

1 What is the Air Traffic Management Knowledge Network?

The “Air Traffic Management Knowledge Network” (ATM KN) is a body that seeks to establish opportunities for UK Air Traffic Management companies, which are predominantly based in the south east, to make greater contacts and foster partnerships with universities and research bodies.

‘Knowledge Networks’ were created as a government response to the Sainsbury review and Lambert report. These reports cited that the UK was, in general, good at researching and developing new concepts but poor at turning this innovation into new products that could yield a commercial return. Knowledge networks were set up to bring the ‘knowledge base’ (universities and public sector research organisations) into direct contact with business (both large industrial ‘primes’ and Small to Medium Sized Enterprises [SMEs]) in order to foster collaborations and develop new products.

The UK ATM industry is comprised of more than 50 of the most innovative and successful ATM SMEs in Europe together with a concentrated representation of major global ‘primes’. Recognising this extraordinary pool of talent, and its potential for future wealth creation, the South East England Development Agency (SEEDA), supports the running of the ATM KN¹ through its local sector consortia for the aerospace industry, the Farnborough Aerospace Consortium (FAC).

The ATM KN is comprised of over 200 industrial, academic and governmental organisations. It has, since 2006, held a regular series of events that has brought together representatives from both industry and academia in various informal forums to:

- § share information on the global market;
- § create an ‘active’ and collaborative research community; and;
- § provide opportunities for businesses and universities to showcase their products and services.

Alongside organising these forums the ATM KN supports and nurtures a longer term set of R&D activities which the membership will be able to take advantage of through collaborative bids and knowledge transfer activities. This work involves:

- § keeping our members up to date with the latest European ATM development projects (such as SESAR – the Single European Sky Air Traffic Management Research Programme); and;
- § supporting the roadmapping activity of the SATS NTC (Sustainable Air Transport Services National Technical Committee) and the ATSG (Aerospace Technology Steering Group). The ATM KN is represented on both of these bodies – more information about which can be found over the page.

¹ ATM KN website: <http://www.southeastknp.co.uk/>

2 UK Governmental intervention in the Aerospace Industry

2.1 History

In May 2002, the then Secretary of State for Trade and Industry, Patricia Hewitt, set up the Aerospace Innovation and Growth Team (AeIGT) with a mandate to map out a 20 year vision for the future of the industry and to make recommendations to deliver that vision. Approximately 150 organisations, including companies, government departments, research bodies, regional development agencies and universities were involved in this activity.

The 2003 the AeIGT report recommended the establishment of a National Aerospace Technology Strategy as a partnership between government, industry and academia. The objective of the National Aerospace Technology Strategy was to ensure that the technology generated by the science base was pulled through and embedded in the supply chain in preparation for exploitation in the accessible aerospace market opportunities.

The AeIGT established the Aerospace Technology Steering Group (ATSG) to oversee the implementation of the National Aerospace Technology Strategy. This group comprises of representatives from industry, academia, national and regional government. The National Aerospace Strategy Group, chaired by the DTI Minister for Science and Innovation², was established to coordinate the funding for the National Aerospace Technology Strategy.

Through the National Aerospace Technology Strategy the UK ATM Technology Validation Programme was formed. This programme sought to define and validate ATM based solutions focused around developing technologies and methods for the environmentally friendly operation of ATM systems. Two projects that successfully gained funding under the DTI's 2005 Technology Programme call through this mechanism were EFAS (Environmentally Friendly Airport ATM Systems) and VANTAGE. These projects ran between 2006 and 2008. The main ATM industrial organisations within the UK (including the National Air Traffic Services, BAE Systems, Flight Refuelling Ltd, QinetiQ, Raytheon, SELEX SI and Thales) participated in this programme alongside key universities and specialist SMEs (such as Helios). Collectively these organisations became known as the 'UK ATM Research and Development Steering Group' – a direct precursor of today's 'Sustainable Air Transport Services National Technical Committee (SATS NTC)³'. The role of NTCs is described on the next page.

2.2 Technology Strategy Board

The in 2005 the Department of Trade and Industry published a report entitled "Competing in the global economy: the innovation challenge". In order to deliver the some of the government's commitments, the report recommended a business-led board be established to select the technology areas where public funds would be used to support collaborative research. Hence the Technology Strategy Board (TSB) was established in October 2004 with the remit to advise the Secretary of State for Trade and Industry on business research, technology and innovation priorities for the UK. Since 1st July 2007 the TSB has been given a wider remit - operating at arm's length from government as a Non-Departmental Public Body it now controls a budget to fund collaborative R&D in the UK.

² SBAC website, Aerospace Technology Steering Group (ATSG), http://mrm.sbac.co.uk/ngen_public/community/common/welcome.asp?id=188&Sat=00000000-0000-0000-0000-000000000000

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http://www.globalwatchonline.com/epicentric_portal/site/defaero/sustainableairtransportservicesntc/?mode=2

2.3 The Aerospace and Defence Knowledge Transfer Network

In 2007 a report was published by a joint panel of senior executives from industry entitled "A sustainable aerospace industry in the UK". This report examined the R&D challenges that exist to the long-term competitiveness of the UK aerospace and defence sector. The report recommended that the implementation, funding and development of the National Aerospace Technology Strategy should be managed by a new Aerospace & Defence Knowledge Transfer Network (A&D KTN). In December 2007, the TSB awarded SBAC (Society of British Aerospace Companies) the contract to operate the current A&D KTN.

The A&D KTN is now one of 23 KTNs established by the TSB, designed to improve the UK's innovation performance. One of the key objectives of the A&D KTN is to maintain and progress the National Aerospace Technology Strategy through a range of activities, including the development of detailed future plans through comprehensive roadmapping. Government will, in future, increasingly look towards KTNs to inform its technology and innovation strategies.

2.4 Technology Roadmaps

The A&D KTN are the current custodians of the National Aerospace Technology Strategy. One major objective of the strategy is to identify the technologies and capabilities that must be embedded in the UK supply chain to ensure its long term competitiveness and so contribute to the sustainability of UK aerospace. This vision is captured in a comprehensive set of technology roadmaps, authored collaboratively by the aerospace industry. They serve to inform stakeholders from across the aerospace and defence community of the expected research and technology development programmes and the estimated investment required to support them until 2020.

The roadmaps take a 'top down' view of the accessible global market drivers, and indicate their service entry dates. The roadmaps show where and when UK products will fit into global market opportunities, and how technology & innovation programmes (TRL 1-4) and validation & demonstration programmes (TRL 4-6) need to develop in order to ensure that UK industry maintains its globally competitive position.

2.5 National Technical Committees

The National Technical Committees (NTCs) comprise technical experts from industry, academia and government across a range of subjects pertinent to aerospace and defence. The NTCs have both an advisory role, such as informing government of research and technology priorities, as well as fulfilling operational objectives, such as establishing consortiums that will undertake collaborative R&D. Part of their remit is to support, influence and deliver National Aerospace Technology Strategy, (particularly through input to the technology roadmaps). They ensure that the technology being funded and developed from TRLs 1 through to 9 is sound, relevant and meets the requirements of the National Aerospace Technology Strategy.