



midlands aerospace alliance

MIDLANDS

# AEROSPACE

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MAGAZINE

## WORLD-CLASS INNOVATION IN MIDLANDS

REGION'S MANUFACTURERS AIM HIGH WITH HELP FROM NATIONAL FUNDING INITIATIVE - PAGE 8



### 'CLOUD' SOLUTION WINS TOP AWARD

Coup for Coventry-based research team - p2

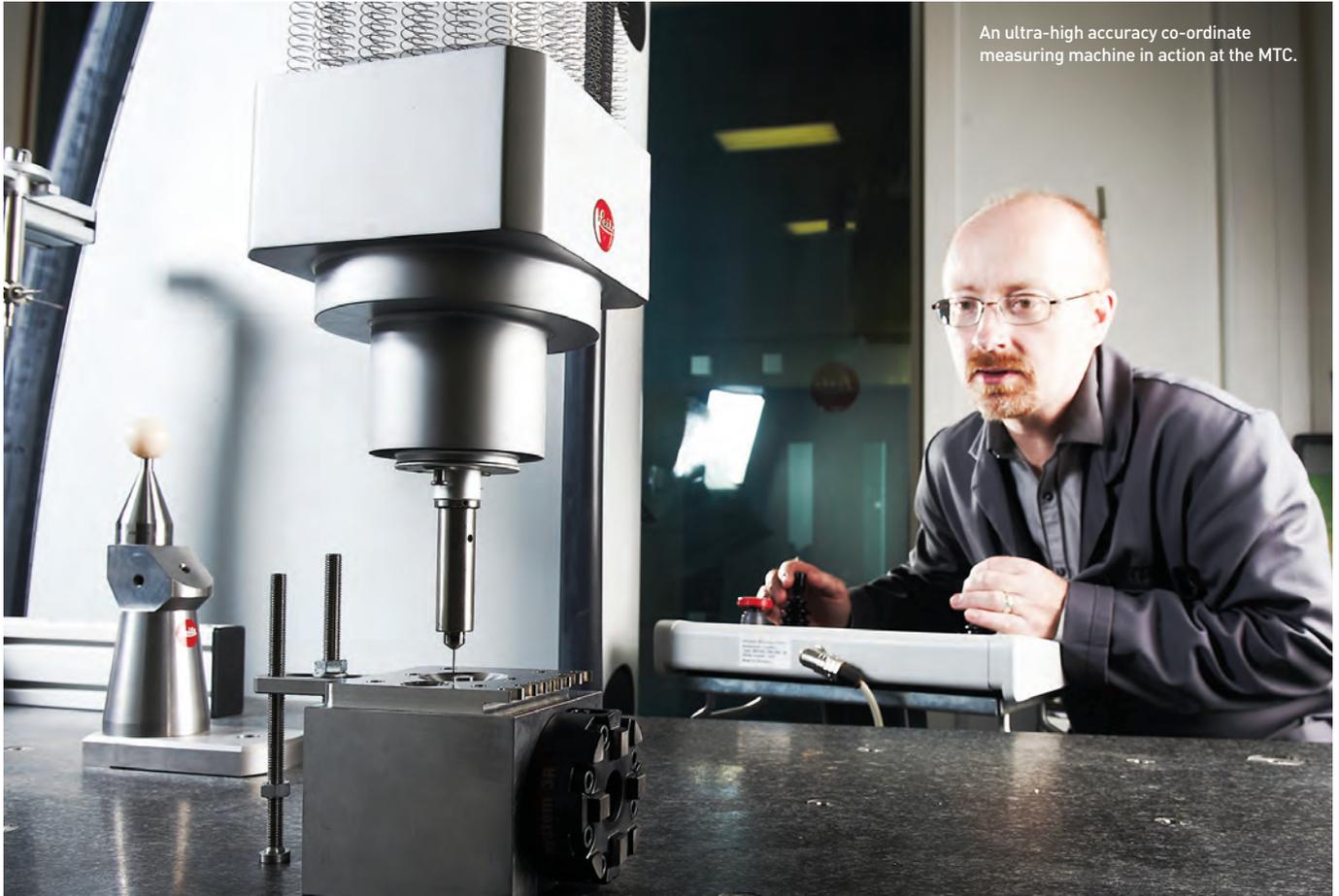
### PRIMES AND SUPPLIERS

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### SPOTLIGHT ON FUTURE MARKETS

Preview of annual global aerospace outlook - p13



An ultra-high accuracy co-ordinate measuring machine in action at the MTC.

## 'CLOUD' SOLUTION TAKES AWARD

Groundbreaking work on the use of cloud computing technology to share precision measurements has won a top industry award for a Coventry-based metrology research team.

The research carried out at the Manufacturing Technology Centre (MTC) took the 'Best presentation and research' award at the global Large Volume Metrology Conference in Manchester.

The novel approach, which is derived from the MTC's core research programme, will enable major manufacturers and their supply chain to exchange precise and detailed measurement information using cloud technology.

MTC metrology team leader Dr Bin Cai said this will eliminate the current problem of inconsistencies of measurement information when it is shared between organisations.

The research is the first application of Industry 4.0 on dimensional metrology in Europe and has been recognised by the National Product Verification programme led by the National Physical Laboratory.

The LVMC Conference is the only event in Europe dedicated to large volume 3D measurement technology and is attended by leading companies and research organisations from across the continent.

Dr Bin Cai said the work at the MTC will allow the exchange of metrology information in a

*"We are helping a range of industrial sectors... The prize at the end of this for manufacturers is better quality at reduced cost."*

digitised and standardised way, with real-time feedback, improving accuracy and efficiency.

"The work at the MTC is being carried out by a team of 24 engineers and technicians using a range of research strands to develop and integrate state-of-the-art inspection technology," he said. "The team has access to the most up-to-date metrology equipment available, ranging from optical scanning to X-ray computed tomography (CT) worth more than £3 million.

"We are helping a range of industrial sectors, including aerospace, automotive and power generation, solve their challenging manufacturing inspection problems. The prize at the end of this for manufacturers is better quality at reduced cost."



[www.the-mtc.org](http://www.the-mtc.org)



## NEWS

### ON THE WEB

CLICK THROUGH TO THE MAA WEBSITE FOR CURRENT NEWS ON MEMBERS' ACTIVITIES:

→ Birmingham-based **Hockley Pattern & Tooling** has invested in new scanning arm to support manufacture and inspection.

→ Black Country-based precision machinist **A&M EDM** has opened a second manufacturing facility.

→ Machine tools distributor **Mills CNC** has pledged support to help keep the last flying Avro Vulcan in the air.

→ **Resource Group** of Worcester has launched an online guide to the safe and legal operation of small UAVs.

→ **Westmoreland Mechanical Testing and Research** has boosted its test capabilities with a move into a new materials test facility.



[www.midlandsaerospace.org.uk/news](http://www.midlandsaerospace.org.uk/news)

## GROWTH IN WORK FOLLOWS MOVE

Composites specialist EPM: Technology has won three new contracts since moving to its new site in Derby.

Managing director Graham Mulholland said the value of the contracts in the aerospace and automotive sectors was expected to exceed £17 million over the next five years.

The company is looking to increase its workforce of 100 by about a third.

One of its new contracts, worth about £8 million, is to manufacture a rotating part of an aircraft.

Mulholland told the Derby Telegraph it was an exciting time for the company, which has experienced an "explosion of growth" since moving into a new £6 million factory in Derby.

# TRENT ENGINE IN DEMAND



The Rolls-Royce Trent 7000, the latest addition to the Trent engine family, has been selected by Arkia Israeli Airlines for up to four Airbus A330-900neo aircraft the airline has ordered.

The order is one of a spate of recent large civil engine deals along with Trent 1000s ordered by Japan's All Nippon Airways (ANA) and Air Europa of Spain, and Trent 700s by Lion Air of Indonesia.

They came as Rolls-Royce announced its first forecast dip in profits in a decade despite the growth in sales volume to a record order backlog of £74 billion.

Chief Executive John Rishton said in a statement that 2014 had been "a mixed year" reflecting, among other factors, a fall in defence spending. However, he added, the "fundamentals of our business remain solid, with long-term growth in demand for the complex power systems we deliver across our Aerospace and Land & Sea Divisions."

Some of that growth is in the seventh-generation Trent 7000 which combines experience from the Trent 700 on the current A330, with the architecture and technology from the Trent 1000-TEN to deliver what Rolls-Royce describes as "significant performance benefits" in fuel consumption, efficiency and noise reduction.

ANA was the launch customer for the Trent 1000 with its first Boeing 787 Dreamliner. The engines of the current order will power three additional Dreamliners to



Trent 1000 powers ANA's launch 787 Dreamliner.

add to ANA's fleet of 80 of the type.

Hiroiyuki Ito, Senior Executive Vice-President, ANA, said the Trent 1000 "has served us very well through our entry into service and we continue to receive excellent customer support throughout from Rolls-Royce."

Spanish carrier Air Europa selected Trent 1000 engines for 14 new 787-9 Dreamliners, adding to the eight Trent 1000-powered 787-8s already on order which are expected to enter service in 2016. The new order is worth £700 million, including TotalCare long-term service support.

Meanwhile, the Trent 700 has been selected by Lion Air to power three Airbus A330ceo aircraft.

This is the first time Lion Air has selected Rolls-Royce engines.



[www.rolls-royce.com](http://www.rolls-royce.com)

# CUBE MEETS DEMAND WITH NEW INVESTMENT



A Black Country engineering business, faced with increased demand for its products, has secured more than £600,000 of new funding to accelerate its manufacturing process.

Rowley Regis-based Cube Precision Engineering designs and makes press tools and CNC machine components for aerospace, defence and automotive companies.

It secured £575,000, including £115,000 through the Regional Growth Fund, to support

the purchase of two new milling machines for cutting large, complex components.

The purchases have enabled Cube Precision Engineering to speed up its manufacturing process by 30 per cent.

The company has also taken on four new staff to help it deal with an upsurge in new orders.

It plans to create further job opportunities in the next six months.

Managing director Neil Clifton said: "We had

been experiencing a high level of demand for our large CNC machining components and, in order to fulfil this, we needed to increase our manufacturing capabilities by purchasing new machinery. Moving forward, we plan to pursue a growth-through-acquisition strategy by vertically integrating our suppliers into the business."



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Tony Wood



Neil McManus



Geoff Hunt



Andy Moran



Clive Lewis

# MAKING SURE OUR GROWTH CONTINUES

THE THIRD ANNUAL MAA CONFERENCE ASKS INDUSTRY LEADERS FOR INSIGHTS INTO WHAT STRATEGIES WORK IN THE COMPETITIVE ARENA OF GLOBAL AEROSPACE.

International collaboration is a prominent feature of today's aerospace sector. Few aircraft programmes today do not bring together global supply chains. Equally, few companies of any size exist that have nothing to offer global programmes.

The challenge for SMEs in particular is knowing how to plan and execute a successful strategy to enable them to continue to work successfully with big companies that play on the global stage.

The third annual MAA conference tackles that challenge head-on by focusing on the theme 'How to compete in global aerospace'.

Delegates to the one-day conference on 26 March – being held for the first time at the new GTG Training Centre in Wolverhampton – will have the opportunity to hear from industry leaders on topics including:

→ How are the strategies of the industry's larger companies evolving?

→ What do small companies need to do to stay ahead – or not get left behind?

→ How can we improve our chances by working together in the Midlands and in local clusters – like Wolverhampton?

At the heart of the conference, distinguished industry leaders – from Airbus, GKN Aerospace, Rolls-Royce and UTC Aerospace Systems – will share their ideas and advice on these subjects with the Midlands aerospace community. Prestigious keynote speakers include:

- Tony Wood, President – Aerospace, Rolls-Royce
- Geoff Hunt, Vice-President, Engineering, UTC Aerospace Systems
- Andy Moran, Head of Supplier Development UK, Airbus
- Neil McManus, Senior Vice-President Asia, GKN Aerospace
- Clive Lewis, Managing Partner, Achieving the Difference.

"We are delighted to have these prominent industry leaders sharing their expertise with conference participants," said MAA chief executive Andrew Mair.

Gold sponsors for the 2015 conference are Moog, UTC Aerospace Systems (both with important local facilities) and Wolverhampton City Council.

The Wolverhampton event follows two successful conferences held at Rolls-Royce in Derby and sponsored by Rolls-Royce and Derby City Council.

Wolverhampton and the Black Country are the home of one of the major aerospace clusters of the Midlands, and local support for the MAA conference has been strong.

The Wolverhampton Express & Star trumpeted the event in its pages as a major coup for the city and region. It said the plans to stage the event in Wolverhampton recognised

*(continued on page 6)*

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THE MAA ANNUAL CONFERENCE

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# GROWTH CONTINUES

*(continued from page 5)*  
the importance of the city in terms of its aerospace industry, and underlined the strong bonds between the MAA and the city.

Councillor Roger Lawrence, leader of Wolverhampton City Council, told the newspaper the MAA conference would benefit the whole area. He said: "As a sector expected to grow over the next couple of decades, aerospace has to be seen as one of the best bets."

In addition to the Gold sponsors, the conference is supported by Silver sponsor RBS, and by Bronze sponsors Argenta, Delcam, JJX Logistics, Jonathan Lee Recruitment, the Manufacturing Advisory Service (MAS) and the University of Birmingham.

"We launched our annual conference three years ago to give our members national and international perspectives that they would otherwise find difficult to access," said Mair, "plus the opportunity for all-important networking.

"Their response has reinforced the value of this initiative and encouraged us to develop the event, as those attending this year's conference will see."

Among comments from participants following last year's conference:

"Well organised, informative conference with excellent calibre of speakers."

"Good balance of speakers with different views and perspectives."

"Presentations were at a very high level."

"My first conference and found it informative and enjoyable."

"Great day well organised, real good content and very well put together."

"An excellent worthwhile event – well done."

**FOR MORE INFORMATION ON THE MAA CONFERENCE, AND TO BOOK PLACES, GO TO THE MAA WEBSITE: [WWW.MIDLANDSAEROSPACE.ORG.UK](http://WWW.MIDLANDSAEROSPACE.ORG.UK)**

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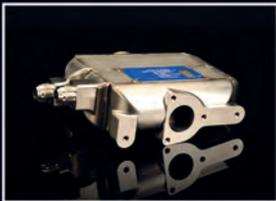
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# TRANSFORMATION WITH INNOVATION



Discussing plans for new technology at Arrowsmith Engineering.



A NATEP GRANT IS HELPING PRECISION ENGINEERING FIRM ARROWSMITH TRANSFORM ITSELF AND, WITH ITS COLLABORATORS, ACHIEVE A BREAKTHROUGH IN MANUFACTURING TECHNIQUES FOR AEROSPACE.

Coventry-based Arrowsmith Engineering and project partners have developed new manufacturing processes aimed at next generation aero-engines and aircraft, thanks to support from the National Aerospace Technology Exploitation Programme (NATEP).

The NATEP project team of Arrowsmith and collaborative partner ANT Industries – both members of the MAA and the Coventry and Warwickshire Aerospace Forum – are working with specialists at the Manufacturing Technology Centre (MTC) to develop new aerospace standard manufacturing techniques including threadrolling.

In the process, Arrowsmith's skilled engineers have transformed themselves into a team of innovators.

Managing director Jason Aldridge said the NATEP project had given Arrowsmith the opportunity to become a "centre of excellence" for aerospace standard threadrolling.

"We'll be working alongside the very best companies in the world to create cutting-edge solutions," he added.

"While the aerospace primes are seen to be investing heavily in new technologies, it's important that the supply chain keeps up.

"Advanced engines need advanced engineering solutions at every stage, so this research is crucial for the industry. By working collaboratively, we're improving the quality and scope of that research, while upskilling our own engineers and sharing our expertise.

"As a result, we will be manufacturing components that previously could not be made, and we'll be using precision controlled production techniques that keep quality high and costs down."

Aldridge said SMEs are often put off applying for R&D funding by red tape. His experience with NATEP was "completely different".

"The NATEP technology managers have helped us pull the project together. They worked with us to set criteria, ensure our paperwork was correct, identify what we needed, and then helped us find it. They didn't

push us with an off-the-shelf solution we would have had to adapt for our business."

Aldridge said SMEs often have difficulty embracing a culture of R&D, but he believes there's a "massive market opportunity" for those that can.

Peter Knight, NATEP technology manager at the Midlands Aerospace Alliance, said the advanced manufacturing techniques being developed through such projects have "enormous potential" in the global marketplace.

"It's important that we support small manufacturers as they bring innovative technologies to the skies, so we can maintain the UK supply chain's standing as one of the most competitive and innovative in the world."

→ The final call for NATEP proposals closes on 14 May 2015. Companies looking to get involved can find out more at [www.midlandsaerospace.org.uk/natep](http://www.midlandsaerospace.org.uk/natep).

# BRIDGING THE GLOBAL SKILLS GAP

THE FUNDAMENTAL IMPORTANCE OF SKILLS AND STRATEGIC TALENT DEVELOPMENT IS NOW WELL RECOGNISED ACROSS THE ADVANCED ENGINEERING SECTOR GLOBALLY. THIS IS ESPECIALLY PERTINENT IN THE GROWING AEROSPACE SECTOR, DUE TO THE CRITICAL VALUE PLACED ON CUTTING-EDGE TECHNOLOGY AND INNOVATION.

 In 2015, aerospace Original Equipment Manufacturers (OEMs) and their supply chains are facing increasing demand and a record backlog for commercial aerospace. This, in turn, is putting mounting pressure on the global pool of skilled workers. This pressure is exacerbated by the globalisation of the supply chain where skills gaps are emerging in developing markets. As a result, it is clear that talent development is even more integral now to the strength and prospects of the international aerospace sector.

Singapore and the UK share a similar approach of creating a collaborative environment for both educational institutions and the private sector to work closely together to support talent development. This month (February) the UK Government announced that, as part of the Aerospace Growth Partnership, £20 million will be invested to support companies, including Airbus, BAE Systems, AgustaWestland and GKN, to design and develop tailored new apprenticeship programmes for prospective employees in the sector. Six new Master's degree courses are also planned to help the development of existing aerospace employees.

In Singapore, the Government partners aerospace companies to develop a curriculum that is both industry-relevant



Institute of Technical Education, Singapore

and industry-ready. Today, Singapore has over 20 aerospace-specialised courses available at almost all technical institutes and tertiary institutes, producing over 1,500 skilled graduates annually.

One such example can be seen from the Institute for Technical Education (ITE), which organises part of its aerospace curriculum around a Boeing 737 aircraft, physically sited within its 10.7 hectare College Central campus in Singapore. The aircraft provides ample opportunity for students to hone their skills with an experiential, hands-on approach towards learning. ITE further complements this by working directly with Boeing to customise software and teaching aids as part of this approach.

Republic Polytechnic is another case in point. It has signed Memorandums of Understanding (MoUs) with companies such as Diethelm Keller Aviation, Hawker Pacific Asia and Pratt & Whitney to secure regular internships and industrial attachments for their students. These partnerships help to further strengthen Singapore's growing aerospace sector, by providing a strong pool of technical talent to support companies with their expansion plans and succession planning.

A similarly collaborative environment has been created within the domain of research, for Singapore's research institutes to work

directly with industry to promote industry-oriented innovation. The Centre for Aerospace Engineering (CAE) was opened at the National University of Singapore's Department of Mechanical Engineering in March 2013. CAE was set-up with the support of the Agency for Science, Technology and Research (A\*STAR), DSO National Laboratories, SIA Engineering Company and ST Aerospace. Focus areas include composite materials and structures as well as experimentation and simulation studies on aerodynamic performance. Experts from these industry partners deliver guest lectures at the NUS Engineering Faculty on a regular basis and offer internships, design projects as well as final-year assignments to the university's engineering students.

*Today, Singapore has over 20 aerospace-specialised courses available at almost all technical institutes and tertiary institutes, producing over 1,500 skilled graduates annually.*

There is no doubt that skills development is essential to the growth of the aerospace sector on a global scale. This is especially relevant in Asia, where the thriving sector requires a growing skilled workforce. At the heart of this growth is Singapore, with its approach to strategic talent development, which has been instrumental in creating a talent pool allowing companies from across the world to capitalise on the growing international demand and opportunities.

**Beh Kian Teik**

International Director for Europe,  
Singapore Economic Development Board



Institute of Technical Education, Singapore

To find out more, contact the Singapore Economic Development Board at [London@edb.gov.sg](mailto:London@edb.gov.sg) or <http://www.edb.gov.sg/>  
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MIDLANDS COLLEGES AND UNIVERSITIES ARE RESPONDING TO INDUSTRY'S DEMAND FOR EMPLOYABILITY AMONG THEIR GRADUATES WITH INNOVATIVE CURRICULUM AND TRAINING PARTNERSHIPS. MIDLANDS AEROSPACE TALKS TO EDUCATORS AND LOOKS AT HOW THEY'RE RESPONDING TO THE CHALLENGES.

*“[The MSc in Innovative Engineering Solutions] came out of a consultation with employers who complained engineers were losing the ability to solve problems. If you're an SME and don't have a graduate training scheme, this could fill that gap that too.”*

**ANGELA DEAN, HEAD OF THE UNIVERSITY OF DERBY'S DEPARTMENT OF ENGINEERING**

↘ The employability of their graduates and the ability of their curriculum to help make them so is a constant and increasingly urgent focus of Midlands educational institutions.

The well-publicised gap between supply and demand, particularly in engineering and manufacturing skills, has prompted new courses at many levels, from pre-GCSE to post-graduate.

Government funding under several programmes has encouraged partnering between industrialists and educators to make sure programmes offered are fit for purpose.

The University of Derby, like most similar institutions, has an industrial liaison committee whose work includes looking for future trends and planning how to prepare graduates for them.

“We're a bridge from school to employment,” said Angela Dean, Head of the University of Derby's Department of Engineering.

As well as a full hand of undergraduate engineering courses, the University of Derby works with individual employers to develop programmes, mainly at the post-graduate level, to address specific needs. An earlier programme with Rolls-Royce, for example, was designed to develop particular mechanical engineering skills.

Employers usually contribute in kind by committing to provide guest lecturers, allowing site visits and possibly job placements during the

students' year in industry.

One of the latest developments by the University of Derby Department of Engineering is an MSc in Innovative Engineering Solutions, aimed at graduates with a first degree in engineering, mathematics or product design, and developed with the support of the Higher Education Funding Council for England (HEFCE). Said Dean: “This came out of a consultation with employers who complained engineers were losing the ability to solve problems.”

Fifty students are currently on the programme, part supported by HEFCE bursaries and part by the firms – including some SMEs – where they are doing two semesters in industry. Next year the programme will be opened to International students.

“This is a very big project for us,” she added. “I think it's a good model for possible graduate apprenticeships. If you're an SME and don't have a graduate training scheme, this could fill that gap too.”

**SECTOR NEED**

Another new programme being launched next September is the MSc programme in advanced materials modelling being offered by the University of Birmingham College of Engineering and Physical Sciences.

It is “based on sector need,” said Business

Engagement Partner Richard Fox. "There's a shortage of people with these skills."

The programme is the first of its kind in the UK, with modules taught within an Integrated Computational Materials Engineering (ICME) context, which is an emerging interdisciplinary field.

Aimed at graduates, scientists and engineers working in material design and development, the course is of particular relevance to the aerospace industry which faces complex materials challenges in the context of a multi-disciplinary team.

"It addresses the increasing demand from industry for modelling tools that enable improved manufacture and processes, rapid insertion of materials, changes in technology and enabling of location-specific property predictions," said Fox.

Funding is available in the form of the Aerospace MSc bursary scheme, which will pay up to £9,500 of successful applicants' tuition fees.

### LATEST TECHNOLOGY

One of a wave of new national colleges, the Advanced Manufacturing Training Centre (AMTC), is due to open in September at the Manufacturing Technology Centre (MTC) in Coventry.

Next autumn's intake of 40 new apprentices will be employed on the centre's innovative Level 3 Advanced Engineering Apprenticeship Programme. They will join the current 36 who are completing their first year at college and will shortly be moving into the new AMTC (pictured left).

The AMTC will teach the latest technology in areas such as intelligent automation, additive layer manufacture, robotics, metrology, mechatronics, additive layer manufacture, computer aided design (CAD) and computer aided manufacturing (CAM).

Apprentices will be able to test and develop their skills in sponsored placements, including the opportunity to undertake international assignments with MTC members and supporters.

The AMTC courses are designed to make a significant contribution toward solving skills shortages in manufacturing and technology industries.

### ATTRACTING YOUNGER STUDENTS

Institutions such as North Warwickshire and Hinckley College (NWHC) in Nuneaton are addressing the need to attract younger students to careers in manufacturing and technology.

As part of its Careers Step Programme, NWHC offers teenagers in Years 8 or 9 the opportunity to study a vocational subject for one day a week at the college, usually leading to a Level 1 qualification as preparation for further education or employment.

The college says its close links with employers allows it to offer a wide variety of apprenticeships. It also works with UK universities to offer a range of sector-specific courses in higher education.

### LEARNING KEY SKILLS

EEF, the British manufacturers' association, is doing its part in meeting the projected skills gap in manufacturing. It opened a new state-of-the-art Apprentices and Skills Training Centre in Birmingham in 2014.

Part of the £2 million investment by EEF in the centre went into funding new high-tech machines and training equipment.

The centre is designed to replicate a real manufacturing environment, with apprentices learning key skills including milling, CNC machine operation, welding and fabrication.

It will also provide development training for experienced employees to help equip them with the right skills for the future demands of modern engineering and manufacturing.

### PREPARATION FOR WORK

Warwick Manufacturing Group (WGM) launched an academy last year to introduce pre-GCSE students to manufacturing and has been rewarded by a "high level" of interest, said Julian Amey, Director of Professional and Executive Programmes.

The aim of the Academy of Young Engineers is to provide a secondary school education for people who have a "vocational interest in manufacturing" to help prepare them for work in an industrial environment, apprenticeships or degree programmes.

Such was the demand for places at the first academy, at the University of Warwick, that work has begun on a second campus in Solihull. Sponsored by the University of Warwick and leading employers, the academy is backed by Solihull Council and a range of local partners.

With its focus on young people, WGM also started an Applied Engineering programme (AEP) leading to a BEng. Amey describes it as a "tough and challenging four-year programme" which nevertheless has doubled its intake of students every year. Typically those enrolling are in their early 20s and have some practical experience in engineering.

"This provides people who have done an apprenticeship with a route to progress beyond the tools to advanced roles in management, design, drawing and so on," said Amey.

The course is taught in modular blocks, typically six weeks at university spread over the year. "It takes a high commitment for home study," he added.

"We're keen on getting people in from the aerospace sector."

### FOR FURTHER INFORMATION:

- [www.birmingham.ac.uk/msc-icme](http://www.birmingham.ac.uk/msc-icme)
- [www.derby.ac.uk/engineering-technology](http://www.derby.ac.uk/engineering-technology)
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*"There's a shortage of people with these skills. [The course] addresses the increasing demand from industry for modelling tools that enable improved manufacture and processes, rapid insertion of materials, changes in technology and enabling of location specific property predictions."*

**RICHARD FOX, BUSINESS ENGAGEMENT PARTNER, UNIVERSITY OF BIRMINGHAM COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES**



## THE VIEW ON WESTMINSTER

*“Investing in long-term growth offers the best route to ensuring economic prosperity.”*

*Paul Everitt, Chief Executive ADS Group, urges all political parties to adopt policies to guarantee continuity in the UK industrial strategy.*

In the lead-up to the UK general election, we asked Paul Everitt to present the views of our national trade association, ADS, on the policy landscape.

➤ The UK general election on 7 May will be one of the most closely contested and unpredictable elections for many years. It is extremely likely that the formation of a new government will require cooperation between a number of parties and may require some lengthy negotiations.

In anticipation of these, ADS has developed a set of core industrial commitments we would like to see all political parties adopt in their election manifestos. They include building on the success of our industrial strategies, prioritising investment in innovation, supporting UK SMEs and midcaps, and working with industry on the upcoming strategic defence and security review.

The next government will need to make some difficult decisions; public expenditure will continue to be constrained, UK and European growth will be under pressure and competition from faster growing economies will intensify.

ADS believes that investing in long-term growth offers the best route to balancing the nation's books, delivering national security and ensuring economic prosperity. The industrial strategies, particularly the work of the Aerospace and Defence Growth Partnerships, are helping to deliver growth through



support for innovation in the supply chain, investing in skills and opening up new export opportunities.

It is important that this work continues. Industry needs continuity and stability so it can invest with confidence. The UK's approach to partnership between industry and government is now recognised as setting the pace for our international competitors.

To compete long-term, the UK needs to increase investment in innovation and new technology. Public support for the Aerospace Technology Institute, NATEP and Innovate UK are making a difference and it is important the government continues to prioritise innovation funding. ADS would like to see longer-term certainty on these funding streams and a commitment to boost funding and the value of R&D tax credits by 2020.

The UK's SME and midcap companies are agile innovators and exporters in their own right. Supporting them to invest and grow will strengthen our global competitiveness. ADS is campaigning for the reform of capital allowances to help support business investment and to free up cash flow. It would

also like to see greater competition and diversity in the UK banking market, to bring down SME loan rejection rates and reduce collateral requirements.

In 2015, a new government will undertake a strategic defence and security review. We know our national security is challenged by the fragmentation of states and the emergence of large dissident or terrorist organisations. These non-state actors now have access to sophisticated technologies and are able to use them more effectively. Government needs to work with industry and academia to enhance our capability to identify, assess and respond quickly to emerging threats.

The UK's aerospace, defence, security and space industries offer exciting growth opportunities. These globally competitive sectors are vital to our future as a high-tech, high-skill, high-wage economy. ADS members want the next government to encourage UK investment in innovation, skills and supply chains, so that we have the technology, people and businesses to take advantage of growing global markets.

Whatever the outcome of the election, securing the commitment of the major parties to continue the partnerships we have so carefully forged will help sustain business confidence. An industrial strategy that spans more than one parliament will send a powerful signal about our country's intent and ambition.



For more on the ADS Manifesto, go to: <https://www.adsgroup.org.uk/pages/59780520.asp>



## PLANNING IS KEY TO SUCCESS AT AIRSHOWS

THE PARIS AIRSHOW 15-21 JUNE OFFERS A CHANCE TO PUT THE INFORMATION IN THE GLOBAL AEROSPACE OUTLOOK TO USE.

➔ Attending and exhibiting at shows is expensive, especially if you factor in staff time. Planning is important to make a success of them.

“First consider what ‘success’ means for you. Why are you going to the show?” suggests Clive Lewis.

“You’ll probably have a number of objectives such as creating awareness of your company, having target customers understand your offering or having that meeting with a particular client’s decision-making team when they are together.

“Once you know why you’re going, develop your objectives to be SMART. This may sound trite – there is much on the internet about ‘SMART objectives’ – but you are about to spend a great deal of money and need to know that it is worthwhile.”

Being specific (the S in SMART) about objectives and making them measurable (the M) will help you focus on achieving them and assessing the return on your investment.

Before the show is the time to create marketing materials and plan targeted activities such as meetings, stand visits and hospitality.

“What you do after the show is just as important,” said Clive. “You need a process of follow-up or the value gained by contact will be lost.”

➔ For more about marketing communications, visit [tinyurl.com/m5wdtb6](http://tinyurl.com/m5wdtb6)

➔ When the 2015 issue of UKTI and ADS’s Global Aerospace Outlook is published in April, it will reveal the expectation that more than 58,000 new fixed-wing passenger and business aircraft, worth US\$5.5 trillion (£3.6 trillion), will be needed over the next 20 years.

In a similar timescale, the global requirement for new helicopters is expected to top 40,000 units, worth around \$165 billion per year.

This annual report also addresses maintenance, repair, and overhaul (MRO) opportunities in a global market predicted to increase over the next decade by \$163 billion.

Development timelines for aircraft new-build opportunities are to be included for 2015. These allow companies to identify when opportunities are ripe for them depending on the supply chain tier they operate in.

So that suppliers can identify their target customers, the Tier 1 and lower tier suppliers announced for these programmes will be listed. This is

particularly valuable to SMEs in the lower tiers and shows that the route to supplying on a new aircraft might not be to the OEM’s home country. For example, lower tier engine or airframe suppliers targeting the Boeing 777X might look to Europe or Japan for customers, rather than the USA.

The new-build programme information contained in this report is compiled from public sources and data provided by major UK-based companies in the aerospace sector. MRO market data, kindly donated by ICF, provides a high-level view of future international opportunities and issues.

Members of the ADS MRO & Logistics Network have added detail on opportunities for 13 priority countries. As one might expect, the large USA market and growing markets in Asia and the Middle East are included. Around half a dozen European countries also make the shortlist.

➔ Clive Lewis, Managing Partner of Achieving the Difference LLP, will preview the report at the MAA Annual Conference on 26 March, ahead of its launch in April.



**GET INSIDE THE BIG FOUR EUROPEAN AEROSPACE MARKETS WITH THE MAA**

## PROFILE

VIEW FROM THE MAA BOARDROOM

“Cities need the ability to plan their education to suit the needs of local businesses.”

*MAA board member Mark Tittley, a Labour councillor on Derby City Council, sees education as the key to a healthy industrial sector.*

### HOW DID YOU GET WHERE YOU ARE TODAY?

I worked at Rolls-Royce for 35 years, the first 25 as a technician and later a stress engineer. I started in 1978 as a craft apprentice, did various training up to an Open University degree in mechanical engineering. In 2003 I became the Unite and GMB convenor for the white collar workforce and continued until I took early retirement in 2013. I got into local politics in 2004, lost my seat in 2008 and was re-elected in 2012.

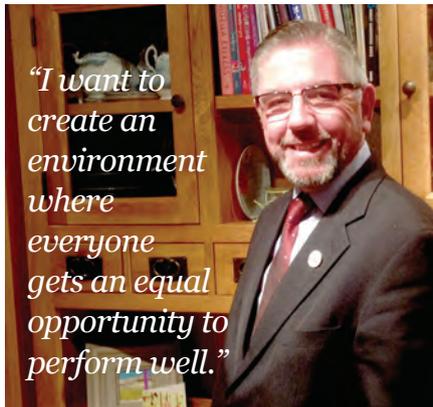
### COULD A YOUNGSTER STARTING TODAY ACHIEVE THE SAME THINGS?

I think they could. Larger organisations like Rolls-Royce support educational aspirations if people are keen and want to do it. Personally, I think people who want to read subjects that will contribute to our GDP should get a full grant. Those who want to do something more esoteric should pay for it themselves.

### IS EDUCATION LETTING INDUSTRY DOWN?

When large organisations put their work abroad, the question we should ask is what do we have to do to compete? How can we model our education infrastructure to get young people to work in that business? The problem with the current education system in general is that local authorities can't adjust the curriculum locally to reflect what is needed in industry. Cities need the ability

*“Working in the private sector, you learn about continuing to produce products to a given quality on a smaller budget which is a useful insight.”*



to plan their education to suit the needs of local businesses.

When I started work in Derby, there were two major employers in the engineering field and four or five other large companies that don't exist any more. That's a reflection on the way the economy has changed. Now we recognise that we can't survive without engineering and manufacturing which used to provide a lot of highly skilled and paid jobs. We need to create an education environment that will do that again. Industry limits its ability to expand if our human supply line of talent (the education system) fails to provide graduates and technicians and skilled people on the same level as other economies like India and Singapore.

### SHOULD CITIES COMPETE FOR CORPORATE INVESTMENT?

In reality, cities and regions work together when it's in their interests to do so. Local authorities can make the area they represent attractive to private industry. For example, the Derby city regeneration team led by Richard Williams has created many opportunities over the last 15 years, from

Pride Park to the new Infinity Park being built near Rolls-Royce. As a city we actively encourage that.

### WHY ARE YOU IN POLITICS?

I like to assist people where I can – always have. I want to create an environment where everyone gets an equal opportunity to perform well; a meritocracy based on people's ability while recognising the need to support local people and business.

### HOW DO YOU CONTRIBUTE POLITICALLY?

In 2013-14, I was the cabinet member for adult services in health, with political responsibility for a budget of £60 million. My earlier union experience dealing with good and bad times was helpful in that role. Working in the private sector, you learn about continuing to produce products to a given quality on a smaller budget which is a useful insight to bring to the public sector, particularly at this time.

### WHAT'S THE BEST PIECE OF ADVICE YOU'RE EVER RECEIVED?

Never take decisions before you have to. That's not the same as burying your head in the sand. When you're younger, there's a tendency to worry about difficult situations. As you mature, you recognise you don't need to take difficult decisions immediately.

### WHAT WOULD BE YOUR DREAM JOB?

Other than commentating on *Test Match Special*? I've enjoyed doing what I've been doing throughout my life while I've been doing it. I enjoy being able to influence decisions that make Derby and the whole Midlands the good place it is to live in.



[www.derby.gov.uk](http://www.derby.gov.uk)

# FOR YOUR DIARY

ONLINE: [WWW.MIDLANDSAEROSPACE.ORG.UK/EVENTS](http://WWW.MIDLANDSAEROSPACE.ORG.UK/EVENTS)

## CALENDAR

### MAKE YOUR IDEAS HAPPEN

**Telford, 17 March**

Learn about NATEP, hear about opportunities in the aerospace sector and growth areas for companies, and tour the facilities of Advanced Chemical Etching (ACE).

### MAA MEMBERS MEETING

**Manufacturing Technology Centre, Coventry, 23 April**

How you can roadmap the technologies that matter to your company so you know what to invest in – with case studies from the MAA community.

### PARIS AIRSHOW 2015

**Paris Le Bourget, 15-21 June**

Exhibit with the MAA at one of the world's biggest and most important aerospace trade shows: a key event for the industry.

### 3RD ANNUAL MAA CONFERENCE

**Wolverhampton, 26 March**

This year's conference, being held in Wolverhampton for the first time, focuses on regional and local industry and its role in global aerospace.

### TRADE MISSION TO ITALY

**Naples, Italy, 18-21 May**

MAA/UKTI trade mission to the aerospace industry of southern Italy, focusing on the Campania and Puglia aerospace clusters. 1-to-1 meetings with leading Italian aerospace customers.



For further information and to book your place

at an MAA event, please scan the QR code or visit [www.midlandsaerospace.org.uk/events](http://www.midlandsaerospace.org.uk/events)



## ABOUT THE MAA...

The Midlands Aerospace Alliance (MAA) is the voice of companies in the British Midlands supplying global aerospace. Its 300 member organisations range from global aerospace players to SMEs. The MAA board comprises senior managers from Controls and Data Services, Meggitt, Moog Aircraft Group, Rolls-Royce and UTAS



Actuation Systems, elected supply chain representatives and key regional partner bodies.

For additional copies of *Midlands Aerospace*, or to add your colleagues to the distribution database, please contact the MAA by any of the means below.

If you have a query or suggestion that you would like to make, please contact the MAA.

T: +44 (0) 2476 430250  
F: +44 (0) 2476 430251  
E: [info@midlandsaerospace.org.uk](mailto:info@midlandsaerospace.org.uk)

## NEW MEMBERS

The MAA welcomes the following new members

### ACCEPT FUSION

*Derby*  
Technical recruitment.

### ADVANEX EUROPE

*Southwell, Nottinghamshire*  
Design and manufacture of springs and wire thread inserts.

### AMCO SERVICES INTERNATIONAL

*Worcester*  
Logistics.

### DESIGN RULE

*Northampton*  
Software tools and management systems.

### ESTERLINE CORPORATION

*Stockton-on-Tees, County Durham*  
Global speciality manufacturing.

### EXOVA

*Dudley, West Midlands*  
Materials testing.

### HAYS

*Birmingham*  
International recruitment.

### LGG CHARLESWORTH

*Malvern, Worcestershire*  
Precision injection moulding.

### KUGEL MOTION

*Stanton-by-Dale, Derbyshire*  
Manufacture of precision ball screw assemblies.

### PORVAIR

*Norfolk*  
Design and manufacture of specialist filtration and separation equipment.

### SALT ENGINEERING

*Coventry*  
Precision engineering and tool making.

### STRIDE SUPPLIES

*Redditch, Worcestershire*  
Spring steel stockholder.

**FIVE REASONS...** for your company to become a member of the MAA – it costs only £395 per year if you are in the Midlands or £590 if not – and you will get these five big benefits:

- Regular networking with your peers and customers.
- Active promotion of your company in the MAA's annual directory and the MAA website.
- Unique access to government funding for the UK aerospace supply chain, and expert support to obtain it.
- The prestige of belonging to the world's second largest regional aerospace organisation.
- Do your part to support one of the UK's crown manufacturing jewels by joining our community.

For more information about any of the above items go to our website: [midlandsaerospace.org.uk](http://midlandsaerospace.org.uk) or contact the MAA office.



[www.midlandsaerospace.org.uk/join](http://www.midlandsaerospace.org.uk/join)



midlands aerospace alliance

# **Wolverhampton**

## Making it happen

# **Let's talk business**

### **Six reasons why your business should choose Wolverhampton**

- Growth is our priority
- We're better connected
- This is a city that works for people
- We'll introduce you to some powerful friends
- You'll be in good company
- Wolverhampton is the right place, with the right people and the right attitude

**For information contact:**

**Tim Johnson, Strategic Director, Wolverhampton City Council**  
**01902 555400 email: [tim.johnson@wolverhampton.gov.uk](mailto:tim.johnson@wolverhampton.gov.uk)**

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