

Aerospace
& Defence

Knowledge Transfer Network

Aerospace & Defence KTN

An Introduction

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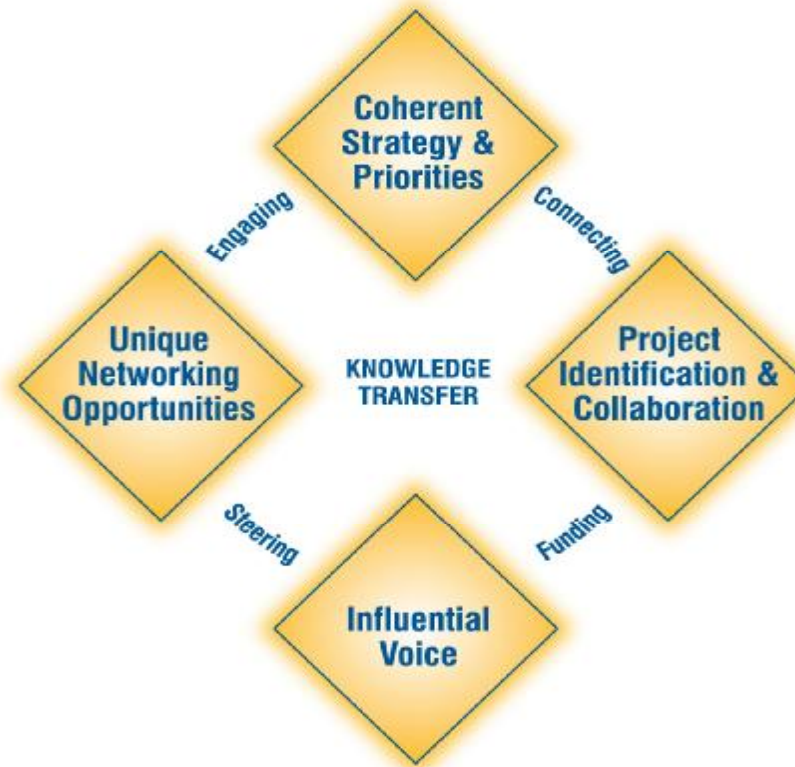


Overview

- Ø **Aerospace & Defence Knowledge Transfer Network – a national programme**
- Ø **Driving the National Aerospace Technology Strategy**
- Ø **National Technical Committee – Sustainable Air Transport Services**

The Aerospace and Defence Knowledge Transfer Network

**A single overarching network across Business, Government and Academia
to foster collaborative research and development across the sector**



Leading to wealth creation in the UK
Funded by the Technology Strategy Board

24 Knowledge Transfer Networks

Aerospace & Defence	Health Technologies
BioProcess UK	Industrial Mathematics
Bioscience for Business	Intelligent Transport Systems
Chemistry Innovation	Environmental
Creative Industries	Location & Timing
Cyber Security	Low Carbon and Fuel Cell Technology
Digital Communications	Materials
Integrated Products and Manufacturing	Nanotechnology
Electronics	Modern Built Environment
Food Processing	Photonics
Grid computing now!	Resource Efficiency
Sensors & Instrumentation	UK Displays & Lighting

Coherent Strategy and Priorities: National Aerospace Technology Strategy



Market Opportunities

Reducing environmental impact of aviation	Improving safety in aviation	Improving security in aviation
Enhancing quality and affordability of aviation	Enhancing efficiency of air transport system	Provision of integrated systems for military

UK Capability

Airframe and Wings	Powerplant systems	Equipment
Autonomous Systems	Rotary Wing	Air Traffic Management

Research Themes

Electronic Systems	Fluid Dynamics	Health Management and Prognostics of Complex Systems
Simulation & Synthetic Environments		Advanced Electrical Power Systems
Advanced Materials and Structures		Advanced Design and Manufacture
Environmental Technologies	Systems Engineering	Human Factors
Autonomous Systems		Sustainable Air Transport Services

Facts and figures

- Ø **£480m of Government and Industry Investment**
- Ø **More than 80 collaborative research programmes**
- Ø **70+ organisations are engaged to drive and deliver**
- Ø **11 National Technical Committees that meet 4 times a year**
- Ø **Committed to Government strategies of High Value Manufacturing and Low Carbon**

Project Identification and Collaboration: Technology Road Mapping and Enabling Access to Funding



Ø Technology Road Mapping

- Ø Shapes schedule of large programmes of demonstration
- Ø Refreshes 6 monthly or as a result of market change
- Ø 11 National Technical Committees, 70+ organisations, 15+ new entrants who actively “do” research
 - Ø E.g. Healthmap NTC, 4 new collaborations identified as an outcome of roadmapping

Ø Enabling Access to Funding

- Ø Early warning of Technology Strategy Board Competitions
- Ø Bespoke briefings on Competitions, e.g. Clean Skies, Information Security
- Ø Facilitation of an industry “task force” to coordinate emerging collaborations, 35+ on the register
- Ø Promotion of other mechanisms, e.g. Knowledge Transfer Partnership, Small Business Research Initiative

Unique Networking Opportunities: Embed, Influence, Create



Ø **Embed**

- Ø **Regional Trade Associations**
- Ø **Royal Aeronautical Society Annual Conference**
- Ø **CEAS Conference**
- Ø **Defence Research 2009**

Ø **Influence**

- Ø **National Technical Committees**
- Ø **Technical Symposia**

Ø **Create**

- Ø **Lecture to Leeds University**
- Ø **SBAC Scotland and Scottish Academia**
- Ø **Annual Academia event**
- Ø **Teaming with Cyber Security**
- Ø **Annual Academic Conference**
- Ø **Funding insight days**

Influential Voice: Effective communications approach



- Ø **Website**
- Ø **Fortnightly Newsletter (are you signed up?)**
- Ø **Monthly in profile (e.g. KTP Profile, Road Mapping Overview)**
- Ø **Quarterly briefings to Technology Strategy Board and Regions on road maps and projected investments requirements (single point of contact on NATS data)**
- Ø **Webinars on multiple topics (7 by end of April)**
- Ø **KTN active on range of existing structures – Ministerial Technology Strategy Group, Aerospace Technology Steering Group, Aerospace & Defence Implementation Group, Regional Strategy Committee**

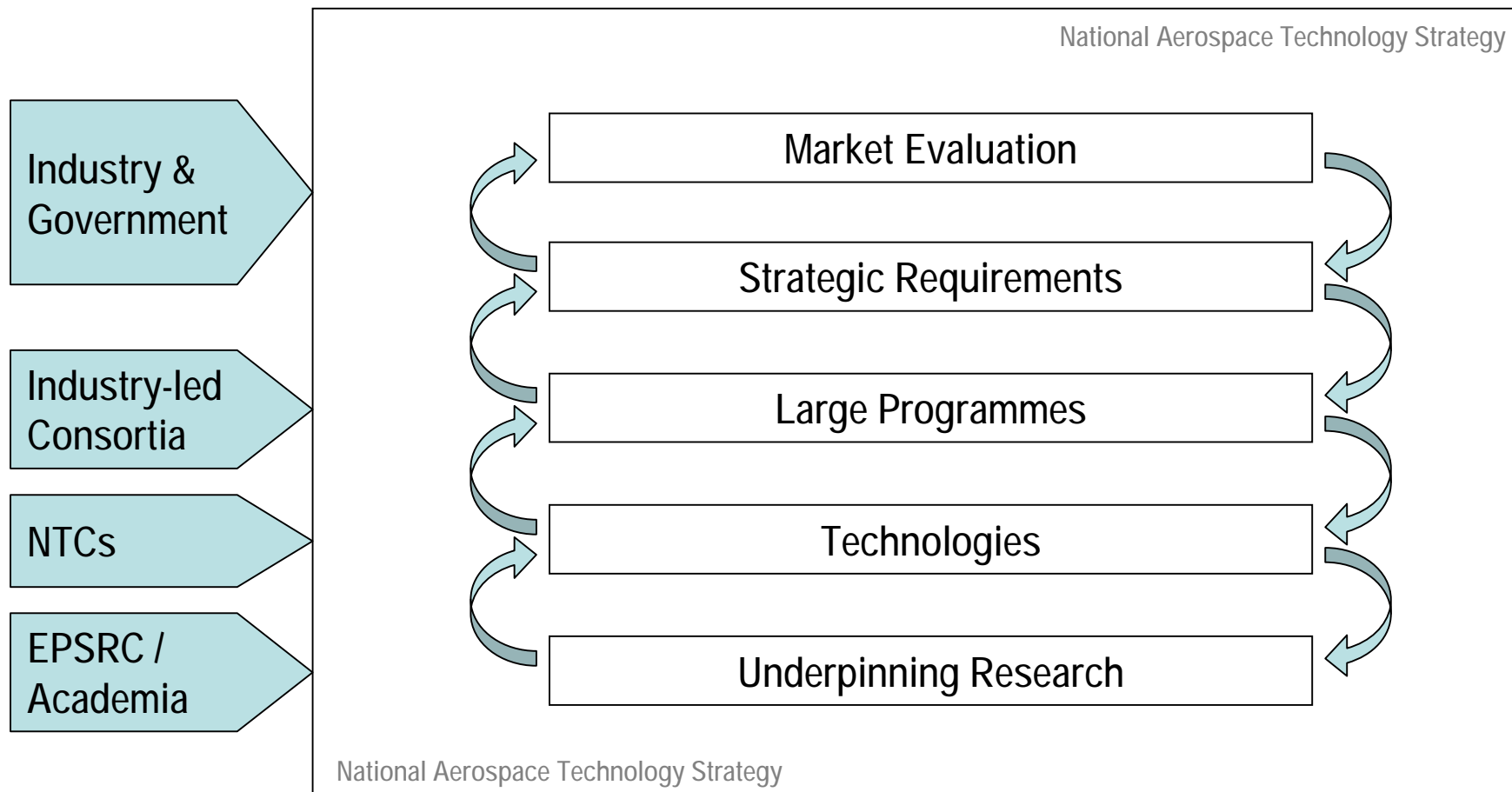
Aerospace & Defence KTN – 2009 programmes

Programme Theme	Update
NATS – Stimulate and Deliver	Sustainable Air Transport Services NTC Autonomous Systems Road – evolving Embed reliability Boost Design in Design & Manufacturing Full Road Map Refresh – June 2009 Coordination of NATS data – quality
Defence engagement	NATS & DTP2 Defence Technology Centres DSTL and NTC overlaps Promotion of CDE and SBRI
Broaden the community base	Communicate directly to all the other KTNs on a monthly basis Working with RTAs and their memberships Leveraging EPSRCs Academic Community
PE and Venture Capital	Early discussions with possible interested parties
National Research Centre	International entity to “act” nationally

Driving the National Aerospace Technology Strategy

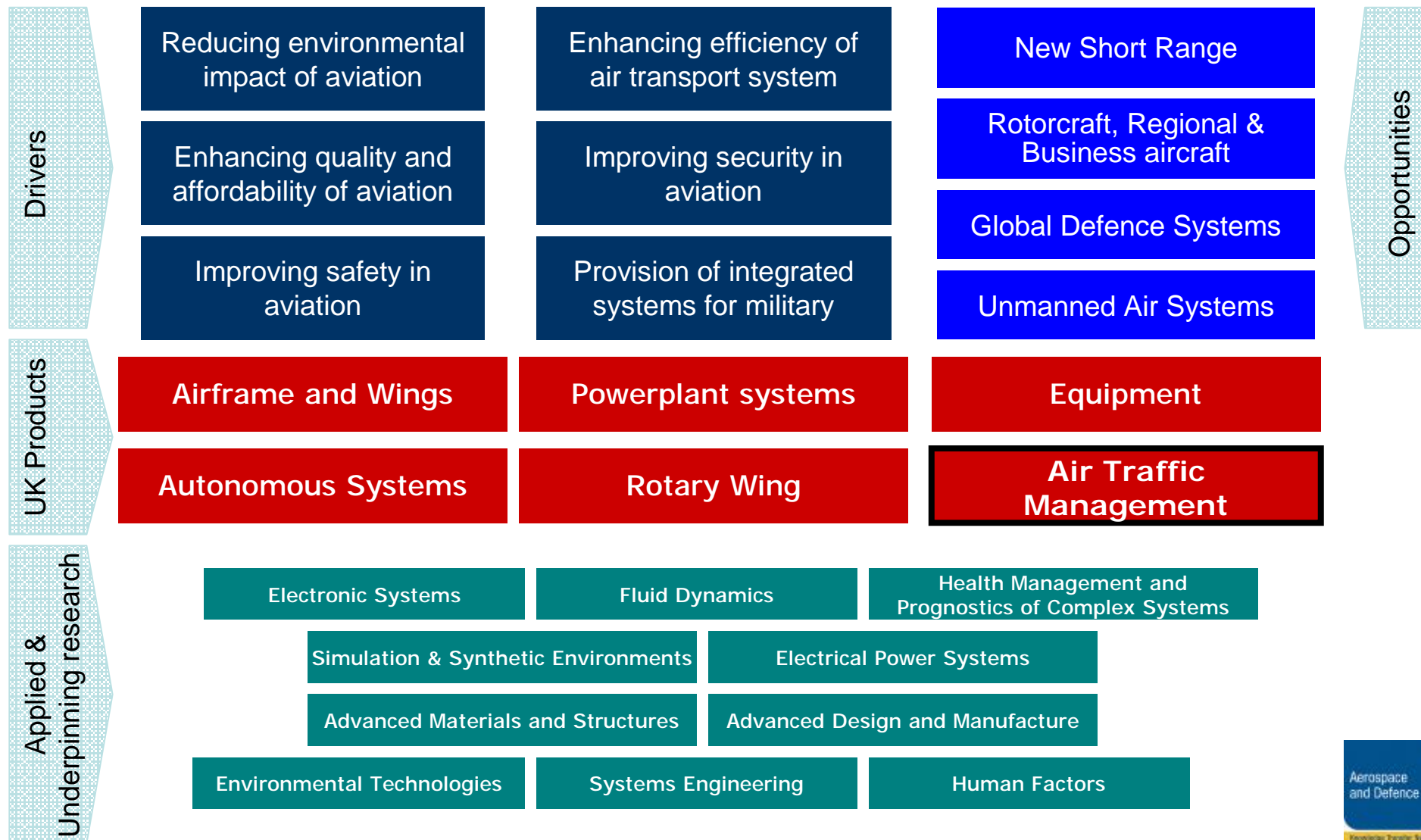
Sameer Savani
Operations Manager

The National Aerospace Technology Strategy is derived by top-down and bottom-up activities



The Aerospace & Defence KTN is the custodian of the Strategy

And the “model” is detailed



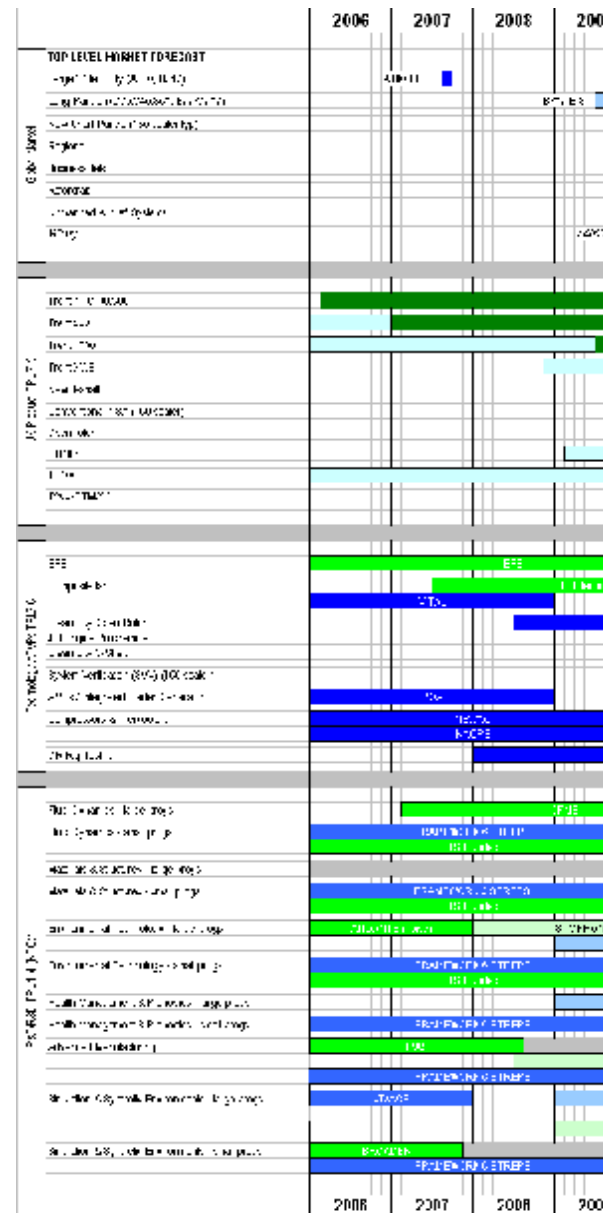
Top Level Road Maps provide the detail for each UK Product

Opportunities

UK Products

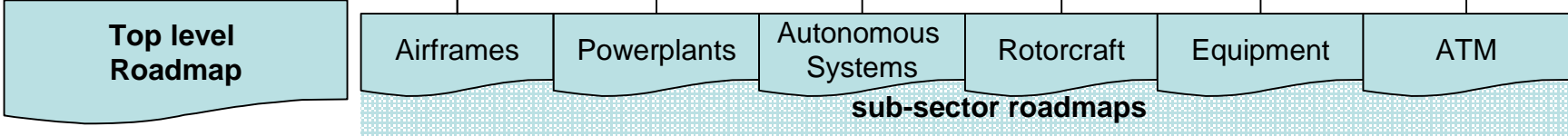
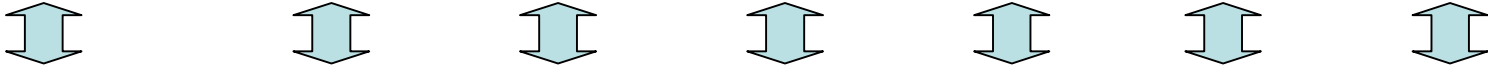
Large Programmes

Technologies



NATS engagement and interaction process

Aerospace & Defence KTN is the custodian of NATS



		Airframes	Powerplants	Autonomous Systems	Rotorcraft	Equipment	ATM
National Technical Committees	Advanced Design & Manufacturing NTC NTC Roadmap	o	o	o	o	o	
	Electrical Power Systems NTC NTC Roadmap	o	o	o	o	o	
	Electronics Systems NTC NTC Roadmap			o	o	o	o
	Environmental Technologies NTC NTC Roadmap	o	o				o
	Fluid Dynamics NTC NTC Roadmap	o	o		o		
	Health Mgt & Prognostics NTC NTC Roadmap	o	o	o	o	o	
	Human Factors NTC NTC Roadmap			o	o		o
	Materials & Structures NTC NTC Roadmap	o	o	o	o	o	
	Simulation & Synthetic Environments NTC NTC Roadmap	o	o	o	o	o	o
	Sustainable Air Transport Syst. NTC NTC Roadmap			o		o	o
	Systems Eng. & Open Architecture NTC NTC Roadmap	o	o	o	o	o	o

There are 11 National Technical Committees in place today

National Technical Committee	National Technical Committee
Electrical Power Systems	Health Management and Prognostics
Electronic Systems	Advanced Design & Manufacturing
Fluid Dynamics	Simulation and Synthetic Environments
Materials and Structures	Systems Engineering
Environmental Technologies	Human Factors
<i>Sustainable Air Transport Services</i>	

... 12th is emerging in Autonomy

Sustainable Air Transport Services (SATS) NTC

- Ø Evolution of the UK ATM R&D Steering Group
- Ø Membership currently comprises of 12 leading organisations
 - Ø Includes UK CAA and DfT
 - Ø Continuing to build membership
- Ø Website and presence established
- Ø Baseline roadmap developed; publication expected in July

Latest News

The SATS NTC has recently been formed from the AeSTT-based UK ATM R&D Steering Group with the introduction of additional members. The immediate priority is to establish a technology roadmap to support the National Aerospace Technology Strategy (NATS). Currently the ATM sub-sector roadmap is undergoing development.

The SATS roadmap will highlight the global opportunities accessible to the UK and define a programme of research that will enable competitive advantage for the UK. Concurrently, the membership of the NTC continues to be reviewed to ensure an inclusive Committee operates with particular attention being paid to ensuring appropriate academic representation.

Chair

Joe Smith
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Members

Joe Smith	Thales
Birion Aekesson	Risk Maastricht Research
Phil Beesbed	Defence Integrated Systems
David Callor	Risk Maastricht Research
Adrian Cloagh	QinetiQ
Alex Domes (secretary)	HALOS
Amanda Hardie	National Air Traffic Services
Tony Hestley	BAE Systems
David Jehn	UK Thales Group
Fraser McGibbon	BAE Systems
Ben Oliver	Systems Engineering and Assessment Ltd
Stephen Penber	National Air Traffic Services
Neil Perry	UK CAA

- Capacity
- Cost Effectiveness
- Efficiency
- Flexibility
- Predictability
- Safety
- Security

Sustainable Air Traffic Services Technology Road Map

Opportunities

- SESAR
 - NextGen
 - JMATS
 - ...

UK Products

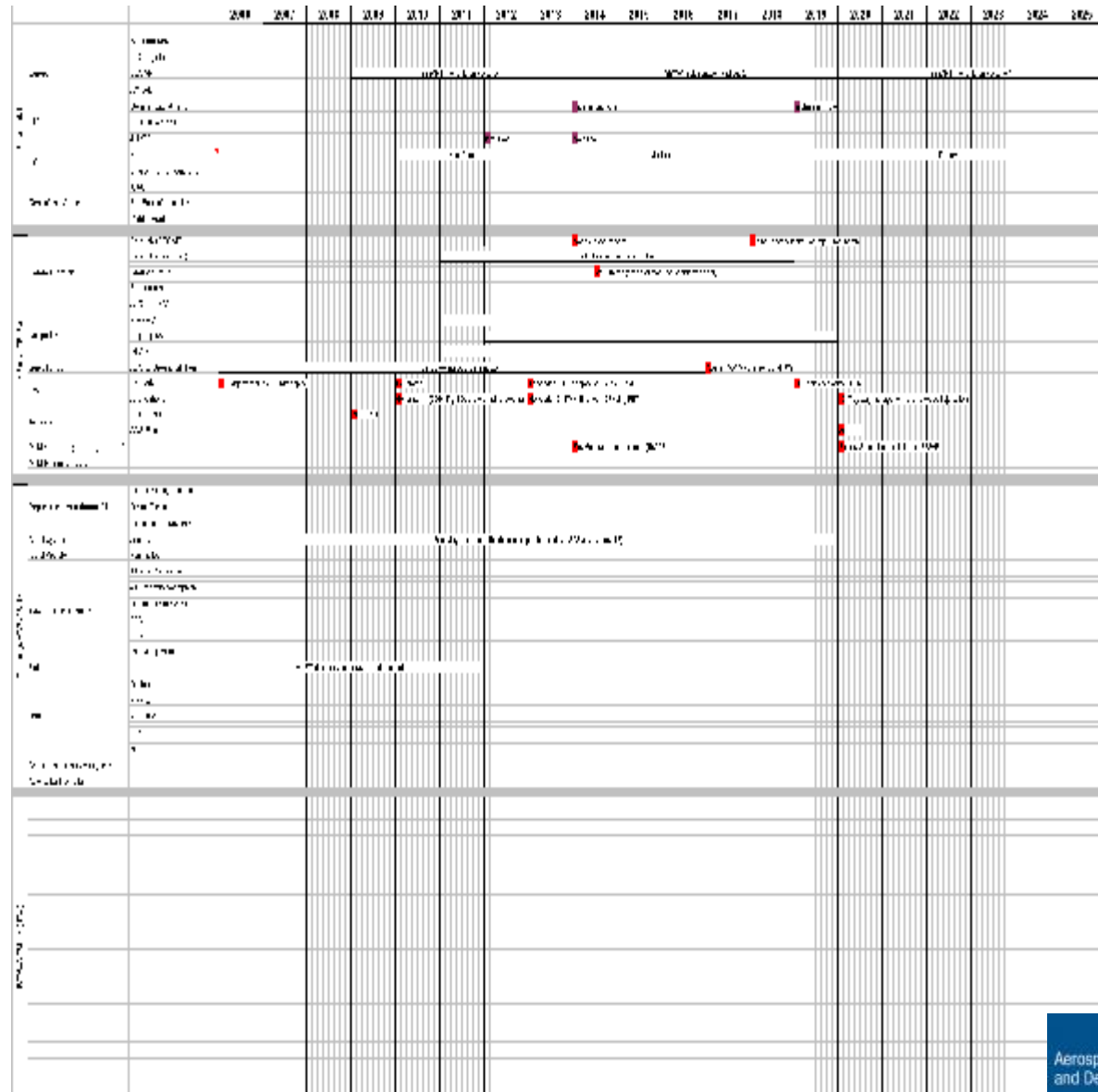
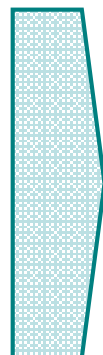
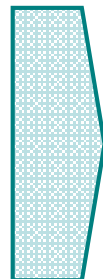
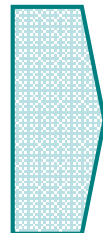
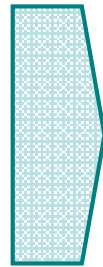
- CNS
 - SWIM
 - Avionics
 - ...

Large Programmes

- Aircraft Systems
 - Aircraft Operations
 - CNS
 - ...

R&T Themes

- Wind Farms
- Safety
- UAVs/General Aviation
- Mobile Information
- Spectrum
- Sustainable operations
- Network Security



...In Summary

- Ø **A single overarching network across Business, Government and Academia**
- Ø **Aims to foster collaborative R&D to enable wealth creation**
- Ø **Custodianship of the National Aerospace Technology Strategy and facilitation of the National Technical Committees**
- Ø **We drive Knowledge Transfer through established communication channels including conferences and symposia**

Aerospace & Defence Knowledge Transfer Network

www.aeroktn.co.uk

Register Today