

## NATO STO releases pivotal report on the trends shaping the future of science, policy, defence and security.

Brussels, Belgium—The NATO Science & Technology Organization (STO) today released its timely *Science & Technology Trends 2025–2045, Volume I: The S&T Macro Trends Report*. This report details the six key trends that will steer NATO's strategic landscape and influence how emerging and disruptive technologies continue to evolve, while providing policymakers, scientists, and the public with the insights needed to make informed choices that will shape the future. Expanding the previous edition – the S&T Trends Report 2023–2043, published in March 2023 – this report builds on the impact of science and technology (S&T) on NATO's political decision options, defence capabilities, military operations, and enterprise functions.

“The role of science and technology is more vital and interesting than ever,” said NATO Chief Scientist and Chair of the NATO Science & Technology Board (STB), Dr Bryan Wells. “The *Science & Technology Trends 2025–2045 Report* not only explores the emerging technologies that will shape our future but also provides us with the information needed to make critical choices and confidently move forward in a rapidly changing world.”

The six key S&T macro trends highlighted in the report are:

- **Evolving Competition Areas** – As global strategic competition intensifies, S&T advances will transform how nations compete
- **Race for AI and Quantum Superiority** – AI and quantum technologies will revolutionize industries and lead to increased competition between leading nations
- **Biotechnology Revolution** – Synthetic biology and continuing developments in related areas will bring research security and health regulations to the forefront
- **Resource Divide** – S&T advancement serves as both a driver of deepening resource divides and as a potential enabler of economic development
- **Fragmenting Public Trust** – Trust in science, institutions, and governments is vulnerable to further undermining and technology can accelerate these challenges
- **Technology Integration and Dependencies** – S&T advancements will provide solutions to complex challenges but will be unequal across nations

The report presents the background, implications and state of play for each trend alongside key judgements, offering timely insights for future policymaking and defence planning. It also challenges scientists to rethink research priorities and highlights issues that will impact security and society.

The report supports informed decision-making, for instance, regarding the level of investment in AI and the trade-offs needed to achieve superiority in this technology area. Careful consideration of future scenarios based on the outcomes of this report will ensure that the Alliance will maintain its ability to act and react as these trends unfold.

Developed by NATO STO with input from ACT, NCIA, and the wider defence S&T community, the report draws on expert surveys, open-source analysis, and STO's Programmes of Work for a robust, evidence-based outlook.

Read the full report to discover the crucial trends that will define the future of science and technology within the evolving political-military landscape.

Download the report here: <https://sto-trends.com/>

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