RAPID OPERATIONAL GEOINT POWERED BY MAXAR

The strength of Maxar's combined offerings delivers unparalleled speed and accuracy in support of DOD missions.

Commercial imagery acquisition in minutes

Space-based geospatial intelligence (GEOINT) is increasingly important as the U.S. Department of Defense (DOD) pivots from anti-terror missions to focus on large, near-peer adversaries and multidomain, multiforce collaboration. Decision superiority will be paramount in future operations in which adversaries move targets quickly to evade detection and restricted and contested environments are more common.

Applying the best commercial technology available will enable the DOD to maintain its technological edge in this burgeoning era of great power competition. Combined next-generation technologies will be essential for the DOD to achieve accelerated timelines for its sensor-to-shooter mission.

Maxar is one of the only companies offering under one roof the leading-edge capabilities necessary to rapidly identify objects from broad area surveillance. In partnership with government stakeholders and other industry leaders, Maxar has developed a proven low-latency imagery acquisition pipeline that results in an average delivery that is approximately one-tenth of current operational outcomes.





JH-7 fighter-bomber aircraft, Yinchuan West Airbase, China | August 13, 2021 | GeoEye-1



Tanks and armored personnel carrier maneuver training, Vostok, Russia | August 30, 2018 | WorldView-3



The Maxar-powered workflow in action

- Sense: A satellite collects imagery of the operational environment.
- **Downlink:** A mobile direct-downlink terminal receives those images.
- Georegister: Automated geolocation and trusted data fusion prepare the images for AI inferencing and automatic target recognition within an accurate coordinate system.
- **Analyze:** An AI system processes the images, detects threats and transforms this information into targeting data. The targeting data is then populated.
- Decide: The AI system recommends how to respond to the threat and a human in the loop coordinates the appropriate response.

From sensor to decision

Together, the many elements of Maxar can help the DOD meet its far-reaching modernization goals in Joint All-Domain Command and Control, automatic target recognition, long-range precision fires and beyond.

Maxar's sensor-to-decision workflow is ideal for situations that are:

- **Persistent:** Decision-makers require continuous visibility and information.
- Disconnected: Data access is challenging in certain environments.
- **Widespread:** The task of the human analyst is exponentially improved with AI/ML.
- **Time-sensitive:** Mission success is directly tied to reducing the time between question and answer.
- High-risk: Ensure the safety of warfighters and first responders.

Four advanced techologies

1. Unparalleled high-resolution imagery

The process begins with capturing the best data. Maxar is building its next-generation Earth observation satellites, WorldView Legion. With the addition of WorldView Legion, the Maxar constellation will be able to image some areas of the globe up to 15 times per day in 30 cm class resolution.

2. Mobile direct-downlink terminals

Delivering high-power computing at the tactical edge is essential to achieve decision superiority. Maxar's Tactical Access Program provides near real-time access to imagery data and processing–even in low-bandwidth environments. Our transportable, sensor-agnostic tools bring the algorithms directly to the data rather than to the cloud.



This view of the Russian Northern Fleet in Severomorsk is an example of Maxar's Al/ML capabilities applied to our high-resolution commercial imagery for object detection.

3. Precision 3D Registration (P3DR)

For sensor data to align with the real world—a critical step for accurate, long-range targeting—it must be georegistered. Other methods are labor- and time-intensive, but Maxar's innovative P3DR technology uses sophisticated algorithms to quickly georegister imagery data at any spot on the globe with an accuracy of 3 m SE90. This dynamic data fusion prepares the images for artificial intelligence (AI) inferencing and automatic target recognition.

4. AI/ML for broad area surveillance

Maxar's AI and machine learning (ML) capabilities substantially reduce latency in decision-making timelines. Our tools automatically detect objects, identify patterns of life or generate targeting data from broad area datasets, highlighting anomalies for decision-makers.

