Northwest Aerospace Alliance

PLANE TALK

WINTER 2021

A new chapter

A new chair, a new year and new possibilities

PLUS:

Members' news | SC21 Competitiveness & Growth

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YOUR CONTENT

Please forward all content for future editions of Plane Talk to our editor at Freshfield, Paul Tustin.

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NWAA Chairman's winter statement

By Neil McKay

I would very much like to take this opportunity to say farewell to all of you who are part of this tremendous community that is the North West Aerospace Alliance.

It has been my privilege and honour to serve on the board of the NWAA since 1996 but particularly as your chairman for the last 15 years. I would like to express my gratitude to you all for the terrific support I have always enjoyed through some tough and challenging periods but equally in wonderful and uplifting times of our development as a changing and energetic force in the UK aerospace sector.

Together with three excellent CEOs in Martin, David and Sharon, supported by strong boards and good operational teams, I look back on those times with a strong sense of pride and attainment not just in what we achieved but the way in which we did it. The collective and collaborative nature of involvement of the membership, primes, local and regional authorities, universities, colleges and others in the broader community created the varied programmes that were instrumental in an effervescent change environment that drew from the customer community a growing respect for the reputation and prestige of the North West industry.

The direction for this successful approach was devised by you in the many workshops that outlined how to go about this journey. Then after support from the board, the operational team discharged the myriad of activities that constituted the programme content that directly influenced the capability, competitiveness and innovative technology that I saw you commonly deploy.

On a personal level I have made a great many friends amongst this membership community and can reflect on how enjoyable an experience it was to work with you all in some extremely testing eras across a wide spectrum of situations and industry demands.

I have been lucky enough to work in this sector for almost 50 years and am privileged to have been a part of this North West powerhouse of industry throughout that time. It has been the best of places to spend one's career in and where I can reflect upon the camaraderie, humour, stimulation and exhilaration that comes with the successes in overcoming the many ordeals we have had thrust upon us of a major political or global nature, emphasised by the current circumstances.

I am also rightly proud of the NWAA and its team and know that you will continue to support this organisation and all it strives for in your name and for the good of the long-term future of the North West as a whole. To that end I am delighted that, as previously announced, Andy Schofield will be the next chairman and will be in place at the end of this year.

Andy is someone I have known for most of my career and is an extremely capable, experienced and adroit individual who is just the right type of person to take this organisation and its membership through the next phase of its development and I wish him well in all that he does.

It just remains for me to say thank you to you all for the wonderful commitment and encouragement I have received from a great many of you throughout my time as your chairman.

May I wish you all and your families a Merry Christmas and a Happy New Year.

OUR STAKEHOLDERS

Lancashire Enterprise Partnership · UK Trade & Investment · Department for Business, Energy & Industrial Strategy · Department for Communities and Local Government · finance birmingham

NWAA Chief Executive's winter statement

By Sharon McDonald

We have all been through so much over the last 20 months, I hope we can safely navigate the winter months and start to focus on how we build our industry and society back better.

I was delighted that our first face-to-face Annual Conference in September was so well attended by our members. They were clearly drawn to our fantastic keynote speakers who showed us all that we have some exciting challenges ahead of us. Michael Christie, Director of the Combat Air Acquisition Programmes for BAE Systems told the conference that one of the key challenges for industry is the significant reduction of product development lead time. Michael felt that industry competitiveness would be significantly enhanced if lead times could be halved, and new products reached markets much quicker. This also applies to the civil aerospace sector and especially to the new aerospace products that we can already see that are being developed to meet the sustainability challenges.

Our main sponsor of the Annual Conference was Kuehne+Nagel, the global transport, logistics, and supply chain company. Our members learnt from Lesley Brodie, UK Sales Director, just how committed Kuehne+Nagel is to sustainability and meeting the United Nation's targets. The United Nations Climate Change Conference COP26 hosted by the United Kingdom in Glasgow has provided us all with a clear indication of where governments are going to focus resources and investment in the future.

All our conference speakers were excellent, but I was particularly grateful to Scott McLarty, the Senior Vice President of Airbus & Business Jet Programs at Spirit AeroSystems (the world's largest independent designer and manufacturer of aerostructures for commercial aircraft) for spending the entire day with us and sharing a unique insight into Spirit's new Aerospace Innovation Centre. Scott showed the conference how Spirit has digitally transformed and automated a new state-of-the-art composite spoiler assembly line for the single-aisle programme. Composites will play a vital role in contributing to how we achieve Net Zero. Lightweight, adaptable, immensely strong, and durable composites are the essential enabling technology for decarbonisation. They hold the key to more efficient air transport and the much talked about hydrogen powered aircraft. What Spirit has also demonstrated is that composite structures can now be developed and manufactured more quickly, helping us to achieve the product development lead time reductions highlighted earlier by Michael Christie.

All the opportunities and challenges highlighted by our conference will be magnified by a talent and skills gap that the North West Aerospace Alliance see growing in 2022. We have clearly seen the industry shed jobs because of the pandemic, and now we are seeing increases in attrition levels, early retirements of senior personnel, whilst we know that attracting new talent into the industry is difficult. Many young people today have ESG (Environmental, Social, Governance) concerns. As an industry we are only going to attract the best new talent if we can demonstrate how we will build a sustainable aerospace and aviation sector. As such, I hope you agree that the North West Aerospace Alliance should place more focus on working with our members on sustainability in 2022.

Finally, I must take this opportunity as CEO, and on behalf of the previous CEOs, to thank Neil McKay as he stands down as chairman of the North West Aerospace Alliance. Neil has served this organisation for over 25 years as both a board director representing BAE Systems and, since 2006 as Chair. Neil's leadership and strategic influence has ensured that NWAA, always, has had the ability to support and help move our industry forwards. Neil has been a passionate campaigner for the North West's aerospace and defence sector, and I am sure will remain so.

I am delighted that Neil has helped us to find such a worthy successor in Andy Schofield, who will assume position in January 2022. Andy is Programme Technology Integration Director within the air sector and Global Engineering Fellow of BAE Systems Ltd and is an Honorary Professor at the University of Nottingham. Andy is responsible for the integration of advanced technologies and capabilities used across a variety of current and future products within BAE Systems. He represents BAE Systems on the programme boards of a number of High Value Manufacturing Catapult Technology Centres in the UK, and sits on a number of national advisory groups, including Made Smarter and is a non-executive director council member of the TWI.

I hope you agree with me that Andy has the knowledge, experience and credentials required to take forward the excellent work of Neil McKay and lead NWAA into the future.

Finally, I'd like to wish you and your families a very Happy Christmas and a wonderful New Year

The NWAA welcomes the following new members...

Castlet Ltd
https://www.castlettltd.co.uk/

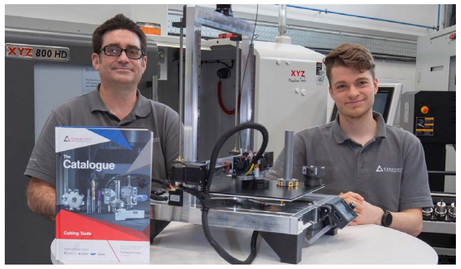
Green Shield Group
https://greenshieldgroup.co.uk/

Delkia Limited
https://www.delkia.co.uk/

Vishay Measurements Group UK Ltd
http://micro-measurements.com/

AMRC graduate's final year project put to good use at Ceratizit's new Technical Centre

Ceratizit UK & Ireland's investment in apprentice training is paying off with Stephen Pennington completing his Manufacturing Technology apprenticeship and final year industrial project by designing and manufacturing a feature rich custom cartesian 3D printer.



Stephen Pennington (right) with Shaun Thornton and the finished 3D desktop printer

This printer will now be used in the new Ceratizit Technology Centre in Sheffield to rapidly prototype special tooling prior to its manufacture within the group, as well as other workshop applications.

Stephen, who is now a Projects Sales Engineer working in the Ceratizit Technology Centre, was given full creative control of the project, which involved carrying out a review of existing desktop 3D printing systems and identifying the best features of each, then incorporating them into his design.

The result was a printer featuring a fully custom aluminium frame, linear rail technology to move each axis, 32bit mainboard for control, an auto bed levelling sensor, direct drive extrusion and a touchscreen user interface to name a few. In total, 150 hours were spent on the project, which included 50 hours of machining components on the XYZ 800 HD vertical machining centre located within Ceratizit UK & Ireland's Technology Centre and the writing of a 7000-word dissertation.

While the design element of the project went ahead with minimal complications, the deadline to finish the machining, assembly and testing of the 3D printer was fast approaching. Machining was to be done in the Ceratizit Technology Centre, which at the time was still being finalised and machines still being installed. Time was running out for Stephen.

"It was just a month before my deadline when the XYZ 800 HD machine was installed and I was itching to get started. I had created the assembly, parts and programs using Fusion 360 CAD/CAM software and, of course, the Ceratizit tooling that I needed was ready and waiting. So as soon as the machine was fully commissioned, I began the machining of the main structural components," says Stephen.

Stephen underwent training on the XYZ 800 HD machine under the guidance of XYZ Machine Tools' Mark Higson and was quickly conversant with all of the machine's capabilities. This allowed him to maximise the performance of the Ceratizit tooling, which included AluLine DLC (Diamond Like Coating) milling cutters ranging in size from 4m to 16 mm, making use of the various cutter geometries available to him. A range of Ceratizit thread milling cutters and solid carbide drills were also part of the tooling package utilised in the project. Throughout the project Stephen was mentored by Ceratizit UK & Ireland Technical Manager Shaun Thornton, who kept a watching brief, offering advice and guidance when required.

While many apprentice projects simply gather dust on a shelf, Stephen's 3D printer is going to be hard at work creating rapid prototype models of special tooling for customers. These will be used to aid visualisation of the finished tool, allow clearances to be checked and generate the confidence that customers are looking for prior to full manufacture of the tools.

For over 95 years, CERATIZIT has been a pioneer in developing exceptional hard material solutions for machining and wear protection. The private company, with registered offices in Mamer, Luxembourg, develops and produces highly specialised cutting tools, indexable inserts, rods made from hard materials and wear parts. The CERATIZIT Group is the global market leader in various application segments and successfully develops new carbide, cermet and ceramic grades, such as for wood and stone working.

With more than 7,000 employees at more than 25 production facilities and a sales network with over 50 branches, CERATIZIT is a global player in the carbide industry. The company's international network includes subsidiary Stadler Metalle and joint venture CB-CERATIZIT.

The technology leader is continually investing in research and development and holds more than 1,000 patents. Innovative hard material solutions from CERATIZIT are used in various sectors, including mechanical engineering and toolmaking, in the automotive and aerospace industries and in the oil, gas and medical industries.

Stephen Pennington at the XYZ 800 HD Vertical machining centre used to machine the components for the 3D printer

Steps to Certification

Find out more about BSI's steps to certification guide

With soaring demand in the aerospace industry for certification as part of tenders, BSI has compiled a simple document to help quickly determine where your organisation sits in the certification journey.

With BSI's sector expertise and experience, we can guide you to success in a set of simple steps. Read on to find out more and how to access your certification guide.

In a sector where quality is paramount, BSI provides integrated services and solutions to ensure not only excellence, but safety, integrity, and reliability. Our series of AS/EN 9100 standards are internationally recognised and can target key areas in quality and business management.

Dedicated aerospace experts can support clients in facilitating sustainable growth and performance, all whilst managing risk and meeting regulatory requirements. Using comprehensive solutions to ensure quality and safety, we can provide standards for quality management systems covering a wide scope of areas.

From design, production and maintenance, through to stockholding and distribution, BSI offers standards to target the areas of your business that require a stringent and sustainable quality management system.

Certification can pave the route to success for your business. BSI has the expertise and global coverage to train and certify to the AS/EN 9100 series of quality standards as well as many others.

We can also help you improve environmental and health and safety performance with ISO 14001, the world's leading environmental management system as well as standards such as the international occupational health and safety standard, ISO 45001. Additionally, BSI can help you minimise the impact of disruptive incidents with ISO 22301 business continuity management and steer you through the complexities of ongoing digitalisation, helping you to protect commercially sensitive information and safeguard against cyber-attacks with ISO/IEC 27001 information security management.

Certification enables a business to show that they have achieved effective best practice against a standard within their organisation. Certification to the AS/EN 9100 series of standards will help to increase market opportunities, increase efficiency, save money and allow traceability throughout your supply chain. Combined, this facilitates continual improvement and a happy and engaged workforce.

Our 10 simple steps to certification can begin your journey to excellence within the aerospace sector. Through testing, assessment and certification, you can increase your organisational resilience, reduce costs, increase customer and stakeholder satisfaction and so much more. Our helpful and informative document lists out easy-to-digest information on how your organisation can begin, with tips on how to get started and what BSI can do to help make your organization future-proof.

Download the AS/EN 9100 Series Aviation, Space and Defence Steps at https://page.bsigroup.com/BSI-Steps-to-certification

Airframe Designs Expands into Computer Aided Design and Ventures into Innovative Technology

Computer-Aided Design

Airframe Designs has extensive experience in the field of Computer-Aided Design.

We are growing our design office to provide CAD support services (CATIA / SOLIDWORKs) to sit alongside our well-established structural analysis and certification capabilities.

Our offering encompasses general mechanical design services for the aviation, space and defence sectors, supporting the conceptual development of mechanical structures from the requirements capture phase through to preliminary, critical and final design reviews.

With Computer-Aided Design allied with structural analysis, AFD offers an ideal environment to design cost-effective mechanical structures.
We also provide a turn-key solution for design, analysis, and manufacture via a trusted manufacturing supply chain.

Our Computer-Aided Design Services include:

MECHANICAL	TEST RIGS	TOOLING	GSE, LIFTING & HANDLING
Installations	Coupons	Mould tools	Ground support equipment
Repairs	Details	Trim tools	Lifting equipment
Products	Components	Rout tools	Handling equipment
Platforms / systems	Full-scale	Jigs & fixtures	Small-to-medium size

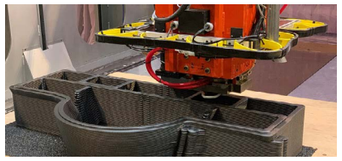
Innovative Technology

Airframe Designs is involved in the research, development, and demonstration of innovative technology through partnerships with specialists in SMART tooling, 3-D printing, and tool surface compensation.

For SMART tooling and 3-D printing we provide a turn-key solution for design, analysis, and manufacture via a trusted manufacturing supply chain.

For tool surface compensation, we provide distortion analysis of composite parts to ensure tools are appropriately designed and compensated. This can eliminate distortion issues associated with thermal expansion, shrinkage, and tool-part interaction.

These technologies can significantly reduce manufacturing lead-times, improve quality, and eliminate and ultimately reduce life-cycle costs.



The innovative technology areas being explored by AFD include:

SMART TOOLING	3-D PRINTING	TOOL SURFACE COMPENSATION
Complex Shapes	Design for 3-D Print	Asymmetry Issues
Closed Form Shapes	Material Selection	Thermal Expansion
Enclosed Geometry	Part Manufacture	Tool-Part Interaction
Shape Memory Polymers	Qualification	Cure Shrinkage Effects

For more detail on services and support available, contact Airframe Designs.
Email: **reachout@airframedesigns.com**
Phone: **01253 400320**
LinkedIn: **www.linkedin.com/company/airframe-designs-limited**
Web: **www.airframedesigns.com**

ADDEV Materials

ADDEV Materials becomes the official distributor of Solvay's composite products in the UK

ADDEV Materials and Solvay have entered into an agreement whereby ADDEV Materials will become the official distributor of Solvay's class leading range of composite products in the UK.

This will provide a number of advantages to advanced composite manufacturing companies. ADDEV Materials will be keeping significant stocks of prepregs, tooling materials, adhesives and primers in a new freezer complex at their AS9100 approved facility in Holywell Green, Yorkshire.
Customers can access the entire Solvay product range of more than 200 materials produced in Solvay facilities around the world though the single outlet at ADDEV Materials.

Stock items will be despatched for immediate shipment throughout the UK including cold and frozen products. ADDEV Materials has global expertise in converting sheet and film materials and this service will in future be extended to Solvay's materials, with prepreg cut and modified to customer's requirements.

Customers in the aerospace, automotive and other high-tech industries will benefit from a simplified supply chain, stock availability, smaller minimum orders and immediate product support in their region.

Solvay is a top tier supplier to the aerospace and automotive industries. It provides advanced composite and adhesive materials designed for extreme-demand environments, radical temperature changes, material expansion and contraction and other demanding external conditions.

ADDEV Materials is an expert distributor and converter of advanced materials to the aerospace, automotive and other industries. The Solvay composite range completes a convincing portfolio of products for the composites industry including finishing and release films, surface coatings and paints, fillers and adhesives and hot bonders, autoclaves and vacuum hoses.

Dormer Pramet appoints new President

Eduardo Martin has been appointed as the new President of Dormer Pramet.

Eduardo will take on the role from 1 February 2022, replacing Stefan Steenstrup, who became President of Seco Tools in October.

For the last six years, Eduardo has been Senior Vice President – Head of Global Sales at Sandvik Coromant and has a long and extensive career within Sandvik.

He joined Sandvik Coromant in 1988 as a programmer of electronic grinding machines and has worked and lived in the USA, Sweden, Italy and Spain. He has held several key senior roles at Coromant, such as Managing Director of Spain and Portugal, as well as heading up Market Area Americas.

A Spanish national, he holds a Technical Engineering degree and an Executive Master's in Business and Administration.

Eduardo said: "I am delighted to be appointed President of Dormer Pramet. This is a wonderful organisation to join, with a huge amount of experience and knowledge across the metalworking industry. It is an extremely exciting period in our company's history, with strong growth ambitions for the next few years. I cannot wait to start working with our teams and customers around the world."

Filippo Mauri will continue to lead the Dormer Pramet team during the interim period over the next few months. In February, he will return to his position as Vice President of Mergers and Acquisitions to support the company in its continued growth ambitions.

Dormer Pramet is a division within Sandvik Machining Solutions.

More information on Eduardo will provided closer to his start date in February 2022. For details regarding Dormer Pramet please visit **www.dormerpramet.com** or contact your local sales office.

Kuehne+Nagel and Lufthansa Cargo agree on partnership to promote power-to-liquid fuel

Kuehne+Nagel and Lufthansa Cargo have agreed on an exclusive partnership for the promotion and use of synthetic crude oil from NGO atmosfair based in Berlin.

The logistics service providers have jointly committed to supporting the world's first production site for synthetic crude oil in Werlte, Emsland (Germany) by purchasing 25,000 litres per year for the next five years. Synthetic fuels have not yet been produced industrially but are available only in laboratory quantities. This fuel is considered to be the fuel of the future, capable of bringing the CO2 footprint of aircraft engines to zero.

Yngve Ruud, Member of the Management Board of Kuehne+Nagel, responsible for Air Logistics, commented: "Already now, Kuehne+Nagel customers can avoid carbon emissions of their shipments globally with our bio SAF solutions and I am delighted to see that time has come for synthetic SAF as the long-term solution for aviation.

"By securing the first power-to-liquid fuel production together with Lufthansa Cargo, we are sending a strong message of commitment and collaboration, inviting our industry colleagues and customers to join us in creating the low-carbon economy of the future already today."

Dorothea von Boxberg, CEO Lufthansa Cargo, explained the strategic background to the partnership with Kuehne+Nagel. She said: "We clearly see the key to a sustainable reduction of our emissions in flight operations in the research and use of synthetic, sustainable aviation fuels.

"The fact that we are now pioneering power-to-liquid technology together with Kuehne+Nagel makes us particularly proud and shows once again that we are actively tackling our climate protection challenges,"

With characteristics almost identical to those of conventional jet fuel, sustainable aviation fuels are an essential pillar on the way to CO2 neutral flying. There are two main types of sustainable aviation fuel – bio SAF and synthetic SAF.

P2L fuel production

P2L fuel production - synthetic SAF is considered the long-term solution for the industry as it can be produced without availability limits, avoiding biomass supply limitations, and can reduce emissions by up to 100 per cent.

Until now, Kuehne+Nagel and Lufthansa Cargo have used bio SAF to reduce the carbon footprint of air freight. While bio SAF is produced from biomass (waste products and feedstocks with low carbon content), the primary energy source and feedstocks for the production of synthetic SAF are renewable electricity, water and carbon dioxide (CO2).

Aerospace & Defence

As your preferred partner we are proud to be the market leading supplier of your logistics and supply chain services.

We support our customers' aerospace and defence needs across the globe.

Our dedicated UK team has experience in the design, implementation, management and development of supply chain solutions supporting all aspects of design and development, build, in service support and decommissioning.

We work as an extension of your business to understand your requirements and translate these into solutions that will enhance your capabilities and deliver operational efficiency.

For more information, visit:
https://uk.kuehne-nagel.com/-/news/lufthansa-co2-neutral-power-to-liquid-fuel

ADS SC21 21st century supply chains
Competitiveness & Growth

North West SC21 Competitiveness and Growth Aerospace Cluster of Excellence

The beneficiaries are making good inroads into their improvement plans with many holding weekly or bi-weekly sessions with teams across their organisations. For the majority, training thus far has focused on strategy, business development and sales, procurement and health and safety.

The ACE members are using several of the programmes' approved training providers including NWAA members Biskit and Redthorn to undertake the training which is being done primarily in person on-site.

In other activity we hosted our bi-monthly ACE Steering and User Groups in a combined meeting. This provided the User Group, which is made up of the ACE beneficiaries, to directly update the Steering Group which is made up of their customers and other Primes/Tier 1 organisations on the progress they have been making to date through their improvement plans and raise any common observations or queries.

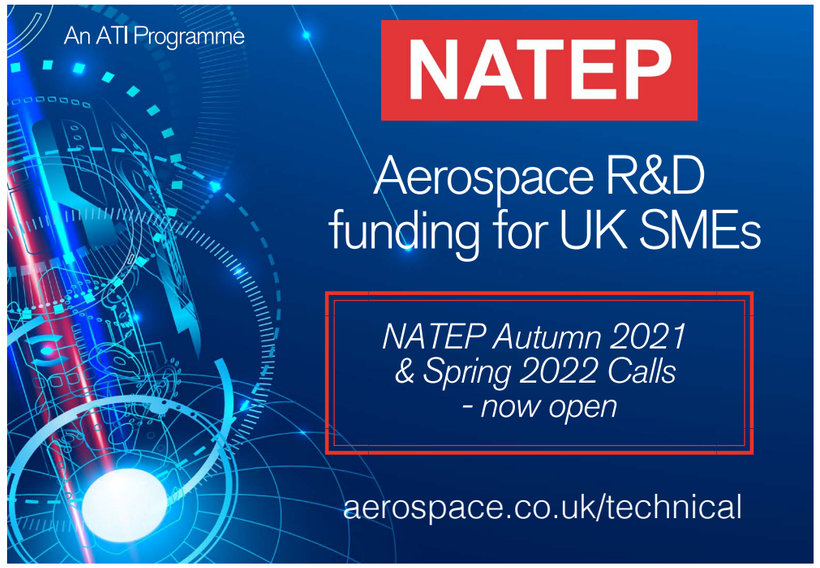
The combined meeting enabled the user group to also receive feedback, and a more general business update from the steering group members.

Due to its success, we will also be combining the next meeting which will be in person at the new AMRC NW site. This session will include customer best practice workshops. These workshops enable the members of the ACE cluster to learn from each other and their customers how they have implemented key processes in their businesses. This provides suppliers with unique insight as to how their peers and customers work and how they might reflect this in their own businesses.

For more information on the ACE and how you can join, please contact:
Catherine Toon via **catherine.toon@aerospace.co.uk** or **075300 97899.**

Aerospace Cluster of Excellence

A&G Precision and Sons Ltd.
ADDISON
HYCROME AEROSPACE
senior
SILCOMS
TELEDYNE CML COMPOSITES Everywhereyoulook
UNILATHE
velocity composites plc



ADS
BAE SYSTEMS INSPIRED WORK
BOEING
NMCL
Rolls-Royce
SAFRAN
SMMT DRIVING THE MOTOR INDUSTRY

NWAA Conference: Welcome back, we've missed you

An impressive line-up of high-profile speakers looked at the major trends around next-generation supply chains in the UK aerospace and defence sectors when the North West Aerospace Alliance Annual Conference returned for its seventh edition on Thursday 23 September.

Over 100 delegates attended the full-day 'Next Generation Supply Chains' conference at The Dunkenhalgh Hotel near Blackburn after the 2020 event was cancelled due to Covid-19.

The presentations held throughout the day reflected the issues, challenges and future opportunities facing the aerospace industry through a series of thought provoking and stimulating talks and group discussions.

Sharon McDonald, Chief Executive of NWAA welcomed delegates: "It is so great to be back to our first face-to-face event since February 2020. It is fantastic to see so many familiar faces and many new ones as well. I'd like to publicily give a big thank you to the team at NWAA who have worked tirelessly to bring as much normality to the membership as possible with a continuation of virtual events, news and social media updates and making sure members have been kept informed of all the latest industry news. I'd like to officially welcome you to our 2021 confernece, it is set to be a great event!". Sharon handed over to Dr David Bailey who facilitated the conference.

Dr David Bailey opened by saying: "Welcome back, I've missed you. So much has changed since the last conference in 2019, and it's difficult to know where to start. The onset of the global Covid-19 pandemic in the first quarter of 2020 led to a lack of air travel with the obvious impacts on airlines and the demand for new aircraft".

"You will all have experienced, to some degree, the effects of signicant cuts to aircraft production. I'm actually surprised at how few aircraft suppliers we've lost to the pandemic. Her Majesty's Government's loans and furlough helped the region's aerospace suppliers to survive the worst of the pandemic, and those companies were able to use their capabilities to support the UK's R&D endeavour with the likes of the ventilator and PPE programmes. We need to build on that kind of endeavour with bigger programmes going forward that help the UK's levelling-up policy."

"I have also been surprised by the side effects of the pandemic. I have seen business leaders want to understand more about how they can use digitalisation to transform their organisations, and there has been a step change towards a more sustainable aviation industry sector – which aligns with government and public support towards the transition to a carbon neutral country.

"As we start to see the potential route for recovery back to pre-pandemic levels of aircraft production and beyond, companies are now thinking about employment, potential skills gaps, and the need to build back better."

Global Markets & Technology

The morning session, focused on 'Global Markets & Technology', which explored how the UK's aerospace and defence markets have been impacted by Covid-19, along wth the differing responses taken by companies, and looked at when aircraft production levels might recover to pre-pandemic levels.

Delegates discussed where future growth is likely to emerge and whether the pandemic has accelerated innovation and green technology, which will be crucial if the industry is to meet its commitment of achieving net zero CO_2 emissions by 2050.

Michael Christie, Project Director for Future Combat Air Systems for BAE Systems, gave a presentation about the Tempest programme and the company's 'Half The Time' challenge to make the programme 50% more efficient. He explained that they would achieve this through digitalisation, agile methods and processes, people and culture, and collaboration.

Alastair Horrocks, Director of Corporate Finance with KPMG, echoed the need for rapid development cycles, automation and digitalisation. The final speaker of the first session was Michael Hyde, Sourcing and Contracting Manager – Aircraft Solutions for Leonardo UK – Helicopter Division. It was exciting to see a global aerospace manufacturer travelling to Lancashire to look for potential new suppliers to service new programmes of work.

> "We need to be more flexible, more efficient, and more green. Good is no longer good enough."
>
> **Aidan Wigham**
> Technical Account Manager
> MSP (Gold+ Sponsor)

Brexit and Digital Supply Chains

The lunchtime session featured Kuehne & Nagel (Platinum Sponsor) and focused on 'Sustainability and Race to Net Zero'. Delegates discovered more about the next generation supply chain, and how there would need to be a much greater focus on sustainability and the United Nation's Race To Zero objectives. In the run up to the UK hosting the United Nation's COP26 event, this was a timely discussion about what more companies can do to help achieve climate change targets. An interactive session encouraged everyone to reflect on their business and consider how they can become more sustainable and reduce their carbon footprint.

Aerospace Supply Chain

The final session of the day, focused on 'Aerospace Supply Chain'.

Malcolm Scott, CDO at Aerospace Technology Institute, Scott McLarty, Senior Vice President of the Airbus Program at global Tier 1 civil aerospace supplier Spirit AeroSystems, and Aidan Wigham, Technical Account Manager at MSP helped delegates understand the challenges the industry face in returning to pre-pandemic levels of business given its new size and shape – and how it can develop supply chain resilience and dynamism to support this.

The pandemic has resulted in lower aircraft demand and restrictions on the movement of people and goods , which has led to a breakdown of many essential aerospace and defence supply chains. The UK's A&D supply chain companies have been forced to downsize and diversify into new markets – such as nuclear, oil and gas, medical equipment and power generation.

Malcolm said the pandemic has sped up the role R&D plays towards a more sustainable future for the sector. He spoke about the need for 'building back greener' and the vision for hydrogen powered aircraft.

Aidan Wigham, Technical Account Manager MSP (Gold+ Sponsor) also spoke about the need for the sector to push forward. He said: "We need to be more flexible, more efficient, and more green. Good is no longer good enough."

He added that the next generation of aerospace needed to be automated, data driven, sustainable and digitalised with continued improvement.

Scott McLarty gave an outstanding presentation on the current status of the Spirit AeroSystems business and an insight into the direction of major primes such as Airbus and Boeing. Scott also showed a video of the new automated production line of a composite spoiler for single-aisle aircraft. The conference was delighted to be given the opportunity to view this world-class technology and a benchmark for modern manufacturing. Scott McLarty brought the presentations to a close stating: "it's important we continue to focus on quality in the supply chain." Scott finished by saying that the UK supply chain is globally competitive and with an increasing focus on quality has the opportunity to grow.

Stronger For the Future

The conference closed with a speech from Chairman Neil McKay who had announced in the morning session that he would be stepping down at the end of the year after 25 years on the board – 15 of those as Chairman.

He told delegates that the Chairman Designate will be Andy Schofield, who has had a long career in aerospace and is currently Technology Delivery Director at BAE Systems.

Mr Schofield said: "I look forward to working with you and putting all my energy and effort into this and pushing forward, powering the North."

Neil concluded "The pandemic has been a surprise and a lot of negatives – but there is plenty of entrepreneurial spirit coming through today. We are going to come out of this stronger for the future."

Taking the stress out of stress analysis

Vishay Measurements Group (UK) Ltd is the UK based subsidiary of Vishay Precision Group based in Basingstoke, Hampshire, UK.

From this location, it offers complete sales and technical support, product supply, services and training to serve the needs of stress analysis, OEM Transducer and Load Cell customers. Our range of high precision foil-based strain gauges, sensors, data acquisition systems and accessories facilitate a successful completion of your installation obtaining accurate, reliable strain data.

Design improvements over traditional strain gauge types include smaller and tighter grid-resistance tolerances, improved gauge-to-gauge repeatability, and enhanced measurement stability. All enhancements are implemented via a fully optimised fabrication process, incorporating the very latest in tooling, methods, and equipment. As a result, the prototype design and manufacturing of anywhere from a single strain gauge piece up to OEM volumes may be easily accommodated, with uniform high quality and competitive lead times.

The Micro-Measurements Advanced Sensors Technology product portfolio includes linear, shear and circular gauges, arranged as individual, half-bridge and full-bridge configurations, in ranges from 350 Ω to 20 kΩ, with added flexibility in mounting options.

For those who do not wish to carry out in-house bonding or for customers requiring additional capacity, we provide full sub-contract bonding service from the Basingstoke facility, offering fast response to sample and batch requirements. Providing on-site installation capability in conjunction with our highly experienced technicians, we can support your own project engineers with the application of strain gauges at your site.

Training is a large part of our activity and should it be on-site or in attendance at our UK training centre, we provide instruction for the practical application of strain gauges, surface preparation, and associated wiring and installation testing. Further workshops for instrumentation and transducers are also available.

Extensive inventory for all our range is supported by on-site warehousing and logistics, which allows us to offer faster response times with many standard and custom patterns, accessories and DAQ systems available for delivery next working day.

Customers have access to full technical and sales support from our local field application engineers and sales managers - providing local support for your projects, guidance on gauge and accessory selection, our data acquisition systems, system hire and stress analysis bonding.

We provide customers with technical, engineering and sales support through our specialist local team.

Supporting you to achieve reliable, accurate results with local support allows us to stay close to the people that matter. We are able to achieve this based on an explicit understanding of our customers' needs and by forming strategic relationships with OEM and end users alike.

Please contact us for more information on how we can support your sensing requirements.

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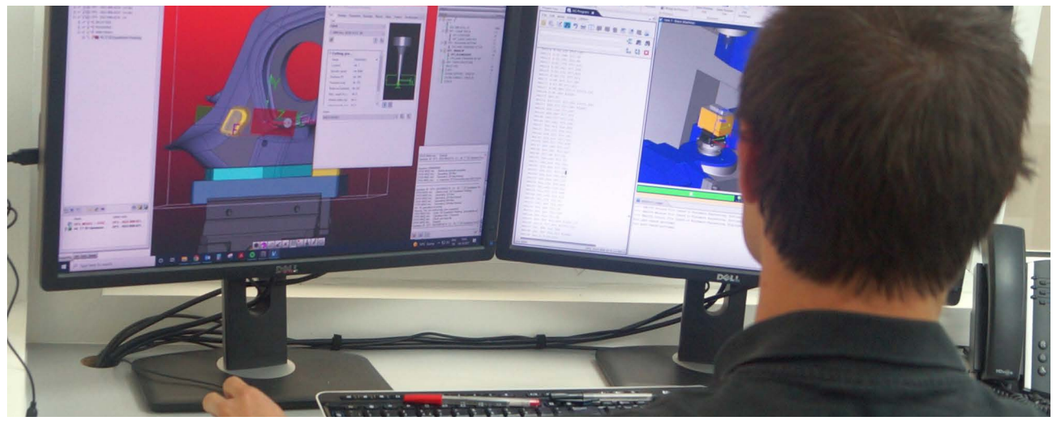
Productivity gains provided by VERICUT



With an impressive machine shop that equals many of the motorsport teams that it supplies, Blackmore Precision Engineering has invested in some of the very latest advanced manufacturing equipment to produce complex tight tolerance components of outstanding quality within demanding timescales. Helping the company achieve its promised delivery is VERICUT CNC simulation and optimisation software.

Kidlington-based Blackmore Precision Engineering's 12,000 ft2 facility is equipped with a range of 5-axis CNC machining centres. They include three Matsuura MAM 72 machines each with 32 pallet stations, four DMG Mori DMU 50s some of which feature automated pallet changing and a DMU 70 for larger parts. The immaculate machine shop has grown and developed rapidly since Brendan Blackmore started the company back in 2005.

"Back then," recalls company director Jeremy Gray, "Brendan was based in a small unit where he used a machining centre and CAD/CAM software to successfully produce parts on a quick turnaround for Formula 1 teams and other motorsports customers. Due to high demand, additional staff and machine tools followed with a move to a larger unit before the relocation to our existing site in 2010."

Bringing his general management experience to the company Jeremy joined Brendan, who still owns the business, in 2008. "Initially it was all about turning parts around very quickly, we were accustomed to having drawings sent to us on a Friday and having to supply parts on the Monday. We still do this today, but in addition we go through the rigorous inspection criteria that is required in every industry sector," explains Jeremy.

Since the business made the decision to invest in VERICUT simulation and optimisation software from CGTech in early 2021, it has further improved the efficient turnaround of customer parts. Says Jeremy: "We had looked at VERICUT in the past, however when two new team members joined us, both of whom had prior experience with VERICUT we were persuaded that was the way forward."

"From a business perspective investing in VERICUT has been very impressive right from the start. Obviously having team members who knew how to use VERICUT was a great help, but the whole CGTech team, from sales to training and subsequently holding our hand to really get everything in place very quickly, has been exceptional. Thanks should be given to the technical support as well for getting all our machines modelled and set up in the software."

Lead CNC Programmer, Jan Plovucha, was a catalyst for the application of VERICUT at Blackmore Precision Engineering. For CAD/CAM the company uses Open Mind's HyperMILL software which has a direct interface with VERICUT to import all of the necessary detail including the Lang high pressure clamping system and zero point plates used across the shopfloor. The goal is to 'hit' the component in one using the experience of the programmers to achieve this.

He says: "We can rely on VERICUT so our prove out time has dropped dramatically. This is vital as we are running small batches of components with complex geometries, and we do not keep parts on file. Each job is treated as a new job, so every part gets the VERICUT treatment each time because it may not be run on the same machine or by the same machinist."

In fact, VERICUT substantiated its value on the very first week the software was in use as one job planned for a DMU 50 machine was highlighted by VERICUT as exceeding the limits of the machine tool. "Previously, the machine would have been set up with the tools and run until it encountered this issue. Then it would need to be broken down and reset on a different machine, losing time and possibly accuracy as we try to match the datum points," Jan points out.

He continues: "We use the AUTODIFF module to check the parts for excess stock material and to eliminate gouging where the CAM program may want to go through the part stock material. VERICUT is so good we don't think about some of these problems anymore, and the technical support and training provided has been first class."

Meet the board

Neil McKay
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Sharon McDonald
NWAA
Chief Executive
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Keith Harrison
Silcoms
Deputy Chairman
01204 466070

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Director
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Iain Minton
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Anthony Hammond
Hyde Group
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Paul Burns
BAE Systems
Director

Jackie Taylor
Safran Nacelles
Strategy, Progress and Site Infrastructure Director

James Milligan
MBDA
Director

Michael Gavin
AIRBUS
Head of Supply Chain Management – Aerostructures

Sarah Mallon
Rolls Royce
Director

Save the date

Please regularly check our website, LinkedIn and Twitter page for the latest upcoming events.

If you would like to register for any of our events, please contact:

Claire Lambert
claire.lambert@aerospace.co.uk
or book via EventBrite
www.aerospace.co.uk

@NWAerospace
@North West Aerospace Alliance

Monday, December 6, 2021

NWAA Annual General meeting
AMRC North West, Samlesbury Enterprise Zone
15:30 – 16:30

Monday, December 6, 2021

NWAA Winter members Forum
Reaping the rewards of digital engineering, so we can make better products more quickly and with less waste
AMRC North West, Samlesbury Enterprise Zone
17:00 – 19:00

NWAA Supply Chain Workshops will be re-commencing in the early part of 2022!

Copy deadlines

Express News

Copy deadlines for members wanting to share news

December 13
January 17
February 14
March 21

Plane Talk

Copy deadline for members wanting to share news in the next edition of Plane Talk

Spring 2022
February 14, 2022
Summer 2022
May 16, 2022
Autumn 2022
August 15, 2022
Winter 2022
November 7, 2022

Please send all information to
nwaa@freshfield.com

Sustainability webinars for 2022

For many, creating sustainability in the aerospace sector is top of the agenda and many people took part in the discussion and facilitated session on sustainability during the NWAA conference. We hope you found the information and context informative, helpful, and thought-provoking.

We hope that, upon reflection, it's stimulated you to think about how your business can play a part in the Race To Zero commitment, which aims to prevent future climate threats, create jobs, and unlock inclusive, sustainable growth for your business.

Businesses committed to sustainability see great rewards such as cost savings, lower risks, long-term business growth, supply chain security, access to new markets, customer loyalty, and overall enhanced brand value.

Kuehne+Nagel strives to make a more positive impact on the world by working towards sustainable logistics with its customers. Since 2020, the company has supported customers to make their supply chains more robust and compliant with Government mandates through its Net Zero Carbon programme.

Although we are all still at the beginning of our sustainability journey, we would like to share this journey to deliver progress to society and drive our future – inclusively.

Learn and share

To help you in your sustainability journey, we would like to invite you to register your interest in joining the forthcoming workshops in Q1 2022 on sustainability.

Further details about the upcoming workshop will be communicated over the coming months. If you would like to register your interest in attending/receiving more information about this event, please contact **Claire Lambert** by emailing: **claire.lambert@aerospace.co.uk**

Sustainability Roundtables - Register your interest !

Following the NWAA conference and due to feedback and demand, we will be running sustainability roundtables in Q1 2022.
Learn/share with your peers and see great rewards, including cost savings, lower risks, long-term business growth, supply chain security, access to new markets, customer loyalty, and overall enhanced brand value.

To register your interest in attending/receiving more information about these events, please email Claire Lambert at the NWAA **claire.lambert@aerospace.co.uk**

KUEHNE+NAGEL

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