



FUTURE WARRIOR CONCEPT (FWC) | NSRDEC

OVERVIEW:

The future is always uncertain, but by applying logic and imagination to current situations and technologies, a conceptual representation of how soldiers might be equipped in the distant future has been developed. This conceptualization is not U.S. Army doctrine, nor is it intended to answer every question raised by the Army After Next. It is intended to raise questions, stir imaginations, and start dialogue about how best to serve and equip our warfighters in the near future.

DESCRIPTION:

The Future Warrior 2025 will be a completely integrated system which will be tailored to each individual, from an electro-spun Combat Uniform to a biomechanically engineered Headgear Subsystem.

There are 6 major subsystems included in the concept:

- **The Headgear Subsystem**, which we describe as Information Central, is the situational awareness hub of the system. It would include Integrated tactical processing (e.g., maps, routes, SA data); 180° emissive visor display; High data rate (GB/sec) communications; Microelectronic/optics combat sensor suite that provides 360° situational awareness; Integrated small arms protection in selected locations.
- **The Combat Uniform Subsystem**, which we describe as Survivability Central, contains three layers: the Protective Outer Layer, the Power Centric Layer, and the Life Critical Layer.
- **The Weapon Subsystem**, Lethality Central, permits direct and indirect target engagements. The weapon weighs 5 pounds, and combines 5 tubes of soft-launched, 15mm intelligent seeker munitions and 1 tube of stacked 4.6mm kinetic energy projectiles for close quarter combat.
- **The Warfighter Physiological Status Monitor (WPSM) Subsystem** collects information on the vital signs (core temperature, skin temperature, heart rate, blood pressure) hydration state, stress level (mouth sensors), thermal state, sleep status, and workload capacity of the warrior. The WPSM can also recommend remote triage care needed.
- **The Micro-climate Conditioning Subsystem**, a network of narrow tubing built into the material of the Life Critical Layer that provides 100 watts of heating or cooling to the warrior.
- **The Power Subsystem**, Duration Central, consists of a 2- to 20-watt Micro Turbine fueled by a liquid hydrocarbon. Ten ounces of fuel, contained in a lightweight plug-in cartridge, powers the soldier for up to 6 days. Polymeric nanofiber battery patches embedded in the headgear and weapon provide back-up power for three hours.



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