

# NATEP

National Aerospace Technology Exploitation Programme

## UAV Projects



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Project	Supply chain partnership	Contact
<b>EyeQuad-T (Miniature Thermal/Optical Camera for UAV/UAS)</b>	<ul style="list-style-type: none"> <li>• Rinicom Limited</li> <li>• HW Communications</li> <li>• Eurocontrol (customer)</li> <li>• THALES (customer)</li> <li>• Trimvale Aviation (customer)</li> <li>• German Aerospace Centre (DLR) (customer)</li> <li>• ALTUS (customer)</li> </ul>	Natasha McCrone – Project Manager natasha@rinicom.com
<p>The overall objective of the project is to produce a small, lightweight imaging system with pan, tilt and zoom functionality that captures optical and thermal video. The miniature camera will be able to support surveillance operations from small Unmanned Autonomous Systems; potentially presenting a high market value, applicable to the robotics, security and defence markets. This is an opportunity to deliver the operational capabilities of more automated and intelligent Unmanned Autonomous Systems, through a novel offer in the area of on-board surveillance. EyeQuad-T will deliver enhanced capability to build basic situational awareness and detection that is essential for decision-making.</p> <p><b>NATEP Grant £149,810</b></p>		

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<b>Risk Aware Mission Planning (RAMP)</b>	<ul style="list-style-type: none"> <li>• TEKEVER Ltd</li> <li>• ROTRON Power Ltd</li> <li>• Sovereign Global(UK) Ltd (customer)</li> <li>• European Maritime Safety Agency, Lisbon (customer)</li> </ul>	Paul Webb – Managing Director paul.webb@tekever.com
<p>UAV market as applied to Search &amp; Rescue, civil surveillance, environmental monitoring. Maritime vessels, land systems, planetary rovers.</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>Secure Authentication &amp; Flight Evidence Recorder (SAFER)</b>	<ul style="list-style-type: none"> <li>• The Great Circle Ltd</li> <li>• Distributed Management Systems Ltd</li> <li>• University of Central Lancashire</li> <li>• ProFlight UAV Suppliers (customer)</li> </ul>	Adam Berrington – Director adam@thegreatcircle.co.uk
<p>Project SAFER (Secure Authentication &amp; Flight Evidence Recorder) exploits a number of recent innovations in encryption and authentication technology, together with the power of the 'cloud' to create a novel UAV pilot authentication system, which logs and communicates flight hours and flight data.</p> <p><b>NATEP Grant £ 146,780</b></p>		

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<b>Detection, Neutralisation and Investigation of Threat UAVs (DeNI of Threat UAVs)</b>	<ul style="list-style-type: none"> <li>• RNC Avionics Ltd</li> <li>• Saher(UK)</li> <li>• West Yorkshire Police (customer)</li> <li>• Eurocontrol (customer)</li> <li>• PNL D (customer)</li> <li>• Airbus DS Ltd (customer)</li> </ul>	Natasha McCrone – Project Manager natasha@rinicom.com
<p>The overall objective of the project is to develop and implement a scalable system capable of detecting, neutralising and investigating threat UAV's. The existing Duplex PTZ (dual optical and video) will be enhanced to include a novel detection, classification and tracking module enabling the police and relevant authorities to apply the appropriate countermeasures to neutralise the UAV and a framework of operational and legislative procedures will be implemented to support all high risk scenarios with the aim of identifying and prosecuting the perpetrator.</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>Heavy Fuel for UAVs</b>	<ul style="list-style-type: none"> <li>• Rotron Group</li> <li>• General Engine Management Systems</li> <li>• CybAero (customer)</li> </ul>	Alex Head – Group Technical Director alex.head@giloindustriesgroup.com
<p>This project is to research and develop novel methods for employing heavy fuels in high specification UAV rotary engines. If successful, the project will completely alter the market's perception of this engine category.</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>SkyBike</b>	<ul style="list-style-type: none"> <li>• Skybike International Ltd</li> <li>• Bit Parallel Ltd</li> <li>• Embedded Logic Ltd</li> <li>• BASF plc</li> </ul>	Gilo Cardozo – Chief Technical Officer gilo@giloindustriesgroup.com
<p>This project will work to develop a UAV platform with crop spraying capabilities. It will explore flight control systems and location integration with an experimental VTOL design.</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>UAV Engine Durability</b>	<ul style="list-style-type: none"> <li>• Rotron Power</li> <li>• A&amp;M EDM</li> <li>• Boeing (customer)</li> </ul>	Alex Head – Technical Director alex.head@giloindustriesgroup.com
<p>This project has been devised to research novel methods for extending the flying durability of UAV rotary engines to a target of 1000 hours of Time Between Overhaul (TBO).</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>SPARCS Rotary Engine</b>	<ul style="list-style-type: none"> <li>• Advanced Innovative Engineering (UK) Ltd</li> <li>• Vortex Exhaust Technology Ltd</li> <li>• Aero Composites Innovations, France (customer)</li> </ul>	Nathan Bailey – Managing Director nathan@aieuk.com
<p>Design, development and testing of a SPARCS (Self-Pressurised-Air Rotor Cooling System) enabled rotary engine propulsion system for Unmanned Aerial Vehicles. NATEP Grant £130,000</p>		

Project	Supply chain partnership	Contact
<b>Hybrid Aircraft Thrust-Vectoring Propulsion System</b>	<ul style="list-style-type: none"> <li>• V-TOL Technologies</li> <li>• Flow HD</li> <li>• Beagle Technology Group Ltd</li> <li>• Scotia Gas Networks (customer)</li> </ul>	Ashley Bryant Managing & Technical Director ashley.bryant@vtol-technologies.com
<p>This project will directly support the development of an optimised thrust-vectoring propulsion system targeted at delivering Beyond Visual Line Of Sight capabilities for the inspection of network industry based assets and infrastructure using a breakthrough Remotely Piloted Aerial System [RPAS] VTOL aircraft concept. NATEP Grant £150,000</p>		

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<b>Hoversafe</b>	<ul style="list-style-type: none"> <li>• Autonomous Technologies Limited</li> <li>• Snelflight Limited</li> <li>• Newcastle University School of Agriculture, Food and Rural Development (customer)</li> <li>• West Midlands Fire Service (customer)</li> </ul>	Nick Gillett nick.gillett@hoversafe.co.uk
<p>Hoversafe is a reliable, inexpensive UAS that anyone can fly safely. It's being designed and built in the North East and is a Great British product. NATEP Grant £150,000</p>		

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<b>Advanced UAV Thermal Imaging and Video Analytics for Search and Rescue Missions (TIVA)</b>	<ul style="list-style-type: none"> <li>• Remvox Limited</li> <li>• RNC-Avionics Ltd</li> <li>• Lancashire Fire &amp; Rescue (customer)</li> </ul>	Steve Pearson CEO Remvox Ltd steve@remvox.co
<p>The overall objective of the project is to develop and implement an all-encompassing system to aid search and rescue missions by automatically detecting body heat through the video analytics of thermal imaging and the incorporation of the analytics results in conjunction with the on-board navigation system to deploy resources directly to area of high potential for rescue/retrieval of personnel. NATEP Grant £150,000</p>		

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<b>Precision Back-up Navigation for UAVs</b>	<ul style="list-style-type: none"> <li>• Forsberg Services Ltd</li> <li>• VTOL Technologies Ltd</li> <li>• Rockwell Collins (customer)</li> <li>• Locanis (customer)</li> </ul>	Charles Forsberg Director charles.forsberg@forsbergservices.co.uk
<p>Forsberg Services Ltd propose an enhanced air navigation system for safe operation of UAVs during critical parts of the flight envelop, in particular landing and take-off. These phases of low-level flight are subject to object avoidance and safe navigation.</p> <p><b>NATEP Grant £150,000</b></p>		

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<b>Small Rotary Engine Technologies</b>	<ul style="list-style-type: none"> <li>• A&amp;M EDM Ltd</li> <li>• Techteam Development LLP</li> <li>• ASNU Corporation Europe Ltd</li> <li>• UAV customer</li> </ul>	Tim Shires Design Engineer tim@amedm.co.uk
<p>Development of an innovative aerospace standard engine architecture to support production of small multi-fuel operation power units specifically aimed at the unmanned air vehicle (UAV) market.</p> <p><b>NATEP Grant £95,000</b></p>		