EUROPEAN DEFENCE AGENCY

FACT SHEET

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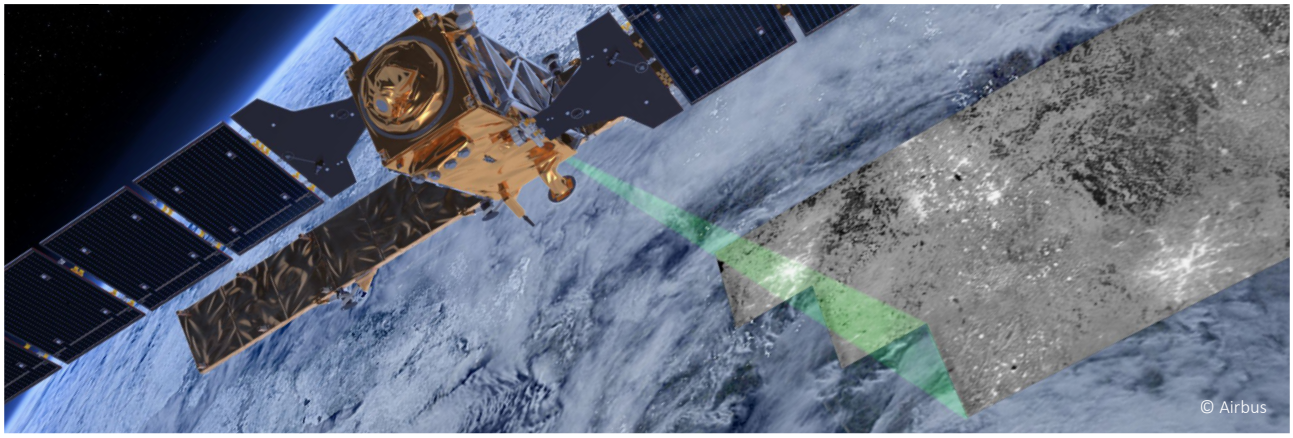

RADAR IMAGERY APPLICATION SUPPORTING ACTIONABLE INTELLIGENCE (REACT)

Pursuant to the EDA 2014 Capability Development Plan (CDP) Priority Actions which were confirmed with the CDP revision in 2018, the European Defence Agency was tasked by its Member States "to develop tools and applications to support EU operations with improved geo-information and satellite imagery, in coordination with the EU Satellite Centre (EU SatCen) and European External Action Service (EEAS) avoiding duplication".

EDA subsequently focused its efforts on Synthetic Aperture Radar (SAR) imagery as its potential is not yet fully exploited by the IMINT (IMagery INTelligence) user community in EU Member States. In this context, EDA launched three different REACT ("Radar imagEry applications supporting ACTionable intelligence") projects, of which the third one is to start in 2021, with the aim to help fill the capability gap identified in this domain.

The REACT projects were awarded to a consortium of European companies specialised in Earth Observation and in geospatial applications and are conducted in close cooperation with the EU SatCen. The latter provides technical support and organises events gathering national experts to benefit from their expertise and guidance for the successful execution of the activities. The REACT projects generated great interest and currently support the activities of the EU SatCen, Member States and FRONTEX (the European Border and Coast Guard Agency).

The project has been developed through different phases:

» REACT 1 consisted of an exploratory study initiated in 2016 which highlighted the increased potential of radar imagery, provided a Workflow Description Document describing the different steps of the exploitation of radar imagery and addressed also the associated complexity behind it.

» REACT 2, building on REACT 1 findings, started in 2018 and developed a software application to support military radar imagery analysts in the generation of a collection plan and in the exploitation phase of SAR imagery. This application has been tested by subject matter experts of EU Member States and EU bodies during several dedicated events. So far, the application has been deployed in Italy and in Spain at their respective IMINT centres and at the EU SatCen which enables access to interested Member States.

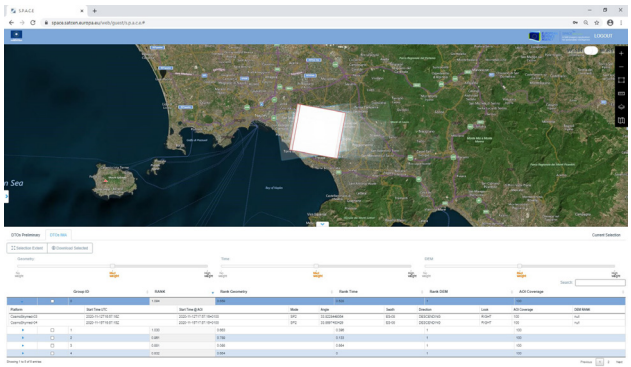

Fig. SPACE – Selected Collection Opportunities

State of Play

The REACT 2 project is an ongoing initiative that foresees further installations at Member States' premises. The Initial Operational Capability will be reached by the end of this phase, expected at the beginning of 2021. Although this application is still at prototype level, it will be deployed with the purpose to increase user engagement and derive the operational feedback necessary to achieve a complete maturity of the application.

Way ahead

REACT 3, building on the achievements of the two previous REACT projects, will be conducted in the 2021-2023 timeframe. Its general objective is to further develop the REACT prototype application to reach full maturity. This will be achieved through an ad-hoc customisation of the application in order to address participating Member States' different operational requirements with a common platform.

In addition, REACT 3 will assess the possibility and cost benefit of the integration of Copernicus Sentinels imagery into the REACT application in order to exploit Copernicus full potential.

The expected benefit to be achieved by this additional REACT phase is to deliver a fully operational capability that allows the military IMINT community to effectively plan, collect, process and interpret space-based radar imagery, delivering actionable intelligence.

Furthermore, the REACT initiative foresees to create a community of users to exchange views, experiences and knowledge and to provide the necessary in-services support through a follow on ad hoc project.

IMINT Cycle & REACT Tools

1. Planning ***SPACE***

Software prototype designed to support the analyst in the definition of the satellite SAR data acquisition plan according to the specific IMINT task to be executed

2. Collection

3. Processing ***IOM***

4. Exploitation ***IOM***

Interactive manual assisting the analyst during the satellite SAR data processing and interpretation according to the specific IMINT task to be executed

5. Dissemination