Science in the balance: What a second Trump presidency could mean for the future of innovation.

As President Donald Trump takes office once again, the scientific community finds itself at a crossroads, anticipating either another four years of disruption or significant technological advancements. While tech innovators, AI researchers, and space engineers express optimism about potential breakthroughs, climate scientists and environmentalists brace for setbacks that could undermine years of progress.

Trump's past approach to science was largely characterised by his scepticism towards climate science, as he labelled climate change a "hoax" at various campaign rallies and new interviews throughout his last serving term. Now, the Trump administration has signalled intentions to roll back environmental policies, exacerbate fossil fuel production and walk out of important climate agreements. In fact, in January 2025, President Trump withdrew from the Paris Climate Agreement, and that month itself, he walked out of the World Health Organisation, criticising their alleged mishandling of the COVID-19 pandemic and failure of effectiveness. If President Trump truly doubles down on more deregulation, the US may find itself side-lined in the global combat against the climate crisis, prioritising short term economic gain rather than long-term environmental stability.

Furthermore, the President's public health policies and pandemic preparedness could potentially shape the nation's response to future health crises. As tensions rise between President Trump and critical national health institutions like the FDA (Food and Drug Administration) and the CDC (Centers for Disease Control and Prevention), Americans are left in an even rockier position than before, possibly prone to more health crises.

President Trump is usually reliant on private sector solution for health issues, which could increase efficiency but lead to issues in safety and accessibility of health solutions. His scepticism of lockdowns, vaccines and masks, and his mishandling of the COVID-19 pandemic was evident, leaving us to worry that a similar rhetoric may persist. Fundamental safety rights have also been violated with President Trump engaging in political vested interests, by pushing institutions to approve vaccines and treatments.

As for a few hopeful positives, he is likely to maintain his pro-business stance on space exploration, as he has shown his loyalty to private companies like SpaceX and Blue Origin in the past. The administration has also expressed interest in returning American astronauts to the moon through NASA's Artemis program, with the aim of establishing human presence of the moon by the late 2020's, with Mars to follow! An extension of the US Space Force also may be in the ranks, which will boost The United States' defensive capabilities immensely.

Ultimately, a second Trump term is likely to deepen the divide between economic interests and scientific progress. While climate science and public health efforts may face significant setbacks, advancements in space exploration and AI-driven innovation could continue to accelerate. The challenge will be balancing these priorities without leaving the United States increasingly isolated in addressing long-term scientific challenges.



AMARA PUTCHA

CITATIONS

Centers for Disease Control and Prevention. "Centers for Disease Control and Prevention." Centers for Disease Control and Prevention, U.S. Department of Health & Human Services, 2024, www.cdc.gov/.

FDA. "US Food and Drug Administration." Fda.gov, 2024, www.fda.gov/.

Frumkin, Howard, et al. "The US Withdrawal from the Paris Climate Agreement: Could It Trump Progress on Climate Change and Health?" BMJ, 30 Jan. 2025, p. r185, www.bmj.com/content/388/bmj.r185, https://doi.org/10.1136/bmj.r185.

Jones, Nicola, et al. "What Trump 2.0 Means for Science: The Likely Winners and Losers." Nature, vol. 637, no. 8046, 15 Jan. 2025, pp. 532–535, www.nature.com/articles/d41586-025-00052-z, https://doi.org/10.1038/d41586-025-00052-z.