

NATO as an Innovation Hub? How Emerging and Disruptive Technologies Are Reshaping Allied Innovation

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The literature on military diffusion has traditionally treated alliances as transmission paths through which nationally developed military technologies are disseminated among allies. In this view, NATO is exclusively portrayed as a forum for standardization and doctrinal coordination rather than also a site of military innovation. This paper revisits this understanding by examining organizational and governance changes within NATO following the adoption of its post-2021 Emerging and Disruptive Technologies (EDTs) strategy. Drawing on insights from Science and Technology Studies (STS), the paper explores how the technological characteristics of EDTs, namely their dual-use nature and reliance on distributed, largely privatized innovation ecosystems, are reshaping how military innovation is organized and strategically coordinated through NATO. The analysis traces this shift through interpretive qualitative analysis of program architectures and research outputs of NATO's Innovation Initiatives, including the post-2021 NATO Science and Technology Organization (STO) Collaborative Programme of Work (CPoW) and the launch of the Defence Innovation Accelerator for the North Atlantic (DIANA) Challenge Programmes. The study shows that EDT-driven interdependencies in scientific expertise and innovation ecosystems are altering transatlantic innovation dynamics, encouraging NATO to institutionalize new forms of engagement with civilian scientists and private-sector actors. These changes have also supported the extension of NATO's innovation initiatives into structured cooperation with the Alliance's Indo-Pacific Four (IP4) partners. The paper contributes to a better understanding of how the contemporary changes in the character of innovation are driving institutional change within NATO, positioning the Alliance not merely as a diffusion mechanism for national capabilities, but as a hub through which transnational military innovation linkages are shaping patterns of military capability development.