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The quarterly newsletter of the Midlands Aerospace Alliance

Issue 27 Autumn 2011

MAA workshop offers insight into supplying global primes

WHAT does it take to supply global aerospace companies such as Hamilton Sundstrand, Pratt & Whitney and Sikorsky?

MAA members keen to hear the answer should book now for the intensive one-day workshop entitled 'Inside United Technologies (UTC) with the MAA' at the Wolverhampton site of HS Marston Aerospace on 18 January.

Marston, a member of UTC's Hamilton Sundstrand group, supplies a range of heat transfer and fluids management products for commercial and military markets.

Managing director David Danger is hosting the event with MAA chief executive Andrew Mair, who said the day's programme is set up "to give you the facts you need to be a supplier to UTC companies. We are fortunate to have MAA members like HS Marston willing to share vital facts about how to supply the global market."



'Back to basics' call to industry

Manufacturing excellence must remain base of success



The new Manufacturing Technology Centre near Coventry.

EXCELLENCE in manufacturing is essential for success in the aerospace industry, but in today's global environment, being good at just process is not enough: you have to have advanced technology as well.

Dr Hamid Mughal, Rolls-Royce executive vice-president, Manufacturing Engineering and Technology, told a gathering of MAA members in Coventry that competitive advantage "will come from innovative manufacturing and systems technologies. You have to do both."

Delivering the keynote speech at a combined MAA members' meeting and AGM at the new Manufacturing Technology Centre (MTC), Dr Mughal said process excellence is rooted in standards and standardisation. To succeed in manufacturing, you have to eliminate variation and deviation from output.

"Concentrate on the shop floor and supply chain," he said. The more efficient the shop floor, the less time is spent firefighting, freeing up time for innovation.

Rolls-Royce pursues innovation through a global network of advanced manufacturing research centres such as the MTC. It is no accident, said Dr Mughal, that five of the seven centres

are in the UK. Such centres with their collaborative model of research work because they remove the fear of failure, he said. "They free people from traditional business constraints."

The goal, he said, is to achieve knowledge-based manufacturing excellence. Whatever you do in manufacturing and design, it is "absolutely critical" to create standards. "Start with standardisation; build on that and keep it simple."

Prof Ken Young, MTC technology director, said the MTC was set up to address a 'black hole' in manufacturing capability readiness levels (MCRL). Phases between university research and industry adoption are poorly supported for a variety of reasons. "Bridging this gap is what the MTC is all about," he said.

It is "exciting" to be able to take research all the way through to fruition, a capability lacking in most pure academic and industry environments.

Among projects lined up at MTC are net shape manufacturing, intelligent

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'Back to basics'

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automation, advanced jigs and fixtures, high accuracy automated welding, integrated wing assembly and assembly of high integrity electronics systems.

The MTC recognises that it needs to bring benefits to SMEs as well as its industry members Aero Engine Controls, Airbus and Rolls-Royce. He told MAA members: "We rely on you to



Prof Young (right) inspects an inlet guide vane model with Nick Willers of Accrofab.

tell us what you need."

Nick Willers of MAA member Accrofab, presenting a company overview, said rapid prototyping had proven "very successful" in saving time, money and surprises at the manufacturing stage.

Acres Engineering's Luke Parker described his company's development of a bespoke disk cleaning machine as an example of the flexibility and innovation capability of a company that started as a 'metal basher'.

Biggest presence yet for Farnborough 2012

THE MAA presence at Farnborough in 2012 will be bigger than at any previous show and will offer members superb display space in the same prime location.

Marketing manager Emma Burgess says the MAA stand in its popular Hall 1 position will be bigger and will feature an innovative new design. "For this show, we will be offering individual pods with a full 60 per cent more wall space for exhibitors to exploit."

There will be a permanently staffed reception, a central kitchen and storage area, and several meeting tables. More promotional opportunities, such as an Olympics-themed activity, are planned.

Says Emma: "What makes the MAA stand out is that we deliberately allocate so much of the available space and branding opportunities to the companies that exhibit with us. You can choose a pod or make a larger area to promote your company with two or three pods.



Artist's drawing of the proposed Farnborough stand showing the display space on individual pods.

"And with another of the MAA's usual open plan design, companies not only have their own space but visitors are positively encouraged onto the stand – and every pod is visible as you walk along the aisles."

Farnborough 2012 already promises to be another Midlands success story. Bookings are now being taken for Farnborough 2012. Please contact emma.burgess@midlandsaerospace.org.uk

Members quizzed on Singapore and other airshows

FOLLOWING on from an excellent and busy week at the Paris airshow in June, plans are in hand for a bumper presence at Farnborough 2012.

The MAA is also calling for expressions of interest in exhibiting at the Singapore airshow from 14-19 February 2012, as well as other smaller shows, such as ILA Berlin. "Four companies coming with the MAA will make these shows viable," commented chief executive Andrew Mair.

There is no question in the minds of Paris exhibitors that working with the MAA was a benefit. A spokesman for Advanced Composites Group, one of the record 14 exhibitors, said: "The pod looked great, the stand was well-positioned and it attracted a lot of visitors."

First-time exhibitor Ricardo said the work done by the MAA with UKTI commercial officers for Italy "resulted in both of the people I requested to meet visiting our stand. I will let you know how I get on with them in the coming months."

Among VIP guests at the MAA stand were Mark Prisk, Minister for Business and Enterprise, BIS; Sir Peter Westmacott, British Ambassador to France; and Malcolm Harbour, MEP for the West Midlands.



'Super pods' 3.9m tall and 2.4m wide offer ample opportunities for exhibitors to promote their brands.

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New MAA service puts expertise, network to work for members

THE MAA has launched a new business support and development service for member companies.

Up to now, MAA expertise and access to the organisation's excellent industry network have only been available through funded programmes or on an ad hoc basis. Now, says chief executive Andrew Mair, they are being made available to all members who want to tap into the MAA's extensive capabilities and network.

Mair encourages members to follow a three-step process to pinpoint how MAA expertise can add the most value to their business:

- Step 1: Find out how the MAA can help you in a free one-hour consultation.
- Step 2: Discuss your business objectives with an MAA expert.
- Step 3: Receive recommendations from the MAA tailored to your business requirements.

"We have already helped members prepare for the future by connecting them to the right customers, creating technology or capability roadmaps and



business plans, and identifying sources of funding," says Mair.

The MAA's wide knowledge of the aerospace and linked sectors allows it to connect members to their next customers, suppliers or partners. Other tools the MAA team is qualified to deliver include AS9100 Rev C gap analysis, Business Excellence, Manufacturing Excellence and SC21 CSIPs (implementation plans).

For more information, call 024 7643 0250 or e-mail info@midlandsaerospace.org.uk.

Virtual PIE/BHR Group senior management team uses MAA road-mapping to analyse its markets, customers and competitors.

New focus on SME business development needs

THE MAA's business development working group was re-launched earlier this year, chaired by MAA director David Danger, managing director at HS Marston.

The group has set three aims:

- support member companies directly to develop new business opportunities;
- work with partner organisations which contribute to this, such as UKTI and inward investment organisations;
- in so doing, where relevant, contribute to revenue that sustains the MAA (eg Farnborough airshow).

"Business development has always been at the heart of the MAA," says Danger. "We want to make sure that individual member companies can access the MAA's considerable expertise and industry network to help increase their sales."

Joining Danger on the group are Mike Beirns (Abbey Metal Finishing), Peter Dickin (Delcam), Alan Duffield (Winbro Group), Neal Hillier (Icon Polymer), Mark Howitt (Tekdata Interconnections), Martyn Mangan (Marketing Birmingham), Martin Pye (Dunlop Aircraft Tyres), Peter Stevenson (UKTI East Midlands), Nick Willers (Accrofab) and Terry Wood (Black Country Chamber of Commerce and Industry).

Do you have ideas for the group?

Contact info@midlandsaerospace.org.uk

Change on the MAA board

THE results of the annual poll for three of the six elected board members were announced at the recent MAA AGM, along with a change to ensure small companies are fully represented.

Re-elected for two-year terms were Craig Askew of ITP Engines UK and Simon Beech of Bulwell Precision Engineers, while joining the board for the first time was Adrian Leatherland of the Resource Group.

Chairman Clive Snowdon congratulated the successful candidates and thanked Mike Woodhouse of Factura and Jonathan Lee Group, who also stood.

CEO Andrew Mair said the board plans to use its discretionary power to appoint representatives of small companies to the board. "We feel this will help balance the tendency members have to elect representatives from larger, better-known names," he said.

Mair praised directors who were standing down: "Mark Johnson of Avingtrans decided not to seek re-election due to his extensive business travel, after an outstanding eight years supporting the MAA board and its predecessor group. Mark Day, previously of Eaton and now with Saywell, is stepping down as appointed director, also after eight years starting as first chairman of Advantage West Midlands' aerospace cluster opportunities group."

MAA business development in action (below) at a meet-the-buyer event with UKTI.



East Midlands punches above weight in SC21

As the MAA-managed East Midlands SC21 project concludes, Aerospace in the Midlands reflects on some of its successes.



EAST Midlands aerospace companies account for 11 per cent of the national awards presented by the 21st Century Supply Chains (SC21) programme despite having just five per cent of companies signed up to the industry's national supply chain improvement initiative.

This result puts the East Midlands second proportionally among the 12 UK regions, an "impressive" performance in the opinion of Tim Holmes, SC21 project manager at the MAA.

Under the two-year SC21 East Midlands support project, administered by the MAA on behalf of the East Midlands Development Agency (*emda*), and in partnership with the Manufacturing Advisory Service – East Midlands (MAS-EM), funding was distributed to 25 companies and deployed on 38 SC21 projects.

All MAA-managed SC21 projects in



the East Midlands have now been completed. Project completion metrics reveal the strong impact that the funded projects had not only on day-to-day business performance but also on sales and retention of customers at a large majority of participants. They also showed that relationships with customers improved among participants, and all rated the MAA's management of the project excellent or very good.

Executives of the Seat Design Company (SDC) pick up their SC21 Bronze award from BAE Systems. From left, Mark Millan (SDC), Peter Hogg and Judith Eastwood (BAE Systems), Keith Swain and Tim Walker (SDC).

Seven East Midlands companies have reached the first SC21 recognition performance levels and been presented with Bronze awards. They are:

- AAR International
- Bulwell Precision Engineers
- Chemring Defence UK
- Glenair UK
- Midland Aerospace
- SL Engineering
- The Seat Design Company.

"MAS-EM and the MAA assisted all seven companies through the SC21 support project," says Tim, "and six of them received grant funding to deploy the SC21 framework or carry out improvement projects."

The East Midlands support project has also generated four video case studies and nine case study documents. "These case studies will be promoted using an MAA SC21 Twitter account and YouTube channel as the project closes," said Tim. "This work will be used to raise the profile of those companies, promote the SC21 programme and communicate the assistance provided by the MAA on behalf of *emda*."

Support was "excellent throughout," said Shaun Moloney, MD of Atlas Composites. The MAA has "a good understanding of SMEs involved in manufacturing and therefore appreciates the level of commitment it takes to improve performance and achieve sustainable long-term employment."

Steve Willis, GM of Cinch Connectors, said: "We received good clear support and advice from MAA."

"The entire project has been very beneficial," said Christine Parsons of

East Midlands SC21 support project in numbers

The MAA's project concluded on 30 September 2011, on budget and having achieved all targets. Here are some of the significant numbers it generated:

- An average improvement in quality performance of **1.46%**, to **99.15%**.
- An average improvement in delivery performance of **7.09%** to **87.45%**.
- An average increase in business turnover of **18.77%**.
- An average improvement of **23.4%** in value added per person and **12.2%** in stock turns
- **83** businesses received direct support, with **123** people receiving relevant training.
- **25** companies have been directly funded; **19** SMEs and **6** non-SMEs.
- **38** projects were supported, **28** by the MAA in addition to **10** by MAS-EM.
- Funding totalling **£187,000** was awarded.
- **6** of **7** bronze-award winning East Midlands companies received direct funding from the project.
- **4** video case studies and **9** written case studies were generated to provide lessons for the future.

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East Midlands SC21 support project participating companies

AAR International
Accrofab
AF Fasteners
Atlas Composites Ltd
Bulwell Precision Engineering
Chemring Defence UK
Cinch UK Ltd
Cosworth
CVI Laser
Gardner Aerospace-Ilkeston
H Beasley
Jack Tighe
Jaivel Limited
Kingfield Electronics
Midland Aerospace
OLD Engineering Ltd
PS Marsden
Paul Fabrications
Sigma Precision
SL Engineering
SPE Ltd
Swift Tool Precision
Taylor Kightly Engineering
The Seat Design Co
Tower Tool Ltd

Chemring Defence. "I would certainly recommend it to all relevant companies."

In total, the project supported 83 East Midlands companies to varying degrees and trained 123 employees.

The national SC21 programme has five key-customer clusters in which East Midlands suppliers participate.

More than 480 companies have signed up to the national SC21 programme.



Creative collaboration proves its value

Members of the East Midlands SC21 cluster group at Atlas Composites site: (from left) Shaun Moloney (Atlas), Tom Townsend (TPT), Christine Parsons (Chemring Defence), Ingard Sagstad (Paul Fabrications), Shaun Fox (SL Engineering), Fraser Pooley (CVI Laser), John Davie (Atlas), Shaun Stevenson (SL Engineering) and Tim Holmes (MAA).

THE fifth and final workshop of the MAA-supported SC21 East Midlands regional cluster was hosted by Atlas Composites on 24 August at its site in Ilkeston.

It was the last review meeting of the five companies that had linked up under the SC21 programme umbrella to share challenges and best practice along the improvement journey.

Atlas Composites MD Shaun Moloney welcomed representatives from Chemring Defence UK, CVI Laser, Paul Fabrications and SL Engineering who collaboratively make up the group in conjunction with the MAA and TPT Consultancy.

MAA SC21 manager Tim Holmes said each workshop gave companies "a chance to share and reflect on their progress". The East Midlands cluster demonstrated the value of the SC21 framework and its relevance to any organisation "because while the five members have a very diverse range of products and services, deploying the SC21 framework identified not just their own challenges but the 'red threads' that small supply chain companies have in common."

Each workshop focused on different key topics such as strategic planning and root cause corrective action. Said Tim: "Some companies have been good at certain aspects but by sharing their experiences, good and bad, they've learned from each other and been able to shore up individual weaknesses. The way companies supported each other has given real

value to the activity."

This review meeting represented the end of an 18-month journey from the initial pre-positioning review, something which Tim reflects on with great pride.

"The East Midlands Cluster Group can be proud of achieving national recognition for its collaborative work ethic," said Tim. Two of its members, SL Engineering and Chemring Defence, have already received national recognition with SC21 bronze awards.

Added Tim: "The common denominator with all group members was their willingness to share best practice experiences, a concept which also coincided with a significant period of growth for all cluster group members."

In deploying SC21 principles, Atlas Composites has already reaped significant rewards. A reduction in the duplication of processes and need to support customer audits has seen an improvement in supply chain performance, a fact that Quality Systems manager John Davie was quick to recognise. He said: "Our experience of AS9100 Revision C changes will enable us to make great strides with our SC21 programme through shared working practices and KPIs. A growing number of customers and suppliers recognise the benefits of achieving an SC21 benchmark. The combination of AS9100 Rev C, which we've recently been awarded, and SC21 bronze will provide the perfect platform to position Atlas Composites as a trusted high performance composites partner."



Aerospring applies research

THE Aerospring project's windup event on 29 September attracted 16 delegates to Birmingham Metropolitan College to learn about the work achieved by the partners. The event included a tour of the engineering and technical teaching areas of the college and hands-on training with the upgraded software, with expert help on hand to help them master the new software, using their own real spring problems. Project partner G&O Springs plans to hold a similar event in the new year; details from Steve Boyd on Steve.Boyd@springs.aero



ATEP 2 yields promising spinoffs

FOUR of the six projects run under the MAA's second Aerospace Technology Exploitation Programme (ATEP 2) have been completed on schedule with outcomes that promise to benefit the aerospace community.

Bridget Day, MAA technology and innovation manager, is pleased with the results, both planned and unanticipated. "The fact that we take projects at a risky stage means some may not fully succeed but spinoff benefits can sometimes be as exciting as the original targets."

The programme has supported six projects since 2009:

- A2OX Aluminium Alloy
- Aerospring
- Aircraft Tyres Finite Element Modelling (ATFEM)
- Chrome-free Ipcote
- Endurance braking
- Technology Advancement of Surface Coolers (TASC).

The biggest spinoff benefit of the technically successful A2OX project led by Aeromet has been winning additional funding from the UK's national Technology Strategy Board. "The small amount of funding they received under ATEP helped them apply for larger amounts and to progress to the next level," said Bridget. On the technical side, the project gathered enough data for a new Aerospace Materials Specifications (AMS) standard. This

means engineers can now specify A2OX for new products.

The Aerospring project, led by G&O Springs, concluded with an event at Birmingham Metropolitan college designed to familiarise users of spring data with its findings. The project has measured the properties, when formed as springs, of 10 different materials, all aerospace exotic metals, which had been identified by BAE Systems and Aero Engine Controls.

A new collaboration was formed between ATEP project partners G&O Springs and Institute of Spring Technology with Birmingham Metropolitan College. The college has experience in tailoring training for industry and in apprenticeships to suit individual companies such as Caterpillar.

Bridget said the project's three SME partners are now looking into the possibility of further funded work.

ATFEM, the third complete project, is progressing to implementation. The success of this project, said Bridget, can be seen in the interest shown in its research by Airbus. Lead partner Dunlop Aircraft Tyres has re-equipped its finite element (FE) system and has employed a full-time staff member to operate it.

European REACH regulations banning hexavalent chrome in Ipcote coatings gave urgency to the Chrome-free Ipcote project. Indestructible Paints' ATEP project was the only such

"The fact that we take projects at a risky stage means some may not fully succeed but spinoff benefits can often be as exciting as the original targets."

research to attract funding, thereby gaining national visibility for the project and its partners.

On the technical side, the project has a two-part solution undergoing testing with Messier-Dowty and Rolls-Royce, the project's customer partners. An unexpected benefit for the three SME partners, said Bridget, was risk management training donated by Rolls-Royce as part of the project.

The Meggitt-led Endurance Braking project has about six months to run. Bridget is confident the partners will find a solution to the challenge of improving the geometry and molecular level chemistry in aircraft brakes. With the support of CERAM, specialist glasses and ceramics have been manufactured by James Kent for Meggitt Aircraft Braking Systems.

The challenge of the TASC project was to create a UK source of supply of surface coolers. As part of the project, HS Marston made more than 10 samples. The results equalled existing products on performance with a saving of cost. "This wasn't the answer they necessarily expected," said Bridget, "but it makes the UK competitive because of a different production process."

An additional benefit, she said, was the development by project partner Advanced Chemical Etching of a new aluminium etching capability which it plans to offer to other markets.

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Innovative engine work earns top design award

MIDLANDS engineer Shaun Addy has been named Design Engineer of the Year at the British Engineering Excellence Awards (BEEA) for innovative work on engines.

Shaun, in his current role at Birmingham-based engine maker Cubewano, perfected a small heavy fuel rotary engine for a US military UAV project. The judges commended him for being "innovative in a small company... taking risks, but using his experience." He exemplified "that legendary 'one step further' ethos."

▲ www.cubewano.com

Work starts on Nottingham aero technology centre

THE University of Nottingham has started work on its £3.3 million Aerospace Technology Centre.

The building forms part of the university's £7 million Institute for Aerospace Technology, which is being established with £3.6 million from the European Regional Development Fund.

This will support a major infrastructure investment and a business engagement and knowledge transfer programme supporting regional SMEs.

The development includes the construction of a large steel-framed building which will provide space for a workshop, offices, meeting rooms and laboratories, extending facilities at the university's Innovation Park.

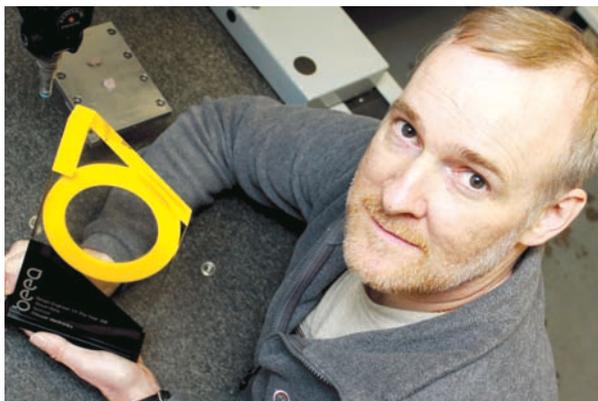
▲ www.nottingham.ac.uk

Boeing Dreamliner delivery celebrated at Rolls-Royce

ROLLS-Royce celebrated the delivery of the first Boeing 787 Dreamliner to launch customer All Nippon Airways (ANA) as the beginning of a new era in air transportation. The aircraft is powered by Trent 1000 engines made in Derby.

Mark King, Rolls-Royce President – Civil Aerospace, said the Dreamliner "represents a quantum leap in technology over the generation of airliners it will replace.

"It marks the beginning of a new era



Shaun Addy: legendary 'one step further' ethos.

of cleaner and more efficient airliners."

The Trent 1000 is specifically designed for the Dreamliner and incorporates the latest aerodynamic, materials and coating technologies in an in-service airliner.

▲ www.rolls-royce.com

New site in planning by Aero Engine Controls

MIDLANDS-based Aero Engine Controls is planning to develop a new 250,000sq ft headquarters site in Birmingham Business Park.

The company has earmarked the site for a multi-purpose facility for its design, development, manufacturing, qualification and R&D work, with space to expand.

Simon Burr, chief executive of Aero Engine Controls, said: "This is the first stage in expanding our capability and building a home for the long-term future of our business."

▲ www.aeroenginecontrols.com

First A380 in China is powered by Trent 900s

ROLLS-Royce has extended its relationship with China Southern Airlines with the delivery of its first Airbus A380. China Southern has five on order, all powered by Rolls-Royce Trent 900 engines built in Derby. Its fleet is the first to enter service in China.

China Southern chairman Si Xianmin said: "We have enjoyed a long and positive relationship with Rolls-Royce, operating a range of its engines in our current fleet, and look forward to this continuing in the future."

▲ www.rolls-royce.com

NEW MEMBERS

The MAA welcomes the following new members to the alliance:

Conduce Group Ltd, Nuneaton
IT and business services.

DLA Piper, Birmingham
Global law firm.

GJD Aerotech Ltd, Lutterworth
Maintenance, AOG support, AD & SB compliance, parking, storage, aircraft partout and disposal.

Güdel UK Ltd, Coventry
Gantry robotics, turnkey automation systems, linear guideway technology and power transmission components.

Industrial Measurements Ltd
Castle Donington
Torque measurement.

KMF Precision Sheet Metal
Newcastle-under-Lyme
Integrated bespoke metal work.

Marketing Birmingham, Birmingham
Strategic marketing.

Mills & Reeve, Birmingham
Legal services.

Nelsons Solicitors, Derby
Legal services.

Omega Resource Group, Worcester
Recruitment specialists.

Shorterm Group Ltd, Derby
Specialist suppliers of manufacturing, engineering, maintenance and composite technicians to the aerospace industry.

Simpson Recruitment
Barton-under-Needwood, Staffs
Recruitment consultancy.

University of Nottingham Institute of Aerospace Technology
Nottingham
Aerospace research.

University of Wolverhampton
Wolverhampton
Higher education, R&D, innovation and skills, business support.

NEWS IN BRIEF

New apprenticeship scheme targets suppliers

A BRAND new apprenticeship scheme for the engineering sector has been launched that could help MAA members address key skills shortages.

Rolls-Royce in Derby has started to train more apprentices than its own business requires on an 11-month programme to a Level 2 qualification; the first year of the apprenticeship.

In July 2011, the first seven trainees were recruited to the Rolls-Royce standard and started on the rolling Midland Manufacturing Apprenticeship programme. The intention is that every 12 weeks, eight new trainees will join the programme, if the company has

successfully placed the apprentices with a quality engineering employer.

Rolls-Royce plans to work with the trainees to find suitable employment at engineering employers where they can go on to complete their training and achieve a full apprenticeship.

This Midlands Manufacturing Apprenticeship programme is being run by Rolls-Royce with government support. The company has committed to developing and training apprentices for the wider engineering sector, as part of its investment in a new multi-million pound state-of-the-art training academy dedicated to training the apprentices of the future.

For more information contact andy.cripps@rolls-royce.com.

The intention is that every 12 weeks, eight new trainees will join the programme, if the company has successfully placed the apprentices with a quality engineering employer.

MAA member **Comar Engineering** of Wolverhampton has won a large order from **Goodrich Actuation Systems** for test rigs for the Bombardier C-Series programme. Goodrich is producing the high-lift system for the aircraft's wings.

Midlands polymer component manufacturer **Icon Polymer** has won a new contract to supply fire seals for Bombardier's C-Series commercial jet. It will supply seals for the pylon to Spirit AeroSystems in Wichita, Kansas.

Coventry-based **Lightning Aerospace** is the newest member of the **Midlands Assembly Network**. Lightning was recently acquired by manufacturing entrepreneur Andrew Redfern, who has led the company to a record annual turnover of £3 million.

Among MAA members to acquire AS 9100 Revision C accreditation are **Able Precision** Engineering of Birmingham and **Atlas Composites** in Derbyshire.

CALENDAR

MAA events for your diary:

Quarterly members meeting
Thursday, 8 December
16:00 – 19:00
Yamazaki Mazak, Worcester
Keynote presentation from GE Aviation and Ultra Electronics – PMES and a tour of Yamazaki Mazak's machine tool manufacturing facility prior to meeting.

Inside United Technologies with the MAA
Wednesday, 18 January 2012
09:30 – 16:00
HS Marston, Wolverhampton
Learn what it takes to supply global aerospace companies.

Singapore Airshow 2012
14-19 February 2012
Singapore
Members interested in exhibiting with the MAA should contact Emma Burgess at the MAA for information.

Farnborough Airshow 2012
9-13 July 2012
Farnborough, Hampshire
Members interested in exhibiting with the MAA should contact Emma Burgess at the MAA for information.

About the MAA...

The Midlands Aerospace Alliance (MAA) is the voice of companies in the British Midlands supplying global aerospace. It was set up in 2003 to improve wealth creation and employment for companies and people involved in the aerospace industry across the Midlands. The MAA is supported by Advantage West Midlands (AWM) and the East Midlands Development Agency (emda).



For additional copies of AIM, or to add your clients to the distribution database, please contact the MAA Secretariat.

Contact the MAA

If you have a query or suggestion that you wish to make, please contact the MAA by any of the means below:

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