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Request for Information on the National Digital Twins R&D Strategic Plan

Kevin Shelburn

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Via FDMS

Kevin Shelburn, 7/22/2024

[REDACTED]

First of all, thank you for the excellent study and report, I truly appreciate the hard and thoughtful work of the committee and reviewers. I broadly and strongly support the recommendations and hope that the potential high impact of digital twins will be realized. My main comment is to strongly emphasize the need for much greater sharing of models and data, particularly in work supported by the NSF and NIH pertaining to medicine. In medical-related research, intellectual property concerns strengthened by the collaboration with for-profit organizations have led to a strong culture of not sharing data, tools, and models for their potential strategic advantage. While understandable from industry, this culture permeates throughout academia as well and includes granting institutions such as NSF and NIH. Recently, greater emphasis on sharing has resulted in talking points in some requests for proposals, and some researchers are sharing out of a sense of duty to the public and the federal money they accept, yet not sharing remains the guidance to every researcher. Without an enforceable change in this culture, the recommendations of your study of digital twins will remain forever aspirational. Sharing the data, models, and the tools that help create them must be a scoreable requirement for any proposal seeking funding from a public institution, with follow-up by program managers on granted proposals. I believe that changing the culture that overly emphasizes intellectual property will also demonstrate that sharing results in research output with a much greater positive societal impact. I appreciate the opportunity to comment on the excellent study. I would be glad to further discuss the study and my comments in more detail if you wish to get in touch. Sincerely, Kevin Shelburne, PhD Research Professor, Mechanical and Materials Engineering The University of Denver, [REDACTED]

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