

Rheinmetall Introduces New Main Battle Tank

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On 13 June 2022, Rheinmetall, Germany's leading company in the security technology and mobility segment, unveiled its' latest main battle tank at the EUROSATORY international defence material exhibition in Paris. The new tank, which bears the name "Panther", constitutes a product elaborated entirely by Rheinmetall and is introducing a new era in the field of land defence systems by posing new high standards in lethality, mobility, and survivability whilst being characterised as a game-changer for the battlefields of the future (Sprenger, Rheinmetall pitches Panther battle tank as heir to the Leopard, 2022).

Sectors of innovation

Primarily, the Panther's engine is based on the legendary Leopard 2 tank, which several countries have notably used since 1980. However, the Panther features a 130 mm cannon, whilst Leopard 2 has a 120 mm weapon. As a result, combing new technologies with a robust mobility component like Leopard's 2 establishes the Panther as military innovation whose impact will be reflected in future army operations (Rheinmetall, 2022).

The company stressed the significant upgrade in terms of lethality since the Panther is capable of long-range strikes in multi-target engagements, which is facilitated by a 130 mm cannon, an automated ammunition handling system and loitering ammunition. According to the Centre for the Study of Defence, a loitering munition is "a type of unmanned aerial vehicle designed to engage beyond-line-of-sight ground targets with an explosive warhead" whilst being able to remain in the air for a long time before proceeding to the attack. Which allows the targeter to take the necessary time to plan and think before attacking (Center for the Study of the Drone, 2017). In addition, the characteristics above are included in the "Future Gun System", which allows a 50% longer range to kill.

Furthermore, in terms of survivability and force protection, the Panther has incorporated an active, reactive, and passive protection technology against threats enabling it to expand its' level of protection. At the same time, it maintains the weight of the system (Rheinmetall, 2022).

Likewise, Panther is fully digitised with a seamless sensor and effector integration, whilst all weapons are connected with targeting sights and the fire control computer through the entirely digitised architecture, allowing for hunter-killer and killer-killer operation. Hence paving the way for similar land forces to incorporate such technologies and utilise the power of artificial intelligence which is already used in military operations for improved performance and enhanced results. Also, it is designed in such a way that it can function in a contested electromagnetic spectrum (Rheinmetall, 2022).

Lastly, the new battle tanks entail future potential for upgrade and improvement because they can be updated and equipped with brand new functions and competencies, thus allowing them to be constantly renewed and fully functional under any circumstances due to their upgraded systems. Similarly, according to Rheinmetall, future operations will be based on environmentally friendly premises, hence automation and combat effectiveness will also be upgraded (Rheinmetall, 2022).

Future Combat Air System

The creation of such a high-technology main battle tank indicates the gradual turn towards technology and digitisation in the sector of ground units aside from air units. In this context, Germany, France, and Spain joined forces to develop a new generation air defence system as part of the Future Combat Air System (FCAS), which will ultimately demand the collaboration of land and air forces, hence creating the need for all military forces to be digitised to connect with each other fully. More precisely, the Future Combat Air System accounts for a program which will entail a sixth-generation fighter aircraft, called Next Generation Fighter (NGF) which will replace France's Rafales fighters, Germany's, and Spain's Typhoon aircraft fighters, whilst also including a wide range of air combat programs such as drones and the overall function will be facilitated by a network of data links, named "combat cloud" (Sprenger, Defensenews, 2021) (Tiwari, 2022).

Despite representing a promising project, FCAS has been facing several setbacks, holding the project back and not allowing it to enter the research and development phase. In addition to this, the CEO of Dassault, one of the involving companies in the project alongside Germany's Airbus Defence and Space, mentioned at the Paris Air Forum on June 7th that the cooperation between the two manufacturers has been proven difficult since they cannot seem to find common ground on the NGF. It goes without saying that due to these difficulties, the project has been set back and instead of launching in 2040, as it was initially planned, it will now be pushed back to 2050 (Tiwari, 2022).

Impact of these new systems

Russia's invasion of Ukraine in February, which is now counting more than 100 days, reflects the urgency of a significant renewal of land forces. The advent of technology has significantly impacted the military sector since the centre of attention has been placed upon cybersecurity, drones and more digitised means of defence and security. As a result, conventional deterrence forces have been somewhat neglected as many consider that we live in a digital era where conventional wars have been replaced by hybrid warfare. Nevertheless, the Russia-Ukraine war has proved the exact opposite. Now, more than ever, Europe and NATO need to upgrade their collective defence system and conventional forces.

The FCAS accounts for a program that will significantly boost Europe's defence status and allow it to be better prepared and united in front of any kind of challenges. Likewise, Panther's unveiling has already attracted the attention of several European countries since such trailblazing weaponry could overturn a waging war. What would happen if Putin had access to such sophisticated battle tanks, like Panther, and how would the war unfold? These are rather daunting questions. Utilising high-technology systems in land deterrence forces could potentially expand the existing imbalance between countries that are superior to others in military power. Consequently, for a state to include such digitised battle tanks in its' military arsenal, with a high-level accuracy and lethality, will create a new world order in military operations, which will probably become more complex, challenging, and destructive.

Bibliography

Center for the Study of the Drone. (2017). Loitering Munitions. Loitering Munitions.

Rheinmetall. (2022, June 13). A new tank for a new era. Retrieved from Rheinmetall: https://www.rheinmetall.com/en/rheinmetall_ag/press/news/latest_news/index_32640.php?_ga=2.164705080.601604891.1655644782-1294813493.1655644782

Sprenger, S. (2021, September 1). Defensenews. Retrieved from Top defense leaders kick off new phase for Europe's next-gen fighter: <https://www.defensenews.com/digital-show-dailies/dsei/2021/09/01/top-defense-leaders-kick-off-new-phase-for-europes-next-gen-fighter/>

Sprenger, S. (2022, June 13). Rheinmetall pitches Panther battle tank as heir to the Leopard. Retrieved from Defensenews: <https://www.defensenews.com/global/europe/2022/06/13/rheinmetall-pitches-panther-battle-tank-as-heir-to-the-leopard/>

Tiwari, S. (2022, March 5). Successor To Dassault Rafale & Eurofighter Typhoon – Why The Next-Gen FCAS Fighter Jet Program Is Hitting Turbulence. Retrieved from The Eurasian Times: <https://eurasianimes.com/rafale-typhoon-why-the-next-gen-fcas-fighter-jet-program/>