MEMORANDUM FOR RECORD

Defense Innovation Board (DIB) Information Session

Friday, April 05, 2024 09:30 AM-10:00 AM

Virtual Session

External Participants: Vito Errico, Nick Frazier, Michael Kanaan, Gary Marcus

DIB Participants: Mike Mullen

DIB Staff: Marina Theodotou (DFO), Kimberly Hidalgo, Zackariah Crahen, Christina Hilf, Juan Merizalde

Purpose: Information Gathering session for "Incentives" DIB report.

Session Summary:

The group discussed the current requirements and acquisition systems and inadequacies for the demands of AI and technology. The urgent need for AI adoption and efficiency is emphasized. Discussed highlighted an operational software unit that is developing a future force design blueprint using real-world data, while a proposal is made to redefine performance metrics. The group discussed scaling AI adoption, the need for a flexible operating model, and shifting focus from bureaucratic to operational risk. The discussion also highlighted the relationship between AI and compute power, the need for incentives for autonomy problem-solving models, and the limitations of generative AI were discussed. Economic aspects of AI, highlighting military innovators, and the role of creative acquisition professionals were also touched upon. The group discussed AI as a set of tools and acknowledges its limitations, such as in the role of radiologists. While AI has brought efficiency gains, it hasn't replaced people and performs best in low-cost error situations. The changing nature of military conflicts presents a challenge for AI.

Open source could pose a risk if it allows other nations to get ahead in deployment. The talent issue is highlighted, where countries like China can potentially deploy talent more effectively due to their political system. Deploying AI at scale is challenging, and there's no clear solution on how to debug cognitive systems. The future of AI may lie in neuro symbolic AI, which combines the learning capabilities of neural networks with the reasoning and factual capabilities of classical AI. Caution is advised in expectations of AI, stating that most software doesn't work

as well as we'd like. The current focus on large language models might be limiting innovation in other areas. The discussion ends with a focus on incentives and metrics to drive faster tech adoption. The current incentive structure is deemed insufficient and new metrics may need to be developed. AI is good at reading charts and finding information, but it struggles with understanding the context and background of a situation. Humans are still needed in the loop to use the technology effectively. AI performs best in situations where the cost of error is low, such as advertisement recommendations. In high-stakes situations like driving, where a single mistake can be costly, AI hasn't performed as well. AI struggles in situations that are constantly changing, such as military operations. The technology performs best in stable environments with a lot of data.

Prepared By: DIB Staff