

## Call for pitches – Guidelines for R&T topics

**Topic of interest:** Space capabilities – new space concepts.

**Airbus Contact Person:** Antonio Castillo-Leon

**Short description of research topic:**

Augmentation of miltatcom capabilities through the use of innovative concepts.

**Detailed areas of research proposed:**

The focus of proposals will be on the use of novel communication techniques in the areas on network orchestration, assets planning and control. It will include relevant areas for the complete satellite constellations, clusters, formation flying, swarms or its management and control both for software and hardware.

The development of new methods, techniques or principles improving the management, interconnectivity, disaggregation, meshed network principles, collocation, cooperative use of capabilities of operation or any particular part of the functioning and use will be of interest for the area of focus of the proposed research and technology projects.



**Target results foreseen (e.g. maturity level to reach, deliverables to produce, estimated timing, etc.):**

The future for satellite communications is to be more and more widespread, with a simplification of the orchestration of different systems involved and a very high availability and bandwidth. Additionally, new capabilities or specific methods developed to provide better or novel information that could enhance or augment current systems could be well foreseen.

The results expected for the research are an improvement of efficiency, cost-effectiveness, quality, security, frequency of military satellite communications and information, making them more and better adapted to future scenarios where they will be more and more widespread and can be performed with smaller, easy-to-use, always ready equipment under most circumstances. This will benefit the military but also public and para-public security organizations allowing them a more efficient coordination and operation thanks to a seamless exchange of information at all levels.

The objective will be to develop a three to five year project maturing valid technologies that can be applied in future satellite communication networks and constellations.

Understanding the current state of the art, the steps will be drafted to take a low TRL technology and mature it towards a proof of concept or demonstrator which can show its benefits and possibilities if it would be integrated on a future platform.

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Other relevant aspects to consider (e.g. previous experience required working in Defence and Space sector, access to specific facilities or laboratories, etc.)

The understanding of the military use-cases, needs and particularities would be good but not a must.

A clear expertise in the technological area and possibilities to bring to the consortia material, laboratories, test-facilities and workforce would be of high interest.