Federal Register Notice 88 FR 7999, [Federal Register: Request for Information on the 2023 Federal Cybersecurity Research and Development Strategic Plan](#), March 3rd, 2023

Request for Information on the 2023 Federal Cybersecurity Research and Development Strategic Plan

The American Psychological Association Services, Inc. (APA)

March 3, 2023

Tomas Vagoun
NCO/NITRD
2415 Eisenhower Avenue
Alexandria, Virginia
22314

RE: RFI Response: Federal Cybersecurity R&D Strategic Plan

Dear Mr. Vagoun,

The American Psychological Association Services, Inc. (APA) appreciates the opportunity to comment on the National Science Foundation (NSF) National Science and Technology Council and the Networking and Information Technology R&D (NITRD) request for information. This request represents a step in the right direction towards ensuring that stakeholders across a diverse array of disciplines are represented in future efforts to achieve cybersecurity research and development goals.

APA Services, Inc. is the companion organization of the American Psychological Association, which is the nation's largest scientific and professional nonprofit organization representing the discipline and profession of psychology, as well as over 146,000 members and affiliates who are clinicians, researchers, educators, consultants, and students in psychological science.

For decades, psychologist researchers have played a vital role in the understanding of policy implementation and broader organizational safety. As with other areas of science, psychologists bring a unique perspective to analyzing and recommending implementation cybersecurity strategies. This perspective provides meaningful assistance to those seeking to understand and push for the adoption of new policies. Psychological science has also played an important role in developing and deploying training programs that are essential to cybersecurity policy adoption and adherence.

We offer the following suggestions and resources to aid those looking to finalize a rule associated with this RFI; in doing so, we ask that the final rule keep in mind the value of psychological and organizational science.

1. *What new innovations have the potential to greatly enhance the security, reliability, resiliency, trustworthiness, and privacy protections of the digital ecosystem (including but not limited to data, computing, networks, cyber-physical systems, and participating entities such as people and organizations)?*

APA has an increasing focus on the psychological factors impacting the future of the workplace, including the role of psychology in ensuring the security, reliability, resilience, trustworthiness, and privacy present in workplaces.[1] New psychological science is being released on critical aspects of the future of work at a speed we have never previously witnessed. Further, while much of the recent popular societal dialogue surrounding Future of Work has focused on office workers (e.g., Zoom fatigue and remote work struggles), many psychologists have a maintained complementary broad focus that encompasses the entire workforce, often with special attention to DEI, at-risk populations, and the psychological importance of "decent work" and the way educational pathways fit the workplace. Through our network of experts and focus on the ever-growing scholarship in this area, we stand ready and willing to assist the NITRD in their efforts to create and distribute effective new policies.

2. *What areas of research or topics of the 2019 Strategic Plan should continue to be a priority for federally funded research and require continued Federal R&D investments?*

We were pleased to see psychology and psychological science represented in the 2019 Federal Cybersecurity Research and Development Strategy. Organizers of that strategy accurately note the role of psychology as a human factor to consider when developing and rolling out new policies. Psychological science has much to offer those seeking to understand and optimize their strategies for the roll out of new policies.

Successful implementation starts with a focus on a healthy workplace. There is a deep and rich literature of psychological science on enhancing and maintaining mental and emotional wellbeing in the workplace.[2] APA rolled out a call to action to employers across the nation to make employee psychological wellness a priority and recommends five strategies for success, including:

- Train your managers to promote health and well-being
- Increase employees' options for where, when, and how they work
- Reexamine health insurance policies with a focus on employee mental health
- Listen to what your employees need and use their feedback to evolve
- Take a critical look at equity, diversity, and inclusion policies

Additional information relating to fostering and growing a healthy workplace can be found in APA's 2022 Work and Well-being Survey.

Psychology also plays an important role in enhancing the effectiveness of cybersecurity strategies from a technical standpoint. Understanding the risk/reward structures motivating

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[1] (2023). Apaservices.org. https://www.apaservices.org/advocacy/future-of-work

[2] See, e.g., the following APA books and journal special issues: The Psychologically Healthy Workplace, Total Worker Health, Interventions in Occupational Health Psychology, Preventing Interpersonal Stressors at Work, and Leadership and Health/Well-Being.

individual behavior, identifying patterns in the behavior of criminals, and deploying effective public awareness campaigns are just a few ways psychological science can be deployed in this fight.[3] Additional focus and integration on this scholarship is essential to effective cyber policies, especially at the federal level. We strongly encourage the NITRD to integrate this focus into future federal cybersecurity research and development strategies.

3. *What objectives not included in the 2019 Strategic Plan should be strategic priorities for federally funded R&D in cybersecurity?*

   More focus must be placed on the role of psychology and the study of human behavior when updating the Federal Cybersecurity Research and Development Strategic Plan. The effectiveness of funding in the area of research and development relating to cybersecurity is increased when considering the role that human behavior plays.[4] Strategies and implementation policies ultimately fall short without adequate and effective adoption. An objective aimed at consulting with, and incorporating the recommendations of psychologists should be added to those projects funded through this program.

   APA again thanks you for the opportunity to comment on this policy. If APA can be of any further assistance, please contact Corbin Evans, Senior Director of Congressional and Federal Relations, at ███████████████

Katherine B. McGuire, MS
Chief Advocacy Officer
American Psychological Association Services, Inc. x

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[3] Wiederhold, B. K. (2014). The Role of Psychology in Enhancing Cybersecurity. Cyberpsychology, Behavior, and Social Networking, 17(3), 131–132. https://doi.org/10.1089/cyber.2014.1502; MIT. (2013) Cyber security and human psychology. http://cybersecurity.mit.edu/2013/11/cyber-security-and-human-psychology; Kirwan, G. & Power, A. (2012). The Psychology of Cyber Crime: Concepts and Principles. IGI Global. https://doi.org/10.4018/978-1-61350-350-8; Mumford, G. (2009, September 1). Preventing cyber-attacks. Monitor on Psychology, 40(8). https://www.apa.org/monitor/2009/09/cyber-attacks; (2023) ; Apa.org. https://www.apa.org/science/about/psa/2017/06/senses-privacy.pdf.

[4] American Psychological Association. (2017, June 1). Psychologist Jeff Hancock presents his cybersecurity research on Capitol Hill. Psychological Science Agenda. https://www.apa.org/science/about/psa/2017/06/cybersecurity-research; American Psychological Association. (2011, May 1). House hearing on cybersecurity references importance of social sciences. Science Policy Insider News. https://www.apa.org/about/gr/science/spin/2011/05/cybersecurity.