

HPE'S VISION FOR A SECURE AND TECHNOLOGICALLY ENABLED NATO DEFENCE ECOSYSTEM

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As pinpointed in the 2030 NATO Strategic agenda, emerging technologies are transforming the nature of peace, crisis, and conflict. With these transformations in mind, HPE technology is built on a range of cutting-edge technologies designed to deliver a competitive and strategic edge in a complex and volatile global security environment.

NATO's strategic defence leadership delivers security and ensures peace for the Atlantic alliance, and HPE stands alongside it to tackle pressing technological and global security challenges. HPE is committed to be a key technological partner in NATO's defence ecosystem, providing secure, interoperable, and advanced IT infrastructure and architectural support tailored to the unique needs of military, with sustainability and diversity at the centre of its service provision. In light of the ongoing war in Ukraine and an increasingly unstable global environment characterised by rising geopolitical tensions, the importance of having resilient, pervasive, and robust military IT architectures enabled by artificial intelligence (AI) and machine learning (ML) – at the edge and at the core – has never been more central to global security.

HPE is embedded in NATO's critical technology ecosystem, and has an extensive track record in delivering high-quality, tailored defence and military solutions to the Alliance. The company is one of NATO's key partners in its Deployable Communications and Information System (DCIS) Cube Project and provides the cutting-edge infrastructure for NATO's Firefly project, as well as other data and infrastructure throughout the Alliance's transatlantic remit (Overview of NATO collaborations in Annex). HPE technology enables secure interoperability between different systems, thus fostering continued collaboration among its members and those of its allies.

Secure, interoperable, and decentralized data analytics at the edge: HPE is uniquely placed to enable the NATO and its allies to exchange data securely in a standardised system through its world-class data analytics provided at the edge in a portable supercomputer, tailored for defence and military seeking complete preparedness in an increasingly unpredictable and data-driven world. HPE can also support data analytics with its AI and ML based swarm learning techniques that can share insights from data while maintaining personal data sovereignty and privacy. Data interoperability and integration into local systems are crucial to ensure that data can be transferred securely in high-pressure and classified environments. Edge processing and miniaturisation are central to ensuring interconnected and distributed systems, underpinning precision warfare: in this way, edge solutions can ensure military forces are future-proofed and able to maintain and extend tactical advantages in the conflicts of tomorrow.

Hybrid cloud solutions: As a leading global player in military IT infrastructure, HPE is well-versed on the complexity of the security challenges faced by the defence ecosystem. In this regard, HPE is focused on agility: HPE GreenLake operates via a consumption-based model, allowing militaries to rapidly increase computing capacities in crisis situations while avoiding overprovisioning costs and lengthy time to procure and deploy new equipment. Data need to be able to be used seamlessly on public cloud, private clouds as well as fixed, mobile or portable data centres at the edge.

Enabling the edge to cloud transition: To be a strategic decision-making asset in dynamic situations, data analytics and edge processing must be based on the highest possible level of speed and precision, which in turn are enabled by AI and ML at the edge, as well as supercomputing power. As a leading proponent for the strategic use of emerging technologies, HPE has also expanded its GreenLake cloud offering to handle the large computing power needed to support AI. HPE has provided supercomputing expertise in a range of military applications, including massive surveillance analytics, nuclear weapons simulations, cyber warfare and advanced materials modelling: this is best exemplified through HPE's El Capitan Exa scale Cray solutions, which were deployed at the NNSA-Lawrence Livermore labs and at the U.S.'s National Security Agency (NSA).

The future of efficient and cost-effective IT systems is hybrid, based on a public and private cloud, and a full integration of decentralised military systems. As the world's leading technology provider in the Deployable CIS environment, HPE has a strong track record in enabling NATO and its allies to exchange data securely on a standardised system. Furthermore, HPE professional services staff are uniquely equipped with security clearances, allowing them to support the most sensitive projects with governments in Europe.

PROJECTS

1. HPE delivers the key infrastructure server and storage for the NATO Communications and Information Agency (NCIA) Agency and the locations (Commands and CIS Support Unit's [CSU] Communication Support Units). This is the backbone of the digital infrastructure - the local support units support the ACO operation and together with HPE, customised solutions are delivered, for air, land, or in space.
2. HPE delivers the Greenlake Solution (for selected projects) – an HPE Private Cloud Solution based on a model where only the services that are used are paid for. It allows digital capacity to expand by up to 30% within minutes to react quickly in crisis situations. This solution provides a full overview of IT assets and serves to manage different cloud services and distribute workloads.
3. HPE is one of the key partners of the DCIS Cube Project: NATO's deployable communication and information system (CIS) solution. Developed together with NATO, DCIS Cube enables the integration of operational requirements to deliver systems in a faster, standardised and cost-effective manner.
4. HPE France provides the infrastructure for NATO's Firefly project together with Thales. This next-gen Deployable CIS ensures flexible adaptation for operations to integrate Military of the Shelf products.
5. HPE Romania is integrating the local requirements of the Ministry of Defence into the infrastructure for the Romanian DCIS NATO project which will become the standard solution for all NATO members.
6. HPE Belgium - together with HP Italy, Germany, Norway, Turkey, US, UK, Portugal, Spain, Poland and the Netherlands – provide onsite support for NATO's Digital Backbone and DC.
7. HPE Belgium supports NATO with tailored consultancy services in the areas of: Datacentre management, Capacity management, Information Technology Infrastructure Library (ITIL) Process Management, Programme, and project management.
8. HPE Norway provides F35 integration services with Lockheed Martin for the Norwegian Air Force, as part of the NATO Command Structure and contributing to Norwegian NATO airspace surveillance.
9. HPE Poland and US deliver the key datacentre for NATO's Alliance Ground Surveillance AGS Program to support the operation of the data centre, ensuring standardised building blocks are used. HPE also ensures that expanding operational requirements can be adapted together with ACO/AGS.
10. HPE Luxembourg supplies the infrastructure for the NATO Support and Procurement Agency (NSPA), as well as for its respective programmes. HPE is a key partner for the NSPA, with operational necessities consistently reviewed via joint dialogue as well as input from HPE Labs.

ABOUT HPE

As the founder of Silicon Valley, HPE has a legacy of operations in Europe, with HP opening its first headquarters outside of the US in Germany in 1959. HPE is the global edge-to-cloud company at the forefront of global computing innovation that helps organisations accelerate outcomes by unlocking value from all of their data, everywhere. Built on decades of reimagining the future and innovating to advance the way people live and work, HPE delivers unique, open, and intelligent technology solutions, with a consistent experience across all clouds and edges, to help customers engage with their data in new ways and increase operational performance. With over three decades of proven leadership in sustainability and committed to leading by example, HPE has pledged to become a net-zero enterprise across its entire value chain by 2040 (Scope 1-3), including a commitment to source 100% renewable electricity in our operations by 2030. HPE is one of just two global tech companies with a 2040 net-zero target approved by the Science-based Target Initiative.

HPE continues to be trusted by defence sector customers across the world with highly strategic and mission-critical operations which are essential to ensuring national security today, and to enabling future defence capabilities: in September 2021, HPE was selected to provide the U.S.'s NSA with high performance computing-as-a-service to support deep learning, AI, forecasting and analysis in a US \$2 billion collaboration, allowing the NSA to harness its rapidly growing data needs. HPE's partnerships with defence and military organisations are of paramount importance for the business and the company looks forward to building on its long history of success in the sector.