



Ministry
of Defence



British Embassy
Washington

Defence Science and Technology

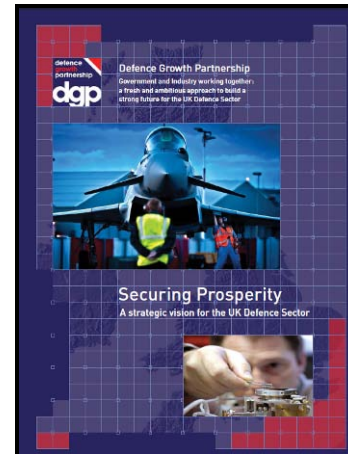
Rob Eason, Counsellor Defence Acquisition & Technology





Changing Context

- **Political**
 - Coalition government 'till 2015
 - Ongoing austerity
- **Defence Transformation**
 - Balanced Defence Budget
 - SDSR 2015
- **Technology & Security**
 - Identify future risks and threats
 - Align science & technology requirements
- **Collaboration & Partnerships**
 - Interoperability
 - Burden sharing R&D
 - Access to global innovation





US / UK S&T Communiqué



FROM: UK Minister for Defence Equipment, Support and Technology (Min DEST);
US Under Secretary of Defense for Acquisition, Technology and Logistics
(USD AT&L)

SUBJECT: Joint US / UK Communiqué on Enhanced Collaboration in Defense
Science and Technology

1. Science and Technology (S&T) collaboration between the US and UK has been a foundation of our strong bilateral Defense relationship for decades. In the context of strategic realignment, major defense transformation, and fiscal constraints on both sides of the Atlantic, the Minister of Defense (MOD) Permanent Under-Secretary and the Department of Defense (DOD) Deputy Secretary for Defense have examined opportunities to enhance our bilateral Defense relationship. Through this review, S&T remains a core focus area with potential for increased cooperation, both independently and in support of other bilateral priorities identified, including carrier-strike, cyber, land forces interoperability, intelligence and the nuclear deterrent.
2. The Prime Minister and President have also recently reaffirmed their mutual commitment to strong collaboration in Science and expressed particular support for cooperation in fields that will generate new economic opportunities.
3. In support of this strategic relationship, we have agreed to a program of activities to increase the mutual benefits of Defense S&T. The intent is to *maintain our capability advantage and interoperability* as we move out of supporting an extended land operation towards developing our future military capability; to *enhance our mutual financial benefits* through burden sharing; and to support *economic growth through innovation*.
4. Under the leadership of Assistant Secretary of Defense for Research & Engineering (ASD R&E) and the MOD Chief Scientific Adviser (CSA), we are pushing forward our S&T engagement on three fronts. First, we will evolve our relationship by establishing significant *joint programs* on cross-cutting S&T priorities for both nations; second, we will develop *new approaches* which will provide a step change in the level of collaboration and benefits; third, we will improve coordination and *alignment with strategic priorities* to ensure coherent S&T advice to leadership, encompassing strategy, program, and capability issues |

*“S&T will matter even more in the future than it has in the past. Technological innovation is vital if we are to protect our **battle winning edge**. This enhanced collaboration will ensure that our work is **smarter and delivers more effectively** for both nations.”*

*“This will be a partnership to develop, maintain and **share technical capabilities** in each nation, we will be looking for **significant joint projects** that will have real impact in which we can **share the burden of the S&T investment**.”*



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Multi-Lateral Cooperation



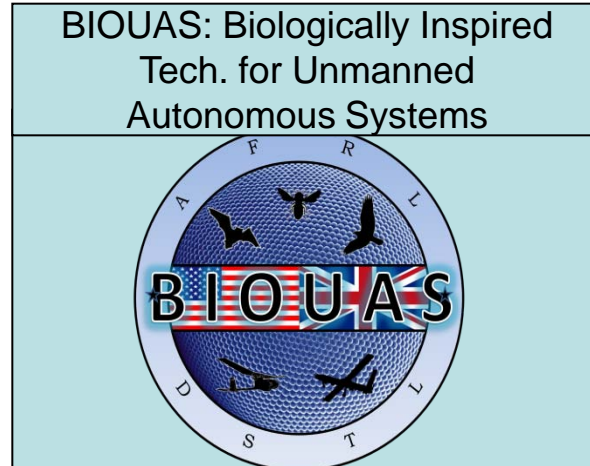
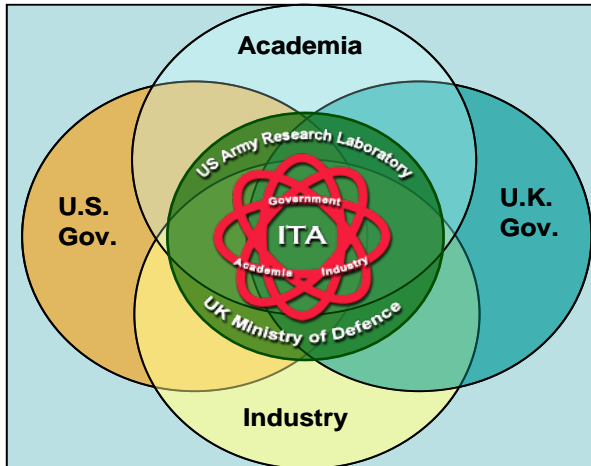


Collaboration & Partnership

- **There is an increasing recognition of the need to enhance collaboration with Allies and Partners**
- **Bi-Lateral & multi-Lateral S&T collaboration enable us to...**
 - Ensure our capability advantage, technological superiority and interoperability
 - Achieve financial savings through burden sharing
 - Access global developments in science and innovation
- **Need to increase engagement with industry & academia**
 - Encouraging early stage international industrial collaboration
 - Aligning requirements, innovation, investment and access
 - Joint research, development, experimentation and prototyping
- **Working together to identify opportunities and address barriers**
 - Export Control Reform and the Defence Trade & Cooperation Treaty
 - Need for a common approach to building partner nation capability



Technology Cooperation Examples



Research & Experimentation:

- Interoperability
- Access global tech

ARTIST: Advanced Radar
Technology Integrated System
Testbed



Zephyr: High Altitude Pseudo
Satellite



Prototyping & Demonstration:

- Burden share
- Accelerate transition



Global Technology Proliferation

- ***China and Russia “are rapidly modernizing their militaries and global defense industries, challenging our technological edge and defense partnerships around the world.”[Hagel]***
- **“International collaboration in science and technology has expanded exponentially over the past two decades and is now considered the norm within the open scientific community” [NAS]**
- **Rate of global technology proliferation is increasing with potential adversaries gaining access to technology**





The Future S&T Landscape

Reduced focus on hardware

More cyber/IT centric

**Defence industry blurred with
dual use and civil sector**

**Need for a new industrial
paradigm**

Our ability to harvest and exploit
information must grow

The humans' role will remain central but
change

Infrastructure will become more
distributed and de-centralised

Shocks and surprises may disrupt us

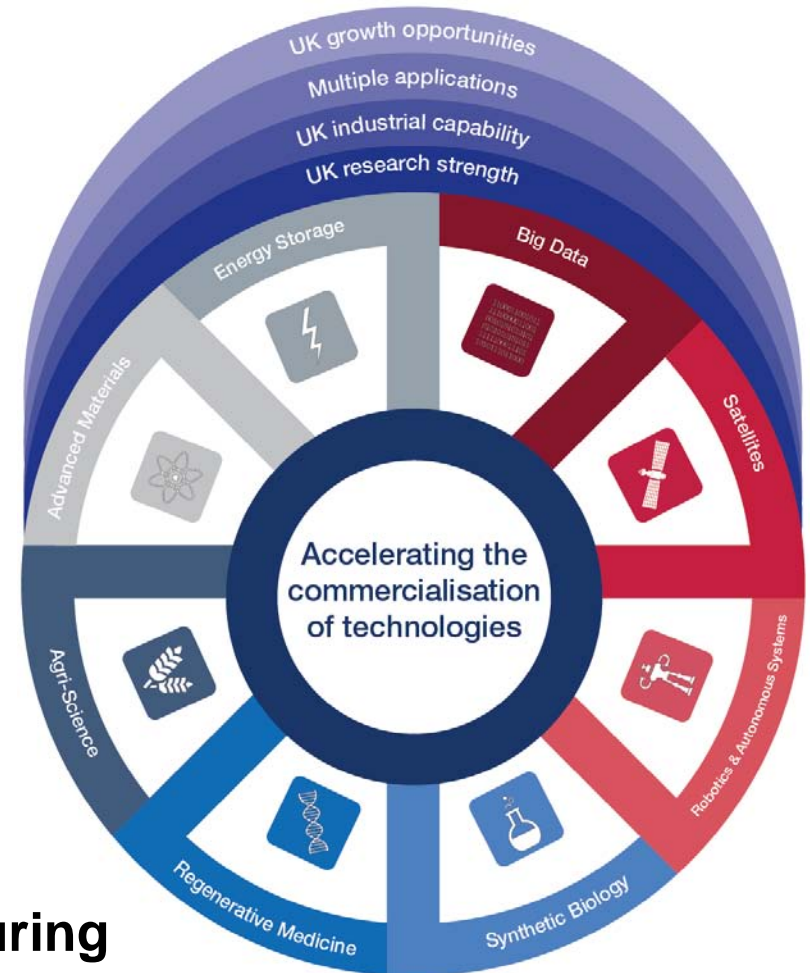
Knowledge and Innovation will level the
playing field

Emerging Technologies



UK Future Investment Priorities

- **Cyber**
- **Space**
- **Energy**
- **Medical**
- **'Big Data'**
- **Autonomy**
- **Synthetic Biology**
- **Quantum Technologies**
- **Human & Social Sciences**
- **Advanced materials & manufacturing**





The Future

- **Capture opportunities and barriers to increased cooperation**
- **Identify potential collaborative partnerships**
- **Develop and facilitate mechanisms for partnership**
- **Enhanced mutual reliance shares costs, builds military interoperability and preserves critical elements of the industrial supply chain**



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Any Questions?



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