International Technology Cooperation

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Outline

- **Why Collaborate**

- **How to Collaborate**

Why Collaborate?

Why
Collaborate?

More effective pursuit of military goals

More capable national equipment

More capable Allies

Coalition technological interoperability

Collaborative Development & Procurement

Access to new **TECHNOLOGY**

Access to new **EXPERTISE**

Access to new **FACILITIES**

Long-term personal **RELATIONSHIPS**

PROVIDED THROUGH COLLABORATION

Collaboration is not new…

- In October 1957 UK and US committed to cooperate on Defense Science and Technology for "mutual benefit"

- Subsequently joined by Canada, then Australia and New Zealand to form – The Technical Cooperation Program

- Not the only collaboration but one of the most enduring and approaching its Fiftieth Anniversary in October 2007…

The Technical Collaboration Program

The 50th Anniversary Meeting has the theme of
"A Stable Partnership in a Changing World"
with the recently approved Banner Statement of:

TTCP will develop, share and integrate emerging defense science and technology to <u>advance the military capabilities</u> of the five member nations. TTCP will provide a <u>trusted, productive and creative network</u> that allows us to develop our <u>best people</u>, advance our <u>best ideas</u> and make full use of our <u>collective opportunities</u>.

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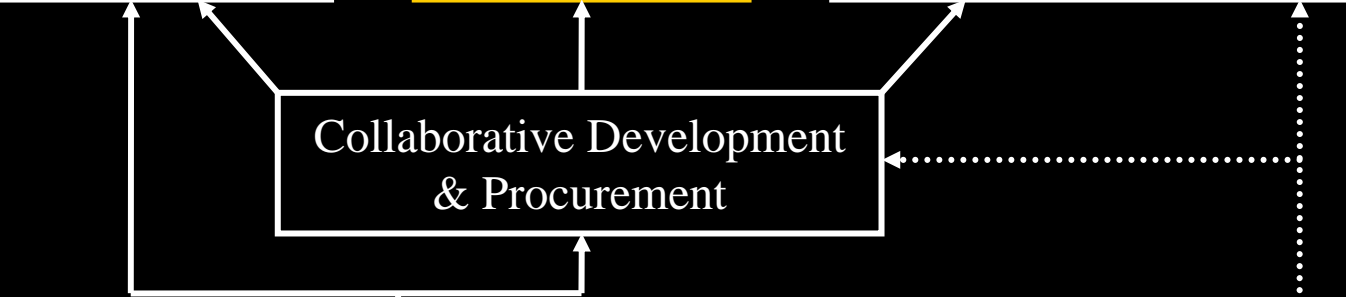Collaborative Development & Procurement

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US benefits
from
overseas
equipment
development

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Examples of Coalition Operations

Operation	USA	UK	Canada	Australia	New Zealand
WWII	✔	✔	✔	✔	✔
Cold War	✔	✔	✔	✔	✔
Korea	✔	✔	✔	✔	✔
Vietnam	✔			✔	✔
Kuwait/Iraq (Desert Shield)	✔	✔	✔	✔	✔
Kuwait/Iraq (Desert Storm)	✔	✔	✔	✔	✔
Kuwait/Iraq (UNIKOM)	✔	✔	✔		✔
Somalia	✔	✔	✔	✔	✔
Former Yugoslavia (UNPROFOR)	✔	✔	✔		✔
Georgia	✔	✔	✔		
Former Yugoslavia (IFOR)	✔	✔	✔		✔
Kosovo	✔	✔	✔		✔
East Timor	✔	✔	✔	✔	✔
Liberia	✔	✔	✔		✔
Sierra Leone		✔	✔		✔
Mediterranean (Active Endeavour)	✔	✔	✔		
Afghanistan (Enduring Freedom)	✔	✔	✔	✔	✔
Afghanistan (ISAF)	✔	✔	✔	✔	✔
Bosnia & Herzegovina (SFOR II)	✔	✔	✔		✔
Iraqi Freedom	✔	✔	✔	✔	✔

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We operate
side-by-side
around the world

Iraq - 2003

1 Marine Expeditionary Force

↑

3 Commando Brigade

↑

15 Marine Expeditionary Unit

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Top National Research Priorities

	🇺🇸 USA	🇬🇧 UK	🇨🇦 Canada	🇦🇺 Australia	🇳🇿 New Zealand
Automation & Unmanned Systems	X	X	X	X	X
CBR Mitigation	X	X	X	X	X
Combat Identification	X	X	X		
Counter-IED	X	X	X	X	X
Force Protection	X	X	X	X	X
Hard & Buried Targets	X	X			
ISR	X	X	X	X	X
Modelling & Simulation	X	X	X	X	
Nanotechnology	X	X	X		
Networks & IT	X	X	X	X	X
Through-Life Costs	X	X	X	X	X
Urban Operations	X	X	X	X	

Implications for:

- Government program managers – other people are working on the same problems as you…

- Industry managers – there are other markets for your ideas…

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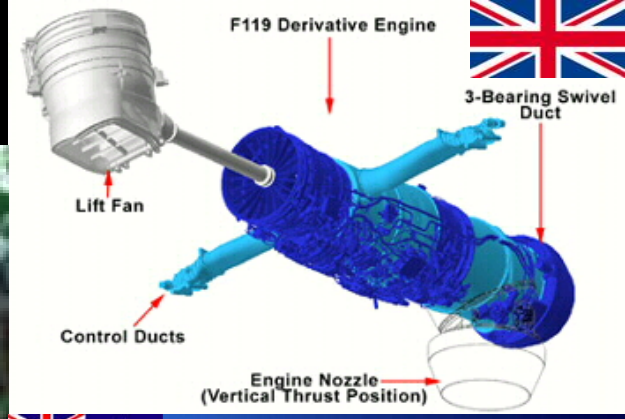Access to new **TECHNOLOGY**

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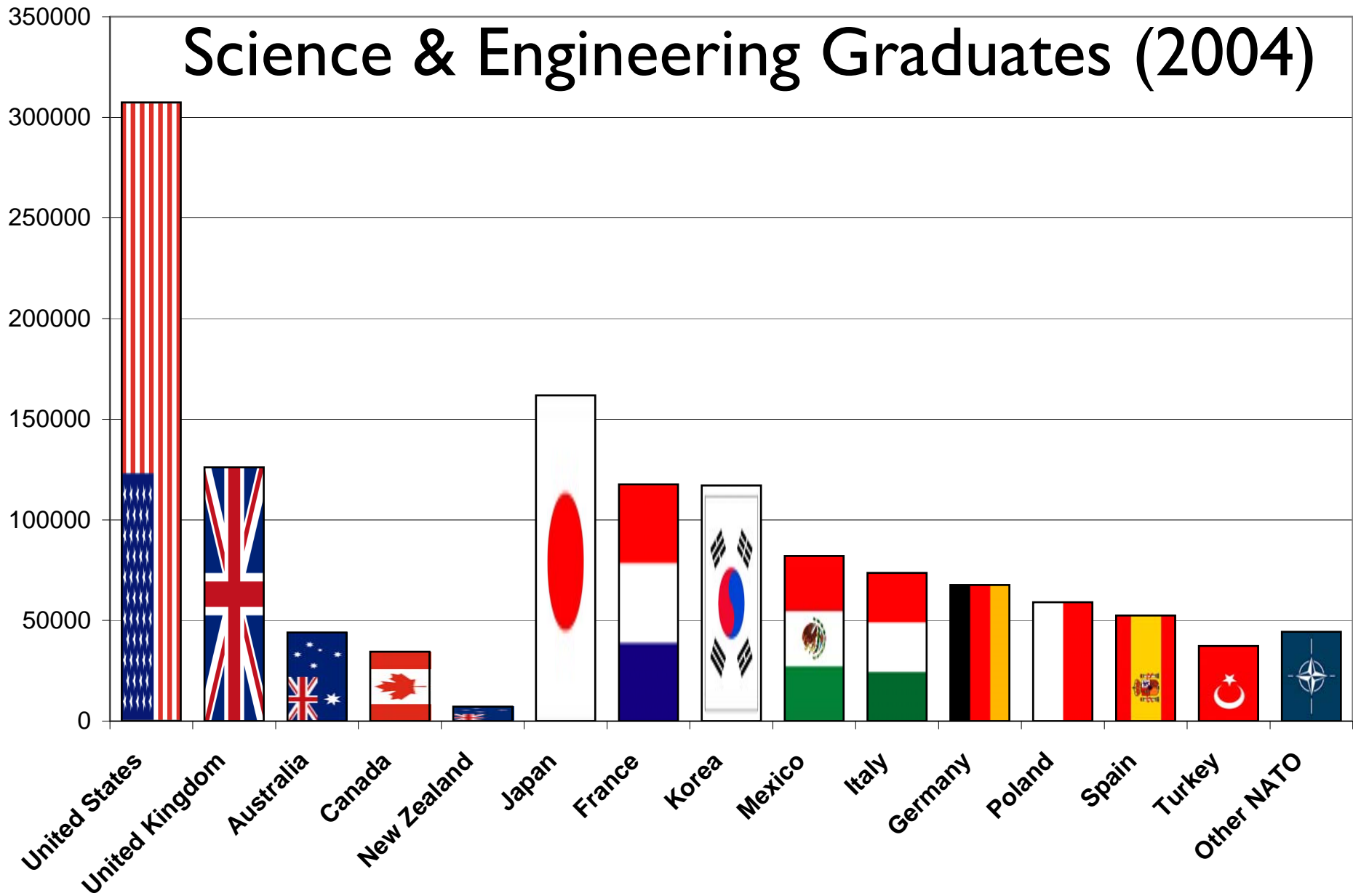
PROVIDED THROUGH COLLABORATION

US benefits from overseas technology

Science & Engineering Graduates (2004)

Data Sources: http://stats.oecd.org/wbos/default.aspx?DatasetCode=RGRADSTY

US benefits from overseas facilities

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Relationships

Established relationships between TTCP scientists enables each nation individually and collectively to tackle the threats we all face in Iraq, Afghanistan and elsewhere.

More effective pursuit of military goals

Why ~~ope~~rate?

More capable national equipment

More capable Allies

OR – SHARED RESEARCH & DEVELOPMENT COSTS FOR MUTUAL BENEFIT

~~T~~ ~~ew~~ ~~PERTISE~~

Access to new **FACILITIES**
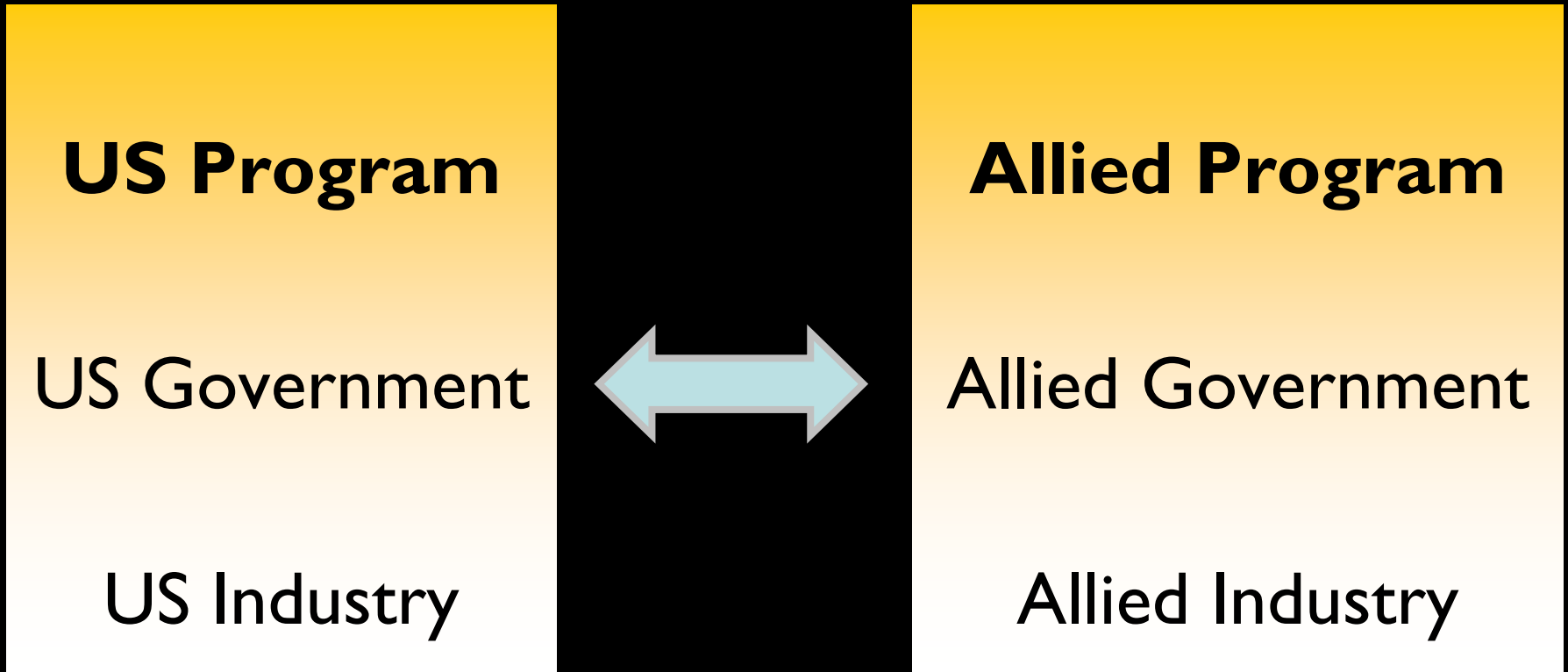
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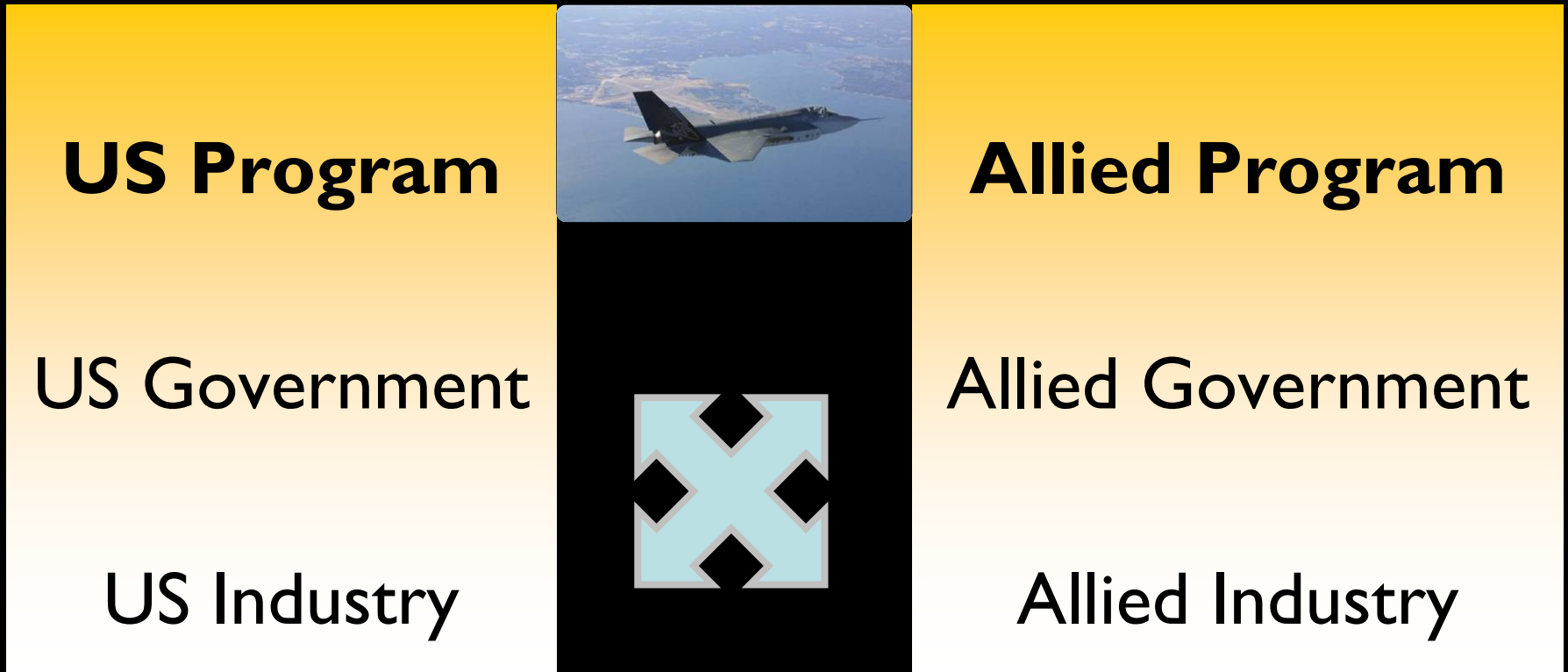
Outline

- **Why Collaborate**
- **How to Collaborate**

Government – Government

Sources of Information (for US Government staff):

- **US National Representatives to collaborative fora** (e.g. TTCP, NATO) – for advice on Allied programs and collaborative channels

- **Overseas US S&T Staff** – for advice on Allied programs, collaborative channels and processes

- **DDR&E International Technology Programs staff** – for advice on collaborative channels and processes

- **DoD International Agreements staff** – for advice on collaborative processes

- **Defense S&T staff in Allied Embassies** – for advice on Allied programs, collaborative channels and processes

How to Collaborate

US Program   **Allied Program**

US Government   Allied Government

US Industry   Allied Industry

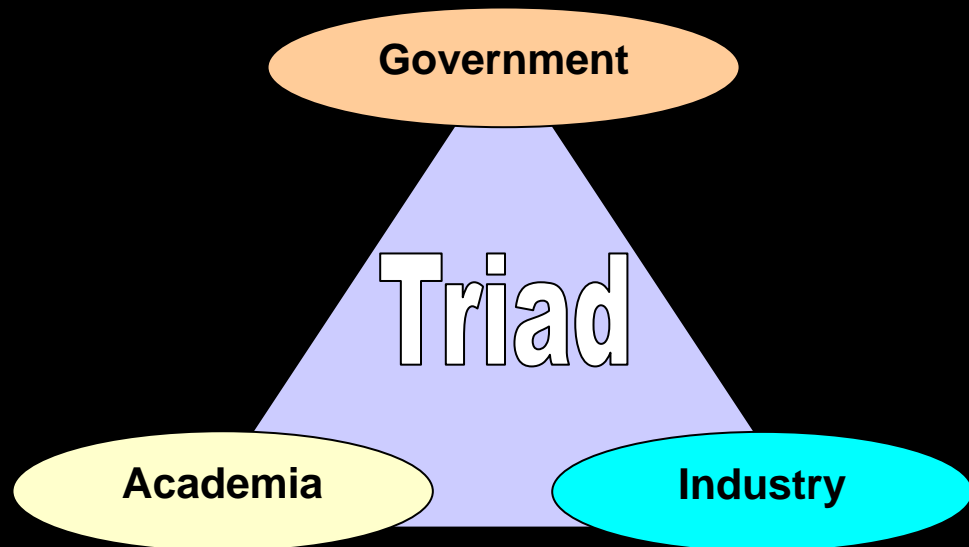Multinational Government–Industry Partnership, e.g. JSF, Network & Information Sciences International Technology Alliance

- UK MOD - US Army

- Consortium, led by IBM

- Fundamental research in **Network and Information Sciences**

- Transition results

- A 5 year, $58M, research programme started in May 06

- Builds on the success of UK Defence Technology Centres and US Army Collaborative Technology Alliances
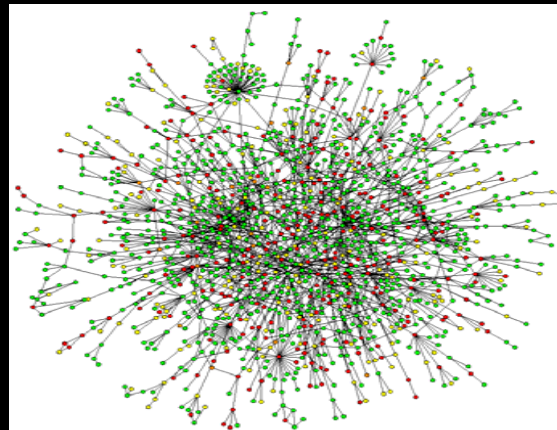
The ITA Concept

- Long-term research and Innovation
- Applied research and Exploitation
- Defence relevance
- International Research Collaboration
- The Alliance

Objectives

- Research and evaluate affordable state-of-the-art technologies

- Design in interoperability

- Promote collaboration between leading industrial and academic organisations in both nations

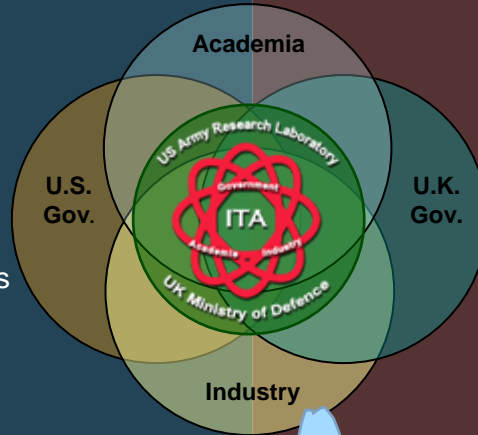- Close working between consortium and government

- Government-Government talks on principles

- Open competition

- Proposals evaluated by joint government team

- Government-Government Project Arrangement

- Awards made to successful consortium

  - Fundamental Research Component

    - US award instrument (on behalf of both nations)

    - Consortium cost-sharing was not required, but was offered

  - Technology Transition Component

    - Separate US and UK award instruments

Consortium

ACADEMIA
1. Carnegie Mellon University
2. City University of New York
3. Columbia University
4. Pennsylvania State University
5. Rensselaer Polytechnic Institute
6. University of California Los Angeles
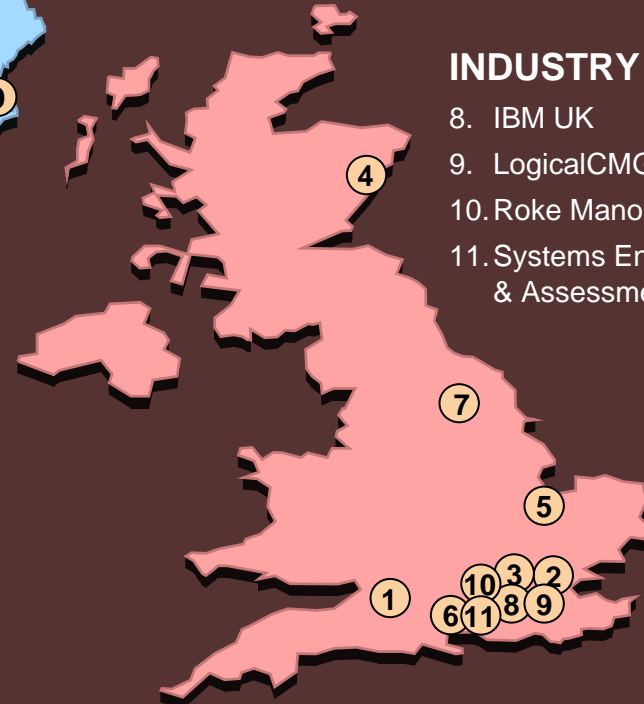7. University of Maryland
8. University of Massachusetts

ACADEMIA
1. Cranfield University, Royal Military College of Science, Shrivenham
2. Imperial College, London
3. Royal Holloway University of London
4. University of Aberdeen
5. University of Cambridge
6. University of Southampton
7. University of York

INDUSTRY
8. IBM UK
9. LogicalCMG
10. Roke Manor Research Ltd.
11. Systems Engineering & Assessment Ltd.

INDUSTRY
9. BBNT Solutions LLC
10. The Boeing Corporation
11. Honeywell Aerospace Electronic Systems
12. IBM Research
13. Klein Associates

Technical Programme

- Consortium Technical Activities
  - 4 technical areas
  - 12 projects
- Each Project :
  - One Project Champion
  - Researchers from Academia, Industry, Government
  - Spans multiple technical areas

Network Theory
Security across a System of Systems
Sensor Information Processing & Delivery
Distributed Coalition Planning & Decision Making

Project Champion

UK University   **US University**   **MoD/Dstl**   **ARL**   **UK Industry**   **US Industry**

Sources of Information (for US Industry staff):

- **Allied S&T Managers** – for advice on Allied programs and opportunities

- **Overseas US S&T Staff** – for advice on Allied programs, opportunities and processes

- **Allied Contracts Bulletins, etc.** – for advice on Allied programs and opportunities

- **Defense S&T staff in Allied Embassies** – for advice on Allied programs and processes

Questions?

OR
LUNCH?

For further information please contact:

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