

Charter of the Defence Innovation Accelerator for the North Atlantic - Diana Program

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By Rossella Muzzeddu

Introduction

Allied foreign ministers met in Brussels on 6 -7 April 2022 and approved the Charter of the Defence Innovation Accelerator for the North Atlantic or DIANA.

DIANA will bring industry, start-up companies and academia together to research new dual-use technologies to solve critical defence and security challenges.

The alliance has also announced additions to the technology list DIANA will focus on what NATO has identified as priorities, including artificial intelligence, big-data processing, quantum-enabled technologies, autonomy, biotechnology, novel materials and space. (NATO website, 2022).

Technology

NATO is willing to improve nine technologies: AI, data and computing, autonomy, quantum-enabled technologies, biotechnology and human enhancements, hypersonic technologies, space, novel materials and manufacturing and energy and propulsion (NATO website, 2022).

These are essential to maintain technological dominance, such as DIANA's goal to shorten the technology development cycle, especially regarding software, AI and quantum.

Jermalavičius, Head of Studies at the International Centre for Defence and Security, said, "It's a long horizon, but capabilities do not appear overnight".

DIANA's goal is to launch challenge calls for non-dilutive financing that does not require start-ups to give up equity or ownership in their company. However, programmes such as Mentoring, technology testing and potential contract opportunities will be available to help reach the goal, and they will be delivered through a network of innovation hubs across the alliance (NATO website, 2022).

For instance, the Big Data for Smart Society Institute (GATE), based in Bulgaria, will focus on digital health, intra-governmental communications and data in industry and city infrastructure.

Host institutions

DIANA has one office in Europe and one in North America.

The European regional office was selected from a joint Estonian-United Kingdom bid, and Canada is hosting the North American regional office.

The Estonian accelerator will be based in Tallinn, while the UK one will be at the Imperial College in London at its Translation & Innovation Hub, where the Institute for Security Science and Technology will lead Imperial's work in DIANA.

The UK and Estonian accelerators are to support start-ups working on dual-use technologies with funding and expertise.

Especially the UK headquarters is likely to focus first on AI and autonomy, which is a focus of DIANA, but then it could expand into biotechnology and materials.

Significant support will arrive from UK Defence and Security Accelerator (DASA), which funds projects related to defence and security.

The accelerator works with major defence companies and the US Department of Defence's Tri-Service Office.

Accelerator sites

DIANA's programs will allow innovators to access dozens of accelerator sites and test centres across over 20 Allies.

Initially, DIANA will run a network of more than ten accelerator sites and over 50 test centres in innovation hubs across NATO alliance countries.

Nine accelerators are expected to be in Portugal, the UK, Belgium, Denmark, Estonia, Italy, Turkey, Greece, and the Czech Republic.

The Technical University of Denmark, Aarhus University and the Danish National Metrology Institute will also provide test centres and manufacturing facilities. They will focus on quantum technologies, while a new site in Italy (Turin) will be dedicated to the space domain.

"The main mission here is to augment the entire NATO alliance within quantum technology," said Jan Westenkær Thomsen, head of the Niels Bohr Institute.

Since 1920 Denmark has been one of the leaders in quantum physics thanks to the quantum theory of Bohr and Max Planck. This deep know-how in quantum has resulted in many spin-out companies. There will also be cooperation with other DIANA centres. "This was already an integral part. I'm hoping this will be the main theme in negotiations with NATO," said Thomsen.

Prospects

Thomsen hopes the DIANA project will start delivering in five to ten years, and he is optimistic about its potential. "It's, of course, difficult to say at this stage, but it's a great idea to pull resources from the whole NATO alliance together," he said.

NATO established DIANA's functional mechanisms in June 2022 Madrid Summit and is willing for DIANA to reach initial operating capability (IOC) in 2023 and full operating capability (FOC) by 2025 (Willet, 2022).

On 5 April, during a press conference before the foreign ministers' meeting, Stoltenberg said, "We expect DIANA will continue to expand in the future."

NATO Innovation Fund

Allies have also agreed to a framework for a multinational NATO Innovation Fund.

This is the world's first multi-sovereign venture capital fund. It will invest 1 billion euros in early-stage start-ups and other deep tech funds aligned with its strategic objectives (NATO website, 2022).

NATO also intends to invest in the funds of venture capital firms that are already investing in technologies the alliance wants to promote (NATO website, 2022).

Jermalavičius says the success of NATO's push for innovation will depend on how tolerant it is of failure. Out of 10 companies, it may be that only one will produce a breakthrough technology. Public money is traditionally averse to lose, and NATO will have to get over this (Burke, 2022).

However, Allies are aware that profound and disruptive technologies bring "both opportunities and risks", that they "alter" the nature of conflicts, that they are becoming increasingly strategically essential and that they are "key" in the global competition between states. Thus, NATO understands that "technological primacy is increasingly influencing success on the battlefield".

Within the European Defence Agency (EDA), Brussels has created the Centre for Defence Innovation (HEDI), which aims to accelerate, test, evaluate and validate emerging, cutting-edge, dual-use technologies (Pons, 2022).

DIANA is also NATO's version of the U.S Defense Advanced Research Projects Agency (DARPA).

It will reinforce transatlantic cooperation regarding critical technologies to assure NM's security and defence digital literacy.

Bibliography

Burke, G. N. (2022, April 12). NATO to launch €1B fund for high tech start-ups in dual use technologies. In science business:

<https://sciencebusiness.net/news/nato-launch-eu1b-fund-high-tech-start-ups-dual-use-technologies>

NATO website, N. (2022, July 15). Emerging and disruptive technologies. In nato.int:

https://www.nato.int/cps/en/natohq/topics_184303.htm

NATO website, N. (2022, April 07). NATO sharpens technological edge with innovation initiatives. In nato.int:

https://www.nato.int/cps/en/natohq/news_194587.htm

Pons, J. (2022, June 30). Disruptive dual-use technologies, a major focus of NATO's new Strategic Concept. In atalayar.com:

<https://atalayar.com/en/content/disruptive-dual-use-technologies-major-focus-natos-new-strategic-concept>

Willet, D. L. (2022, April 11). NATO details DIANA technology programme. In Janes.com:

<https://www.janes.com/defence-news/news-detail/nato-details-diana-technology-programme>