

ENABLING MARITIME DOMAIN AWARENESS WITH NEXT-GEN SAR SYSTEMS

Innovations in small-satellite technology will lead to an unprecedented number of commercial synthetic aperture radar (COMSAR) platforms on-orbit, requiring new paradigms for orchestrating and executing collection and processing. Novel strategies tailored to the maritime domain are needed to maximize area collection and efficiently deliver data to decision-makers on mission-relevant timelines. Data collected with these techniques will be processed by new purpose-built algorithms that efficiently parse the large data sets to detect, isolate, and identify potential signatures of interest. Overarching constellation tasking strategies for the Maritime domain awareness mission thread will also be developed to take maximum advantage of the high-tempo collection capacity of these future large constellations.

IMPACT: Direct downlink and rapid processing will deliver timely situational awareness to the fleet and diversify information flows for battlefield decision makers.

