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## Next steps towards the Digital Brigade – Rheinmetall showcases Gladius 2.0, uncrewed systems and Tactical Core at Eurosatory 2024

Rheinmetall's Gladius 2.0 has already proven itself as a user-centric system for soldiers on the digital battlefield. At Eurosatory 2024, Rheinmetall will be presenting further developments of the system. Rheinmetall is taking further steps towards digitalisation of the battlefield and creating a "Digital Brigade".

Thanks to its open, modular and scalable architecture, Gladius 2.0 can be adapted to various mission profiles. For example, different variants are available: Light, Flex and Multi-Role, which enable customisation, growth



potential and upgrades depending on the scenario. In addition to the in-service Windows version, an Android-based architecture is now also available, which significantly increases flexibility and integration capability. In addition, the Tactical Core, a software product developed by Rheinmetall's partner blackned, acts as interoperable middleware to improve connectivity. This networks the elements of the battlefield and can, for example, offer advanced sensor-effector network functionalities. Such developments and features are key to Rheinmetall's role as a centre of excellence for the integration of in-house solutions such as the TacNet battle management system or external solutions such as the Tactical Core or the Android Tactical Assault Kit (ATAK) software. The integration of modern communication technologies such as 5G as an alternative to tactical communication is just as possible as the use of body sensors to monitor the (physical) condition of the soldier and the integration of unmanned solutions such as UAVs for reconnaissance and engagement of targets.

### Creating the Digital Brigade

Gladius 2.0 is not just another system, but a key element in the digitalisation of the battlefield, which Rheinmetall has in mind as the future of armed forces worldwide. The vision is a Digital Brigade that networks sensors, systems and decision-making and has the potential to evolve into a fully digital military ecosystem. To achieve this, Rheinmetall has already begun building a networked infrastructure that includes, for example, the Tacnet tactical management system and blackned's Tactical Core. Rheinmetall is also endeavouring to work with other companies to integrate their applications into the digital brigade approach.

▶ **Key facts**

▷ Rheinmetall is taking further steps towards the digitalisation of the battlefield and the digital brigade

▷ Open, modular and scalable architecture

▷ New applications

▷ Visit us at stand E115/F115

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**Sense, connect, automate, dominate**

The creation of this digital infrastructure will help meeting the challenges of today's battlefield, where information is crucial and the speed of information transfer makes the difference. The networking of sensors, which connects every human actor and every system thanks to the Tactical Core, will then enable the automation of certain elements, be it sensor-to-shooter or human-machine teaming, or through software applications. To bring the vision of the digital brigade to life, Rheinmetall has identified a number of applications to be presented at Eurosatory. These include

- AI-based sensor-to-shooter application: AI-based image recognition and algorithms will be used to analyse the video streams sent by the various proprietary sensors and determine the type and location of detected vehicles. This data is forwarded to other connected systems, enabling rapid response thanks to a fast sensor-to-shooter chain.

- Embedded simulation: This application enables vehicle-integrated simulation and training. The team practises with the original system and its original sensors, but trains against synthetic enemies in a mission exercise or training environment. This embedded simulation runs on the Tactical Management System, together with the Tactical Core, and can be supported by any vehicle.

- Unmanned Control Service Application: Rheinmetall's Unmanned Control Service Application is a middleware for the control of UAVs, UGVs and even underwater robotics. This makes it possible for unmanned objects to act as "loitering munitions", for example.

- Decision support module for force deployment: The decision support module identifies the positions of own and enemy forces and analyses the terrain. The AI automatically proposes optimal positions where units should be deployed. This application can be integrated into any vehicle and soldier system.

The new applications can be seamlessly integrated into the overall system, making them invaluable for both the dismounted soldier and the command post.

Rheinmetall is pursuing an open architecture approach to integrate other UAVs, UGVs, vehicles and sensors into its Digital Brigade approach. Around this mission of sense, connect, automate and dominate, Rheinmetall focuses on use cases from the respective customer perspective - scenarios where any partner or company that wants to join can be invited.

At Eurosatory 2024, the latest developments of Gladius 2.0 and the Digital Brigade approach will be presented. Visit us at stand E115/F115 in the outdoor area.