

IAF SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)  
Satellite Commercial Applications (3)

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CYBERSECURITY AS A DIGITAL TRANSFORMATION CHALLENGE: ESA BUSINESS  
APPLICATIONS AMBASSADOR PLATFORM FOR ITALY AS AN ENABLER OF SPACE-BASED  
SOLUTIONS**Abstract**

The growth of the New Space Economy, the new economy of space-enabled solutions supporting traditional sectors, is a consequence of the progressive digitization of information, goods and services translating into higher value opportunities. At the same time, however, this rapid digital transformation brings to light the other side of the digitization coin: users are increasingly exposed to cyber risks and attacks making cybersecurity an increasingly important concern. The space sector can play an important role in enhancing cybersecurity and in Italy, a top country in terms of space investment, the ESA Business Applications Ambassador Platform for Italy (AP-IT), managed by Fondazione E. Amaldi, promotes the commercial integration of satellite data and technologies in non-space sectors. For 2023-2024 biennium, the AP-IT focuses on cybersecurity with the aim of encouraging and stimulating the Italian non-space ecosystem to exploit the added value offered by space to solve its needs and challenges. Quantum key distribution provides a reliable and highly secure encryption method for geographically dispersed networks; satellite communication systems can provide secure and reliable communications between geographically dispersed entities without the need for vulnerable terrestrial infrastructure, while the integration of Galileo's authenticated functions increases the reliability of location and timing information. However, integrating space resources and technologies into cybersecurity requires significant investment in infrastructure, research and development. Therefore, it is essential to establish a framework for collaboration between the space and cybersecurity industries to ensure effective and efficient use of these resources. Collaboration would enable the development of space cybersecurity solutions tailored to the specific needs of different sectors and organizations. This paper aims to present the results of the scouting and matchmaking study conducted by AP-IT with cybersecurity stakeholders, e.g. CYBER 4.0 - Cybersecurity Competence Center, CNIT - Consorzio Nazionale Interuniversitario per le Telecomunicazioni, CINI - Consorzio Interuniversitario Nazionale per l'Informatica and ACN - Agenzia per la Cybersecurity Nazionale, to define the challenges and needs of the sector, and then with space agencies and operators to identify the benefits that space could bring for their resolution. Space-integrated applications are increasingly being leveraged to support the cybersecurity industry by offering unique opportunities for data transmission and protection. The outcomes of the context and stakeholder analysis, along with those of the first local events in Europe, including the feedback and requirements of the participating start-ups, will be presented in this study.