

AI RFI Responses, October 26, 2018

Update to the 2016 National Artificial Intelligence Research and Development Strategic Plan RFI Responses

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October 15, 2018

Mr. Faisal D'Souza
National Coordination Office
National Science Foundation
Alexandria, Virginia 22314

RE: National Science Foundation Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO) Request for Information on Update to the 2016 National Artificial Intelligence Research and Development Strategic Plan

Dear Mr. D'Souza,

The U.S. Council for International Business ([USCIB](#)) is pleased to respond to this request for information concerning the National Artificial Intelligence (AI) Research and Development Strategic plan. USCIB is a trade association composed of more than 300 multinational companies, law firms, and business associations, which includes a broad cross-section of the leading global companies in the information and communications technology (ICT) sector. USCIB members welcome this opportunity to outline our AI policy priorities.

General Comments:

USCIB members believe that digital technologies and the online environment enabled by them present unprecedented opportunity to raise productivity, foster creativity and innovation, generate economic growth, build trust, and enhance social prosperity. Key to realizing these social and economic benefits, however, are policies that ensure an open, safe, secure, stable, interoperable, seamless, and sustainable Internet. Serving as essential complements are policies that encourage both private investment and public-private partnerships in the R&D needed to drive innovation and realize the potential of AI and other emerging technologies.

Such policies are most effectively developed when informed by stakeholder engagement. Government policymakers can benefit from close cooperation with business, academia and other stakeholders to ensure that the legal, policy, and regulatory approaches implemented create a holistic framework that enables sustainable business investment in infrastructure and product innovation, includes technically feasible solutions, and offers appropriate privacy and human rights protections. The participation of a full complement of stakeholders best ensures that decisions concerning R&D and related policies avoid unintended consequences or outcomes that fall short of expectations. Importantly, a multistakeholder approach will help to build trust and dispel fears that could undermine realization of AI's economic and societal benefits.

1. Importance of AI R&D -- AI holds the potential to increase productivity and build cost-effective, impactful solutions in numerous sectors, ranging from agriculture and energy to healthcare and education. It is perceived as a great transformer for both developed and developing countries. Research has estimated that AI can double annual economic growth rates by 2035 for

developed countries;¹ in developing countries, the United Nations agencies have embraced AI as an accelerator for realizing the [2030 Agenda for Sustainable Development](#).

Key to driving forward further innovations is robust R&D over the long-term. Policy should promote and make public funds available for AI R&D, including test laboratories to experiment with innovative AI applications. Governments and business should establish public-private partnerships to fund AI-powered flagship initiatives (for example, cancer research, climate change, cybersecurity). And policymakers should develop incentives to encourage increased private investment in AI R&D.

2. The Role of AI in Mitigating Policy Challenges – Advances in AI also raise a host of questions about the impact it will have on jobs, security, privacy, inclusiveness, and diversity, among other challenges. Sustained focus on AI-related R&D will enhance the already-proven ability of AI to mitigate some of these challenges.

Specifically, AI can support autonomous detection of malicious behavior, and corresponding alerting and response mechanisms, all of which will streamline how major cybersecurity threats are countered. Indeed, cybersecurity firms currently are using AI to predict threats to network intrusion.

By the same token, AI can be used for negative purposes, such as to perpetuate cyber-attacks in a way that avoids traditional security defenses. This underscores the need for appropriate research funding and incentives to leverage AI technologies to counter their possible use for criminal purposes. In addition, we urge reliance on existing cybersecurity standards and risk-based approaches, such as the NIST Cybersecurity Framework and ISO/IEC 27103.

AI also is being used to promote inclusiveness by supporting people with disabilities and senior citizens with sensorial, physical, or cognitive impairments who otherwise may be excluded from mainstream information sources and services.² The nature of the impact of AI on jobs has many dimensions. Some jobs and tasks likely will be automated. However, AI, like any technology, ultimately leads to a net increase in jobs over time. Further, AI also can empower workers by improving human safety and taking over tasks that are too hard or too dangerous for people. To the extent the deployment of AI technologies results in near-term job losses, advances realized through AI R&D should be complemented with government and public-private programs to help mitigate the social impacts of job transition and assist in helping people to reskill and adapt.

3. Importance of US AI Technology Leadership – and Policy Leadership – It is critical that the United States maintain AI technology leadership through robust private R&D as well as through public-private partnerships. This, in turn, will enable U.S. policymakers to play leading roles in developing policies that foster AI innovation and discourage preemptive regulations driven by the fears and misunderstandings of some sectors, societal groups, and countries.

Also important, U.S. leadership on policy will enable a more human-centric approach to development and deployment of new AI technologies that is guided by ethics rooted in timeless values. The objective of all stakeholders should be to foster the collaborative development of fair, accountable, and trustworthy use of AI technology. Promoting a code of ethics will help to

¹ <https://www.accenture.com/us-en/insight-artificial-intelligence-future-growth>

² <https://gettecla.com/blogs/news/how-tecla-e-enhances-amazon-alexa-for-users-with-physical-disabilities>

build trust in the technology, especially if accompanied by increased efforts by policymakers and other stakeholders to educate a broad cross-section of developed and developing country societies. Many industry groups are already working on ethical standards and good business practices, which we commend to the NITRD.³

Finally, as discussed above, we need U.S. leadership on technology and policy to guide efforts to address the inevitable impact on jobs and work. To equip populations with the skills needed to perform future forms of work, governments will need to collaborate with business and the technical community to adapt education and training opportunities. This should entail promoting new academic curricula that include greater emphasis on science, technology, engineering and mathematics (i.e. STEM skills), employing distance and online learning and on-the-job training programs to help up-skill today's workers, among other initiatives.

4. The Importance of Evidence-Based AI Policy Development – AI-focused policies and regulations should not be developed in a vacuum or informed by politics or irrational fear. At this juncture, it is critical to pursue an evidence-based approach to policymaking around AI. Such analysis should include:
 - The impact of AI on different sectors, stakeholders and regions;
 - The ecosystem supporting and driving AI developments and impact across sectors;
 - Comparative analysis of relevant regulatory frameworks;
 - Best practices in integrating AI across different sectors, including its use in the public sector;
 - Innovative approaches to education and re-skilling, identification of needed skills, and connecting of skills to available opportunities; and
 - Analyses of the impact of technology on workforce, including creation of new work in adjacent domains, and identification of new measures/indicators needed.

As part of its ground-breaking *Going Digital* project, the OECD Committee on Digital Economy Policy has formed an [AI Experts Group](#). This group will develop a set of AI principles based on the above evidence-based analysis and plans to issue a report in 2019. We urge the NITRD to closely monitor this project.

Thank you for this opportunity to highlight USCIB's AI policy priorities. While the focus of this RFI is more technical in nature, we urge you to consider the complementary importance of having a sound policy foundation for further advances in the development and deployment of AI technologies.

Sincerely yours,

Barbara P Wanner
Vice President, ICT Policy

³ [IAF Partnership on AI](#), [IEEE Global Initiative](#), [Open AI](#), to name a few examples.