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Robotics: Rheinmetall Mission Master to join Dutch Future Manoeuvre Elements trials

Rheinmetall’s Mission Master robotic vehicle will join a two-year Concept Development & Experimentation programme of the Dutch Army. The Robotics and Autonomous Systems (RAS) Unit of the 13th Light Brigade is running a multi-year Concept Development & Experimentation (CD&E) programme to pave the way for an operational unit. In the CD&E programme, various innovative operational concepts will be shaped to create desired Future Manoeuvre Elements that will enable the Dutch Army to execute missions more effectively. These operational concepts include the use of Autonomous Unmanned Ground Vehicles (A-UGV). The Mission Master was transferred in November 2020.

Rheinmetall is a world-renowned manufacturer of state-of-the-art UGV, with a strong focus on autonomous and modular warfare solutions. After initial successful trials in the Netherlands and Scotland, Rheinmetall’s Mission Master is now joining a two-year CD&E programme to further develop these innovative operational concepts, where adaptability and autonomy are the key criteria. In shaping these operational concepts, the RAS unit and Rheinmetall will be collaborating with innovative Dutch enterprises, knowledge centres and universities.

Robotics are already changing the modern battlefield. A modular A-UGV, Rheinmetall’s Mission Master enhances the combat performance of soldiers deployed on the ground in numerous ways. The Mission Master’s artificial intelligence and robotic brawn mean that it can execute a multitude of dull, dirty, and dangerous tasks that troops would otherwise have to perform themselves, letting them get on with the most important thing of all: their core mission.

Ready for action, the Mission Master A-UGV can operate in autonomous or semiautonomous mode as a fully-fledged member of the combat team. The Mission Master platform is designed for maximum flexibility, and can be readily adapted for a wide variety of different missions thanks to modular build-ons specially engineered for quick installation. It is able perform a wide array of tasks, including cargo transport, casualty evacuation, CBRN detection, surveillance, and fire support (here, the human operator decides if and when to
engage targets, something the remotely controlled effectors are never allowed to do autonomously). It can also serve as a mobile communications relay station.

The Mission Master is a robust platform, featuring long-range endurance and a silent drive mode. Its unique all-terrain mobility allows it to manoeuvre in difficult environments both indoors and outdoors. Speed, scalable autonomy and proven high mobility in all types of terrain combine to make the Mission Master a powerful, highly dependable comrade of dismounted forces operating in small groups. The Mission Master is thus a perfect match for the Dutch Army's CD&E programme.

The handover marks the vehicle's second success involving a NATO customer. In the UK, Her Majesty's Armed Forces ordered four Rheinmetall Mission Master robotic vehicles in April 2020. Configured for transporting cargo, these autonomous unmanned ground vehicles are forming part of the British Army's Robotic Platoon Vehicle programme. This programme is designed to determine the extent to which unmanned vehicles can boost the combat effectiveness and capabilities of dismounted troops at platoon level. The four Mission Master – Cargo vehicles were delivered in spring 2020. In addition, the scope of delivery comprised two stretcher systems that can be integrated into the cargo vehicle in just 60 seconds. The order also included training and service support as well as spare parts. The vehicles were supplied by Rheinmetall Canada, with Rheinmetall BAE Systems Land (RBSL) providing on-location support services in its capacity as cooperation partner. In the Netherlands, Rheinmetall Canada’s cooperation partner is Rheinmetall Defence Nederland in Ede, just east of Utrecht.