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SPACE IN SUPPORT OF SECURITY MISSIONS: AN EVOLVING LANDSCAPE WITH UNTAPPED
POTENTIAL

Abstract

Space technologies, data and services are essential tools for a plethora of organisations tasked with security missions, for instance in the domains of law enforcement, crisis management or civil protection. In the last few years only, space-enabled capabilities have played a key role in several security-related developments across the globe (e.g. response to natural catastrophes such as the volcanic eruptions in Tonga or La Palma; monitoring of human rights violations; rescue of migrants coming to Europe...).

This contribution of space-based systems and services (remote sensing, telecommunications, PNT capabilities) to security missions has increased over time and is poised to further increase. Two factors can explain this situation: the democratisation of the space sector and the reduction of costs that ensued; as well as the evolution of security activities themselves, whose technological dimension has taken a more prominent position. Space applications are thus increasingly considered as useful tools that are complementary to terrestrial means.

However, the uptake of space solutions for security missions could still be improved; to reach this objective, the evolving needs and requirements of actors of this community needs to be taken into account, despite their heterogeneity. Through an extensive consultation campaign, ESPI performed a comprehensive assessment of these needs, and categorised them into three main “families”: functional needs; security needs; and usage needs.

This paper will present the results of ESPI research. It will develop how space technologies, and their combination with terrestrial technologies, contribute to support security missions on Earth. It will also provide insights on the specific needs and requirements of the user community. In particular, it will show that:

- Users from the security community mainly seek new, adapted and improved capabilities to support their missions
- These capabilities should also be easy to access, intuitive to use and readily integrable in their operational environments
- Needs and requirements for security features (confidentiality, resilience, availability, etc.) are not the main concern of organisations tasked with law enforcement, civil protection and emergency management missions

Thus, security actors are in favour of facilitating the use of space solutions rather than reinforcing their security features. In this regard, they call for greater integration of such solutions with terrestrial applications, with the objective to obtain “full packages” of information or services that can be directly delivered through their own technical and operational environment.