



Modernisation of the “secure soldier system” is active and incremental: lethality sensors and optics have been upgraded, SDR networking has been rolled out to improve C2 and interoperability, and clothing/protection packages have seen iterative improvements following Forza NEC concept development and user trials. At the same time the Army is preparing a Soldato Sicuro 2.0 trajectory – focused on greater sensor fusion, lighter protection, more software centric C2 and wider digitisation funded in part through national programmes – but that 2.0 configuration remains a development path rather than a fully fielded replacement, so current units operate a phased, evolving mix of baseline kit and incremental upgrades.

Netherlands

The Dutch Army presented the Verbeterd Operationeel Soldaat Systeem (VOSS) concept paper in 2008. Conceived for the platoon level, the Improved Operational Soldier System was built around a smart vest with load carriage and protection capability, plus integrated PNR-1000 radios and power systems for individual soldiers as well as Elbit RAPTOR wearable C2 terminals for officers and NCOs. Following

◀ **The wearable Raptor tablet is part of the VOSS architecture. It provides platoon and group leaders with situational awareness and blue-force tracking capability. (Image: Netherlands MoD)**

initial pre-production deliveries in 2019 and subsequent evaluation and operational feedback, capability gaps and connectivity issues regarding the radios and power supply were reported in 2024. As an interim solution the MoD plans to upgrade VOSS using firmware updates, battery improvements and better chargers. For the mid-term the Army is procuring L3Harris Falcon IV tactical radios to replace the PNR-1000.

Poland

Poland initiated the Tytan Advanced Individual Combat System project in 2007 with the goal of creating a futuristic Land Warrior style system similar to the one then being pursued by the US Army. The goal was originally to create a system consisting of more than 100 potential components, although Col. Robert Frommholz, deputy head of the Polish armaments agency, spoke of 44 elements in a 2024 interview with Polish media. Still, the ambition is for a comprehensive panoply including more enduring and protective uniforms, improved body armour and ballistic helmets, load-carrying equipment, firearms and weapon sights, sensors and communications systems.

While the project is behind schedule (all elements were originally to be completed by 2022), significant progress is being made. The MSBS Grot modular weapon system, consisting of a 5.56 mm carbine and a 7.62 mm sniper rifle, is already fielded. The PERAD 6010 encrypted personal tactical radio was approved for service in 2024, while the bulletproof ballistic helmet (which includes a jaw shield and a visor) passed operational testing that same year. While other elements of the system will surely not be ready for several years (and some might ultimately be dropped or further delayed after testing) Poland is making headway on one of the most comprehensive Future Soldier programmes in NATO.

United Kingdom

The UK is also conducting one of Europe’s most advanced modernisation efforts. This modernisation drive has both organisational and technology/soldier kit elements. At the soldier kit level, modernisation began with the VIRTUS soldier system provided by Source Tactical Gear under a 2015 three-year (plus extension) contract. VIRTUS consists of a scalable body armour kit, a

◀ **British Army soldiers training in 2026 with the VIRTUS soldier system consisting of body armour, helmet and scalable tactical vest. (MOD Crown Copyright)**



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helmet and a scalable tactical vest. The armour elements provide the same protection as previous equipment at a fraction of the weight, and with significantly improved ergonomics.

Moving forward, the British Army has divided its Future Soldier programme into two interdependent lines of development. The Dismounted Close Combat System (DCCS) is pursuing the physical, kinetic and survivability dimension of the dismounted soldier kit, and is progressing with procurement activity and capability insertion. Major elements include a planned incremental upgrade of the VIRTUS body armour; ‘Project Grayburn’ to replace the SA80 assault rifle family (a corresponding notice to industry released in January 2026 mentioned a notional procurement timeframe of 2028-2045); fielding of the SMASH X4 hard kill C-UAS solution (in progress) and a soft-kill electro-magnetic drone-defeat system (EMDAD).

DCCS is supplemented by the Dismounted Situational Awareness (DSA) programme to provide a digital backbone intended to provide the dismounted soldier with a coherent situational awareness and C2 environment. DSA is expected to be introduced incrementally, with two elements or ‘equipment drops’ annually over a five-year period. A first equipment drop decision came in 2023 as the British Army selected TAK as its battle management application for the DSA programme. Overall, however, DSA is behind schedule. A major problem is indecision regarding which master system architecture to select: a Mesh-radio-centric architecture based on a MANET radio and an End-User Device/tactical tablet for unit leaders,

or an LTE-centric architecture with a smartphone-based EUD. Given the fundamental importance of digital connectivity for dismounted soldiers on the modern battlefield, true evolution of the British future soldier system remains dependent on DSA implementation.

The Journey IS the Destination

While new individual pieces of equipment are beneficial, the greatest gain to operational capabilities is achieved through developing a comprehensive set of soldier hardware designed from the outset to slot seamlessly together. And this is only the first step. ‘Smart’ soldier systems are increasingly networked within the squad and platoon, and directly connected with the systems on their infantry fighting vehicles; field grade officers integrate into higher echelon situational awareness channels, with the ultimate goal of real-time operational coordination of infantry, armour, artillery and airpower. Situational awareness, target hand-off and coordinated fire and movement create a more potent combat system, providing the mobility and fast reflexes necessary to survive and prevail on the current and future battlefield.

Ultimately, of course, there can be no end-state. Technology is ever evolving, with operational doctrine continuously being revised to keep pace with and take advantage of these developments. Today’s ‘next-generation’ infantry force will be tomorrow’s status quo, inevitably initiating the search for the ‘next next-generation’ soldier system. 