



**TO:** US National Security Community  
**FROM:** Barry Pavel, Matthew Kroenig, and Anastasia Kazteridis  
**DATE:** January 25, 2019  
**SUBJECT:** How to Strengthen the US Approach to Artificial Intelligence

---

This Strategic Insights Memo (SIM) outlines and assesses the US government's current approach to artificial intelligence (AI). Despite significant progress, the US Government (USG) is not where it needs to be. Building upon ongoing efforts, this SIM recommends the development of a whole-of-government strategy, with clear lines of authority, that leverages US advantages derived from coordination with allies and the private sector.

### **The Central Importance of American AI Leadership**

America's economy and security increasingly depend on whether the United States can establish itself as the global leader in AI. AI promises to be a disruptive technology, like the printing press and the steam engine, and it is already transforming key sectors of the US and global economy. AI is catalyzing growth by automating routine, labor-intensive tasks, and is also moving into increasingly complex endeavors. (For example, the practice of radiology is soon likely to be largely automated.)

This ongoing transformation is generating massive efficiency and effectiveness gains in the private and public sectors (along with concomitant job disruptions) and is poised to change societies and economies. AI will also have profound implications for law enforcement and national security, including in the areas of cybersecurity, surveillance, military robotics, and many other domains.

There is a first mover advantage in AI, as the global leader can gain an economic and military edge over rivals and will be in a position to write the rules that govern AI's uses. Since Edison's lightbulb, the United States has been the world's innovation leader, but America's great-power competitors, China and Russia, are making major investments in AI. China is set to outpace the United States in key areas of AI investment and application.

### **The US Government's Approach**

The USG is aware of the significant AI challenge and has formulated a three-part framework for addressing it: Promote, Protect, and Counter.

Promote. The USG seeks to promote the development and integration of AI into American society and government. This includes: training American engineers and computer scientists, removing barriers to AI adoption in government and the private sector, ensuring a regulatory environment that promotes American values, and increasing R&D spending.

Protect. The USG aims to protect US technology from acquisition by strategic competitors. This includes greater protections for data and intellectual property. For example, the Commerce Department is considering new export controls on AI to protect America's national security innovation base.

Counter. The United States seeks to counter threats posed by hostile actors using advanced technology. Steps could include raising the costs for adversarial acquisition of AI and measures to deter and defend against AI-enabled weapon systems.

Under this approach, the USG has begun a number of initiatives:

- The Pentagon created the Joint Artificial Intelligence Center (JAIC) in June 2018, whose goal is to oversee and standardize all service and defense agency AI efforts.
- In September 2018, the Department of Defense’s Defense Advanced Research Projects Agency (DARPA) announced a \$2 billion campaign to invest in new-wave AI technologies that prioritize contextual reasoning capabilities and “explainability” over the next five years.
- The White House’s Office of Science and Technology Policy (OSTP) is investing in science, technology, engineering, and math (STEM) education. In an effort to cultivate the next generation of innovators and computer scientists, the White House committed \$200 million in grant funds to this effort, which was matched by \$300 million from private industry. (As a point of comparison, it is estimated that \$12 billion was spent on AI in China in 2017.)
- Furthermore, the National Defense Authorization Act of 2019 called for the establishment of a National Security Commission on Artificial Intelligence whose goal is to review advances in AI, related machine learning developments, and associated technologies. The commission is expected to release a public report later this year.

### **Assessment of and Recommendations for the USG Approach**

Despite significant progress, there is a troubling sense of complacency among the USG, allied governments, and Silicon Valley about the incipient technological arms race with China. The USG needs to respond with appropriate urgency to this new “Sputnik moment.”

First, the USG approach is too decentralized. Individual agencies and departments decide how, if at all, to incorporate AI into their work. An “Assistant to the President for AI” reporting directly to the President should orchestrate a whole-of-government approach, leveraging the National Security Council, the National Economic Council, OSTP, and other major players.

Second, this new official should lead a USG-wide effort to develop a US Strategy for Harnessing AI, which would guide US economic and security policies and budgets. It should include technology innovation, integration, strategic data acquisition and management, and employment.

Third, there is inadequate engagement with the private sector. The American private sector is the world’s most dynamic, but US technology firms prefer to minimize government oversight and regulation. In addition, the USG and private sector extol a hands-off approach and contrast it favorably to China’s authoritarian model of forced government-industry cooperation. Still, private-public partnerships that better leverage the private sector’s innovation and expertise will be necessary to ensure the fast, effective, and responsible use of AI.

Fourth, the USG is not effectively leveraging one of its greatest assets: its allies. America’s over thirty formal treaty allies in Europe and Asia provide a deep pool of data and technology resources, but legal restrictions have prevented greater coordination. For example, European privacy laws hinder the data sharing necessary for AI development. For many in Silicon Valley, it is more burdensome to collaborate on AI with governments and firms in Europe than in China. The United States should lead a new grouping of the world’s leading democracies, including European and Asian allies, initially to consult and coordinate annually on technology policies, leading eventually to a standing technology alliance.

For more detail on these recommendations, see “A US Strategy for Artificial Intelligence,” forthcoming in the 2019 *Atlantic Council Strategy Papers* series.

---

**Barry Pavel** is Director of the Scowcroft Center for Strategy and Security. **Matthew Kroenig** is Deputy Director for Strategy and **Anastasia Kazteridis** a Program Assistant in the Scowcroft Center.