

# NATEP

## Productivity projects



## Productivity Projects

Project	Supply chain partnership	Contact
<b>Advanced Stress Concentration Assessment Tool (ASCAT)</b>	<ul style="list-style-type: none"> <li>• Cabot Design Ltd</li> <li>• Gingerneering Ltd</li> <li>• Safran Landing Systems</li> </ul>	Rachel Stephenson General Manager  rachel.stephenson@cabotdesign.com
Generation of an analysis tool which integrates into current commercial available analysis software to assess the peak stresses at stress concentrations in landing gear structures. <b>NATEP Grant £90,000</b>		

Project	Supply chain partnership	Contact
<b>Cabin Interior Monument Load Cell</b>	<ul style="list-style-type: none"> <li>• Cabot Design Ltd</li> <li>• Gingerneering Ltd</li> <li>• Rockwell Collins operating in the UK as B/E Aerospace (UK) Limited</li> </ul>	Rachel Stephenson General Manager  rachel.stephenson@cabotdesign.com
A novel load cell developed for testing aircraft interior structures. With enhanced stiffness representation, self-calibration and interchangeable interface adapters, the load cell advances the useful data obtained during test and enhances capability for correlation with analysis <b>NATEP Grant £62,500</b>		

Project	Supply chain partnership	Contact
<b>Standardised Image Correlation for Industry</b>	<ul style="list-style-type: none"> <li>• Enabling Process Technologies Ltd</li> <li>• Strain Solutions Ltd</li> <li>• Airbus</li> </ul>	Dr John Philip Tyler Director  philip.tyler@eptworld.com
The project will develop a new physical method for validating digital image correlation displacement/strain data by achieving traceability to the length standard at the time of test data capture. <b>NATEP Grant £58,142</b>		

Project	Supply chain partnership	Contact
<b>BASELINE - Rapid Machine Tool Verification</b>	<ul style="list-style-type: none"> <li>• Insphere Ltd</li> <li>• Hexagon Manufacturing Intelligence (UK) Ltd</li> <li>• Nuclear Advanced Manufacturing Research Centre</li> <li>• Rolls-Royce plc</li> </ul>	Ben Adeline Chief Executive  ben@insphereltd.com
The Baseline project will develop a solution for rapid verification of large volume machine tools. The outcome of this will be to improve machining processes, reducing scrap and improving machine uptime. <b>NATEP Grant £107,790</b>		

Project	Supply chain partnership	Contact
<b>Wireless Telemetry Antennas</b>	<ul style="list-style-type: none"> <li>• TBG Solutions Ltd</li> <li>• G2 Communications</li> <li>• Rolls-Royce plc</li> </ul>	Neil Roddis – R&D Manager neil.roddis@tbg-solutions.com
<p>Innovative antennas to be used to improve the reliability and efficiency of wireless monitoring of measurement data in aero engine development test; generic signal conditioning for signals from the measurement sensors</p> <p><b>NATEP grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Engineering Training Augmented Reality "ET-AR"</b>	<ul style="list-style-type: none"> <li>• VR Simulation Systems Ltd</li> <li>• Blue Flame Digital Ltd</li> <li>• Wolverhampton University</li> <li>• Rolls-Royce plc</li> <li>• Stadco UK Ltd</li> </ul>	Tim Luft Director  tim@vrsimulation.co
<p>VRSS propose the research, development and industrial trial of a new form of learning for the aerospace engineering/manufacturing industry – combining Augmented Reality (AR) with a set of new AR glasses for intuitive point-of-need training and knowledge.</p> <p><b>NATEP Grant £140,000</b></p>		

Project	Supply chain partnership	Contact
<b>Advanced Magnesium Investment Casting (AMIC)</b>	<ul style="list-style-type: none"> <li>• Aeromet International Ltd</li> <li>• Luxfer MEL Technologies</li> <li>• Spirit Aero Systems</li> </ul>	Paul Monington Head of New Technology  paul.monington@aeromet.co.uk
<p>The development of investment casting technology to enable the casting of near net shape magnesium castings. The project utilises additive manufacturing techniques in pattern production to reduce lead time and production costs, while addressing reported casting difficulties with innovative ceramic shell solutions.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>A20X Surface Treatments Development</b>	<ul style="list-style-type: none"> <li>• Aeromet</li> <li>• Poeton Industries</li> <li>• Boeing (customer)</li> </ul>	Mike Bond Director of Advanced Material Technology mike.bond@aeromet.co.uk
<p>The project will develop and verify the performance on a range of metal finishing treatments (anodic and chemical conversion coatings) for Aeromet's A20X family of casting alloys without using hexavalent chrome compounds (which have a limited life under REACH legislation).</p> <p><b>NATEP grant £35,000</b></p>		

Project	Supply chain partnership	Contact
<b>Visual Inventory Optimisation Software</b>	<ul style="list-style-type: none"> <li>• Consult Avila</li> <li>• CANDA Systems</li> <li>• RLC Engineering (customer)</li> </ul>	Dudley Wood - Director dudley.wood@consultavila.com
<p>This project will: Develop a visual management software tool to optimise inventory levels based on a proven best practice methodology, including data visualisation and active &amp; dynamic inventory planning and control, segmentation, mapping, trend analysis, alerting, root-cause analysis and forecasting. This software will be supported by an inventory management and control e-learning package and will be delivered via cloud technology. NATEP grant £64,000</p>		

Project	Supply chain partnership	Contact
<b>Process Optimisation for Aerospace Alloys</b>	<ul style="list-style-type: none"> <li>• ANT Industries</li> <li>• Arrowsmith Engineering</li> <li>• Technoset</li> <li>• Pattonair Ltd (customer)</li> <li>• ITP SA (Spain) (customer)</li> </ul>	Mark Harriott – Technical Manager mark.harriott@antindustries.co.uk
<p>The project will: improve manufacturing processes on exotic metals that will substantially increase capacity in the Aerospace supply chain. Utilise the expertise of the Manufacturing Technology Centre, Coventry, to undertake research into specific machining processes. Optimise production methods for machined aerospace parts to secure UK supply chain competitiveness and reputation for providing a world class service. NATEP grant £90,000</p>		

Project	Supply chain partnership	Contact
<b>asureSign Aero</b>	<ul style="list-style-type: none"> <li>• Test and Verification Systems Ltd</li> <li>• University of Bristol</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Dr Michael Bartley - CEO mike@testandverification.com
<p>The funding supports the development of a tool (asureSign™) to support Requirements Based Verification for DO-178 &amp; DO-254 compliance in aerospace software and hardware development. Both standards mandate that developers demonstrate key safety requirements have been fully tested and that test coverage targets have been met. NATEP grant £92,000</p>		

Project	Supply chain partnership	Contact
<b>Wet Fit Slave Fasteners</b>	<ul style="list-style-type: none"> <li>• Kwikbolt Ltd</li> <li>• i2M</li> <li>• Wesco Aircrafts (customer)</li> <li>• GKN Aerospace (customer)</li> <li>• Lockheed Martin Aeronautics (customer)</li> </ul>	Mr Jan Niklewicz – Technical Director jan@kwikbolt.com

The project will design and develop, in collaboration, new innovative wet fit slave fasteners to be used during composite aircraft assembly. Providing a more efficient and effective working environment as well as a more cost effective, environmentally friendly and reliable method of production.

NATEP grant £145,000

Project	Supply chain partnership	Contact
<b>Supply Chain Excellence Data Streamlining (SCEDS)</b>	<ul style="list-style-type: none"> <li>• Prion Cutting Edge</li> <li>• Rule IQ</li> <li>• Assystem UK Ltd (customer)</li> </ul>	Mark Cella – Business Developer PLM mcella@prioncuttingedge.co.uk

SCEDS is the new affordable technology platform that shares aerospace project data, which is centrally located and secure, with an extended supply chain (SMEs), reducing the risk of costly design and manufacturing mistakes

NATEP Grant £150,000

Project	Supply chain partnership	Contact
<b>Precision Deep Hole Boring</b>	<ul style="list-style-type: none"> <li>• Perfect Bore Manufacturing Ltd</li> <li>• Dickinson Legg Ltd</li> <li>• Gemms Ltd</li> <li>• Impcross Ltd (customer)</li> </ul>	Jon Waghorn – Project Manager jon.waghorn@pbm-ltd.com

PBML and DLL are collaborating to produce more accurate, robust and enhanced geometric tolerance bore solutions to the aerospace industry

NATEP Grant £150,000

Project	Supply chain partnership	Contact
<b>Water Soluble Ceramics for Aluminium investment casting applications</b>	<ul style="list-style-type: none"> <li>• Aeromet Intl. Ltd</li> <li>• Adaptive Engineering Solutions</li> <li>• Airbus (customer)</li> </ul>	Mike Bond Director of Advanced Material Technology mike.bond@aeromet.co.uk

The project will develop a water soluble ceramic material which offers significant improvement potential in the investment casting industry. Once mature, this technology will allow components to be manufactured with features which today cannot be produced, thus opening up the product design space for parts count and component size reduction.

NATEP Grant £148,000

Project	Supply chain partnership	Contact
<b>Valuechain.com –connecting the Aerospace Supply Chains</b>	<ul style="list-style-type: none"> <li>• Valuechain.com</li> <li>• Techni Grind Machining</li> <li>• Hyde Coatings Ltd</li> <li>• Alcoa (formerly RTI Forming) (customer)</li> </ul>	Tom Dawes – Director tdawes@valuechain.com
<p>The Valuechain.com project provides multi-tier connectivity and visibility within the aerospace supply chain through an integrated cloud-based collaborative platform to streamline inter-company operations and develop competitive high value manufacturing extended enterprises.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Thermoplastic Composite Fusion Welding (CoFusion)</b>	<ul style="list-style-type: none"> <li>• AGC AeroComposites</li> <li>• The National Composites Centre</li> <li>• Ten Cate Advanced Composites Ltd</li> <li>• Rolls-Royce plc (customer)</li> </ul>	David Conway - Materials Technology Director dave.conway@agcaerocomposites.com
<p>The CoFusion project builds on previous development work to optimise the efficiency and applicability of an innovative, rapid, low cost and flexible thermoplastic composite welding process to aerospace standards.</p> <p><b>NATEP Grant £137,000</b></p>		

Project	Supply chain partnership	Contact
<b>SMART Racking System</b>	<ul style="list-style-type: none"> <li>• S2 Aerospace Ltd</li> <li>• University of the West of England</li> <li>• Airbus Military UK (customer)</li> </ul>	Tim Shortman - Managing Director tim.shortman@s2aerospace.com
<p>The funding supports the development of a SMART Racking System for high-value aircraft wheels in the aerospace MRO and the introduction of new development capability within S2 (currently “build-to-print”) for innovative engineering design solutions.</p> <p><b>NATEP Grant £154,750</b></p>		

Project	Supply chain partnership	Contact
<b>Whole-field simulated/ experimental data comparison</b>	<ul style="list-style-type: none"> <li>• Enabling Process Technologies Ltd</li> <li>• Strain Solutions Ltd</li> <li>• Airbus Operations Ltd (customer)</li> </ul>	Dr John Philip Tyler – Director philip.tyler@eptworld.com
<p>This project will develop a new method for the full-field comparison between experimentally derived digital image correlation displacement/strain data and finite element simulation results from aerospace structures, incorporating an innovative and fully automated coordinate transformation approach.</p> <p><b>NATEP Grant £77,000</b></p>		

Project	Supply chain partnership	Contact
<b>Xenon Pulse Technology in Fibre Placement</b>	<ul style="list-style-type: none"> <li>• Heraeus Noblelight Ltd</li> <li>• Hexcel Composites Ltd</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Martin Brown - Applications Manager martin.brown@heraeus.com
<p>Heraeus Noblelight Xenon Flash technology offers potential cost and performance advantages in processing of composite materials for aerospace applications. This research will take the technology closer to commercialisation.</p> <p><b>NATEP Grant £145,500</b></p>		

Project	Supply chain partnership	Contact
<b>Inhibiting Delamination in CFRP Composites</b>	<ul style="list-style-type: none"> <li>• M Wright &amp; Sons Ltd</li> <li>• Composite Innovations Ltd</li> <li>• GKN Aerospace (customer)</li> </ul>	Simon Marshall – 3D Development Manager simon@mwright.co.uk
<p>Delamination is a primary source of failure for composites, leading to over engineered parts. This project will investigate ways to inhibit delamination by three dimensional textile fibres in reinforced plastic composites</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Volume manufacture of a composite fixing and weight Reduction system</b>	<ul style="list-style-type: none"> <li>• Adhesion Technologies</li> <li>• MEP Ltd</li> <li>• Dopag</li> <li>• Formax</li> <li>• Pressavon</li> <li>• Loop Technologies</li> <li>• GKN (customer)</li> </ul>	Colin Wood – General Manager colin.wood@adhesiontec.com
<p>This project provides a machine to prove mass production of Fiba Spida fixings which will facilitate weight reduction and revolutionise how composite aerospace structures are designed, and constructed.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>TOGGLON a bonded Fixings Installation System</b>	<ul style="list-style-type: none"> <li>• Adhesion Technologies</li> <li>• MEP Ltd</li> <li>• Pressavon</li> <li>• Loop Technologies</li> <li>• GKN (customer)</li> </ul>	Colin Wood – General Manager colin.wood@adhesiontec.com
<p>The Togglon project enables us to deliver the world's first installation tool specifically designed to quickly, accurately and consistently install composite bonded fastenings on to most substrates at any angle.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Aerospacespecialprocesses.com</b>	<ul style="list-style-type: none"> <li>• Valuechain.com Ltd</li> <li>• Stainless Plating Ltd</li> <li>• Blackprint Ltd t/a “Alloy Heat Treatments”</li> <li>• Bombardier (customer)</li> </ul>	Tom Dawes – Director tdawes@Valuechain.com
<p>Aerospacespecialprocesses.com is a cloud-based platform which aims to develop a collaborative on-line platform that streamlines communication between aerospace manufacturers and special process houses by optimising complex planning variables, sharing 2-way information with customers and co-operative partners and consolidated logistics planner providing intuitive decision support to improve service levels, productivity and therefore increase the competitiveness of aerospace special process houses.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
<b>Collaborative Knowledge Management for Aerospace Operations Improvement</b>	<ul style="list-style-type: none"> <li>• Agile Business Improvement Ltd</li> <li>• Pentangle Internet Ltd</li> <li>• Gardner Group Ltd (customer)</li> <li>• Unilathe (customer)</li> <li>• Packaging Automation(customer)</li> <li>• Clwyd Compounders (customer)</li> </ul>	Helen Jackson hjackson@dna-agile.com
<p>The development and deployment of persuasive technology (captology) to drive behavioural and cultural change supported by an innovative cloud-based collaborative problem solving platform to support UK aerospace supply chain companies disseminate best practice and embed standardised continuous improvement solutions. This is further supported by utilising semantic search capability and access to a shared collaborative knowledge repository with the aid of industry experts.</p> <p>NATEP Grant £ 150,000</p>		

Project	Supply chain partnership	Contact
<b>Rapid Development Compressor Component Manufacture</b>	<ul style="list-style-type: none"> <li>• Centrax Turbine Components</li> <li>• Mettis Aerospace</li> <li>• West Country Tools (WCT)</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Josh Sansom josh.sansom@centraxtcl.com
<p>Providing a full commodity manufacturing solution to the production of HPC components to meet cost, quality and delivery targets in a flexible design sphere</p> <p>NATEP Grant £149,340</p>		



Project Title	Supply chain partnership	Contact
<b>Polymeric Additive Manufacturing for Aircraft Interiors</b>	<ul style="list-style-type: none"> <li>• Bristol Aero Ltd</li> <li>• HiETA Technologies Ltd</li> <li>• Ipeco Holdings (customer)</li> <li>• Jet Aviation AG (customer)</li> </ul>	Brett Peterson – Head of Engineering brett.peterson@bristol.aero
<p>The use of recently developed, cost effective, polymeric additive manufacturing materials with sufficient levels of fire retardancy for use in high value aircraft interiors and systems is investigated through a full design-manufacture-test cycle.</p> <p>NATEP Grant £145,500</p>		

Project	Supply chain partnership	Contact
<b>Additive Aero Valve Optimisations (AAVO)</b>	<ul style="list-style-type: none"> <li>• Meggitt Aerospace Ltd</li> <li>• Ashton &amp; Moore Ltd</li> <li>• GE Aviation (customer)</li> </ul>	Scott Lathrope –Meggitt PLC Engineer Scott.Lathrope@meggitt.com
<p>A program to design, manufacture and test a functional aircraft component that is fully optimised for additive layer manufacture. A standardised optimisation capability will be generated by capturing process “lessons learned”.</p> <p>NATEP Grant £142,500</p>		

Project	Supply chain partnership	Contact
<b>Hands Free Inspection Interface</b>	<ul style="list-style-type: none"> <li>• Muretex Ltd</li> <li>• University of Coventry</li> <li>• Cranfield Aerospace (customer)</li> <li>• Rolls-Royce (customer)</li> </ul>	Dr J T Platts – Managing Director jtplatts@muretex.com
<p>This project will develop an infrastructure and delivery system based on an optical head mounted display to reduce both the inspection time and the burden placed on inspection staff.</p> <p>NATEP Grant £73,800</p>		

Project	Supply chain partnership	Contact
<b>ROCA: RapiTime Object Code Analyser</b>	<ul style="list-style-type: none"> <li>• Rapita Systems Ltd</li> <li>• University of York</li> <li>• Rolls-Royce plc( customer)</li> <li>• Airbus Defence and Space Madrid (customer)</li> </ul>	Dr Guillem Bernat – CEO bernat@rapitasystems.com
<p>ROCA is a collaboration between Rapita Systems and the University of York, developing the next generation of software verification tools to reduce the cost and effort for current and future aerospace industry needs.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
<b>Dry Drilling of Aluminium Alloys</b>	<ul style="list-style-type: none"> <li>• Teer Coatings Ltd</li> <li>• Kyocera Unimerco Tooling Ltd</li> <li>• Airbus (customer)</li> </ul>	Dr Kevin Cooke – R&D Technology Centre Manager kevin.cooke@miba.com
<p>Dry, in-situ drilling of aluminium alloys, with no significant loss of performance, will reduce costs while improving the work place environment. The project facilitates dry-drilling with newly designed tools exploiting the latest high performance solid lubricant coatings</p> <p><b>NATEP Grant £105,670</b></p>		

Project	Supply chain partnership	Contact
<b>Plasma Cleaning in MCM Advanced Manufacture</b>	<ul style="list-style-type: none"> <li>• Welwyn Components Power &amp; Hybrid</li> <li>• Accelonix</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Billy Shaw – Engineering Manager billy.shaw@welwyn-tt.com
<p>This project will demonstrate that an innovative cleaning process can be introduced into the manufacture of advanced MCM (multi-chip module) devices for avionic engine controls, and automated to improve both yield and quality.</p> <p><b>NATEP grant £70,000</b></p>		

Project	Supply chain partnership	Contact
<b>Innovative Aerospace Transport Tooling</b>	<ul style="list-style-type: none"> <li>• Datum Tool Design</li> <li>• Fleet Maintenance</li> <li>• Bombardier Aerospace (customer)</li> </ul>	Michael Maguire – Joint Managing Director michael@datum-design.com
<p>The project is to gain understanding of cost effective and re-configurable tooling to permit the manufacture of multiple transport systems for aerospace assemblies</p> <p><b>Grant for R&amp;D £47,640</b></p>		

Project	Supply chain partnership	Contact
<b>Automated Manufacture of Slot Liners (AMSL)</b>	<ul style="list-style-type: none"> <li>• MEP Ltd</li> <li>• Jackson Design Ltd</li> <li>• SAFRAN Labinal Power Systems (customer)</li> </ul>	Phil Hart – Managing Director phil.hart@mep.co.uk
<p>Aerospace power generators operate at high temperatures; moulded components which act as insulators must cope with demanding electrical output, stresses and strains. This technology delivers high quality, safe products whilst retaining manufacturing in the UK in the long term.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Metal Matrix Composites for Helicopter Applications</b>	<ul style="list-style-type: none"> <li>• Aerospace Metal Composites Ltd</li> <li>• Mettis Aerospace</li> <li>• Leonardo MW Ltd (customer)</li> </ul>	Dr Stuart Godfrey – Business Development Manager stuart.godfrey@materion.com
<p>This project will develop both an aluminium and Silicon Carbide (SiC) metal matrix composite (MMC) material and create a forging supply chain specifically for helicopter applications. The funding will thus create a UK source (for the first time) for this high performance material which is required in the aerospace market.</p> <p><b>NATEP Grant £ 150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Prep'ing Composite Moulds with Lasers For Enhanced Productivity and Quality</b>	<ul style="list-style-type: none"> <li>• Advanced Laser Technologies Ltd</li> <li>• CNC Robotics</li> <li>• Cobham Antenna System (customer)</li> <li>• EPM Technology (customer)</li> </ul>	Roger Hardacre – Managing Director roger.hardacre@altlaser.co.uk
<p>The project will develop an advanced system that can clean, polish and repair moulds made of metal or composite used to produce composite parts. The intention is that a successful outcome will lower supply chain costs &amp; improve productivity of skilled labour by developing an automated technology for cleaning composite material moulds The system can be in a bureau format for low frequency users, or for high frequency users it can be a factory based solution.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Low Mass Composite Mould Tool (LMCMT)</b>	<ul style="list-style-type: none"> <li>• KAMAN Tooling Ltd</li> <li>• KAMAN Composites Ltd</li> <li>• Hexcel Composites</li> <li>• Ten Cate Advanced Composites</li> <li>• BAE Systems (customer)</li> </ul>	Paul Barrett – Managing Director paul.barrett@kaman.com
<p>The LMCMT project will revolutionise Composite tooling strategies across the Aerospace and Automotive sectors, delivering lower cost, lower energy and lower carbon footprint tooling to all of the major aerospace manufacturers making composite components. The objective of this R &amp; D project is to Design, manufacture and test 2 off Proof of concept Low Mass Composite Mould tools.</p> <p><b>NATEP Grant £146,560</b></p>		

Project	Supply chain partnership	Contact
<b>HoleGun+</b>	<ul style="list-style-type: none"> <li>• Third Dimension</li> <li>• Insphere Ltd</li> <li>• Airbus (customer)</li> <li>• GKN Aerospace (customer)</li> </ul>	Dr Tim Monks - Chief Technical Officer tim.monks@third.com
<p>The development of Third Dimension's "Optical Countersink Hole Inspection Solution" will dramatically improve manufacturing of complex aerospace components by simplifying inspection, reducing rework time, improving cycle time and significantly reducing overall cost of manufacture.</p> <p><b>NATEP Grant £147,760</b></p>		

Project	Supply chain partnership	Contact
<b>In-loom splicing for aerospace applications</b>	<ul style="list-style-type: none"> <li>• AVoptics</li> <li>• TT Electronics</li> <li>• BAE Systems</li> <li>• MOD - UK Chinook project team (customer)</li> </ul>	Andrew Voizey – Managing Director andy.voizey@avoptics.com
<p>To develop a simple to use, novel in-loom mechanical splicing technology to enable the repair of fibre optic harnesses on aircraft.</p> <p><b>NATEP Grant £149,760</b></p>		

Project	Supply chain partnership	Contact
<b>Project Fusion</b>	<ul style="list-style-type: none"> <li>• AVPE Ltd</li> <li>• South West Metal Finishing</li> <li>• Airbus Innovations(customer)</li> <li>• Airbus Group (customer)</li> <li>• Renishaw plc (customer)</li> <li>• LIMA (customer)</li> </ul>	Chris Steel – Chairman chris.steel@avpe.co.uk
<p>AVPE is an SME supplying directly into Airbus' MRO business. Project Fusion will develop Airbus certified "Class 2" components manufactured using ALM technology with modified post ALM machining, NDT and surface treatment processes.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Machine Connectivity &amp; Manufacturing Intelligence</b>	<ul style="list-style-type: none"> <li>• ATS UK</li> <li>• Hitex Ltd</li> <li>• Arrowsmith Engineering (Coventry) Ltd (customer)</li> </ul>	Martin Kelman – Senior MES Consultant martin.kelman@ats-global.com
<p>The project will create a highly cost effective Machine Connectivity Module (MCM) which connects and monitors manufacturing processes using the latest technology in the fields of; embedded sensors, wi-fi communications and android based data processing &amp; display platforms</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Proof of Systems Assurance &amp; Certification</b>	<ul style="list-style-type: none"> <li>• D-RisQ Ltd</li> <li>• Abstract Solutions Ltd</li> <li>• GE Aerospace (customer)</li> </ul>	Nick Tudor – Business Director njt@drisq.com
<p>This project seeks to provide an automated, highly assured, systems design analysis capability tool which will enable faster and more cost effective development of constantly evolving complex systems for aerospace and other associated markets.</p> <p>NATEP Grant £75,000</p>		

Project	Supply chain partnership	Contact
<b>3D Moulded Circuits</b>	<ul style="list-style-type: none"> <li>• Laser Optical Eng. Ltd</li> <li>• Moulded Circuits Ltd</li> <li>• MBDA UK Ltd (industrial supporter)</li> </ul>	John Tyrer johntyrer@laseroptical.co.uk
<p>Develop a laser writing system capable of producing 3D copper tracks or circuits on 3D aerospace lightweight structures.</p> <p>Create the ability to produce fully functional circuitry directly onto 3D parts, enhancing functionality and enabling them to become part of a larger product or system, thereby reducing size, weight and cost.</p> <p>NATEP Grant £145,727</p>		

Project	Supply chain partnership	Contact
<b>Finite Measurement</b>	<ul style="list-style-type: none"> <li>• Powerkut Ltd</li> <li>• Coventry University</li> <li>• Winbro Group (customer)</li> </ul>	info@natep.org.uk
<p>The project will build and market a new machine that is capable of processing gauge block calibration in an automated environment. This will address a market need for measurement results to improve at the same rate as materials technology in the aerospace sector and meet an increasing demand for consistent quality of results accessible for the whole supply chain.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
<b>Automated Testing of SPARK Ada Contracts (ATSAC)</b>	<ul style="list-style-type: none"> <li>• Altran UK Ltd</li> <li>• University of Oxford</li> <li>• Rapita Systems Ltd</li> <li>• MBDA UK Ltd (customer)</li> <li>• Rolls-Royce plc(customer)</li> </ul>	Stuart Matthews SPARK development team manager stuart.matthews@altran.com
<p>Software verification is an expensive and time consuming activity. In this project, Altran, University of Oxford and Rapita will combine SPARK specifications with automatic test vector and test harness generation thus reducing cost, risk and timescales for verification of aerospace software.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
<b>Fastener &amp; Stress Attenuator</b>	<ul style="list-style-type: none"> <li>• Adhesion Technologies Ltd</li> <li>• ENL Ltd</li> <li>• Dopag (UK) Ltd</li> <li>• Loop Technology Ltd</li> <li>• Pressavon</li> <li>• Leonardo MW Ltd (customer)</li> <li>• Jaguar Land Rover Automotive PLC (customer)</li> </ul>	Colin Wood General Manager colin.wood@adhesiontechnologies.com
<p>Adhesion Technologies Ltd is developing a 'Fastener and Stress Attenuator' to replace rivets and underperforming laminate in aerospace structures. This will enhance payload capability and lifetime operating costs across the aerospace sector.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Slave Fasteners for Automation</b>	<ul style="list-style-type: none"> <li>• Kwikbolt Ltd</li> <li>• i2M</li> <li>• Wesco Aircraft (customer)</li> </ul>	Dean Carran Operations Director dean@kwikbolt.com
<p>To align with the future of aerospace manufacture this project aims to design and develop single sided temporary fasteners and their interfaces suitable for fully automated aerospace assembly processes.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Hydraulic Hand Tool Development</b>	<ul style="list-style-type: none"> <li>• F E Robinson Ltd</li> <li>• Klauke UK Ltd</li> <li>• Airbus Operations (customer)</li> </ul>	Guy Williams Managing Director guy.williams@ferobinson.co.uk
<p>UK SME F.E. Robinson is leading the design and development of a range of light weight "Smart" Hydraulic hand tools tailored for use in the Aerospace sector. For the first time, the customer will be enabled in achieving substantial efficiency improvements in certain manual operation wing production processes.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Hot spot heat detection system</b>	<ul style="list-style-type: none"> <li>• Photon Fire Limited</li> <li>• Leigh Speciality Cables</li> <li>• Meggitt PLC (customer)</li> </ul>	Bill Shepherd Managing Director Bill.Shepherd@PhotonFire.com
<p>Development of an in-flight temperature monitoring system for aircraft - that localises hot-spots before an emergency incident occurs.</p> <p><b>NATEP Grant £85,480</b></p>		

Project	Supply chain partnership	Contact
<b>Distortion and Residual Stress Control for Manufacture</b>	<ul style="list-style-type: none"> <li>• Silcoms Ltd.</li> <li>• The AMRC with Boeing</li> <li>• Sandvik Coromant</li> <li>• Craftsman Tools Ltd</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Andy Morris Engineering Manager andrew.morris@silcoms.co.uk
<p>The partnership is working on a collaborative project looking to utilise the latest in FE analysis, residual and distortion stress management to optimise the engineering of high value, thin walled aerospace components. The project is aiming to keep the UK at the forefront of this highly skilled and competitive market.</p> <p><b>NATEP Grant £120,000</b></p>		

Project	Supply chain partnership	Contact
<b>Cryogenic Research of Efficiency on Structural Titanium (CREST)</b>	<ul style="list-style-type: none"> <li>• Hyde Aero Products Ltd</li> <li>• Starrag UK Ltd</li> <li>• Walter GB Ltd</li> <li>• BAE Systems (customer)</li> </ul>	Paul Mellor Technical Director pmellor@hydeaero.co.uk
<p>The objective of this project is to determine and understand the benefits of Cryogenic rough machining strategies when applied to prismatic Titanium Structural Airframe components in comparison to the traditional emulsion application</p> <p><b>NATEP Grant £101,670</b></p>		

Project	Supply chain partnership	Contact
<b>Triaging through NDT</b>	<ul style="list-style-type: none"> <li>• Theta Technologies</li> <li>• Manufacturing Technology Centre</li> <li>• Rolls-Royce plc</li> </ul>	Julian Wright Managing Director j.wright@thetatech.co.uk
<p>This project will investigate a novel non-linear acoustic non-destructive testing (NDT) method for instant triaging of defective metal components in automated real-time go/no-go decision making. The state-of-the-art is too slow and too expensive for commercial applications but without NATEP funding this will remain an academic technology curiosity and industry will not benefit from the anticipated reduction in inspection times.</p> <p><b>NATEP Grant £145,100</b></p>		

Project	Supply chain partnership	Contact
<b>Process Control Software Tool [PCST]</b>	<ul style="list-style-type: none"> <li>• Line Business Services</li> <li>• Amfax Ltd</li> <li>• Cobham Mission Systems (customer)</li> </ul>	Stewart Long Projects Director s.long@sovision.com
<p>This project will develop a new process control tool targeted at SMEs which will help ensure that agreed processes are followed systematically, consistently and transparently within projects to support the completion of manufacturing and development projects to agreed quality, time and budget parameters</p> <p>NATEP Grant £100,130</p>		

Project	Supply chain partnership	Contact
<b>Next Generation Single Crystal Helix</b>	<ul style="list-style-type: none"> <li>• Investment Casting Systems Ltd</li> <li>• C&amp;M Mould Tools Ltd</li> <li>• Resinex UK Ltd</li> <li>• Rolls-Royce (Precision Casting Foundry) (customer)</li> </ul>	David Granados Alcala Programmes Manager David@investmentcastingsystems.co.uk
<p>Design and production of an innovative feature which will increase the production yield of the casting process for single crystal turbine blades &amp; structures.</p> <p>NATEP Grant £142,600</p>		

Project	Supply chain partnership	Contact
<b>Metrology for Additive Manufacturing</b>	<ul style="list-style-type: none"> <li>• Insphere Limited</li> <li>• Renishaw</li> <li>• Airbus Group Innovations (customer)</li> </ul>	Ben Adeline Chief Executive ben@insphereltd.com
<p>This project will develop an innovative and highly sought after metrology verification method for additive manufacturing processes. This will enable unique techniques for additive manufacturing process control supporting the certification of AM parts for production aerospace use.</p> <p>NATEP Grant £122,800</p>		

Project	Supply chain partnership	Contact
<b>ALFLEX</b>	<ul style="list-style-type: none"> <li>• 3D Metal Printing Ltd</li> <li>• University of Bath</li> <li>• Leonardo MW Ltd (customer)</li> </ul>	Alberto Casonato Managing Director alberto@3dmetalprinting.co.uk
<p>The objective of this research is to investigate the capability of manufacturing in ALM a Tail Driveshaft Flexible Coupling for a Leonardo helicopter. The expected results are to improve damage tolerance, inspectability and eliminate the presence of fasteners and ultimately to reduce component complexity. Because this is a flight critical part, Leonardo will also be working with and supporting the partners on a less critical Fan Impeller to enable more testing that will improve and influence the Coupling design.</p> <p>NATEP Grant £88,200</p>		



Project	Supply chain partnership	Contact
<b>Combustion Chamber Process Innovation</b>	<ul style="list-style-type: none"> <li>• Nasmyth Technologies Ltd</li> <li>• Hucknall Sheet Metal Ltd</li> <li>• GE Aviation Czech (customer)</li> </ul>	Adrian Hill Engineering Manager adrian.hill@chinnltd.com
<p>Nasmyth Technologies Ltd will develop innovative processes for the manufacture of combustion systems in aircraft engines and support long term growth of jobs in the high value-added aerospace sector.</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Composite Pipe Bending</b>	<ul style="list-style-type: none"> <li>• Sigma Precision Components Ltd</li> <li>• e-Mould (UK) Ltd</li> <li>• Rolls-Royce plc (customer)</li> <li>• Bentley Motors (customer)</li> </ul>	Michael Andreae Director of Technology & Improvement michael.andreae@sigmacomponents.co.uk
<p>The Composite Pipe Bending project will develop a repeatable, cost effective method to bend composite pipes using CNC pipe bending equipment</p> <p><b>NATEP Grant £46,554</b></p>		

Project	Supply chain partnership	Contact
<b>Software Defined Telemetry</b>	<ul style="list-style-type: none"> <li>• TBG Solutions Ltd</li> <li>• G2 Communications</li> <li>• Rolls-Royce plc (customer)</li> </ul>	Neil Roddis R&D Manager neil.roddis@tbg-solutions.com
<p>Software controlled wireless communications system for reliable wide bandwidth remote monitoring of sensor data, initially aimed at improving efficiency and cost-effectiveness of aero engine development test</p> <p><b>NATEP Grant £150,000</b></p>		

Project	Supply chain partnership	Contact
<b>Ultrasonic Assisted Machining of Aerospace Composite (USAMAC)</b>	<ul style="list-style-type: none"> <li>• Teer Coatings Ltd</li> <li>• Kyocera Unimerco Tooling Ltd</li> <li>• BAE Systems (customer)</li> </ul>	Susan Field Collaborative Research Coordinator sue.field@miba.com
<p>USAMAC will demonstrate a new generation of drills, where tool design and state of the art coatings will enable the full benefits of ultrasonic assisted machining technology to be realised in the drilling of advanced composite stacks.</p> <p><b>NATEP Grant £137,600</b></p>		

Project	Supply chain partnership	Contact
<b>Integrally Bladed Rotor (IBR) – Abrasive Flow Machining</b>	<ul style="list-style-type: none"> <li>• ITP Engines UK Ltd</li> <li>• Extrude Hone Ltd</li> <li>• Brunel University</li> <li>• Industria de Turbo Propulsores, SA (customer)</li> </ul>	Carlos Cenal Project Engineer Carlos.Cenal@itp-engines.co.uk
Industrial research to model the effects of an Abrasive Flow Machining polishing process on aerofoil profiles and the development of predictive process controls which will lead to a reduction in manufacturing time and an improvement in quality. <b>NATEP Grant £107,350</b>		

Project	Supply chain partnership	Contact
<b>Integrally Bladed Rotor (IBR) – Abrasive Barrel Milling Cutter</b>	<ul style="list-style-type: none"> <li>• ITP Engines UK Ltd</li> <li>• Technicut Ltd</li> <li>• Geo Kingsbury</li> <li>• Industria de Turbo Propulsores, SA (customer)</li> </ul>	Carlos Cenal Project Engineer Carlos.Cenal@itp-engines.co.uk
Industrial research to develop the capability to manufacture gas turbine integrally bladed rotors (IBR's) using barrel milling tools thereby reducing manufacturing time and improving quality. <b>NATEP Grant £131,650</b>		

Project	Supply chain partnership	Contact
<b>Fastening Forms in Composite Technology</b>	<ul style="list-style-type: none"> <li>• Rotite Technologies</li> <li>• Sigmalex</li> <li>• University of Manchester</li> <li>• Airbus Operations Ltd (customer)</li> <li>• Aircelle Ltd (customer)</li> <li>• Ejot UK Ltd (customer)</li> </ul>	Stuart Burns Founder and Innovation Director stuart.burns@rotite.com
Lightweight structures and assemblies are essential for fuel efficiency and sustainable design. This project will develop, for the first time, integrally formed Rotite fasteners in composites, providing structural and weight saving solutions in contemporary materials. <b>NATEP Grant £139,500</b>		

Project	Supply chain partnership	Contact
<b>Helicopter Auto Regime Recognition and Continuous RTB</b>	<ul style="list-style-type: none"> <li>• Helitune</li> <li>• University of Bristol</li> <li>• Prosig</li> <li>• Castle Air (customer)</li> </ul>	Dominic Southgate - Project Manager dominic.southgate@helitune.com
This project will use novel algorithms that automatically detect helicopter flight regimes to enable continuous recording of rotor track and balance data. The outcome will be a reduced number of dedicated maintenance flights, increased helicopter availability and reduced overall costs to aircraft operators. <b>NATEP Grant £150,000</b>		

Project	Supply chain partnership	Contact
<b>Hot Isostatic Pressing of Titanium Components (HIPNOTIC)</b>	<ul style="list-style-type: none"> <li>• Maher Ltd</li> <li>• Nikken Innovation Centre Europe Ltd</li> <li>• Replicast Ltd</li> <li>• Westmoreland Testing &amp; Research Ltd</li> <li>• Airbus (customer)</li> </ul>	Gerry Clark Managing Director  gerry.clark@maher.com
The aim of the project is to deliver component demonstrators for the Wing of Tomorrow programme led by Airbus. Novel technology delivered by a newly established local supply chain will be used to manufacture the components. <b>NATEP Grant £148,545</b>		

Project	Supply chain partnership	Contact
<b>Forging Near Net Shape Titanium Components (FRANTIC)</b>	<ul style="list-style-type: none"> <li>• Maher Ltd</li> <li>• Bifrangi UK</li> <li>• Westmoreland Testing &amp; Research Ltd</li> <li>• The Boeing Company (customer)</li> </ul>	Gerry Clark Managing Director  gerry.clark@maher.com
The FRANTIC project aims to establish a new supply chain in the UK for titanium aero structures. Using novel forging techniques to manufacture near net shape components will result in cost competitive solutions for the end user <b>NATEP Grant £97,040</b>		

Project	Supply chain partnership	Contact
<b>Civil Aviation MRO Springboard (CAMROS)</b>	<ul style="list-style-type: none"> <li>• Advanced Aerospace Assembly Ltd</li> <li>• NC Technology Ltd</li> <li>• Replicade Ltd</li> <li>• Intoware Ltd</li> <li>• Argenta Nova Ltd</li> </ul>	Jim Heley - Managing Director jim.heley@a3l.uk.com
CAMROS (Civil Aviation MRO Springboard) investigates technology & business applicability of: Ingestion & delivery of digital work-cards Technician support via telepresence Visualised tracking of MRO history Focused on the needs of end-user BAE Regional Aircraft, CAMROS is a cross-border SME consortium <b>NATEP/Scottish Enterprise Grant £ 150,000</b>		