July 19, 2019

## Comment Template for Draft Plan for Federal Engagement in Developing Technical Standards and Related Tools for AI Technologies

COMMENT #	NAME OF COMMENTER	TYPE i.e., Editorial Minor Major	LINE # PAGE etc.	RATIONALE for CHANGE	PROPOSED CHANGE (specific replacement text, figure, etc. is required)	
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1	On behalf of the Center for the Governance of AI, the Future of Life Institute, the Center for Long-Term Cybersecurity , and certain researchers at the Leverhulme Centre for the Future of Intelligence.	Major		Tables 1 and 2 would be of greater use to both Federal agencies and the US private sector in planning engagement if the tables specified which standards development organizations and specific standards fell under each cell category.	Add appendix to specify which standards development organizations and specific standards (or ongoing development processes) fall under each cell category in Tables 1 and 2.
2	Ibid.	Major	P 11, L 275-276	Sentence contradicts the previous sentence at L 272-3: system owners make risk decisions in a larger legal, ethical, and societal context that either completely or partially internalizes the risk externality. As worded, the sentence disregards the external impacts of risk decisions on stakeholders beyond system owners. For example, autonomous vehicle manufacturers do not make risk decisions in a vacuum, but rather they are subject to preexisting regulations and standards.	Strike sentence "Ultimately, it is up to system owners to determine what risks they are willing to accept, mitigate, or avoid."
3	Ibid.	Major	P 11, L 264 - 267	There is existing precedent for how to implement ethical considerations into AI standards, as acknowledged in Table 2. It is important for the document to explicitly acknowledge these ongoing standard efforts so that the reader is not left with the impression these challenges are going unaddressed.	Insert a sentence following the clause "it is not clear how that should be done and whether there is yet sufficient scientific and technical basis to develop those standards." that states: "However, as indicated in Table 2 above, work is ongoing to develop AI-related standards for societal and ethical considerations, governance, and privacy to address these challenges."
4	Ibid.	Major	P11, L 268 - 269	The current phrasing may suggest that there are AI systems where little to no ethical considerations are warranted, and that only the highest risk systems warrant such ethics. Ethical considerations should be integrated into all AI standards processes from the outset and not reserved only for a subset of standards deemed high risk. Absent a change to the sentence to improve clarity as proposed, we would recommend striking it as a consensus statement entirely.	Strike the sentence "The degree to which ethical considerations might be incorporated into standards should be tied tightly to the degree of risk to humans" and replace with a more direct "The incorporation of ethical considerations into standards is especially important in application areas that have more direct or influential human impact."

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5	Ibid.	Major	P 11, L 268 - 271	Another area of consensus among AI stakeholders includes the importance of supporting the safety and security of AI systems throughout their life cycle. For example, this point is one of the OECD AI Principles, as endorsed by the U.S. government. This language has also been echoed in a number of filings in response to NIST's RFI.	Add bullet point "Standards should facilitate AI systems that function in a robust, secure and safe way throughout their life cycles."
6	Ibid.	Minor	P 5, L 62-63	Due to pervasive challenges with algorithmic bias, the question of fairness is central to trustworthy AI. Similarly, without support for accountability - in technical, organizational, and policy terms - the public will quickly become disillusioned with notions of trustworthy AI.	Add "fairness and accountability" to the list of characteristics that relate to trustworthy AI technologies that currently includes "accuracy, reliability, robustness, security, explainability, safety, and privacy."
7	lbid.	Minor	P 9, L 196 - 200	The safety and security of AI systems should be tested and evaluated as a critical feature of performance assessment.	Add "security" to the end of the sentence such that it reads, "Testing methodologies to validate and evaluate AI technologies' performance, especially to prescribe protocols and procedures. These tools are needed for specifying, assessing, comparing, and managing the performance and trustworthiness of AI technologies. Among other things, applications include testing for conformance, interoperability, security, and comparing AI systems to human performance.
8	Ibid.	Minor	P 9, L 210- 212	An important element of a tool for accountability and auditing is to understand what effect and impact an AI tool is having on a given decision-making or prediction process, for example if it has a disproportionate impact or unintended consequence for particular communities.	Add "and the broader consequences of using the AI system" to the end of the sentence such that it reads "Tools for accountability and auditing to enable examination of an AI system's output (e.g., decision-making or prediction), including traceability, to provide a record of events such as their implementation, testing, completion, and the broader consequences of using the AI system."
9	Ibid.	Minor	P 16, L 441	Procurement by federal agencies is an important market-shaping lever ideally used to reinforce standards and thoughtfully support AI development that is responsible, safe, and trustworthy.	Add the words "safe and trustworthy" to the bullet point such that it says "procuring and deploying safe and trustworthy standard-based products and services"
10	Ibid.	Minor	P 16, L 464	Flexibility is important for quickly changing technologies, but regulatory or procurement actions should also reinforce American values identified in the American AI Initiative and the OECD AI Principles endorsed by the U.S.	Add the word "principled" such that the sentenced reads, "Maintain a principled, but flexible posture in specifying AI standards that are referenced in regulatory or procurement actions."