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SPACE TECHNOLOGIES: THE PARADIGM SHIFT FROM RELIANCE ON THE SATELLITE
INFRASTRUCTURE TO ALTERNATIVE, PRIVATE SECTOR TECHNOLOGIES**Abstract**

The stage for services such as digital mapping, Earth Observation (EO) and internet connectivity, which have been predominantly served by satellites, is seeing a paradigm shift in its composition. Traditional access to satellite data requires a top-down approach, often making the acquisition process tedious and expensive. In addition, satellite data has many features that are becoming redundant in its use. Furthermore, alternative technologies that take a bottoms-up approach such as Unmanned Aerial Vehicles (UAVs), crowd-sourced imagery and general robotics have been identified as an alternative data source to satellite information.

This paper investigates the state of the current uses of satellite technologies and their associated advantages and disadvantages. Alternative data collection methods will be assessed quantitatively relative to satellites in terms of metrics such as economic viability of the technology, availability of data, cost to acquire data and uses of the data. The role of recent heavy private sector investment into these technologies will be investigated, and a case will be made for the paradigm shift away from satellite technologies.