

Role of Command Support Information Systems

Patrick Beazley

CSIS Team Leader,

RUSI Advance Technology Conference

23rd - 25th September 2002



CSIS

"Information Superiority across Defence"

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 23 AUG 2004		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Role of Command Support Information Systems				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) CSIS				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADM001711 Meeting C4ISTAR Requirements: Implementing and Exploiting Technology Solutions, The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 24	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

The CSIS IPT:

- Is a “cluster” IPT managing over 30 different projects,
- is “dual-accountable” to CDP and CE/DCSA
- was formed early in 2000 from (at least) 3 ex-PE Business Units
- comprises some 85 staff, civilian & military, mainly in Bristol, also at High Wycombe & Portsmouth,
- runs in-year budgets of ~ £65M for new capability and ~ £40M for capability support.



CSIS

“Information Superiority across Defence”

Projects

- **Almost all deliver capability incrementally, major projects are:**
 - **Joint Operations Command System (JOCS)**
 - **RN Command Support System (RN CSS)**
 - **RAF Command Control Information System (RAFCCIS)**
- **Other projects include:**
 - **Lychgate and FOCSLE**
 - **Command Task Force 345 (SMBPS)**
 - **Pilot Direct Broadcast System**
 - **Joint Command System (Logistic)**
 - **UKINTELWEB**



CS/S

"Information Superiority across Defence"

The Headlines

Information is key to future warfare

NEWS

Information system in Afghanistan role

New capability allows rapid transmissions to commanders

COMMAND SUPPORT INFORMATION SYSTEMS

THE DPA's Command Support Information Systems (CSIS) IPT has recently completed a number of demanding trials on the novel Pilot Direct Broadcast System (Pilot DBS).

Having completed a hot weather deployment to Oman late last year, the IPT conducted cold-weather trials in Goose Bay, North Canada – some tri-



RIGHT INFORMATION AT THE RIGHT TIME: DBS in action but classified – maps which pre- better management of scarce

Secretary of State Geoffrey Hoon stresses importance of 'network centric capability' in update on latest work on the New Chapter of the Strategic Defence Review

power. The gathering, processing and distribution of information to the right is comparable to the enormous impact of a business on the commercial world."

better individual capabilities.

The benefits on offer included:

- greater precision of control of operations, from the strategic to the tactical level, to maximise both their political and military effect;
- greater precision in the application of force – both to give it enhanced effect and to minimise accidental damage;
- greater rapidity of effect, whether disrupting the enemy at the campaign level or seizing fleeting opportunities.

Oman breakthrough for command system

CLOSE WORKING between the DPA Command Support Information Systems (CSIS) IPT and contractors provided a communications breakthrough during exercise Saif Sareea II.

The challenge was to provide a network which would allow controllers and umpires to see all data, yet to allow participants to see only their own data etc.

Network allowed segregation of data for friendly, enemy and neutral forces

cise controllers and umpires to see all data, the Blue forces to only see "friendly" data and the Red forces to see only the "enemy" information.

Thousands of e-mails were passed between command centres and airfields throughout Oman, to and from the UK and the ships at sea. The system handled over 1,000 internal addresses and over



CSIS

"Information Superiority across Defence"

COMMAND SUPPORT INFORMATION SYSTEM

Network Enabled Network

Inter

USAF Colonel John Boyd devised the concept of Observe, Orientate, Decide and Act (OODA) as a model for military decision making. following his experience in air-to-air combat during the Korean War,

Integration

Service Delivery
Decide – Destroy

capability? - what capability?



CS/S

"Information Superiority across Defence"

This?

From sensor ... NATO alliance-owned E-3 Airborne Warning & Control System aircraft helped the USA patrol its airspace after 11 September 2001



Sensors working

The fast and accurate dissemination of data is

Gaining the ability to prosecute threats almost instantaneously by swiftly interpreting and distributing reconnaissance information has become a vital goal during recent cam-

Control, Communications and Information (C3I) Systems. "The key to success for force multipliers is: 'Can you get this information to the soldier?'" Since late last year during Operation 'Enduring Freedom' in Afghanistan, imaging

jdww.janes.com • JDW • 24 July 2002 • 65

BRIEFING

SENSOR-TO-SHOOTER CAPABILITIES



... to shooter: A US Air Force B-1B Lancer performs a low-level flypast for troops deployed for Operation 'Enduring Freedom'. The transfer of target co-ordinates to such a platform requires just a narrow bandwidth compared with the relay of streaming video



The armed MQ-1 Predator UAV, although an important asset in reconnaissance, is restricted by speed, weapons-carrying capability and time on station



CSIS

"Information Superiority across Defence"

Or this?



CSIS

"Information Superiority across Defence"

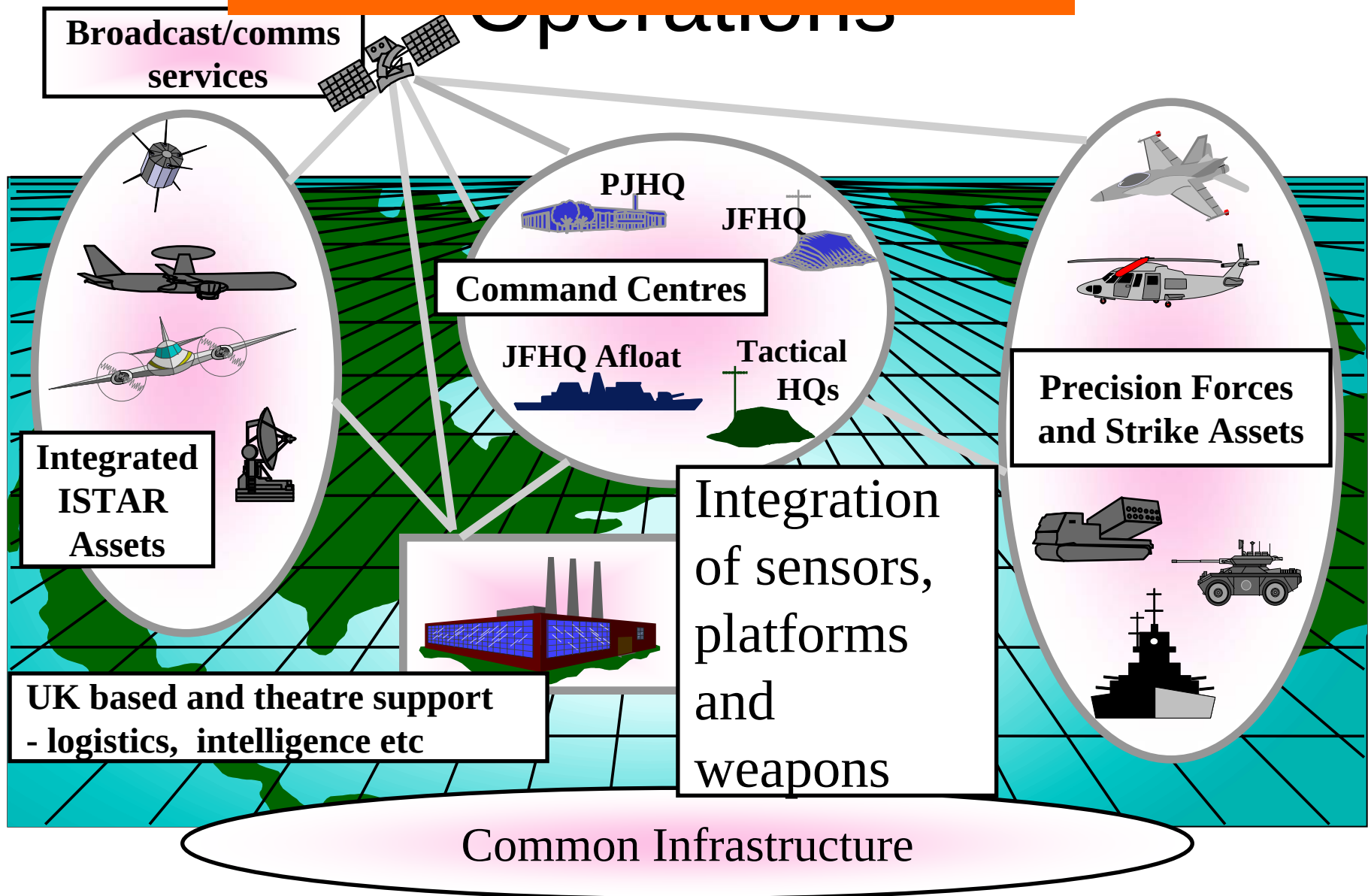
Or
this?



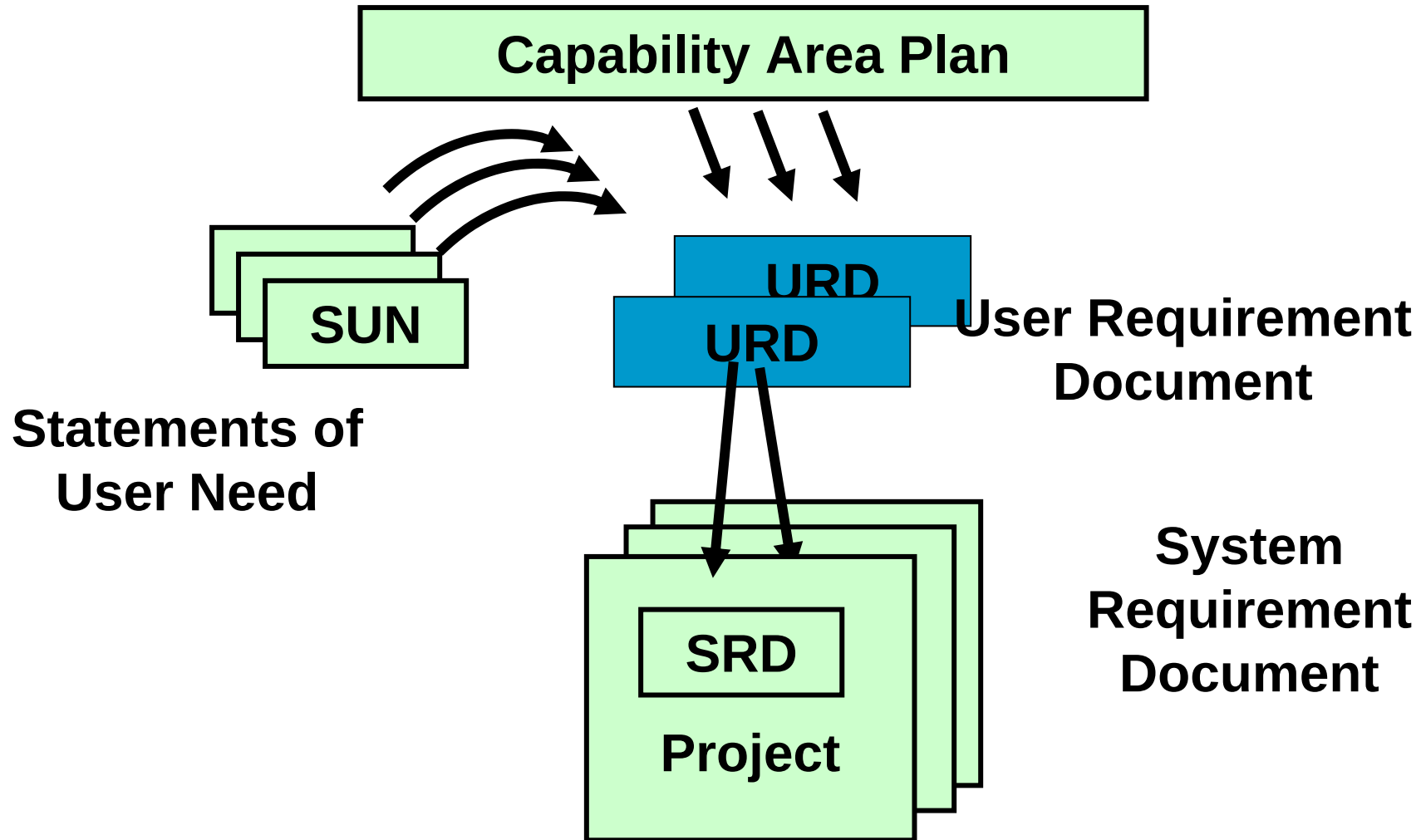
CSIS

"Information Superiority across Defence"

ALL OF THESE!



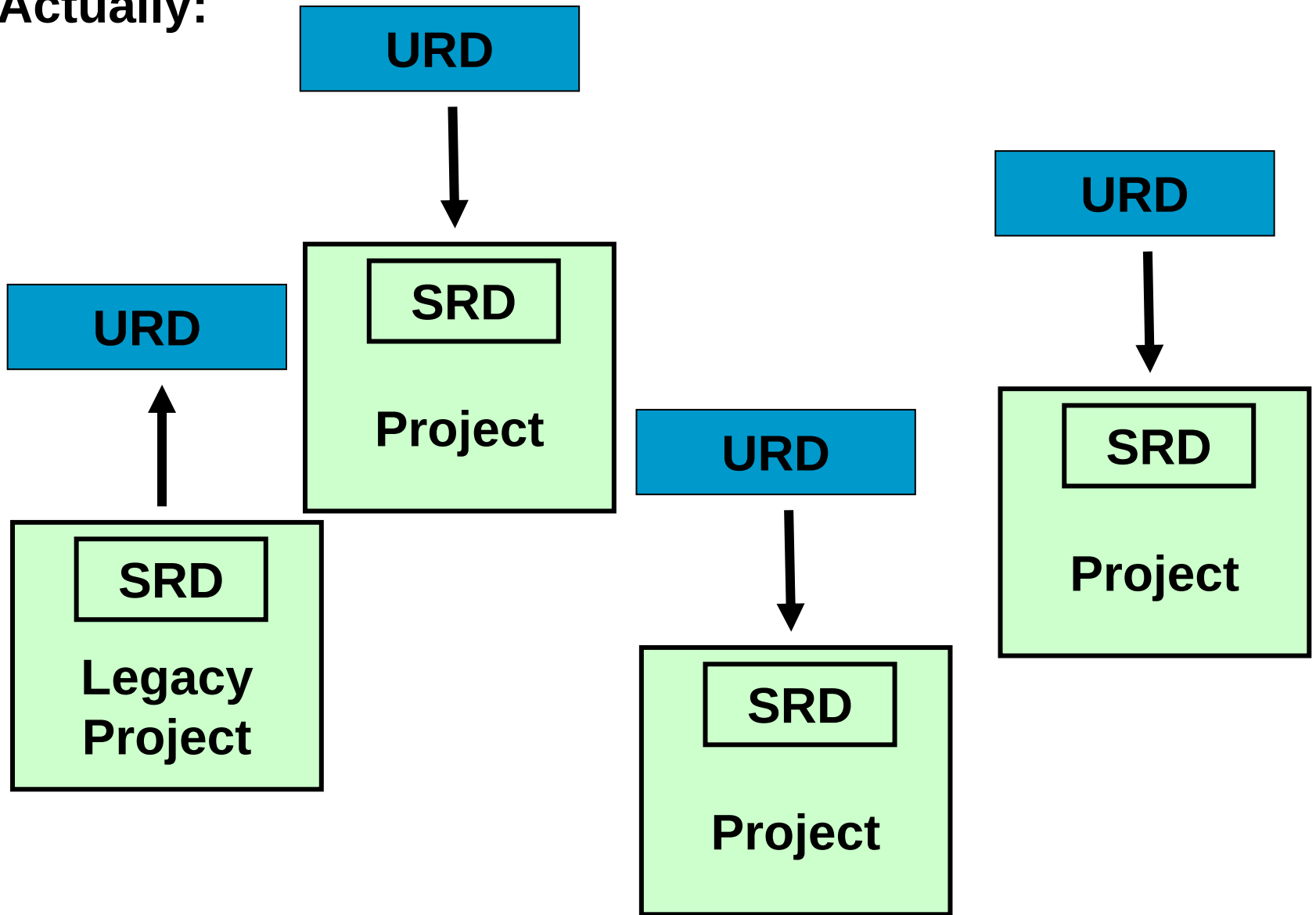
Smart Acquisition:



CS/S

"Information Superiority across Defence"

Actually:



CSIS

"Information Superiority across Defence"

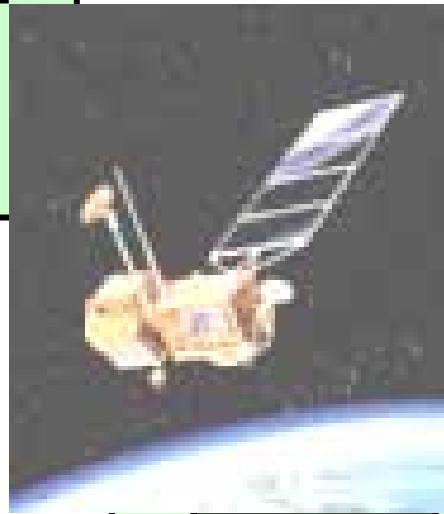


SRD

Project



**Legacy
Project**



Project



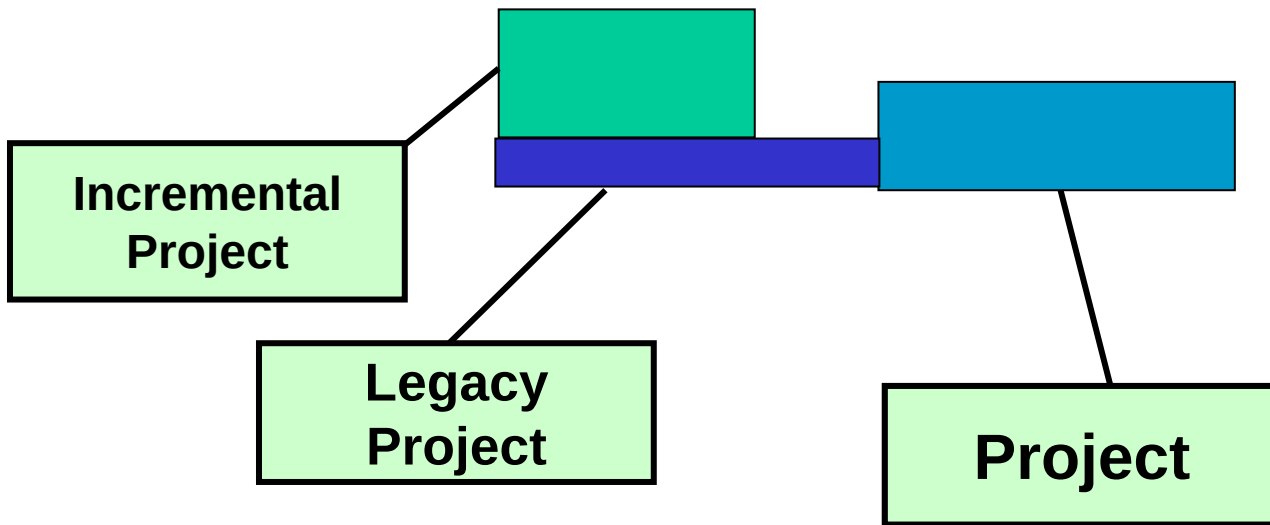
SRD

Project



CSIS

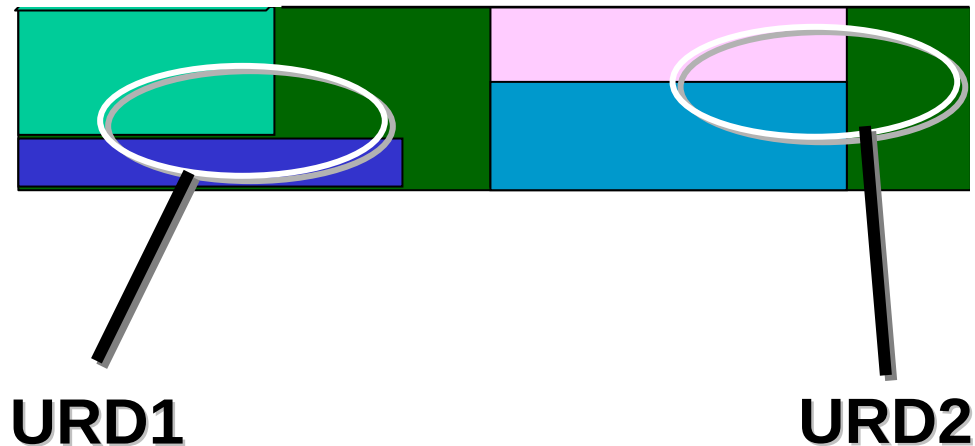
"Information Superiority across Defence"



CSIS

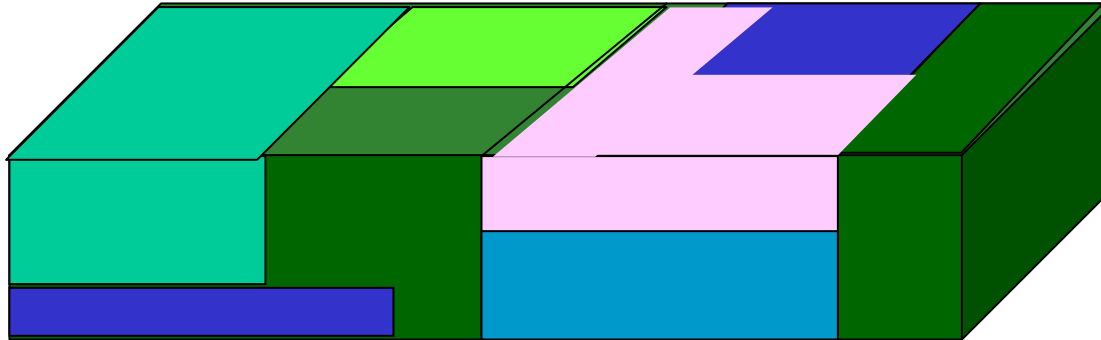
"Information Superiority across Defence"

**The separate requirements
are contiguous parts of a whole:**



CS/S

"Information Superiority across Defence"

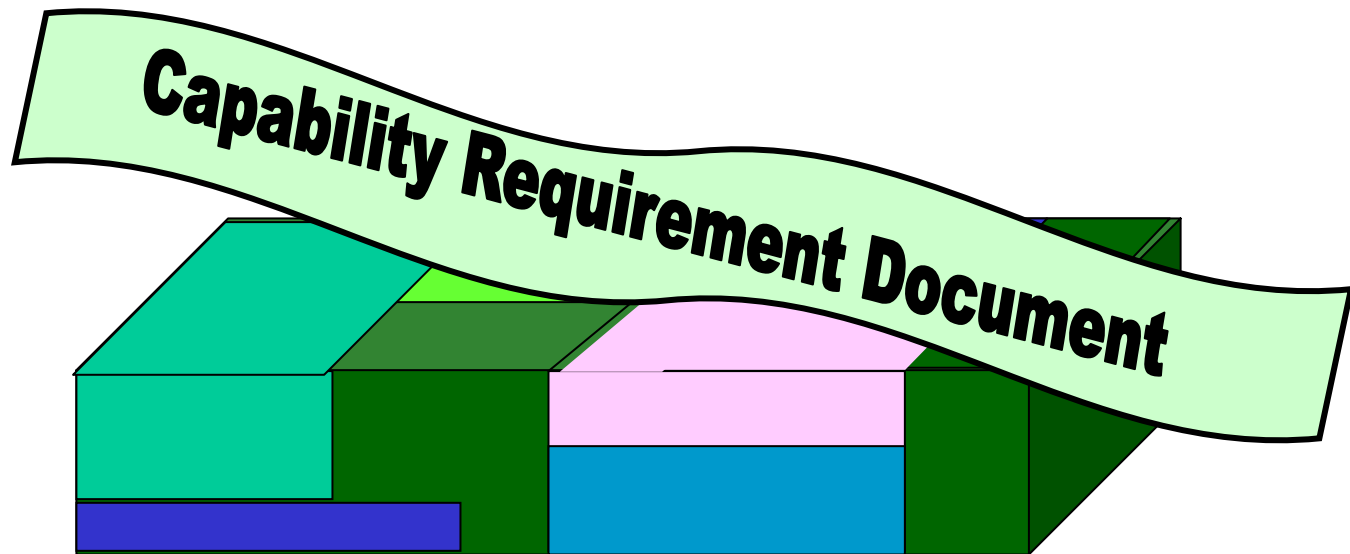


**The requirement/project jigsaw
is multi-dimensional and time dependent**



CS/S

"Information Superiority across Defence"



**Each consideration of new need or
balance of investment
Requires a slice through the
continuum**



CS/S

"Information Superiority across Defence"

So - What is capability?



From one end:

The capability to **strike**
requires the capability to
find and identify, the
capability to **decide** and
the capability to
communicate



CS/S

"Information Superiority across Defence"

So - What is capability?

From the other end:

An **intelligence** capability is of little value if all it ever allows you to do is watch.



CS/S

"Information Superiority across Defence"

So - What is capability?

From the middle:



“If they seriously think they can push that volume of data through *my* system they’re barking!”

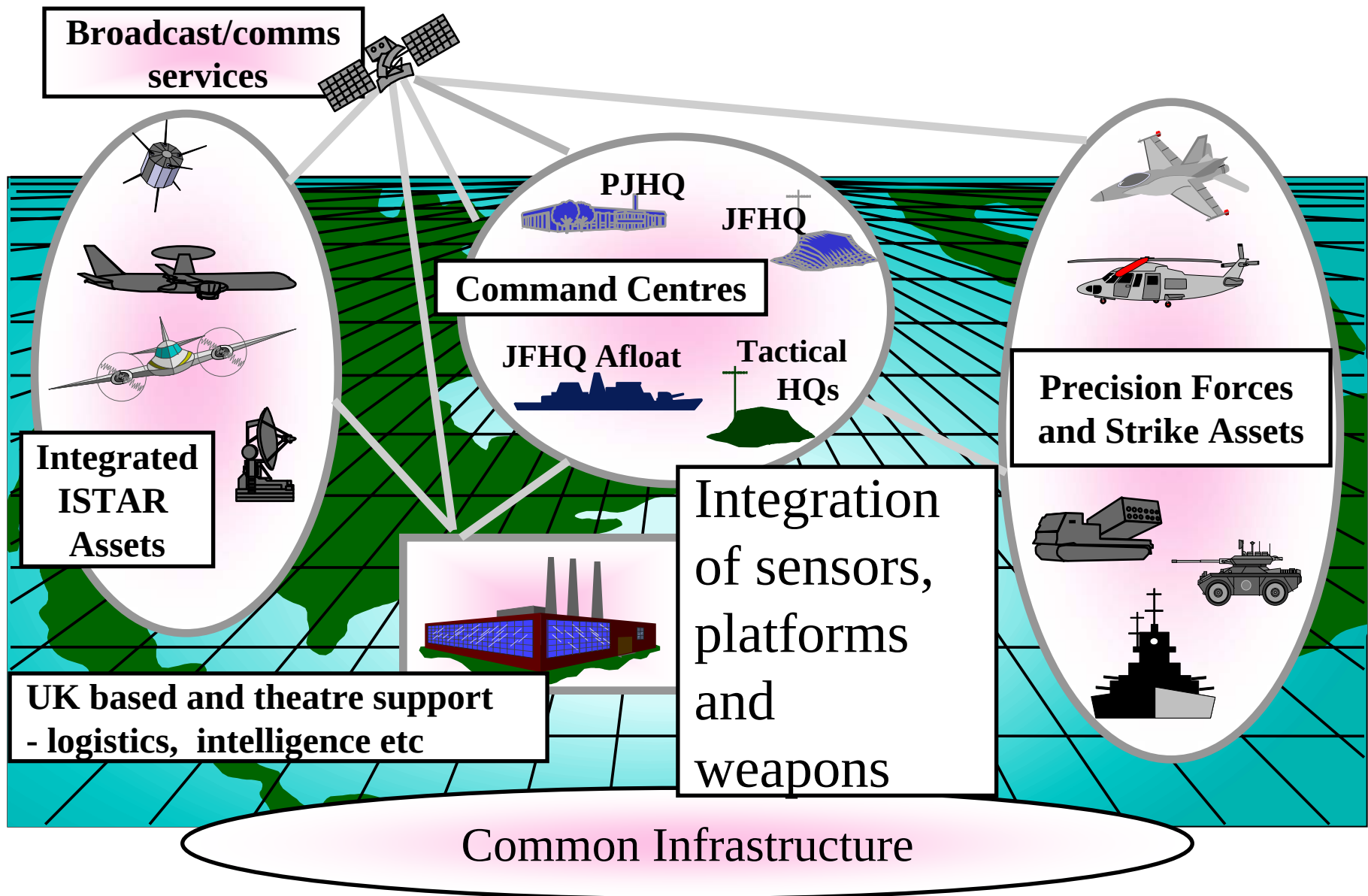
“For the cost of a *single one* of those shiny pieces of kit they could have the best decision support IT in the world!”



CS/S

“Information Superiority across Defence”

The difficult bit:-

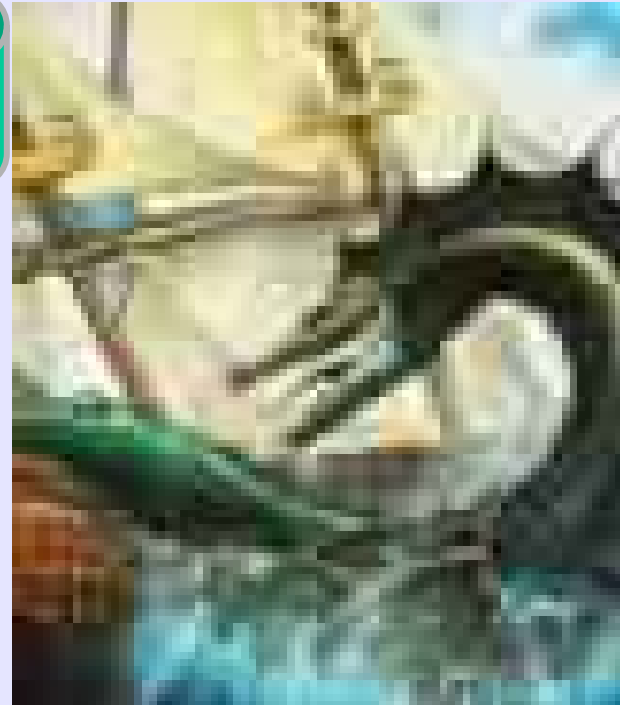


The difficult bit:-

If no project is an island:

- **Where do we take our slice?**
- **How do we set the boundaries?**

Here be dragons!



The difficult bit:-

If no project is an island:

- **Where do we take our slice?**
- **How do we set the boundaries?**

Here be dragons!

If we need the whole picture:

- **How do we capture legacy programmes?**
- **How do we balance investment to address real end-to-end capability?**

The difficult bit:-

If no project

- Where do we
- How do we

Here

If we need the

- How do we
 - How do we
- address re



es?

programmes?

ent to
ability?

Here be Capability Managers!



CSIS

"Information Superiority across Defence"

Exploiting Information for Command