

Precise job for cleaner waters

Dutch company RanMarine Technology has developed an autonomous, floating aqua-drone for cleaning waterways. It uses Telekom's Precise Positioning System for accurate navigation.

Challenge

The battery-powered "WasteShark" aqua-drone from RanMarine independently cleans harbors, canals, and waterways of plastic waste, oil spillage, or algae. In addition, it measures water quality. However, conventional satellite GPS did not provide the swimming robot with sufficient precision – neither for precise autonomous navigation nor for automatic docking and recharging.

Solution

RanMarine chose the [Precise Positioning](#) solution from Telekom and Swift Navigation: A global network of base stations measures local interference with the signals from GPS satellites and sends this data to the cloud. From there, corrected position data is transmitted to the floating drone. Instead of being accurate to within several meters, the position of the watercraft can now be pinpointed to within a few centimeters.

Customer benefits

Thanks to Precise Positioning, the WasteShark can navigate more precisely and fluidly, collect waste more quickly and avoid obstacles more safely. This saves time and operating costs. In addition, the exact coordinate of a temperature or pH measurement can now be recorded. Importantly for RanMarine, the drone can now also precisely navigate its docking and charging station, which was not possible before. Telekom's Precise Positioning service, which is already available in many countries, works out-of-the-box, is scalable for an unlimited number of vehicles and is also more reliable than publicly available correction services.



Precise Positioning provides us with the accuracy and scalability we need to continually evolve our cleaning aqua-drones.

Richard Hardiman, Founder and CEO of RanMarine Technology

Precise Positioning

