Reach for the skies

The Aerospace Growth Partnership

Industry and government working together to secure the future for UK aerospace

ADS

Aerospace Growth Partnership

BIS | Department for Business Innovation & Skills

MAINTAINING OUR LEADERSHIP AS AN AEROSPACE NATION

The UK has a great tradition of innovation in aerospace.

It's in our DNA.

Just think of the great companies that make us great in flight: Rolls-Royce, BAE Systems, Bombardier, Airbus, AgustaWestland, Spirit Aerosystems, Goodrich Actuation Systems, Messier-Bugatti-Dowty and GKN Aerospace.

From the Tiger Moth to Concorde and the Airbus A380, we've provided the skills and ingenuity to create great flying machines.

Now we face a new challenge. Global competition to our standing as one of the world's leading aerospace nations is intensifying.

What's more, the next generation of aircraft must be leaner and greener if flying is to achieve its growth potential.

That's why industry and government have got together in a new partnership:

- to help keep us at number one in Europe and number two in the world
- to secure for the UK more of the global aerospace market

That's why the Aerospace Growth Partnership is here: to help the UK reach for the skies.

MARK PRISK
Minister of State for Business and Enterprise

MARCUS BRYSON
CEO GKN Aerospace and Land Systems

SIZE OF THE UK AEROSPACE INDUSTRY

100,000+
direct jobs in UK aerospace

£24.2BN annual earnings

75% of turnover to export markets

OUR GLOBAL POSITION

global market share **17%**

#1 in Europe **#2** in the World

RETAINING OUR EDGE IN AEROSPACE MARKETS

Our strengths are in high-value, high-technology areas such as design and manufacture of large aircraft wings; aero-engines; helicopters; and advanced systems - including landing gear, fuel, mechanical, avionics and electrical power.

Growth in air travel since the 1970s has led to a strong industry in the UK and continuing global demand means there will be additional work in upgrading existing aircraft models. But we're looking to the future too. We need to seize the opportunity to play a central role in creating the all new, next generation aircraft and helicopters that will come into service in the mid-2020s. Indeed, the future prospects for the civil aerospace sector are very bright.

However, the UK's current strength is the result of significant public and private investment in research and technology in the late last century.

The UK aerospace industry is faced with increasing competition globally not only from traditional aerospace manufacturing nations but also from developing aerospace nations.

We can't stand still. To stay at the forefront of the increasingly global aerospace industry, the UK needs to secure strategic work packages on the new programmes, as those we are currently working on come to the end of production and support over the next few years.

Action is needed now to ensure that public and private investment is increased to globally competitive levels.

The AGP is committed to rising to these major challenges for the benefit of the sector and, most importantly, for the UK economy.

THE FUTURE OF THE GLOBAL AEROSPACE MARKET BY 2030

27,000 large new civil airliners – **$3.2 trillion**

24,000 business jets – **$600BN**

5,800 regional aircraft – **$215BN**

9,500 helicopters – **$50BN** (by 2020)

THE OPPORTUNITY FOR OUR AEROSPACE SECTOR

4.8% compound annual growth – the size of the sector doubles about every 15 years

33% of world traffic to be in Asia Pacific

$352BN potential market share for the UK to **2030**

WHAT IS THE AGP?

The Aerospace Growth Partnership is a positive collaboration of industry and government working together to secure the future for UK aerospace.

It is creating a shared vision and plan for the UK aerospace industry for the next 15 years and beyond.

This covers everything from business jets to the very largest twin aisle passenger aircraft and helicopters to advanced turbo props.

Industry roadmaps will cover three areas where the UK aerospace industry is particularly strong:

- advanced aerostructures
- propulsion systems
- advanced aircraft systems

Over 80 senior industrialists are working with government on the real challenges we face to keep aerospace at the heart of the UK economy.

Specialist groups are looking at strategy, technology, manufacturing, supply chain, skills and engagement/communications.

Our final report will be published at the end of 2012 and with it the real work will begin.

Conor Crossey, apprentice, Bombardier Aerospace, Belfast Northern Ireland Apprentice of the Year 2012 Age 21

"I had never really thought of doing an apprenticeship, but since I've joined Bombardier's apprenticeship scheme, I've never looked back. It's given me the chance to earn while I learn, and I know that the skills I'm developing and the qualifications I'll gain at the end of my training will help me secure a career in aerospace. I'm looking forward to developing new skills as my career progresses in an industry which is constantly evolving and pushing technological boundaries."

THE AGP'S STRATEGY WILL BE BASED ON LEVERAGING OUR WORLD-BEATING TECHNOLOGIES

- advanced wing design, integration and manufacture
- advanced aero-engines
- helicopters
- landing gear systems
- aircraft and engine control systems
- electrical power systems
- wheels and brakes
- advanced propeller systems
- advanced rotor blade design
- avionics
- maintenance, repair and overhaul
- data management

WHAT IS OUR PROGRAMME OF ACTION?

The AGP has conducted a review of the prospects for the sector and has adopted the following three-tiered approach:

PROTECT (0-5 years): looking at the capabilities we need to have now – identifying what currently exists in the UK and what actions may be necessary to make these fit for purpose to support the overall strategy.

EXPLOIT (up to 2025): Working together to identify programmes for UK industry, primarily on upgrades to existing aircraft and systems.

POSITION (2025 and beyond): Taking action now to position the UK to be as competitive as possible for the all new aircraft that will enter service in the mid 2020s.

We have also drawn the following conclusions and priorities regarding the future needs of the sector:

- New ways of teamworking between industry and government and within supply chains are central to the continued success of the sector.
- A strategic long-term partnership with government providing consistency and certainty of research and technology funding is crucial. This will assist in securing the future economic growth of the UK aerospace industry, manufacturing work and high-value jobs.
- The industry needs to continue to develop innovative product and process technologies in the short to medium term to secure market share.
- For the long-term, the focus needs to be on the high-technology innovation and skills needed to help build tomorrow's quieter and greener aircraft.
- The need for a finance forum to increase communication and mutual understanding between banks and business. This will improve the availability of finance ensuring that growth opportunities can be exploited across the supply chain.

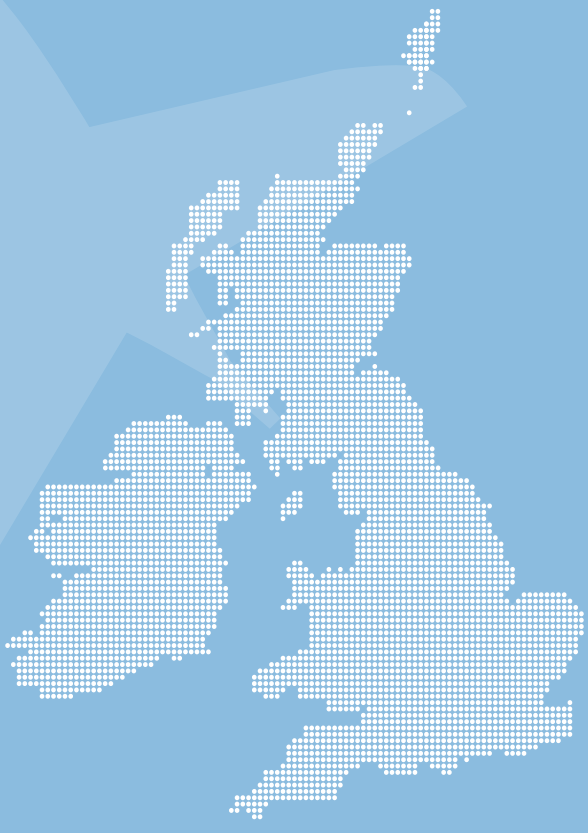
A LONG-TERM, STRATEGIC VISION FOR UK SUPPLIERS

Effective, competitive supply chains remain a key ingredient in claiming market share in the future.

This can be achieved by improving agility and accelerating change in the supply chain by investing in new techniques and tools.

Prime, original equipment manufacturers need to embrace teamwork, enhanced relationship management and risk-sharing with suppliers.

It will also be important to reduce supply chain complexity – better product integration will help this requiring a mix of collaboration, clustering and consolidation across the UK supply chain.



MAKING SURE WE HAVE THE RIGHT PEOPLE TO SUCCEED

People are crucial to our industry. It is their skills and knowledge base that will make us succeed.

We have identified that a significant number of engineers will retire over the next decade. So we need to tackle the shortage of engineering graduates with the right skills coming into the industry.

We also need higher skilled apprenticeships leading to higher technological capabilities for the sector. Companies in the supply chain will need to strengthen their leadership, management and operational skills.

Already, government and business are working closely on skills through an Aerospace Sector Skills Group, to secure the current and future talent the industry needs.

The AGP will spell out the industry's current and future skills needs based on existing and new technologies and determine future priorities while delivering a strategy to reduce any gaps identified.

The sector must also be attractive to the engineers of the future: we need to take steps to secure the workforce of tomorrow by making aerospace the industry of choice.

This will require us to attract, develop and retain the best skills by promoting what the sector has to offer in terms of careers and professional development.

A key strand of this work will be a schools engagement strategy that inspires our future apprentices and engineers. In doing this, we will place a specific focus on increasing diversity within the sector.

RETAINING WORLD LEADERSHIP IN KEY TECHNOLOGIES

Advances in technology are at the very core of our prospects for success.

Making aircraft quieter and greener will be what is asked of the next generation of aerospace technologies. These improvements in environmental performance will rely on advances in wing and power plant design, as well as advances in materials, electronics and software.

As a world leader in novel technology, the UK has strong foundations to compete and grow in this area.

However, the AGP sees the need for a long-term strategic vision for technology development, with consistent funding from government to remain globally competitive.

This will help ensure that game-changing concepts and intellectual property are exploited in the UK rather than overseas.

The March 2012 Budget committed £60m of government investment in the creation of a UK Aerodynamics Centre to pull together existing research and modelling capabilities.

The UK Aerodynamics Centre will encourage increased investment to fund a programme of work to ensure the UK is a competitive leader in this vital field.

More widely, demonstrating that novel technologies do not present unacceptable risks is vital to our progress, so we are also accelerating proposals to invest in other such risk-reduction facilities and programmes.

A MANUFACTURING BASE TO DELIVER THE EDGE WE SEEK

Advanced manufacturing will provide the base for the evolution of our aerospace capability.

- Companies are more likely to invest in creating jobs and capabilities in the UK if they believe the government is committed to maintaining the UK as an attractive environment for aerospace.
- The UK must invest in the capacity and manufacturing technology that will enable competitiveness on future aircraft. Timing is crucial. Maturing manufacturing technology must align with the needs of the leading companies - too early and advantage is lost, too late and work will go elsewhere.
- The AGP needs to identify where improved manufacturing processes and key enabling technology can be delivered, and where investment and collaboration is needed.
- This will mean working with new and advanced materials and processes not yet in use. The architecture of new civil aircraft and helicopters will also be different with future aero-engines, advanced aerodynamics and integrated all-electric systems playing a part where they did not before.

Beth Gibson, Electrical Engineering Apprentice, AgustaWestland

"After finishing school, I joined the apprenticeship scheme at AgustaWestland, choosing the Electrical Engineering route due to my preference for hands-on work and my interest in electrical systems. I have just started my third year with the company and my knowledge of the aircraft is expanding greatly. I love working in the aerospace industry; it's exciting and when you see the aircraft flying, you really feel you have been part of something very special."

For more information about the
Aerospace Growth Partnership, please contact

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PRINTED AND PUBLISHED BY THE AGP JULY 2012 : DESIGN ELEVENTHIRTYDESIGN.COM