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Marble Imaging: An European VHR solution for monitoring our precious Marble

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In an era where rapid environmental changes triggering societal challenges necessitate rapid decision making to ensure sustainable development and climate adaptation, Earth Observation (EO) serves as a means for global monitoring. However, current commercial EO data are expensive, difficult to access, have limited repeat monitoring capabilities and can be interrupted depending on the policies of the data provider, limiting its usage for developing reliable EO based insights. While the Copernicus and Landsat programme offer free and open data, their use is limited by the coarse resolution of their sensors. Community resilience, climate adaptation and mitigation, disaster response and management, scientific advancement, requires detailed, accurate, consistent and daily monitoring of our Earth in very high resolution (VHR).

Marble Imaging aims to develop the first European small satellite constellation to supply timely Very High Resolution (VHR) data as a groundbreaking solution for comprehensive Earth monitoring. As a European company and an incubatee of the ESA Northern Germany BIC, Marble Imaging will ensure timely, uninterrupted VHR data and will negate the dependence of EU institutions on non-European companies offering the same. To ensure timely repeat monitoring of the globe, Marble Imaging plans to deploy up to 200 small satellites targeting increased observation frequencies and likelihood of obtaining low cloud cover imagery. Designed to complement existing EO ecosystems, Marble's instruments will measure in the visible, Near Infrared spectrums at 0.75 μm and Shortwave Infrared spectrum at 6-9 μm and ensure radiometric and spectral compatibility with Sentinel-2. The targeted spectral and temporal resolutions from Marble will provide the necessary data for the development of services, solutions and insights to tackle global challenges and support policy making with regards to climate adaptation, mitigation, EUDR and the SDGs. A winner of the German Aerospace Center (DLR) Small satellite payload initiative, Marble Imaging aims to launch its first satellite in Q4 2025.

With repeat VHR data, the possibilities are unlimited and we are using our geospatial expertise to develop our advanced analytics suite, Precious Marble, that will provide timely EO based insights and analytics to enable rapid and informed decision making. Crafted to leverage not only Marble's VHR data and other existing EO data and products, and vital socio-economic information, Precious Marble will provide an in-depth vulnerability assessment of our Earth describing the environmental and socio-economic factors contributing to the risk. This supports societal adaptability and community resilience by providing a wide range of users (scientists, governmental institutions, national security, financial institutions, actors within supply chains etc.) with the information they need to understand, monitor and mitigate the risks.

As Marble Imaging embark on this journey to redefine Earth observation, we invite collaboration from experts and stakeholders across disciplines. Equipped with a strong geospatial solutions team, we are committed to using our expertise to support a sustainable Earth and preserving our Marble for future generations. We are developing EO processing software, crafting use cases based on focused user requests and exploring the constellation's raw data stream to develop novel techniques. If you resonate with our vision and mission, join us in shaping a future where data-driven insights empower global efforts towards environmental stewardship, community resilience and sustainable development.