

United States Senate

WASHINGTON, DC 20510-1407

November 18, 2022

The Honorable Gene Dodaro
Comptroller General
Government Accountability Office
441 G St., NW
Washington, DC 20548

Dear Mr. Dodaro,

As you may know, the CHIPS and Science Act of 2022 (P.L. 117-167) contains multiple provisions related to the direction of federal research funding, including the creation of a new directorate at the National Science Foundation (NSF) authorized to perform research in areas of emerging technology, including immersive technologies. As NSF and other federal research agencies work to implement this law, we encourage the Government Accountability Office (GAO) to investigate the adoption of immersive technologies across federal civilian agencies.

Immersive technologies, or tools that enable the integration of digital content and the physical environment in a manner that supports user engagement, hold great promise for our nation as they are able to simulate real-world conditions and events with remarkable accuracy and cost-effectiveness. Increasingly, first responders like firefighters, emergency medical technicians, and police officers are using virtual reality for training. In marketing, companies are implementing virtual reality to enable consumers to interact with products remotely. In the defense industry, immersive technologies are now used to train soldiers in virtual environments that mimic battlefield conditions. These technologies also support manufacturing by allowing product testing in 3D virtual environments and by providing real-time assistance for complex assembly on the factory floor. Other countries like South Korea and Singapore are exploring the use of “digital twins” for city planning. Despite these uses of immersive technologies, and amid increased public and private investment in them, it is unclear whether U.S. federal agencies are adopting these technologies as ubiquitously as the private sector.

GAO is well-positioned to provide transparency into the status of technology development while encouraging federal adoption. However, there is currently very little information available from federal entities on how they may be adopting immersive technologies. We encourage GAO to investigate this matter by answering the following questions below:

- 1.) How is extended reality currently being utilized by federal civilian agencies (FCAs)?
- 2.) What percentage of the federal workforce uses immersive technologies in their workforce training?
- 3.) What are the most prominent barriers to immersive technology implementation at FCAs? These could include, but are not limited to, cost, broadband quality, processing power, regulatory hurdles, procurement processes, and requisite technical skill.
- 4.) What due-diligence items must the federal government complete before utilizing immersive technology in FCAs?

5.) What areas of government (non-defense) would benefit from incorporating immersive technology into their functions?

Thank you for your attention to this matter. We appreciate your thoughtful consideration of the request particularly as research organizations continue to develop immersive technologies.

Sincerely,



Todd Young
United States Senator



Roger F. Wicker
United States Senator



Ben Ray Luján
United States Senator