

IAF SPACE OPERATIONS SYMPOSIUM (B6)  
Ground Operations - Systems and Solutions (1)

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## REINVENTING SPACE OPERATIONS TO ENABLE THE NEWSPACE INDUSTRY

**Abstract**

The space industry is currently going through a paradigm shift driven by new actors, increasing private investments, innovative space technologies, and new types of business models; but we believe that the development of the commercial NewSpace sector is still hindered. We observe that, today, the development of a ground segment and the operations of a space mission are still far too complex, far too expensive and far too static. In this context, Telespazio VEGA is developing a disruptive new offering to address the needs of the emerging commercial space industry, called ENABLE. This paper will give an overview of the rationale, the concept and the technologies behind this new offering in the hope to communicate to the audience the necessity for a global mentality shift in the field of space operations.

ENABLE is a completely new offering for the space industry. On one hand, it is the world's first end-to-end platform for operations and is accessible to the NewSpace market in a pay-per-use model. The platform is cloud-native, low-cost, and agile: it centralises in one place anything a space venture needs to design and operate its mission in a sustainable way. On the other hand, it is an Operations-as-a-Service offering to take over entire space operations on behalf of clients, by using the ENABLE platform. ENABLE will drastically simplify, reduce cost, and accelerate the development of ground segments and the operation of space missions.

The paper will focus on the strategic and business perspectives. It will explain why the traditional approaches for design, operations and procurements of space operations activities are not applicable to the NewSpace industry. It will show what can be done to change these approaches by new ones, some of which were just a few years ago unthinkable. It will demonstrate by giving concrete details on the ENABLE platform (architecture, use cases, screenshots, lessons learned. . . ) how we managed to do this differently and what the benefits are for our NewSpace clients.

The NewSpace movement is a wonderful opportunity to reinvent ground segment architectures and operational concepts, and to envision new business models; a set of innovations that, eventually, may also be useful to traditional and institutional players.