Switzerland launches anticipation of technologies at the OSCE for a secure and humane future

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Switzerland is making **anticipation** of technologies **a central pillar of its 2026 chairmanship of the Organisation for Security and Co-operation in Europe (OSCE)**. At the request of the Federal Department of Foreign Affairs (FDFA), Michael Hengartner, President of the ETH Board and Chair of the GESDA Academic Forum, **launched this scientific-technological offensive** at the first meeting of the OSCE's Economic and Environmental Committee (EEC) in 2026, held on 28 January in Vienna.

This contribution to the EEC is marking an important step in the explicit integration of science and technology anticipation into the organisation's work. This intervention gives concrete expression to the third of the five priorities of the Swiss Chairpersonship, which aims to ensure that technological developments are anticipated and harnessed for a secure and humane future. GESDA is thus promoting a **shift from essentially reactive diplomacy to anticipatory, science-based diplomacy**, capable of acting before technologies become factors of crisis or conflict: scientific anticipation as a tool for security and peace.

Four sensitive technological areas

In his speech, **Michael Hengartner invited participating States** to pay particular attention **to four key areas of technology** identified as critical to peace and security: space, advanced artificial intelligence, neurotechnologies and quantum technologies.

Firstly, in the case of **space**, future innovations in satellite design, autonomy and in-orbit services will transform the geopolitics of low Earth orbit. In-space manufacturing, increasingly accurate Earth observation and the potential development of in-orbit data infrastructure will enhance the strategic value of space, while increasing the risks of congestion, escalation and the questioning of existing norms.

In terms of **advanced artificial intelligence**, we are entering a new phase in which AI agents will develop an understanding of the physical world, capable of generalisation, self-learning and adaptation. Within 25 years, autonomous AI systems will operate in a variety of fields, experimenting on their own to discover new skills and strategies, with models of the world as flexible and abstract as those observed in certain forms of biological intelligence.

Neurotechnologies, meanwhile, are advancing rapidly thanks to our growing ability to decode and modulate brain signals, accelerated by AI. Applications long considered speculative are becoming plausible: in the next decade, we may see the emergence of early forms of memory modification for therapeutic purposes, for example to treat post-traumatic stress or severe depression, as well as a wider deployment of advanced brain-machine interfaces. This field holds considerable promise, but also raises sensitive issues, as it touches on the ultimate frontier of human autonomy: cognition, emotion and agency.

Finally, within the next ten years, **quantum technologies** should enable certain types of calculations to exceed the capabilities of the most advanced conventional systems, with consequences for communications, materials and chemistry, biology and medicine. The implications for peace and security are equally significant: the strategic advantage will go to those who have quantum capabilities, but above all to those who are able to secure their communications and critical infrastructure in a world where current encryption paradigms may no longer be sufficient.

GESDA will make its expertise available throughout Switzerland's OSCE Chairpersonship to help make Geneva a sustainable driver of science diplomacy. One of the highlights of this year will be **the conference entitled 'Anticipating Technologies – For a Secure and Humane Future', to be held on 7 and 8 May in Geneva**. This conference will focus on the ways in which scientific and technological advances are transforming security and cooperation in the OSCE area.

In his speech, Ambassador Raphael Nägeli, the Permanent Representative of Switzerland to the OSCE, the UN and other International Organizations in Vienna, highlighted that: "When science and diplomacy work hand in hand, technology becomes a tool for our common advancement. By anticipating emerging technologies, we can strengthen security and stability while ensuring innovation remains human-centered and consistent with our shared values."

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About GESDA

The Geneva Science and Diplomacy Anticipator (GESDA) is an independent Swiss foundation that connects scientific anticipation with global diplomacy. Its mission is to anticipate emerging scientific breakthroughs and help translate them into inclusive, ethical, and cooperative solutions to global challenges.

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