



A Solar Powered Drone: Applications and Future Work

Students: A. Carbone, V. Romaniello, M. Trerotola
Teacher: R. Capone

Abstract

The poster explains the aims of this projects and possible uses of the aircraft for the future. Drones were originally conceived for military uses, but now they have found several civil applications as well, like in search and rescue operations or in exploring inaccessible regions, land surveying, improving agricultural activities. As low-cost flying machines, they can look and go to places people cannot – or at least not safely – and with infrared cameras they can sometimes see beyond what human eyes can. According to that, the low cost, the low risk guarantee, the improvement of operational hours and the accuracy of drones joined to the ecological sustainability and efficiency of the solar panels give the basis of our idea of unmanned aerial vehicle.

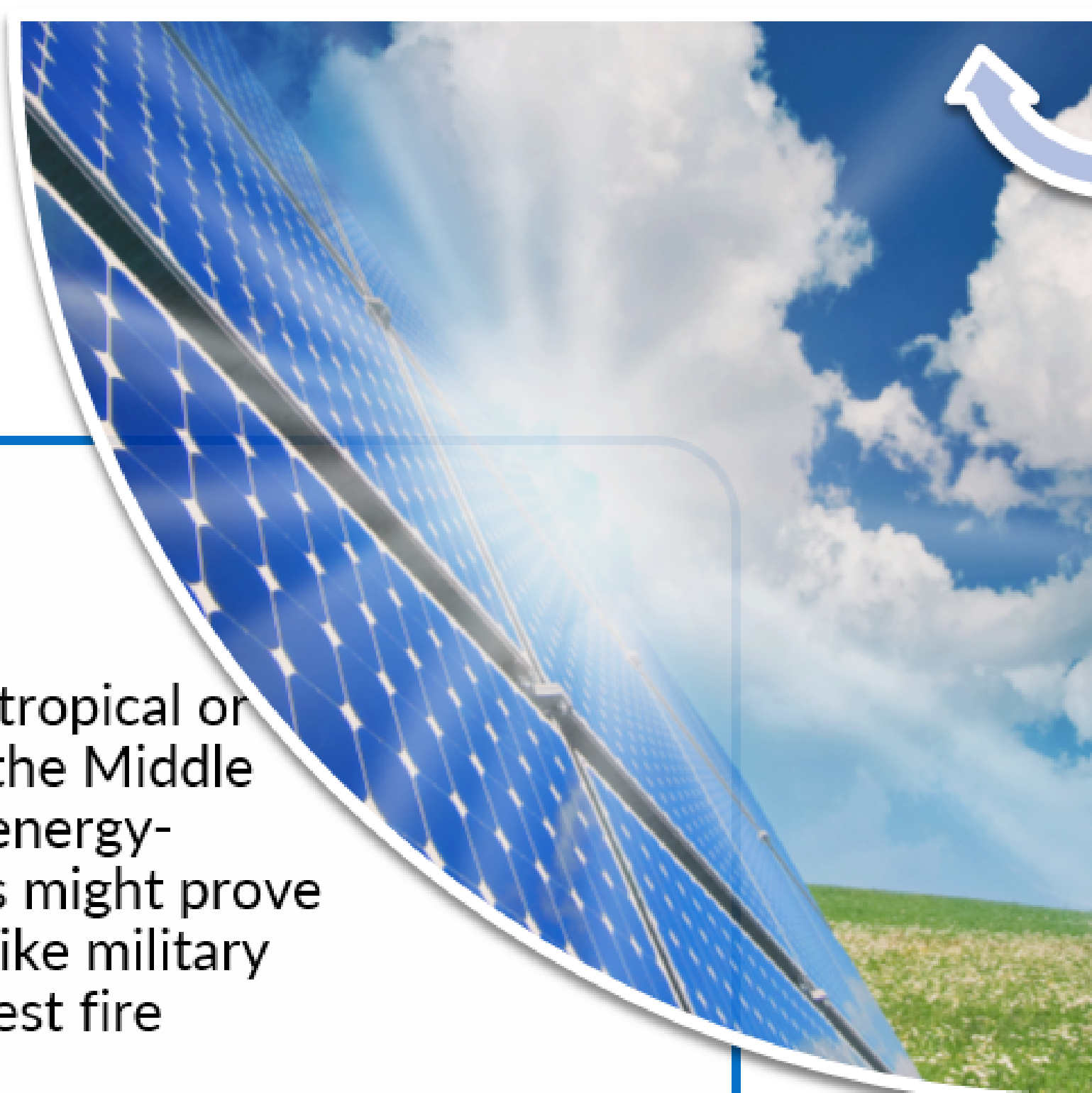
- By using this technology, the monitoring of very large areas will be possible through the use of "a fleet" of drones.



- Combining the work of two or more solar-powered drones might theoretically grant a constant use of these devices, according to the prospect in which a drone which has exhausted its energy could land on a fixed spot and take time to recharge the battery through its panels, while another drone, which has already finished its charging time, takes off to take the place of the first drone.



- In regions with a tropical or arid climate, like the Middle East, using solar energy-powered aircrafts might prove decisive in tasks like military operations or forest fire detection.



- Invigilator drones were used to snoop out exam cheats.

