

<b>Title</b>	<b>MIDAS - Control of a team of mini-UAVs to support counter-terrorism missions</b>
<b>Founded by</b>	<b>NATO Emerging Security Challenges Division, SPS Programme,</b>
<b>Starting date</b>	15.01.2018
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<b>Project Abstract</b>	MIDAS will research and develop a new control architectural framework for the management of multiple UAVs, specifically employed to support counter-terrorism missions in urban environment. The UAVs, equipped with different payloads and operating “in team”, will extend the situational awareness and decision making, allowing high interaction levels between Mission Control Operator (MCO) and UAVs. The situational awareness and decision making will be dramatically improved through the investigation and application of new algorithms for sensor data fusion, video analysis and scene understanding. The MIDAS concept will be developed and demonstrated in virtual (realistic) scenarios.
<b>Activities</b>	<ol style="list-style-type: none"> <li>1. Development of a reference architecture for enabling the information exchange between the UAV team and the operator in terms of data formats and data link specifications;</li> <li>2. Study and application of sensor data fusion and video analysis algorithms for improving the confidence and accuracy levels of information about the scenarios, as well as detection and tracking of potential threats;</li> <li>3. Development of a SW-in-the-loop e HW-in-the-loop demonstrator as proof of concept.</li> <li>4. Assessment and evaluation of MIDAS concept and the related operational capability improvement.</li> </ol>