AGP: Aerospace Growth Partnership Roadshow
Bristol  2 July 2013
Agenda

10.30 – 10.40  Welcome - Barry Warburton, Chief Executive, WEAF
10.40 - 11.10  Aerospace Industrial Strategy Overview – Graham Chisnall, Deputy CEO & MD Aerospace ADS
11.10 – 11.30  Aerospace Technology Institute - Graham Chisnall, Deputy CEO & MD Aerospace ADS
11.30 – 11.50  National Aerospace Technology Programme (NATEP) - Jeff Taylor, Director, Aerospace Strategy & Policy, ADS
11.50 – 12.10  Aerospace Growth Partnership & Skills - Mark Stewart, General Manager Human Resources Director, Airbus
12.10 – 12.20  AAE iNet - Barry Warburton, Chief Executive, WEAF
12.30 – 12.40  Discussion, Q&A
12.40 – 13.30  Sandwich Lunch
Aerospace Industrial Strategy Overview

Graham Chisnall
Deputy CEO ADS & MD Aerospace
What is the AGP?

- The AGP brings the UK aerospace industry and Government together to address barriers to growth that affect the UK aerospace industry, to boost exports and to create high-value jobs.

- The AGP will focus on ensuring that the UK remains an attractive location for aerospace companies to carry out work, both on current and future generations of civil aircraft.

- The AGP is jointly chaired by Michael Fallon MP, Minister of State for Business and Enterprise, and Marcus Bryson, VP Aerospace at ADS.
AGP Strategic Aims

Maintain Position as #1 in Europe

- Increase UK global market share in engines
- Return to a 20% market share of wings on future Airbus programmes
- Maintain / develop centres of excellence for engines, wings & key systems

Broaden the UK Customer Base across the global market:

- Worldwide partner of choice for wings, engines and key systems
- Secure access to worldwide markets
- Leverage private investment with HMG & EU funding
A Strategic Vision for UK Aerospace

July 2012

- Launched by Vince Cable at FIA2012. Foreword by Prime Minister.
- Set out key interim findings from AGP
- Identified opportunities and challenges that need to be addressed to secure short, medium and longer term growth.

An Industrial Strategy for UK Aerospace

March 2013

- Presents cohesive strategy to deliver the vision from Reach for the Skies.
- Launched March 2013 on behalf of the UK aerospace sector, committing over £1bn public funding for R&T, over consecutive Governments.
AGP Achievements

- UKTI Market Access Pilot • [Jan 2013]
- Finance Forum • [Nov 2012]
- 500 MScs • [Jul 2012]
- Aerospace Technology Institute • [Mar 2013]
- UK Aerodynamics Centre • [Mar 2012]
- National Aerospace Technology Exploitation Programme • [Jun 2013]
Aerospace: UK position

- UK is a major player in the aerospace industry:
  - Holds 17% of global market
  - Europe's largest aerospace manufacturer and second only to the US globally
  - Employs over 230,000 people in the UK, contributing £24bn to the economy each year

- To maintain global position, the AGP was set up to help Government and industry work together

- Strategy document launched at Farnborough Airshow 2012 revealed UK strengths:
  - Advanced aerostructures
  - Propulsion systems
  - Advanced aircraft systems
  - Aerodynamics
How the AGP is Structured

Scope:
- Civil aircraft, 25 seats+
- Business jets and larger
- ADS special interest group for rotorcraft
- Civil/Military Dual-Use

Key Product Groups:
- Propulsion
- Advanced Aerosystems
- Advanced Aerostructures

Recommendation Timescales:
- Protect – 0-5 Years
- Exploit – 5-15 Years
- Position – 15+ Years
AGP Work Packages 2013
AGP Ongoing Concepts
Aerospace Finance Forum

Current State
- Supply chains consist of small, medium and fairly large businesses.
- Lack of access to non-partisan financial advice.
- Supply chain is under capitalized:
- M&A activity is low.
- Business Growth Fund under-used in the aerospace industry.
- Private Equity investment is not aligned with the long-term view of the industry.
- Asset-based lending and Invoice Financing is difficult - risk attached to already highly leveraged businesses + the risk averse nature of the banking industry.

Communication
- Improve banks' understanding of the aerospace industry by up-skilling their regional teams.
- Launched a quick survey of @ 1000 aerospace SC companies to better understand the current funding landscape and future needs.
- Improve SC companies' understanding of accessibility to appropriate and affordable funding

Achievements so far
- Two banks have already put aerospace specialists into their regional offices.
- 'SME Access to Finance Schemes' published by BIS.
- The various stakeholder members of the FF are increasing their understanding of the difficulties facing development of the future UK supply chain

Future State
- Funding aligned to the risks & long term nature of the industry:
- Less onerous contract Terms and Conditions where appropriate.
- Improved Balance Sheet strength in the SC.
- Easier access to:
  - Supply Chain Financing
  - Funding for Lending Scheme
  - Aggregated Capital Bond market.
AGP Secondees 2013

AGP Project Coordinator
• Rachel Gollin, GKN

Strategy Group
• Charlotte Colls Rolls-Royce

Technology Working Group
• Matthew Boyle, Bombardier
• Nicholas Vitale, Airbus
• Alex Appleby, GKN

Supply Chain Working Group
• Jane Halstead, Spirit
• Chris Owen, Marshall Aerospace & Defence Group

Manufacturing Working Group
• Anoop Kundi, Airbus
Further Information:

Websites:

- www.adsgroup.org.uk
- www.aerospace4growth.org.uk

For copies of “Lifting Off” and further information contact:

jeff.taylor@adsgroup.org.uk
Thank You
Aerospace Technology Institute

Graham Chisnall
Deputy CEO ADS & MD Aerospace
Lifting Off with Technology

- Invest £2bn in an Aerospace Technology Institute...
  - £2bn industry-Government investment to create Aerospace Technology Institute

- Committed over 7 years...
  - Certainty of investment allows industry to plan

- To create and safeguard jobs...
  - 115,000 jobs could be created in the sector from investment in the ATI

- At all levels in the supply chain
  - AGP will support businesses of all sizes, including SMEs
Background and Context

A need for long term, substantial investment in UK Aerospace R&T to enable:

- Increase the UK global aerospace market share through targeted technology development
- Increase UK exports of high specification products from the aerospace sector
- Leverage technology advancements into other high growth sectors, such as automotive, for the benefit of the UK as a whole
- Scale up education and academic work in advanced engineering subjects
- Attract well-educated engineers into careers in the aerospace industry
- Build up and maintain a full understanding of the UK’s aerospace technology resources (people, technology, facilities)
Proposal & Vision

Establish a single, coherent, national aerospace technology development programme,
with long-term Government and industry funding,
that with pace and cohesion will secure and grow the UK's share of the global aerospace market.

The scale and ambition of this vision will be realised through the
UK Aerospace Technology Institute
Core Functions of the ATI

- Provide UK leadership for the Aerospace Technology Strategy
- Direct funds for Aerospace research in line with strategic priorities
- Supply industry and government with high-level technical analysis
- Provide economic evaluation and impact as a result of aerospace research
- Ensure dissemination of developments to appropriate stakeholders
- Represent the UK in international Aerospace forums
- Develop connections with other programmes including manufacturing, supply chain and skills.
Proposed Scope and Role of the Institute

- Encompass aerodynamics, structures, propulsion and systems technologies
- Shape and direct a UK Aerospace R&T strategy and proposed programmes that would operate a £300m pa co-investment by industry and Government with industrial leadership
- Forge strong and focused university links with close involvement of BIS, TSB and EPSRC (and possibly HEFCE)
- Represent UK Aerospace R&T internationally
- Report on the Economic Impact
- Disseminate and Report

The "go to" place for UK Aerospace R&T - nationally and internationally
How the ATI Will Work

- The Government and industry will each contribute £150m pa to the new Aerospace Technology Institute.

- In FY13/14 this includes £68m of previously announced Government funding (including around £40m of the funding announced in the 2012 Budget for the Aerodynamics Centre, which will be incorporated within the ATI). The figure for FY14/15 includes £22m of previously committed Government funding. The industry funding for ATI also includes elements of previously announced funding for FY13/14-14/15.

- The ATI will consist of a small core team primarily seconded from industry and academia. Their role will be to lead on the development of a technology road map, prioritise areas for work, scope programmes, map where capabilities exist across the UK, assess the actions needed to make these fit for purpose and coordinate capability building activities.

- The research and technology programmes will be based on collaborative projects embedding vital capability into the UK supply chain.
Types of ATI programmes

- Small scale, open call collaborative research projects
  ...and....

- Complex umbrella programmes, e.g. SAMULET, NGCW, STEM, etc
  ....through to.....

- Large-scale demonstrators, which could combine and integrate the results of smaller projects and take them to a higher level of maturity
  ....plus the alignment of investments in.....

- Physical facilities

- Educational centres, e.g. DTC’s
ATI Next Steps

The ATI will be up and running with an initial portfolio of projects by the end of 2013.

- Create a formation team to establish the governance structures and legal frameworks to best deploy the ATI robustly but with pace
- Establish and communicate the position of the ATI in the innovation landscape
- Establish a process to determine an initial portfolio of projects
- Appoint individuals to board roles in the short and long term
- Confirm budget for the ATI’s core functions

The AGP will communicate further details to the industry in the coming months.
NATIONAL AEROSPACE TECHNOLOGY PROGRAMME (NATEP)

Jeff Taylor
Director Aerospace Policy & Strategy ADS
National Aerospace Technology Exploitation Programme (NATEP)

An Aerospace Growth Partnership technology development programme managed by:

Delivered by:
NATEP Funding Route

- Birmingham City Council
  - £125m, 5000 jobs
  - Aerospace Growth Partnership
    - £23m, 1200 jobs
  - Advanced Manufacturing Supply Chain Initiative
  - National Aerospace Technology Exploitation Programme
NATEP Summary

• Structured process to encourage exploit/position product/manufacturing technologies to emanate (“bottom up”) from UK aerospace supply chain
• £23m programme to mature 100 undeveloped aerospace technologies in supply chain
• Funds new technologies at small partnerships of SMEs, mid-cap business units with customer participation
• Focus on middle TRLs. Must have route to market.
• Solves existing market failures in supply chain communication, supplier R&D management capability, in addition to funding.
• Model is proven Midlands Aerospace Alliance Aerospace Technology Exploitation Programme (2006-12) -- 11 successful projects funded
NATEP

NATEP will deliver 1200 jobs by increasing the technology skills in the aerospace supply chain via 100 technology projects. As a result 250 companies will have improved their company CV and will have been kick started along a growth path and prepared for increase in business including exports. These companies will have more experience with working with relevant catapults and with the knowledge base. We will have coordinated the projects at aircraft level in order to maximise business growth and job creation.
National Aerospace Technology Exploitation Programme

100 Projects

- Partnerships apply for funding competitively on rolling six monthly basis; decisions made by senior engineering manager groups in each regional cluster. These continue to meet quarterly to guide and feed back to projects.

- Professional industry expert support given to help companies develop good bids (expert plays no role in decision-making)

- Must be a partnership. Points awarded for fit with national strategies.

- Universities and research organisations support projects but don’t lead.

- Projects typically take 1-2 years.

- Typically £150k direct funding to industry per project.
MAA Aerospace Technology Exploitation Programme (ATEP) 2006-12

Manufacturing novel aluminium alloy
Mid-cap Aeromet of Worcester worked with SME partner Grainger & Worrall, the University of Birmingham, materials provider London & Scandinavian Metals and customer Aero Engine Controls to develop manufacturing processes for a novel high-strength aluminium alloy, A20X.

Has led to additional successful funding bids . . .
# National Aerospace Technology Exploitation Programme

## Summary

- **£23 million Government Investment**, of which **£15 million is for R&T projects**

- **Six Prime sponsors** (AEC, Airbus, Rolls Royce, Bombardier, GKN, Spirit)

## Typical Project Breakdown

<table>
<thead>
<tr>
<th>Breakdown</th>
<th>Funding</th>
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<tbody>
<tr>
<td>Capability Training &amp; Expert support</td>
<td>£80K</td>
</tr>
<tr>
<td>£150K Supplier matched funding</td>
<td>£150K</td>
</tr>
<tr>
<td>£15K Industry Mentoring Support</td>
<td>£15K</td>
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</table>

![Diagram showing typical project breakdown](diagram.png)
Work Packages 0 to 6 to deliver 100 projects
- 5 calls over 4 years

Screenshot of detailed Gantt chart
NATEP - NATIONAL STEERING BOARD (NSB)

- Chairman: Andy Page (Rolls Royce)
- ADS
- Birmingham City Council
- Technical x2 Catapult ATI
- Devolved Regions x 3
- Regional Trade Assoc. x 2
- NATEP Sponsor Prime x 2
- Supply Chain x2
- Regional Advisory Panels
  - Chair – NATEP Dep. Prog.
  - NATEP - North
  - NATEP - Midlands
  - NATEP - South West
  - NATEP - South East
  - NATEP - Northern Ireland
  - NATEP - Scotland?
  - NATEP - Wales?

- NATEP Prog. Dir. (NSB Secretary)
- NATEP Dep. Prog. Dir.
## NATEP - Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>17 June 2013</td>
<td>Ministerial Announcement, Paris Airshow</td>
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<tr>
<td>July 2013</td>
<td>Contract Agreement</td>
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<tr>
<td>July 2013 – July 2015</td>
<td>Six-monthly calls for NATEP bids</td>
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<tr>
<td>2015 - 2017</td>
<td>Project delivery / completion</td>
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<tr>
<td>March 2017</td>
<td>End of NATEP Programme</td>
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Further Information

www.adsgroup.org.uk/natep

Jeff Taylor
jeff.taylor@adsgroup.org.uk
www.adsgroup.org.uk
0207 091 7834
AGP - Road show Bristol
People, Skills and Engagement

Mark Stewart
Chair, People and Skills Working Group, Aerospace Growth Partnership
General Manager and Human Resources Director, Airbus

2 July 2013
**Aims and Objectives – Key Focus for This Year**

- Help secure the next generation of talent for the Aerospace sector
- Improve the image of civil aerospace as a career choice
- Increase diversity
- Continue to understand our future skills needs
- Continue to promote the benefits of investing in training and skills
- Deliver an Industrial Partnership if our Employer Ownership Bid is successful

Ensure the UK has the best people, with the right skills to manufacture the next generations of civil aircraft
The Focus For Today

- TRS - Do you know about it and the benefits of being part of it
- MSc’s - A real opportunity to upskill our sector
- Employer Ownership of Skills – A fresh approach
- Engagement – Why its important and what does it involve
- New Steering Group - How we will Deliver it

Without the people and skills we won’t be able to develop, innovate and exploit the technology
Connecting People and Opportunities

Talent Retention Solution - created by business for business, to help redeploy and recruit skilled people in engineering
- Free for SMEs to access and use the candidate database.
- Easy to use - [www.talentretention.biz](http://www.talentretention.biz)
- Now 3,500+ engineers registered and 700+ companies on the system
- Created to redeploy engineering staff at risk. Now broadened out so that students and apprentices are registering
- Working to become a total solutions platform for the AME sector
Higher Education - Aero MSc bursary programme

- Whose involved
  - Industry, Government, RAeS & The Royal Academy of Engineering

- The programme objectives:
  - Generate more MSc qualified engineers with high level skills who will work in the UK aerospace sector; and to
  - Up-skill the existing UK aerospace engineering workforce and reinforce the supply of skilled people with knowledge and expertise in key areas of technology for the future.

- The programme plan:
  - 500 bursaries to start MSc courses from 2013 to 2015

- Current status
  - 304 Applicants
  - 255 Passed to detailed applications
  - 133 Passed to interview phase
  - 85 Interviews conducted
  - 64 Bursaries Awarded
Employer Ownership of Skills

- The EOS objectives:
  - Traineeships that provide a pathway to apprenticeships
  - Doing more on shared apprenticeships to support SMEs
  - Re-skilling the existing workforce in new technologies and ways of working
  - Co-funding of training places

Ensure that employers have the opportunity to define the training needs for the sector, and put in place training programmes to meet the needs of the future
Employer Ownership of Skills

- 5 key skills priorities identified within the Strategic Vision ‘Reach for the Skies’ report

- Submitted an Industrial Partnership Bid on behalf of the Sector:
  - An effective Information, Advice and Guidance (IAG) careers service
  - An Apprentice / Graduate matching service: ‘Engineering Clearing House’
  - Industry designed traineeships, apprenticeship frameworks and accelerated up-skilling conversion programmes
  - An ‘Industry Standard’ network of Training Providers
  - A pilot programme for 350 aerospace traineeships across the West Midlands, the North West, the North East and the East Midlands to start in January 2014.
Employer Ownership of Skills – Key Dates

- 11th Mar – Deadline for expressions interest submitted by 13:00
- 28th Mar – Deadline for full and outline bids by 13:00
- Jul 2013 – Decisions regarding full and outline bids
- Oct 2013 – Delivery to commence for successful full bids
- Oct 2013 – Deadline for outline bids to full bids
- Jan 2014 – Decisions regarding developed full bids
Engagement 5 Key Communities

- **Young People and Education**
  - Ensuring the pipe is stocked with good quality STEM school leavers / better careers advice by actively supporting the “See Inside Manufacturing” initiative (between BIS and industry), develop better working relationships with schools, teachers and career advisers.

- **Supply Chain Regions & LEPs**
  - Ensuring all suppliers are aware of the AGP initiatives, understand the benefits that they can gain and are enabled to access those benefits.

- **International Customers**
  - Ensuring that customers are appraised of the coherent strategy of the UK supply chain, and understand their needs to deliver the best solutions.

- **Westminster / Whitehall**
  - Ensuring the government is fully aligned with the strategy to solidify and stabilise the industry beyond this administration.

- **Media / PR**
  - Ensuring the AGP activities are fully appreciated and understood.
# AGP People and Skills Work Group

<table>
<thead>
<tr>
<th>Company / Group</th>
<th>Name</th>
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<tbody>
<tr>
<td>Airbus</td>
<td>Mark Stewart</td>
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<tr>
<td>AW</td>
<td>Clive Higgins / Steve Palmer</td>
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<tr>
<td>Bombardier</td>
<td>Carol Philips</td>
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<tr>
<td>GKN</td>
<td>Andrew Harvey</td>
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<tr>
<td>Rolls-Royce</td>
<td>Graham Schumacher</td>
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<td>Safran Messier-Dowty</td>
<td>David Bond</td>
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<tr>
<td>Spirit</td>
<td>Jenny Scales</td>
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<tr>
<td>UTC</td>
<td>Ashley Portlock</td>
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<tr>
<td>ADS</td>
<td>Graham Chisnall / Alan Fisher</td>
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<td>Semta</td>
<td>Sarah Sillars</td>
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<tr>
<td>RAeS</td>
<td>Paul Bailey</td>
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<tr>
<td>BIS</td>
<td>Roger Bourne</td>
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<tr>
<td>UNITE</td>
<td>Ian Waddell</td>
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### Possible Further Members (TBC)
- Supply Chain Company
- Regional Trade Association
- Vocational Education (Mike Keoghan)
- National Apprenticeship Service (Karen Woodward)
Thank You
AAE iNet
Barry Warburton
Chief Executive - WEAF
Discussion, Q&A
Lunch & Close