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ESTIMATING COPERNICUS HIGH PRIORITY CANDIDATE MISSIONS JOBS FOR EUROPE

Abstract

The current suite of Sentinel missions are at the heart of the Copernicus programme, led by the European Commission. Data from the Copernicus Sentinels, which are developed by ESA, feed into the Copernicus Services, which help address challenges such as urbanisation, food security, rising sea levels, diminishing polar ice, natural disasters and, of course, climate change. Six high-priority candidate missions are being kicked-off for implementation to address EU policy and gaps in Copernicus user needs, and to expand the current capabilities of the Copernicus space component. A dedicated, independent ESA cost engineering team was deeply involved in all six Study Phases in Phase A/B1, preparation of Request for Proposals, evaluation and negotiations for the Anthropogenic Carbon Dioxide Monitoring (CO2M), Hyperspectral Imaging (CHIME), Imaging Microwave Radiometer (CIMR), Polar Ice and Snow Topography Altimeter (CRISTAL), L-band Synthetic Aperture Radar (ROSE-L), and Land Surface Temperature Monitoring (LSTM) Copernicus Missions. A dedicated task force, integrated into each one of the above named six Missions, has been giving full and integrated expertise by covering a wide range of tasks for performing fast, consistent, transparent, harmonised and detailed results in a multi-complex Mission environment, nonetheless with very stringent procurement evaluation programmatic constraints. This article's content is based on one of the most complicated and demanding procurements in which ESA and its independent cost engineering team has ever been involved in. The majority of the cost engineering team has been mobilised for providing key support and being the focal point on costing matters, manpower profiles analysis, cost data distribution, and assessment. Based on the data received from Industrial offers, this work will provide an estimate of the number of Jobs that the expansion of the Copernicus Programme would generate in Europe. The contribution of the Copernicus Programme to a fair and sustainable European economic growth will also be analysed in this article, including the involvement of emerging companies, and Small and Medium Enterprises (SMEs). This article shows the forecast of the job-impact of the six Copernicus Expansions' on the Space Strategy for Europe, on the EU commitment to sustainable development. This work furthermore highlights how Copernicus allows opening up new business opportunities for the entire European industry, which more than ever needs support during COVID-19 pandemic and in order to mitigate socio-economic consequences.