UK NATIONAL AEROSPACE TECHNOLOGY STRATEGY

Ray Kingcombe
Aerospace, Marine & Defence Unit
Department of Trade and Industry
UK
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National Aerospace Technology Strategy (NATS)

- To support competitiveness of UK aerospace sector, through ensuring technology capability in key areas - National Aerospace Technology Strategy (NATS).
- Arose from work of Aerospace Innovation and Growth Team (AeIGT).
- AeIGT had remit “to map out a 20-year vision for the future of the Industry and to make recommendations on how to make the vision a reality”.
- Over 140 senior people from Aerospace companies, Government Departments, Trade Unions, Universities and Research Bodies involved.

Aerospace IGT

- Reported mid 2003 with vision that by 2022: "The UK will offer a global Aerospace Industry, the world's most innovative and productive location, leading to sustainable growth for all its stakeholders".
- Identified 5 objectives
- 1. The UK must sustain a level of focused Aerospace applied research and demonstration sufficient to maintain and enhance the UK's position in the global Aerospace market.
- 2. The UK must systematically and continuously deliver productivity and overall business performance improvement at a rate faster than its competitors.

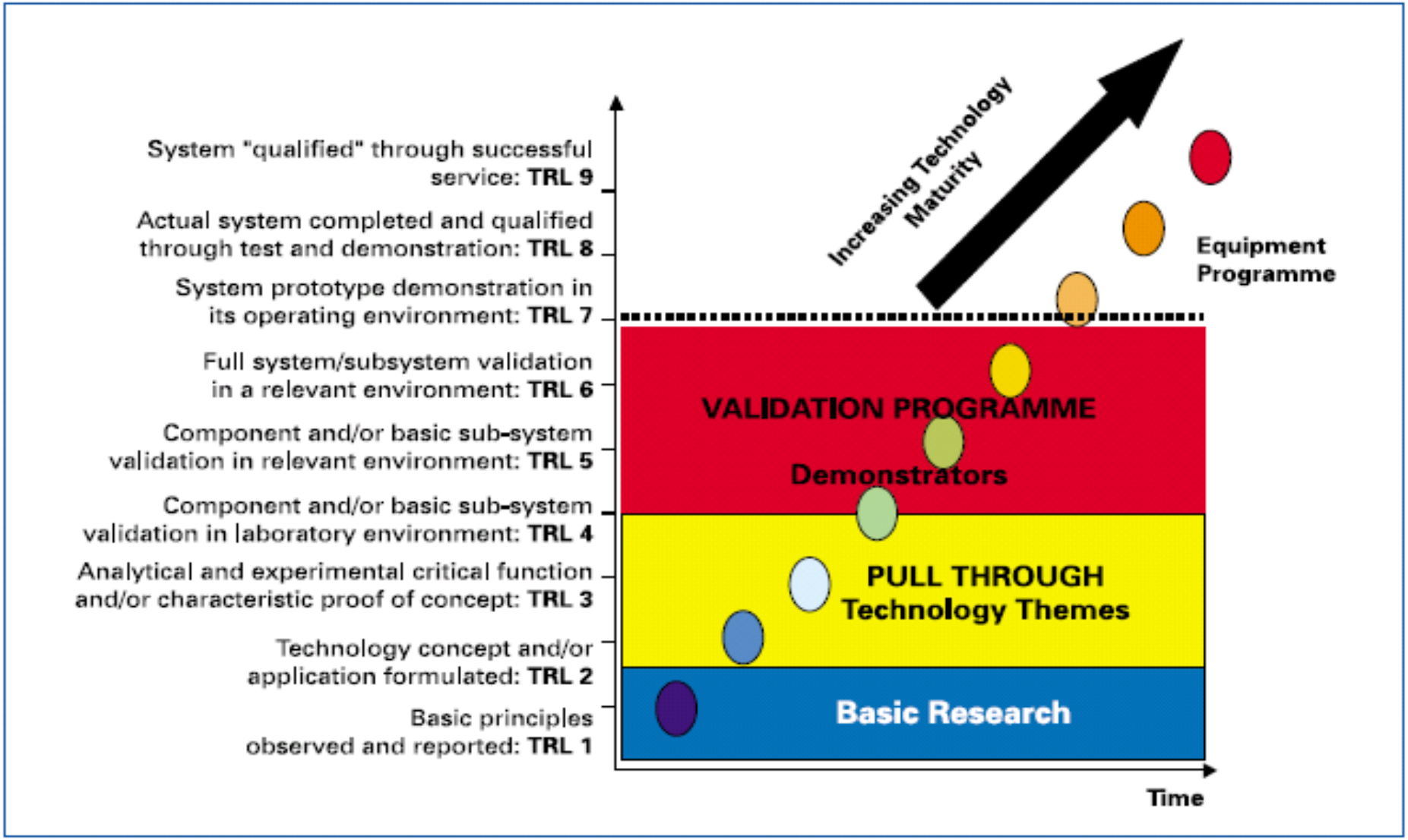
Aerospace IGT (2)

- 3. UK industry must continuously develop a world-class workforce.
- 4. Deliver the macroeconomic conditions, the wider socio-economic environment and focused policies required to improve UK Aerospace's competitive advantage and its potential to thrive in world markets.
- 5. The UK must be at the forefront of international sustainable development of the Aerospace Industry in the areas of safety, security, capacity and the environment.

National Aerospace Technology Strategy

- Today look at the first objective (Research & Technology).
- AeIGT Report on implementation of National Aerospace Technology Strategy produced in mid 2004
- My presentation will set out the approach on technology adopted, and how successful we have been.
- Note the UK National programme is not enough to secure UK aerospace industry's future, we need complementary activity within the EU Framework Programmes.

Technology pull-through and validation



Challenges

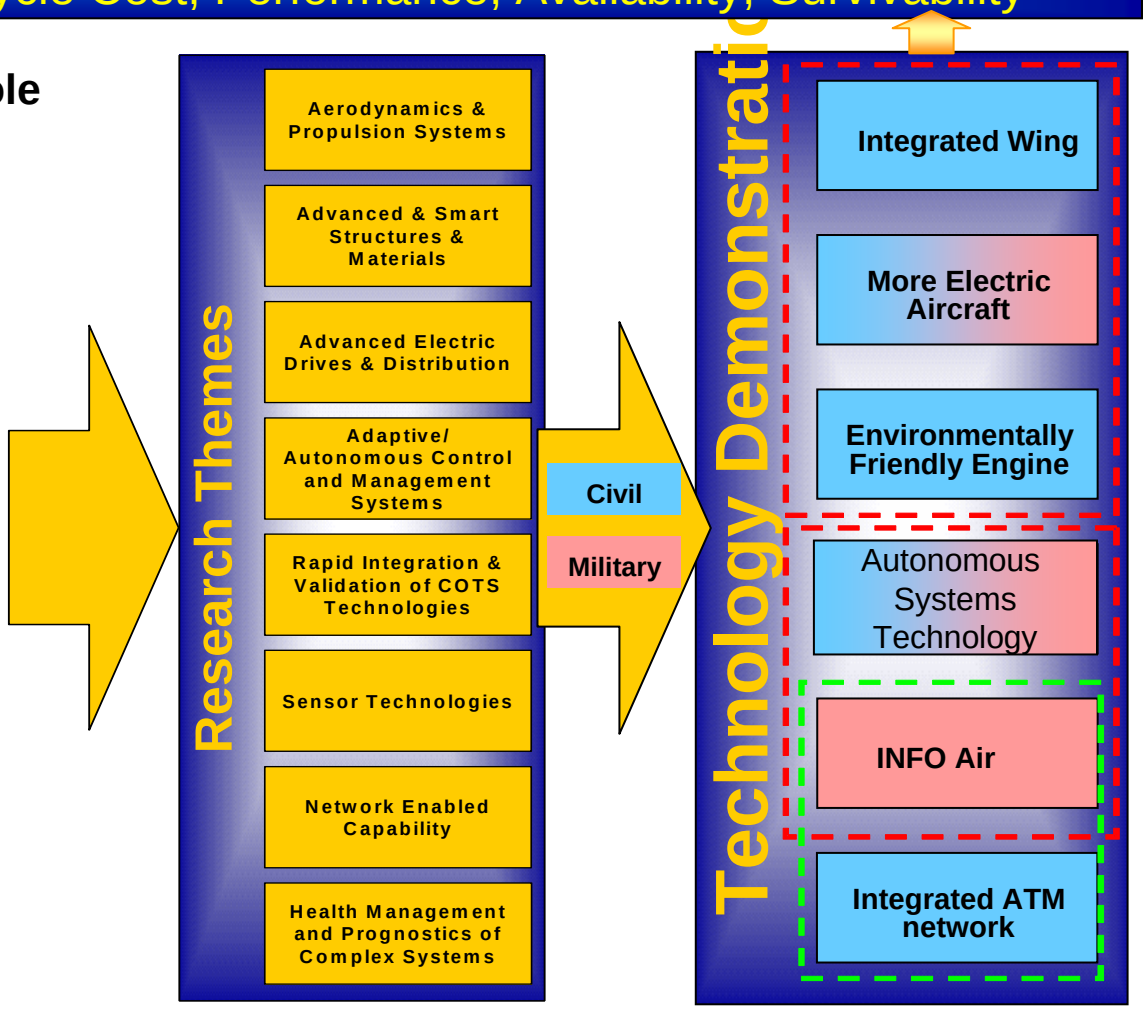
Safety, Environment, Life Cycle Cost, Performance, Availability, Survivability

Continue to play a world-leading role

- Wings
- Aero-engines (civil)
- Rotors & rotor drives (military)
- Sensor Systems (military)
- Simulators, training and Synth. Env. (civil)
- Electrical Power Systems (civil)
- Actuation Systems (civil)
- Airframe Fuel Systems (civil & military)
- Maintenance Systems (military)
- Aircrew Protection and Life Support (military)

Potential to become world-leading

- Engines and exhausts (military)
- Weapon Systems (military)
- Communication, Navigation, Surveillance and Data Links (civil)
- C3I Systems (military)
- Electronic Systems Integration (civil & military)
- Simulators, training and synthetic environments (military)
- Maintenance Systems (civil)



Delivery mechanisms

- Two delivery mechanisms: Aerospace Technology Validation Programmes (ATVPs) & Aerospace Innovation Networks (AINs).
- ATVPs play a valuable role in validating technology, sub-systems and systems integration, before they are taken into the prototype stage. ATVPs led by industry, with participation by government, research bodies and universities.
- AINs are focused on specific research areas aimed at identifying priorities for industry technology pull-through from the research base. Networks led by industry, with participation by government, research bodies and universities.
- AINs feed in to the future direction of ATVPs and suggestions for new ATVPs.

Delivery of strategy

- Delivery though a partnership between industry, DTI, Regional bodies, Ministry of Defence, Research Councils, Universities, Other Government Departments.
- Senior level endorsement from all, with regular reviews.
- Industry driven.
- Focus on 6 technology validation programmes and 12 research-based innovation networks.
- £300 million a year programme.
- In first 5-year programme, but envisaged NATS run for 20 years.
- Complementary activity in EU Programmes.

UK Programmes

6 ATVPs

Environmentally Friendly Engine (EFE).
Autonomous Systems (AU).
Air Traffic Management (ATM).
Integrated Wing (IW).
More Electric Aircraft (MEA).
Information Networks for Operations in the Air (INFOAir).

12 AINs

Aerodynamics and Computational Fluid Dynamics.
Environmental Technology.
Advanced Aerospace Materials & Structures.
High Temperature Materials.
Advanced Electrical Power Systems.
Systems Engineering.
Sensor Technologies.
Interactive Network Systems.
Health Management & Prognostics.
Through-Life Support.
Electro-Magnetic Interaction & Effects.
Synthetic Environments and Systems Simulation.

Management of NATS

- Industry set up Aerospace Technology Steering Group to oversee and co-ordinate implementation with representation from key stakeholders – industry, DTI, EPSRC, MoD, Regions, Universities.
- Lord Sainsbury Minister for Science and Innovation chairs the National Aerospace Technology Strategy Group tasked with co-ordinating government funding – DTI, MoD, EPSRC, Dept Transport, Regions.
- Core support through DTI Technology Programme. Aerospace industry bids for funding in competition with other sectors. Ensures only high quality and important proposals win.
- Regional-National Aerospace Forum set up, to co-ordinate regional support and improve process of regional engagement.

Progress

- ATVPs at varying stages of implementation – obtained support for projects within their programmes.
- Successfully brought together multi-partners and multi-funders for bidding in to the DTI Technology Programme.
- Helped national and regional partnership approach to supporting projects.
- AINs less developed. Some have won support for projects while others haven't been launched yet.
- Benefits from a more focused industry-wide programme as a result of National Aerospace Technology Strategy.
- Over the past 2 years resulted in an increasing trend of government support for aerospace projects typically running for 3-5 years.

Links to EU Framework Programme

- Framework 7 – mainly Aeronautics & Air Transport
- Aeronautics JTI (Clean Sky)
- Collaborative R&D
- Industry priorities

Further information

- Contact Ray Kingcombe at DTI.
- Tel: +44 020 7215 1115
- email: ray.kingcombe@dti.gsi.gov.uk
- Or Mike Cadman at DTI.
- Tel: +44 020 7215 1658
- email: mike.cadman@dti.gsi.gov.uk
- Address: Aerospace, Marine and Defence Unit
  Department of Trade and Industry
  151 Buckingham Palace Road
  London SW1W 9SS
  UK