

## Satellite radar system targets tailings safety

Synspective, a Tokyo-based SAR (synthetic aperture radar) satellite data and solutions provider, and Insight Terra, a London-based start-up providing a cloud based environmental and infrastructure risk management platform and solutions, have entered into a strategic partnership to deliver a new space enabled data and monitoring solution for the mining industry.



### Craig Guthrie



The companies said their solution uses satellites and earth observation coupled with ground sensors to monitor mine tailings facilities.

Synspective and Insight Terra will work together to provide an integrated product offering combining Insight Terra's cloud based IoT Insight Platform with Synspective's leading edge analytical models of SAR data for the mining and other related industries. The integrated solution allows for the fusion of near real-time ground truth and earth observation data for proactive monitoring and alerting.

Insight Terra's leading mining product, Tailings Insight, is currently deployed with a number of global mining companies for tailings dam monitoring. Synspective develops and operates high-frequency, high-resolution SAR satellites called "StriX" to provide high-quality data sets and solution services.

The company has already placed three satellites into targeted orbit while planning to establish the constellation of 30 satellites and an analytics platform by late the 2020s.

The integration of SAR data gathered by Synspective's growing constellation of StriX series satellites will provide powerful earth observation capabilities to the Tailings Insight application. This cutting edge technology can be utilized to monitor ground movement and land deformation that are risk indicators for potential failures of tailings facilities, mine walls, and water dams, among others.

The companies will initially focus on the global mining industry: The World Bank estimates that global mining activity will increase by more than 500% over the next decades in response to the global need for metals and minerals to support the global clean energy transition. The Tailings Insight solution including new InSAR capabilities will be a leap forward for mining operators, investors and regulators seeking to monitor and mitigate potential mine related disasters affecting people, communities and the environment.

"The partnership is timely, addressing the urgent call by the Church of England (COE) and others for better monitoring of risks from tailings dams and solutions to prevent environmental hazards", said the companies in a statement.

"The combined solution is aligned with the Global Industry Standard on Tailings Management (GISTM) promulgated in 2020 by the International Council on Mining and Metals (ICMM), the United Nations Environmental Program (UNEP) and Principles for Responsible Investment (PRI). The GISTM requires mines with high-risk tailings facilities, both active and closed, to comply by August 2023, less than a year away. This solution meets that timeline".