March 12, 2020

The Office of Management and Budget
725 17th Street NW
Washington, D.C. 20503

RE: The National Society of Professional Engineers’ Public Comments on Docket ID No. OMB-FRDOC-0001-0261, Draft Memorandum to the Heads of Executive Departments and Agencies, “Guidance for Regulation of Artificial Intelligence Applications”

On behalf of the nearly 23,000 members of the National Society of Professional Engineers, these comments are submitted in response to the Office of Management and Budget’s request for public comment on the draft memorandum to the heads of executive departments and agencies titled, “Guidance for Regulation of Artificial Intelligence Applications.”

As stated in NSPE’s Emerging Technologies Policy Guide, NSPE believes that the public’s interests are best served when licensed professional engineers oversee various components of the design, development, evaluation, certification, or implementation of emerging technologies, including artificial intelligence. Today, AI does not have the same technical constraints as when it was first being developed, and, as it becomes even more prevalent in the public, there needs to be a level of accountability at every step of its development and deployment. Professional engineers are qualified and competent individuals who can act as a source of accountability for overseeing each step of the development and deployment of artificial intelligence. Because professional engineers have an ethical duty to protect the public, they are uniquely positioned to guide the introduction of artificial intelligence, while prioritizing public safety.

With this role in mind, the National Society of Professional Engineers urges OMB and other federal agencies to use the subject-matter expertise of professional engineers for the implementation and regulation of artificial intelligence.

In reviewing the draft memorandum, NSPE finds OMB’s approach to regulating artificial intelligence lacking in its considerations for and prioritization of the health, safety, and welfare of its users and the general public. By creating a minimized regulatory environment, the government creates room for developers to create technology without fully considering the impacts on the public’s health, safety, and welfare. By the time something terrible happens, it will be too late to backtrack and regulate artificial intelligence. NSPE recommends that OMB review its guidance for cases where innovation and the rush toward
implementation take priority over the health, safety, and welfare of its users and the public.

Specifically, one OMB recommendation that sparked concern is the suggestion that federal agencies use voluntary consensus standards as a way to facilitate the implementation of AI rather than creating formal regulation. Voluntary consensus standards are problematic. They create an opening for industry to self-regulate and self-certify the technology they are developing. Who in industry is thinking about how artificial intelligence can impact the public’s health, safety, and welfare? Individuals working in the private sector might have loyalty to their company, to the product they’re developing, or to cost, superseding any obligation or accountability to protecting the public. We’ve seen multiple instances where self-certification has gone awry. One example is the March 2018 autonomous vehicle crash in Tempe, Arizona, which demonstrates the errors that can occur when self-certification of safety is relied upon. The automated driving system was not capable of properly identifying the pedestrian and, because of this, was unable to choose a safe course of action, resulting in the pedestrian’s death. The National Highway Transportation Safety Administration does not even mandate safety self-assessments for autonomous vehicles, and this is a key recommendation of the National Transportation Safety Board’s investigation into the incident.1 If voluntary consensus standards become the norm, how can we ensure that, first, these standards are protecting the public, and secondly, that these standards are actively being met? NSPE asks OMB to revisit its position on voluntary consensus standards and use the expertise of licensed professional engineers when making decisions about the regulation of artificial intelligence.

NSPE recommends a regulatory framework that uses third-party verification to evaluate risk presented by the implementation of artificial intelligence. A third-party verification process should establish that the AI technology under review can be safely operated, as determined by an assessment of risk. This can be done through the submittal of risk assessments audited by a professional engineer who is in responsible charge of the third-party verification process. When using the expertise of a PE as a third party, the loyalty to the manufacturer or owner of the AI system is minimized, and one can be sure that their decisions are being made with the utmost consideration for the public’s health, safety, and welfare. By suggesting this guiderail of third-party verification, we want to ensure responsible innovation in artificial intelligence technology.

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NSPE greatly appreciates this opportunity to comment on OMB’s draft memorandum on the regulation of artificial intelligence. Any further questions can be directed to Margaret Edwards, policy associate, at medwards@nspe.org.

Sincerely,

David Martini, PE, F.NSPE
President