the rule is intended to have reach beyond human assistants, to other nonlawyers, human or not, involved in the representation of a client.”) David L. Gordon and Rebecca L. Ambrose, The Ethics of Artificial Intelligence, The Jackson Lewis Corporate Counsel Conference, available at https://www.jacksonlewis.com/sites/default/files/docs/Final_The%20Ethics%20of%20Artificial%20Intelligence_Gordon%20and%20Ambrose.pdf

⁸ (“While Model Rule 5.3 was typically applied to humans, amendments to the rule have made clear that it extends to AI as well.”) Katherine Medianik, Note, Artificially Intelligent Lawyers: Updating The Model Rules of Professional Conduct in Accordance with the New Technological Era, 39 Cardozo Law Review 1497, 1520, available at <http://cardozolawreview.com/wp-content/uploads/2018/07/MEDIANIK.39.4.pdf>

In further detail, Rule 5.3 and Comment [3]⁹ to that Rule refers to the lawyer using nonlawyers outside the firm to assist in providing legal services, not as a substitute for the lawyer providing those services and ultimately being responsible for them. The title to Model Rule 5.3 was, as noted above, changed to reflect the scope of the nonlawyer services now being provided inside and outside of firms. The scope of nonlawyer services includes service performed by individuals and services performed by automated products. That is why the examples listed in Comment [3] included “cloud computing.”

Under Rule 5.3, lawyers should “communicate directions appropriate under the circumstances to give reasonable assurance that the nonlawyer’s conduct is compatible with the professional obligations of the lawyer.” In the context of AI, the lawyer’s supervisory duties may also include having to communicate and provide direction to an appropriate human who works for the AI provider, just like a lawyer using a cloud provider may have to communicate concerns to the appropriate employee of the provider to negotiate changes to terms of service. Standardization will also help to frame the negotiations about the requirements for the AI service.

D. Duty to Not Harass or Discriminate

In August 2016, the ABA adopted Model Rule 8.4(g)¹⁰, which prohibits harassment and discrimination by lawyers against eleven protected classes. Rule 8.4(g) states that it is professional misconduct for a lawyer to “engage in conduct that the lawyer knows or reasonably should know is harassment or discrimination on the basis of race, sex, religion, national origin, ethnicity, disability, age, sexual orientation, gender identity, marital status or socioeconomic status in conduct related to the practice of law.” About 20 states already have some variation of ABA Model Rule 8.4 on the books, and several other states are considering whether to adopt ABA’s new expansive rule. Lawyers in jurisdictions that have adopted some form of Rule 8.4 must consider whether their use of AI is consistent with the rule. Moreover, even in jurisdictions that have not adopted some form of Rule 8.4, the AI tools should have technical measures to permit lawyers to consider how bias in the use of AI could create risks for clients, and these measures would be facilitated by proper standardization.

Bias in AI technology stems from the nature of AI tools, which involve machine training in addition to programming. If the data used for training is biased, the AI tool will produce a biased result. For these reasons, it is important to have diverse teams developing AI to ensure that biases are minimized.

The data used for training AI should also be carefully reviewed in order to prevent bias. At a minimum, the AI tools should identify its data source. For example, the AI tool should identify whether its training data is a public data source, private data source, who gathered and entered

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https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_5_3_responsibilities_regarding_nonlawyer_assistant/comment_on_rule_5_3/

10

https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_8_4_misconduct/

the data, and how it was measured, validated to not have a disparate impact on the basis of race, sex, religion, national origin, ethnicity, disability, age, sexual orientation, gender identity, marital status or socioeconomic status.

3. The needs for AI technical standards and related tools. How those needs should be determined, and challenges in identifying and developing those standards and tools

To enhance the safety and trustworthiness of AI tools, broadly-recognized AI technical standards should be developed and adopted, tailored as appropriate to the evolving appetites of specific applied environments where AI is already or likely to become prevalent. In the legal profession, for example, such environments could include management of administrative and ministerial activities, adjudications and other regulatory proceedings, traffic and misdemeanor criminal processes, and routine commercial transactions. Stakeholders' concerns, such as those of tool developers, companies, the law profession, law enforcement, and the public must be incorporated and should be balanced and accounted for while promoting U.S. innovation and competitiveness.

6. Whether the need for AI technical standards and related tools is being met in a timely way by organizations

Because of the quickly developing AI landscape in the U.S., there are few related laws or regulations (and supporting standards). Governments and organizations have proposed principles and are studying the effects of automated decision making.

NIST and any other entities considering entry into the early-stage standards development arena, or others addressing AI norms, must be particularly cognizant of that posture and the above-described risk of becoming either front-runners OR laggards to both the standards and policy processes and rapidly evolving market conditions.

7. Whether sector-specific AI technical standards needs are being addressed by sector-specific organizations, or whether those who need AI standards will rely on cross-sector standards which are intended to be useful across multiple sectors

Speaking specifically as to the legal profession, lawyers are bound by profession-specific ethical duties (as described above) and have a role as officers of the court. Technical standards would help lawyers fulfill their duties. But these standards can be cross-sectorial.

In addition, there will need to be higher-level, internationally-recognized standards addressing many of the common underlying technical and/or operational requirements, as well as related terminology, concepts and frameworks.

8. Technical standards and guidance that are needed to establish and advance trustworthy aspects (e.g., accuracy, transparency, security, privacy, and robustness) of AI technologies

There need to be internationally-recognized standards to address many of these aspects of AI technologies. That said, we note the following:

Safety and Accessibility

- AI tools should be consistent with both applicable safety-oriented security control standards for ICT systems, such as NIST 800-series controls, and current sector specific technical industry standards for safety, such as OSHA’s Guidelines for Robotics Safety and the NHTSA and the U.S. Department of Transportation issued Federal Automated Vehicle Policy.
- AI tools should be designed to permit accessibility for those with disabilities, including complying with the accessibility standards recommended by the W3C.

Transparency

- The AI tools should store an audit trail of its determinations in a secure manner to permit a human to conclude if an AI decision was faulty. The time period for storage should be configurable to account for data retention laws and policies.
- In legal and justice applications, AI tools that (a) provide advice or support conclusions about a public or legal benefit or right, or the denying of such benefit or right, including in judicial decision-making or (b) assist a lawyer to give legal advice (“Legal AI Tools”) should be able to support its conclusions, so that lawyers can competently use that advice and conclusion.

Accuracy and Robustness

- Legal AI tools should always permit a human to be in the decision-making process (e.g., human-in-the-loop). At the least, the AI enables its work product to be reviewed and corrected by a human before producing a final work product.
- At a minimum, the AI tools should identify its data source in order for a human to determine if the data source is reasonably accurate, robust and free of impermissible bias. The AI tool should identify:
 - the size and makeup of its training data
 - whether the training data is a public data source, private data source
 - how widely adopted is the data source, who gathered and entered the data
 - how the data was measured and validated to not have a disparate impact on the basis of race, sex, religion, national origin, ethnicity, disability, age, sexual orientation, gender identity, marital status or socioeconomic status (“**Protected Classes**”).
- While protecting the privacy and confidentiality of the users and the source of the data, the AI tools should also provide statistical displays of its decisions in an aggregate fashion to permit a human to understand if there are disparate impacts across the above Protected Classes.

Security and Privacy

- The AI tools should have technical safeguards in place to protect sensitive information processed by it, such as those set forth in Revision 5 of NIST SP 800-53. For example, in

the legal profession this would include attorney-client information, which would be facilitated by standard technical measures for data segregation between clients, encryption, and data masking.

- The AI tools should also be able to identify where sensitive information, such as attorney-client information, privacy-sensitive or other confidential data is stored so as to permit a human to determine if such storage is reasonable under the circumstances. For example, a standard could help monitor, in the case of data is stored in the cloud, in which data center, which back-up sites, and in what country the data are stored.

Defining and Achieving U.S. AI Technical Standards Leadership

10. Where the U.S. currently is effective and/or leads in AI technical standards development, and where it is lagging

The UK and the EU has implemented AI policies that promotes trustworthy AI. The U.S. should take note of the progress in the UK and EU and adopt its own standards to remain competitive.

AI LAWS AND STANDARDS IN THE UK AND EU

GDPR

U.S. multinational companies may be subject to the GDPR based on the circumstances. In addition to privacy and data security requirements, the GDPR have certain provisions related to automated decision making. Specifically, the AI policy should require compliance with GDPR Article 22, which states:

1. The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.
2. Paragraph 1 shall not apply if the decision:
 - a. is necessary for entering into, or performance of, a contract between the data subject and a data controller;
 - b. is authorised by Union or Member State law to which the controller is subject and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests;
or
 - c. is based on the data subject's explicit consent.
3. In the cases referred to in points (a) and (c) of paragraph 2, the data controller shall implement suitable measures to safeguard the data subject's rights and freedoms and legitimate interests, at least the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision.

4. Decisions referred to in paragraph 2 shall not be based on special categories of personal data referred to in Article 9(1), unless point (a) or (g) of Article 9(2) applies and suitable measures to safeguard the data subject's rights and freedoms and legitimate interests are in place.

Moreover, under Article 15(1)(h):

The data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, where that is the case, access to the personal data and the following information:

(h) the existence of automated decision-making, including profiling, referred to in Article 22(1) and (4) and, at least in those cases, meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject.

Arguably, this requirement enhances trust in the usage of AI, but currently there are no proposed technical standards that should be adopted that permits a company to reasonably comply with Article 22 and 15(1)(h).

UK's House Of Lords, Select Committee on Artificial Intelligence

Across the Atlantic, the UK's House of Lords Select Committee on Artificial Intelligence, Report of Session 2017–19 issued its AI report, "AI in the UK: ready, willing and able?", which advises:

[W]e suggest five overarching principles for an AI Code:

- (1) Artificial intelligence should be developed for the common good and benefit of humanity.
- (2) Artificial intelligence should operate on principles of intelligibility and fairness.
- (3) Artificial intelligence should not be used to diminish the data rights or privacy of individuals, families or communities.
- (4) All citizens have the right to be educated to enable them to flourish mentally, emotionally and economically alongside artificial intelligence.
- (5) The autonomous power to hurt, destroy or deceive human beings should never be vested in artificial intelligence.

High-Level Expert Group On Artificial Intelligence Ethics Guidelines For Trustworthy AI

Similarly, but in more detail, the European Commission's HIGH-LEVEL EXPERT GROUP ON ARTIFICIAL INTELLIGENCE ETHICS GUIDELINES FOR TRUSTWORTHY AI, 28 April, 2019, set forth the following guidance:

Chapter I:

- Develop, deploy and use AI systems in a way that adheres to the ethical principles of: respect for human autonomy, prevention of harm, fairness and explicability. Acknowledge and address the potential tensions between these principles.
- Pay particular attention to situations involving more vulnerable groups such as children, persons with disabilities and others that have historically been disadvantaged or are at risk of exclusion, and to situations which are characterised by asymmetries of power or information, such as between employers and workers, or between businesses and consumers.
- Acknowledge that, while bringing substantial benefits to individuals and society, AI systems also pose certain risks and may have a negative impact, including impacts which may be difficult to anticipate, identify or measure (e.g. on democracy, the rule of law and distributive justice, or on the human mind itself.) Adopt adequate measures to mitigate these risks when appropriate, and proportionately to the magnitude of the risk

Chapter II:

- Ensure that the development, deployment and use of AI systems meets the seven key requirements for Trustworthy AI: (1) human agency and oversight, (2) technical robustness and safety, (3) privacy and data governance, (4) transparency, (5) diversity, non-discrimination and fairness, (6) environmental and societal well-being and (7) accountability.
- Consider technical and non-technical methods to ensure the implementation of those requirements.
- Foster research and innovation to help assess AI systems and to further the achievement of the requirements; disseminate results and open questions to the wider public, and systematically train a new generation of experts in AI ethics.
- Communicate, in a clear and proactive manner, information to stakeholders about the AI system's capabilities and limitations, enabling realistic expectation setting, and about the manner in which the requirements are implemented. Be transparent about the fact that they are dealing with an AI system.
- Facilitate the traceability and auditability of AI systems, particularly in critical contexts or situations.
- Involve stakeholders throughout the AI system's life cycle. Foster training and education so that all stakeholders are aware of and trained in Trustworthy AI.

- Be mindful that there might be fundamental tensions between different principles and requirements. Continuously identify, evaluate, document and communicate these trade-offs and their solutions.

Chapter III:

- Adopt a Trustworthy AI assessment list when developing, deploying or using AI systems, and adapt it to the specific use case in which the system is being applied.
- Keep in mind that such an assessment list will never be exhaustive. Ensuring Trustworthy AI is not about ticking boxes, but about continuously identifying and implementing requirements, evaluating solutions, ensuring improved outcomes throughout the AI system's lifecycle, and involving stakeholders in this.

A piloting process will be set up as a means of gathering practical feedback on how the assessment list, that operationalizes the key requirements, can be improved. All interested stakeholders can already register their interest to participate in the piloting process that will be kicked-off in summer 2019.

Concluding Remarks

The American Bar Association Section of Science & Technology Law appreciates the opportunity to submit these comments. We continue to make ourselves available to NIST staff to work on this important topic.