

# **Military Robots and Unmanned Vehicles Market Shares Strategies, and Forecasts, Worldwide, 2010 to 2016**

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## **Abstracts**

WinterGreen Research announces that it has a new study on Military Ground Robots and unmanned vehicles. The 2010 study has 513 pages, 190 tables and figures. Worldwide markets are poised to achieve significant growth as the military ground robots and unmanned vehicles are used globally. Growth comes as the nature of combat changes in every region while the globally integrated enterprise replaces nationalistic dominance.

Military robot automation of the defense process is the next wave of military evolution. As automated systems and networking complement the Internet, communication is facilitated on a global basis. The military charter is shifting to providing protection against terrorists and people seek to maintain a safe, mobile, independent lifestyle. Much of the military mission is moving to adopt a police force training mission, seeking to achieve protection of civilian populations on a worldwide basis.

According to Susan Eustis, the lead author of the study, "the purchase of Military Robots is dependent on budget constraints. The use of Military Robots is based on providing a robot that is less expensive to put in the field than a trained soldier. That automation of process has appeal to those who run the military.

Robots are automating military ground systems, permitting vital protection of soldiers and people in the field, creating the possibility of reduced fatalities. Mobile robotics operate independently of the operator.

The innovation coming from all the vendors is astounding. No one innovation is more significant than another. One vendor, BAE Systems has an ant size robot useful for

reconnaissance and networking robots in development. As soldiers take up secure positions behind a wall, they deploy a small reconnaissance team. The initial deployment is poised to be a very, very small reconnaissance team. Some hopping, some flying, the stealthy autonomous reconnaissance squad vanishes into a suspicious building for several minutes, then relays the all-clear back to its partners outside when that is the case.

What is good for a robotic unmanned ground vehicle is also good for an unmanned vehicle. Multiple technological, logistical, political and market forces share a quantum singularity that has brought mobile robotics to the point where robots are useful to every arm of the military services. This is a phenomenon that will have a major impact on the way we run the military and police societies.

Use of remote-control toys in Iraq started as improvised robots to check out possible roadside bombs. There has since been a flurry of activity on the robotic explosive ordnance disposal (EOD) front since that early beginning. Deliveries of smaller and cheaper Bots are anticipated.

The emergence of a market for intelligent, mobile robots for use in the field and the confined areas of city fighting presents many opportunities. Units used in public spaces and on the battlefield create a better, more flexible, more cost efficient military.

Technology is used to actuate the disparate robot types. Core robotics research and advances in robotic technology can be applied across a variety of robotic form factors and robotic functionality. Advances feed on and off of each other. With each new round of innovation, a type of technological cross pollination occurs that improves existing robotic platforms and opens up other avenues where intelligent mobile robots can be employed, effectively creating new markets.

Roboticians are more advanced in their training and in the tools available to create units. Military robots have evolved from units used in the field to manage different situations that arise. Robots save lives.

Defense security systems have an emphasis on casualty reduction during combat. This has resulted in investment in robotics technology that is useful. Robotic research is on the fast track for government spending. Congress passed a law making it an Army goal that by 2015, one third of the operational ground combat vehicles are unmanned. The US Navy and Marines have similar initiatives underway.

Military ground robot market forecast analysis indicates that vendor strategy is to pursue developing new applications that leverage leading edge technology. Robot solutions are achieved by leveraging the ability to innovate, to bring products to market quickly. Military purchasing authorities seek to reduce costs through design and outsourcing. Vendor capabilities depend on the ability to commercialize the results of research in order to fund further research. Government funded research is evolving some more ground robot capability.

Markets at \$831 million in 2009 are anticipated to reach \$9.7 billion by 2016.

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BAE Systems

General Dynamics

iRobot

Kongsberg

Versa / Allen Vanguard

American Reliance Inc. (AMREL)

Gostai

VIA Technologies

Lockheed Martin

Northrop Grumman

QinetiQ / Foster Miller

Telerob

QinetiQ North America / Foster Miller

Robotic Technology Inc.

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