

Vikram VT 21: How Vikram VT 21 Upgrades India's Infantry Combat Vehicles

April 30, 2026 • vajiramandravi.com



Vikram VT 21 Latest News

- The Defence Research and Development Organisation has launched the **Vikram VT 21** project featuring two Advanced Armoured Platforms—wheeled and tracked.
- These are designed to meet the Indian Army's need for a Futuristic Infantry Combat Vehicle (FICV).
- The platform aims to replace the ageing **BMP-2** fleet by offering improved mobility, protection, and adaptability across varied terrains, positioning it as a next-generation solution for modern battlefield requirements.

Vikram VT 21: Advanced Armoured Platform by DRDO

- The Vikram VT 21 is an Advanced Armoured Platform (AAP) developed by the DRDO, designed as a modern infantry combat vehicle.

- It features enhanced armour protection capable of withstanding projectiles, blasts, and shrapnel, along with integrated weapons and surveillance systems.
- The platform also offers high mobility across diverse terrains, making it suitable for modern battlefield operations.

Two Variants: Wheeled and Tracked

- The project includes two variants:
 - **Wheeled variant:** Runs on tyres, offering higher speed, easier maintenance, and suitability for urban, semi-urban, and road conditions.
 - **Tracked variant:** Moves on continuous tracks like tanks, providing better grip, stability, and performance on rough, uneven, and off-road terrain.

Collaborative Development

- The platform has been co-developed by the Vehicles Research and Development Establishment, a DRDO facility, in partnership with Bharat Forge Limited and Tata Advanced Systems Limited, with support from multiple MSMEs and other DRDO units.

Vikram VT 21: Features, Mobility, Armour and Weaponry

- The Vikram VT 21 is equipped with an indigenously designed 30 mm crewless turret, a remotely operated system that enhances firepower, protection, and operational safety.
- It is paired with a 7.62 mm PKT machine gun and can launch third-generation **Nag Anti-Tank Guided Missiles (ATGMs)**, enabling it to effectively engage heavily armoured targets with precision.

High Mobility and Performance

- Powered by a high-capacity engine and automatic transmission, the platform offers a strong power-to-weight ratio, ensuring superior speed, agility, and manoeuvrability.
- It can climb steep gradients and navigate difficult terrains, including trenches and uneven surfaces.
- Additionally, its amphibious capability, supported by hydro jets and water propulsion systems, allows seamless movement across rivers and water bodies.

Robust Armour and Protection

- The vehicle provides **STANAG Level 4 and 5 protection**, adhering to NATO standards for resistance against heavy gunfire, explosions, and artillery fragments.
- It also features modular blast and ballistic protection, enhancing survivability in diverse combat scenarios.

Modularity and Indigenous Development

- Designed as a modular platform, it can be adapted for multiple roles such as troop transport, reconnaissance, and combat support.

- Currently, about **65%** of the system is **indigenously developed**, with plans to increase this to 90%, strengthening India's defence manufacturing ecosystem.

Futuristic Infantry Combat Vehicle (FICV): Need and Strategic Importance

- The Indian Army requires a Futuristic Infantry Combat Vehicle (FICV) to replace its ageing BMP-2 fleet, which has been in service since the 1980s.
- The need arises from evolving threats and the shift towards modern, technology-driven warfare.

Role in Network-Centric Warfare

- FICV is designed for network-centric warfare, where military units, sensors, and command systems are digitally connected.
- This enables real-time information sharing, faster decision-making, improved coordination, and enhanced situational awareness, significantly boosting operational effectiveness.

Operational Importance in High-Threat Areas

- With enhanced mobility, protection, and firepower, FICVs are critical for infantry operations in high-risk zones, particularly along borders with China and Pakistan.
- They support rapid deployment, combined arms operations, and integration of advanced surveillance and communication systems.

Way Forward: Trials and Induction

- Before induction, the platform must undergo development trials, user trials, and approval by the Indian Army, followed by large-scale production.
- DRDO has expressed confidence that these stages can be completed within three years.

Source: IE

Source: <https://vajiramandravi.com/current-affairs/vikram-vt-21/>

© Vajiram & Ravi. For personal use only.