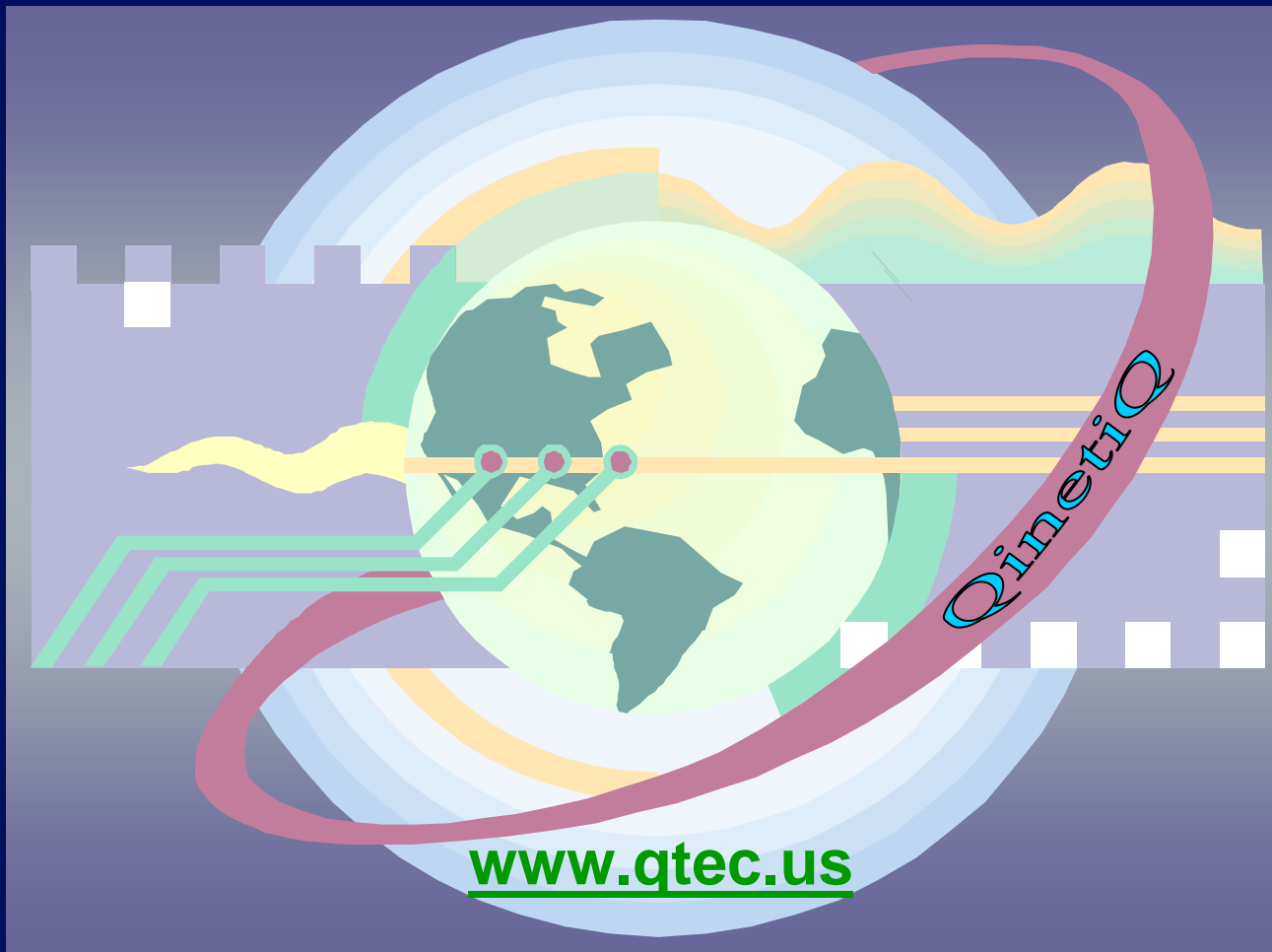


# **QinetiQ** *HELPING DEFENSE INDUSTRY MITIGATE THE FINANCIAL RISK OF OBSOLESCENCE*



[www.qtec.us](http://www.qtec.us)

Presented By  
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QinetiQ Technology Extension Corporation  
(QTEC), USA

**QinetiQ**

# DMSMS REALITY CHECK

## WHAT IS THE COLLECTIVE FINANCIAL IMPACT IN...

- ...redundant research on common component problems?
- ...redundant solution cost common components at box level systems?
- ...production delays?
- ...rework?
- ...retesting?
- ...recertification?
- ...missed shipment schedules?
- ...cost overruns?
- ...increased cost of ownership?
- ...logistical support for the war fighter?

**CAN WE REDUCE THIS FINANCIAL IMPACT?**

# WHAT CHANGE IN DMSMS INFORMATION SERVICES CAN REDUCE DMSMS COST IMPACT?

***What if...with a click of a mouse you could identify all participants in the defense industry that is working the identical component problem?***

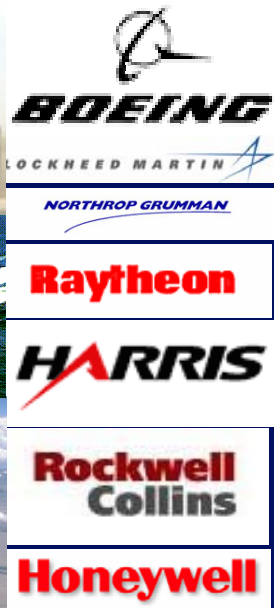
***What if...you had a means of collaboration and solution sharing on common component obsolescence problems industry wide?***

***What if...all of this could be done with absolute security without divulging participants' configuration information?***

**ALL OF THE ABOVE IS NOW POSSIBLE WITHIN DOD...UTILIZING THE "Q-Star™ Coalition and Commonality Server (QCCS)**

# THE NEED FOR INTERNATIONAL INTEROPERABILITY BETWEEN COALITION COUNTRIES IS INCREASING...

## DoD

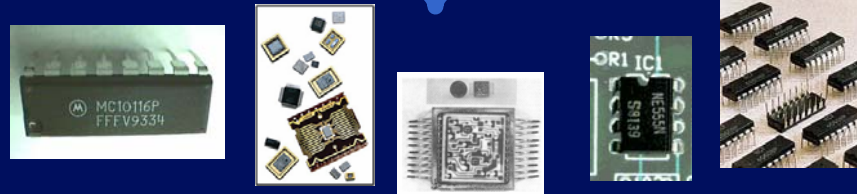
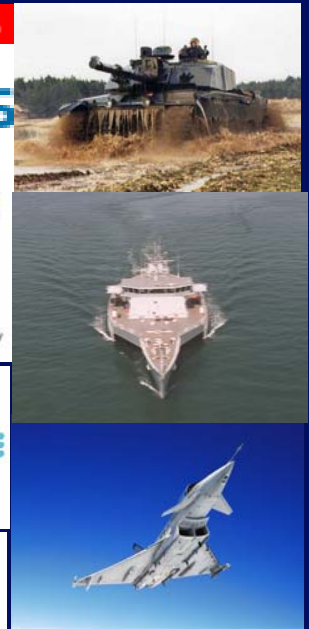


## FOR EXAMPLE

Land, Sea & Air Weapon Systems Have Common Suppliers

...And They Use Common Components

## MoD



Interoperability Solution Sharing On Common Component Obsolescence Will Benefit All Coalition Countries and Their Supplier Bases

## NUMBER OF Q-Star™ ALERTS PROCESSED IN PAST 12 MONTHS

<u>TYPE ALERT</u>	<u>ANNUAL</u>	<u>DAILY AVG</u>
Life Time Buy While Supplies Last	4,211	16
Part Re-Instated by Mfr	29,956	115
Consult Mfr; status in flux	3,366	13
Part Placed on Lifetime Buy	8,795	33
Parts Discontinued (no longer in production)	307,329	1,182
Parts Designated by DSCC as no longer recommended for new design	2,188	8
<u>Total Alerts Processed</u>	<u>355,845</u>	<u>Daily Avg. 1,367</u>

**WHAT IS THE COLLECTIVE FINANCIAL IMPACT IN REDUNDANT RESEARCH, REDUNDANT SOLUTION DETERMINATION, SUSTAINMENT STOPPAGE, COST OVERRUNS, REWORK, RETESTING, RECERTIFICATION, PRODUCTION DELAYS, MISSED SHIPMENT SCHEDULES AND INCREASED COST OF OWNERSHIP?**

# DOD's BASELINE OF ACTIVE DEVICE USAGE IS INCREASING FURTHER DILUTING PURCHASING POWER INCREASING DMSMS COST IMPACT

## FOR EXAMPLE:

As rapid active device functionality expansion increases...frequency of DMSMS occurrences will increase. Thereby increasing DMSMS cost impact.

87,000



1990

115,000



2000

184,000



2005

## Other Related Conditions That Impact Component Obsolescence

1. Fewer Components Needed To Achieve System Functionality.
2. Lack of Unit Volume In Weapon System Manufacturing.
3. Long Support Cycles Required.
4. Usage of Commercial Components With Shorter Life Cycles.
5. RoHS Compliant Components Raise Reliability Issues In Weapon System Applications.

**DATA-CENTRIC OBSOLESCENCE MANAGEMENT IS THE MOST COST EFFECTIVE WAY TO MANAGE COMPONENT LEVEL OBSOLESCENCE.**

# WHY SHARE OBSOLESCENCE SOLUTIONS AT THE COMPONENT LEVEL?

- Obsolescence expenditures are rapidly increasing production costs, eroding sustainment cycles, reducing combat readiness and increasing ownership cost.
- The existing autonomy for program management sub-system support, although essential, is redundant and too costly when working common component problems at the box level.
- Sharing component level obsolescence solutions on common component problems internationally will benefit all participants.
- As industry transitions to RoHS Pb free electronics this will create a whole new realm of technological challenges for military/aerospace applications in areas of reliability and quality.

**What Is Your Strategy To Manage Component Problems Across Your Land, Sea and Air Weapon Systems?**



# **TO BE COST EFFECTIVE, OBSOLESCENCE MANAGEMENT IN THE FUTURE WILL REQUIRE...**

## **Utilization of Data Centric Information Technology**

- **Less platform-centric...more data-centric on common component problems.**
- **Utilization of a common information system and workflow process.**
- **Develop a means for collaboration and solution sharing exchanges across Allied Nations and their supply chains.**
- **System used must not interfere with individual team member program decisions.**
- **Component availability information updated daily.**
- **Direct access and open Information support to all coalition friendly countries and their supply chains.**

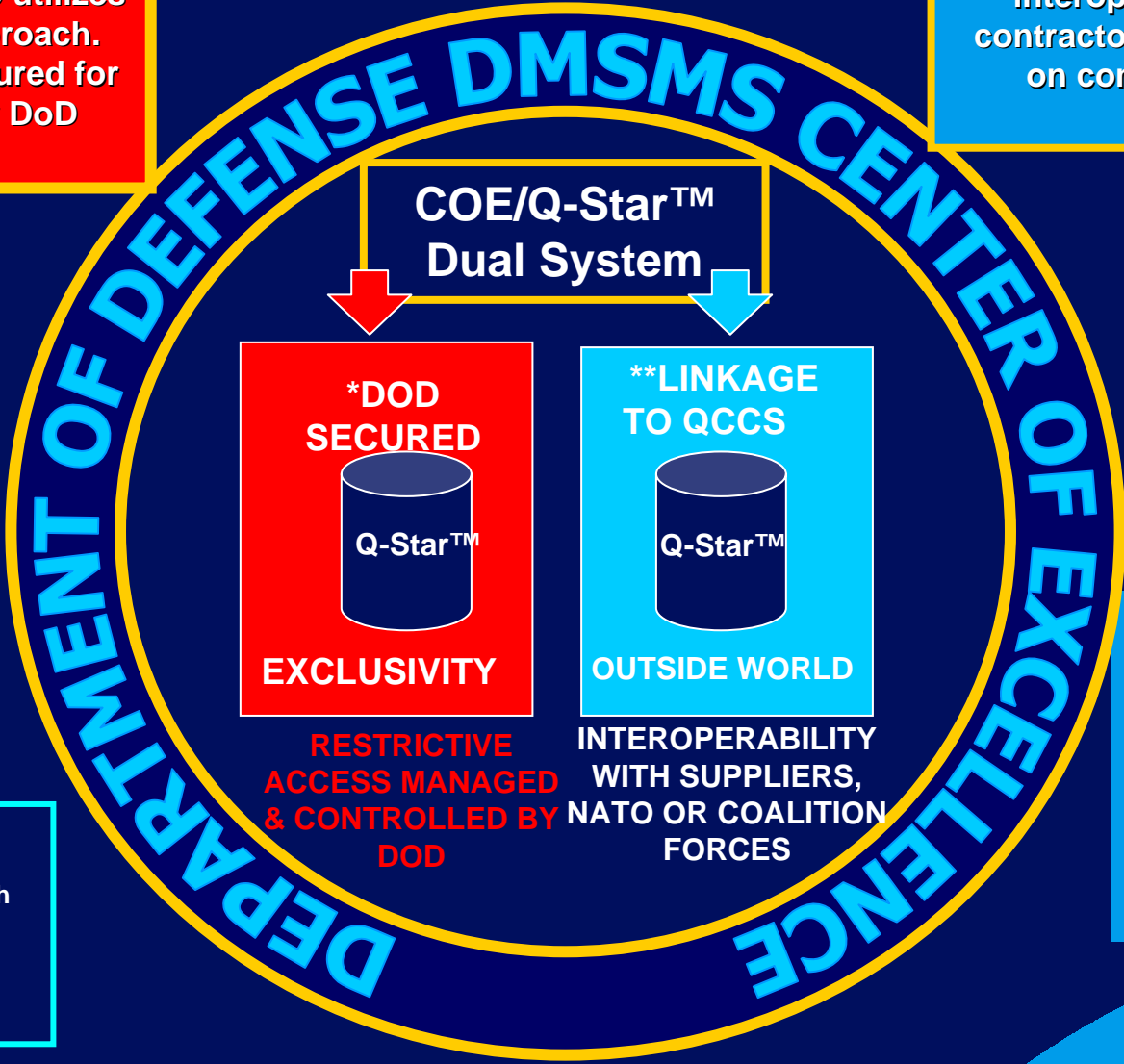
**SYSTEM MUST MEET ALL PARTICIPANTS' SECURITY REQUIREMENTS and BE ITAR COMPLIANT**



# INTEROPERABILITY EXAMPLE: THE DOD DMSMS CENTER OF EXCELLENCE (COE) OFFERS QCCS AS ONE OF THE COE'S MANY CENTRALIZED INFORMATION SERVICES

Q-Star™ provides data-centric obsolescence management. QTEC utilizes a dual system approach. One system is secured for exclusive use by DoD agencies.

\*\*The QCCS system allows **secured** seamless interoperability with DoD contractors or coalition forces on common component problems



\*RED INDICATES DOD/USG ONLY

**ADVANTAGE:** QCCS Enables DoD/USG Users To Work Seamlessly With Contractors Or Friendly Nations On Common Component Problems Using Q-Star™.

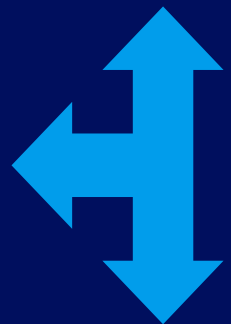
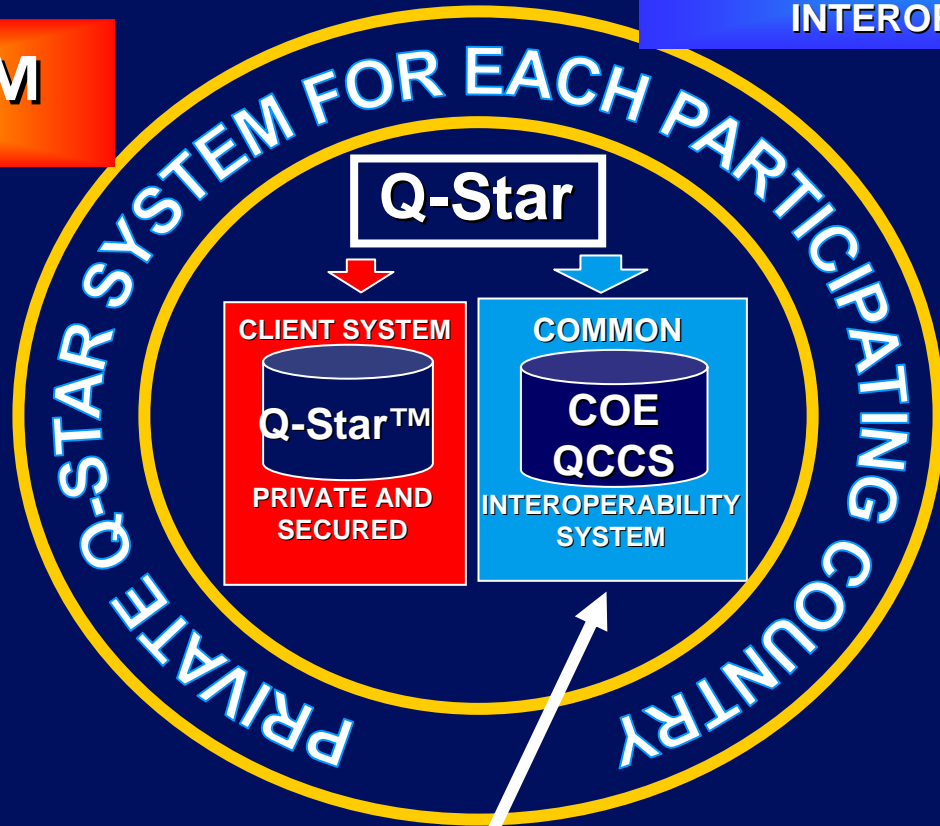
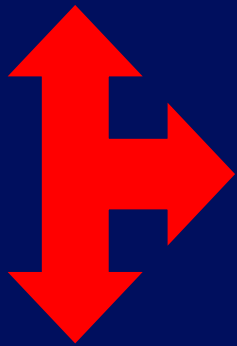
The QCCS system only contains flat files with no configuration information...only name, point of contact, phone number, email address and generic identification of common component

# Client Q-Star™ Systems Offer A Secured Private System Managed and Controlled By Client

Each Allied Country Would  
Have A Private  
Obsolescence System

ALL PARTICIPANTS WITH DOD  
APPROVAL WOULD HAVE  
ACCESS TO THE DOD QCCS  
INTEROPERABILITY SYSTEM.

## Q-Star™



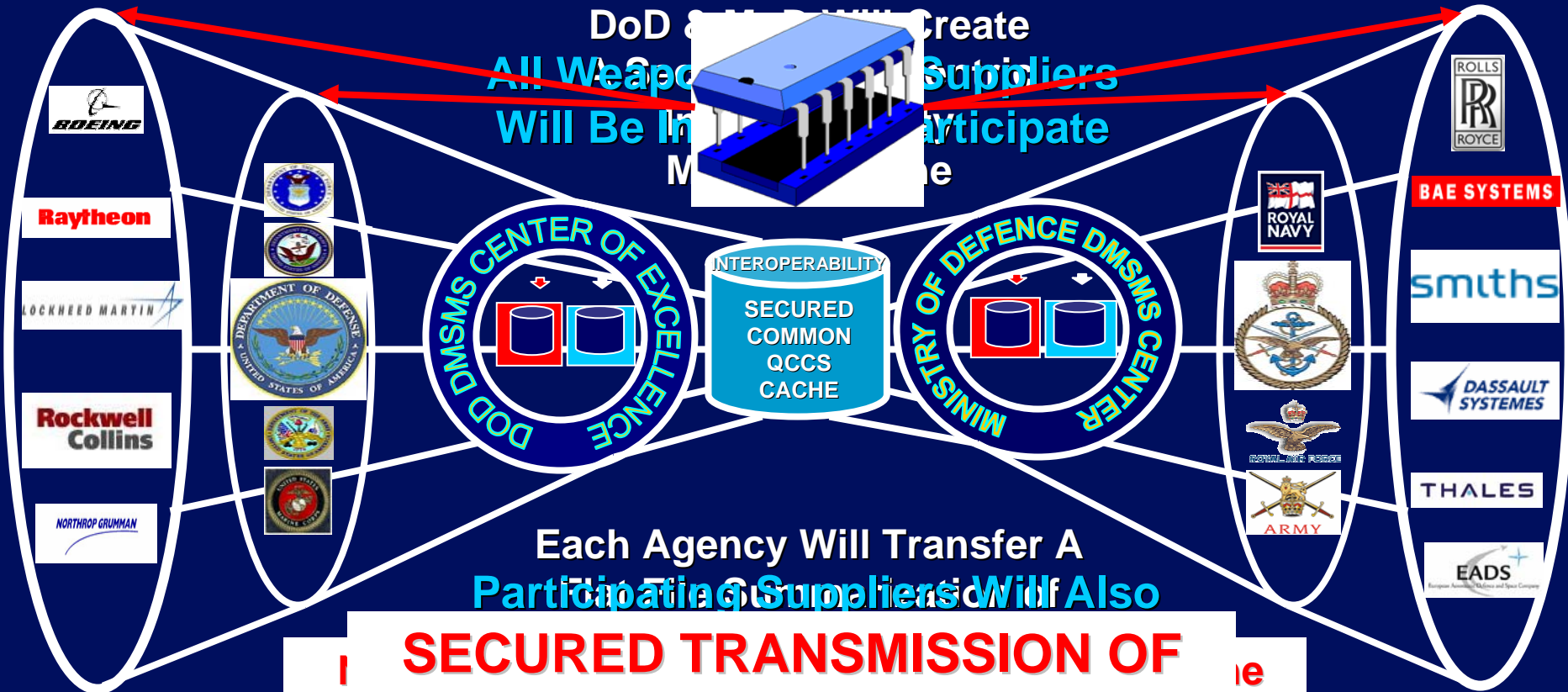
The Private  
System Would Be  
Under The Control  
and Security Of  
Each Participating  
Client

International  
Data-Centric  
Networking On  
Common  
Component  
Problems

**NO CONFIGURATION  
INFORMATION IN BLUE SYSTEM**

# CONCEPTUAL EXAMPLE: HOW DoD AND MoD WILL UTILIZE THE QCCS ON COMPONENT OBSOLESCENCE

**INTEROPERABILITY DMSMS SOLUTION SHARING AT THE COMPONENT LEVEL WILL BENEFIT ALL PARTICIPANTS**



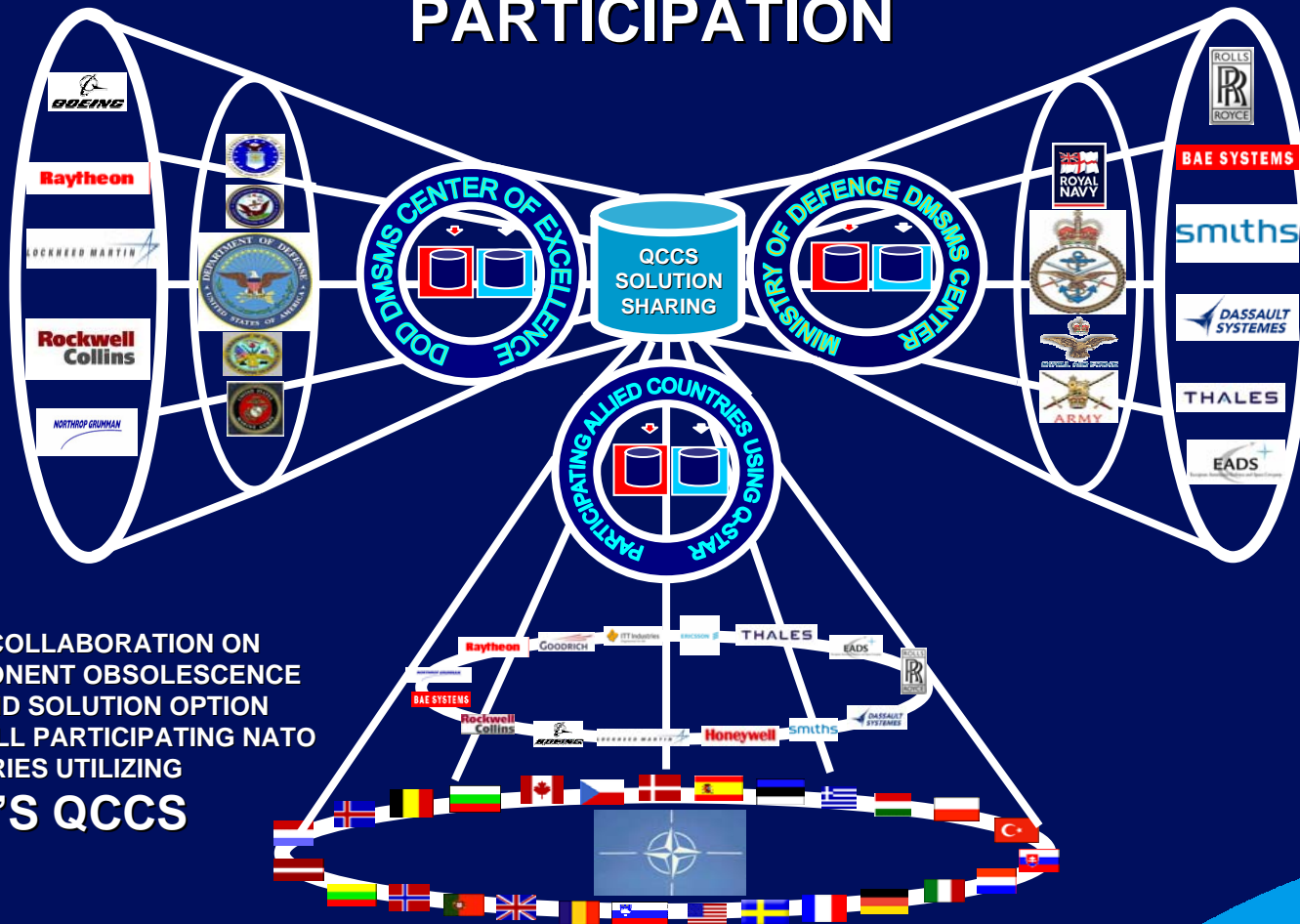
Each Agency Will Transfer A  
Participating Suppliers Will Also

**SECURED TRANSMISSION OF  
ALL PARTS LISTS**

Participants Allowing Them To Collaborate Or  
Share Solutions On A Common Component

# QCCS SYSTEM WOULD BE OPEN TO ALL ALLIED COUNTRIES WISHING TO PARTICIPATE ON COMMON COMPONENT OBSOLESCENCE PROBLEMS

## FOR EXAMPLE: NATO-WIDE PARTICIPATION

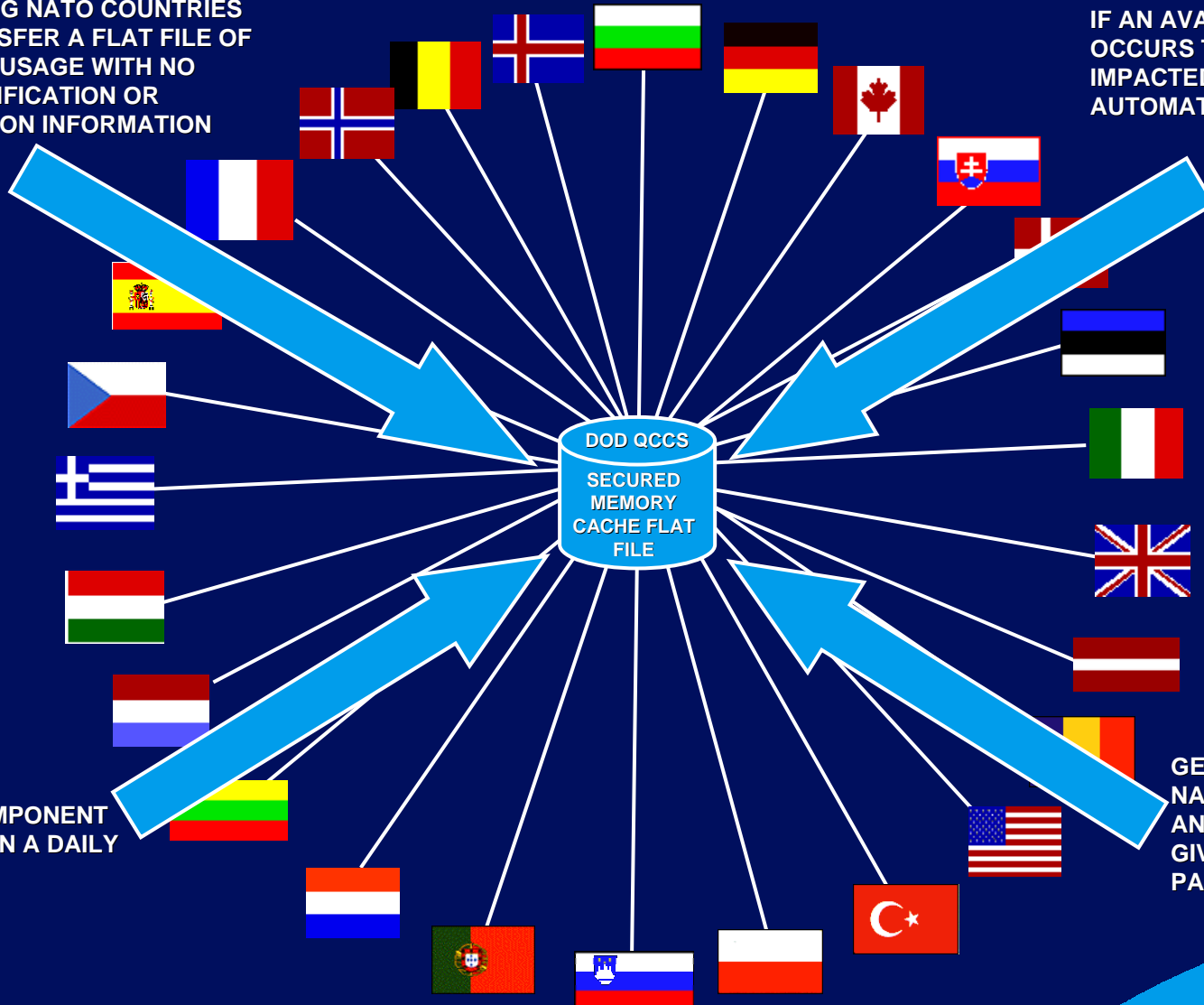


SEAMLESS COLLABORATION ON  
COMMON COMPONENT OBSOLESCENCE  
PROBLEMS AND SOLUTION OPTION  
VISIBILITY FOR ALL PARTICIPATING NATO  
COUNTRIES UTILIZING  
**DOD'S QCCS**

# EXAMPLE: NATO INTEROPERABILITY SOLUTION SHARING USING THE QCCS SYSTEM ON COMMON COMPONENT PROBLEMS

PARTICIPATING NATO COUNTRIES WOULD TRANSFER A FLAT FILE OF THEIR PARTS USAGE WITH NO USAGE IDENTIFICATION OR CONFIGURATION INFORMATION

IF AN AVAILABILITY CHANGE OCCURS THOSE PARTICIPANTS IMPACTED ARE NOTIFIED AUTOMATICALLY BY QCCS



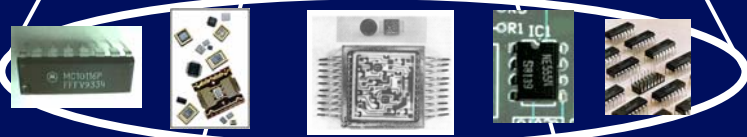
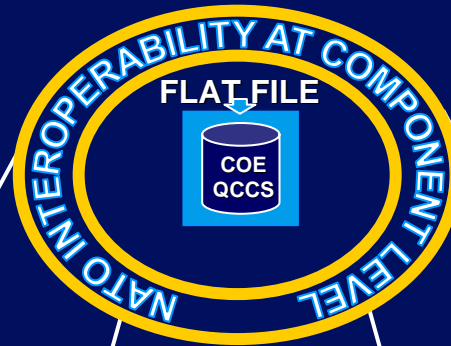
QCCS UPDATES CHANGING COMPONENT AVAILABILITY ON A DAILY BASIS

GENERIC PART NUMBER, NAME, PHONE NUMBER AND EMAIL ADDRESS IS GIVEN TO THOSE PARTICIPANTS IMPACTED

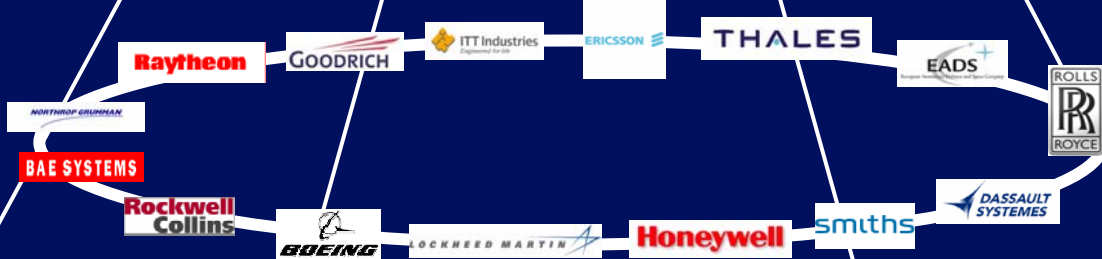
# QCCS SYSTEM CONCEPT FOR INTERNATIONAL INTEROPERABILITY

## QCCS SYSTEM DATA SAFEGUARDS

- NO... CONFIGURATION INFORMATION
- NO... WEAPON SYSTEM IDENTIFICATION
- NO... WHERE USED INFORMATION
- NO... PARTS USAGE COMMONALITY
- NO... SEAMLESS COLLABORATION
- NO... SOLUTION SHARING
- NO... COMPONENT OBSOLESCENCE



WEAPON SYSTEM SUPPLIERS THAT WANT TO PARTICIPATE



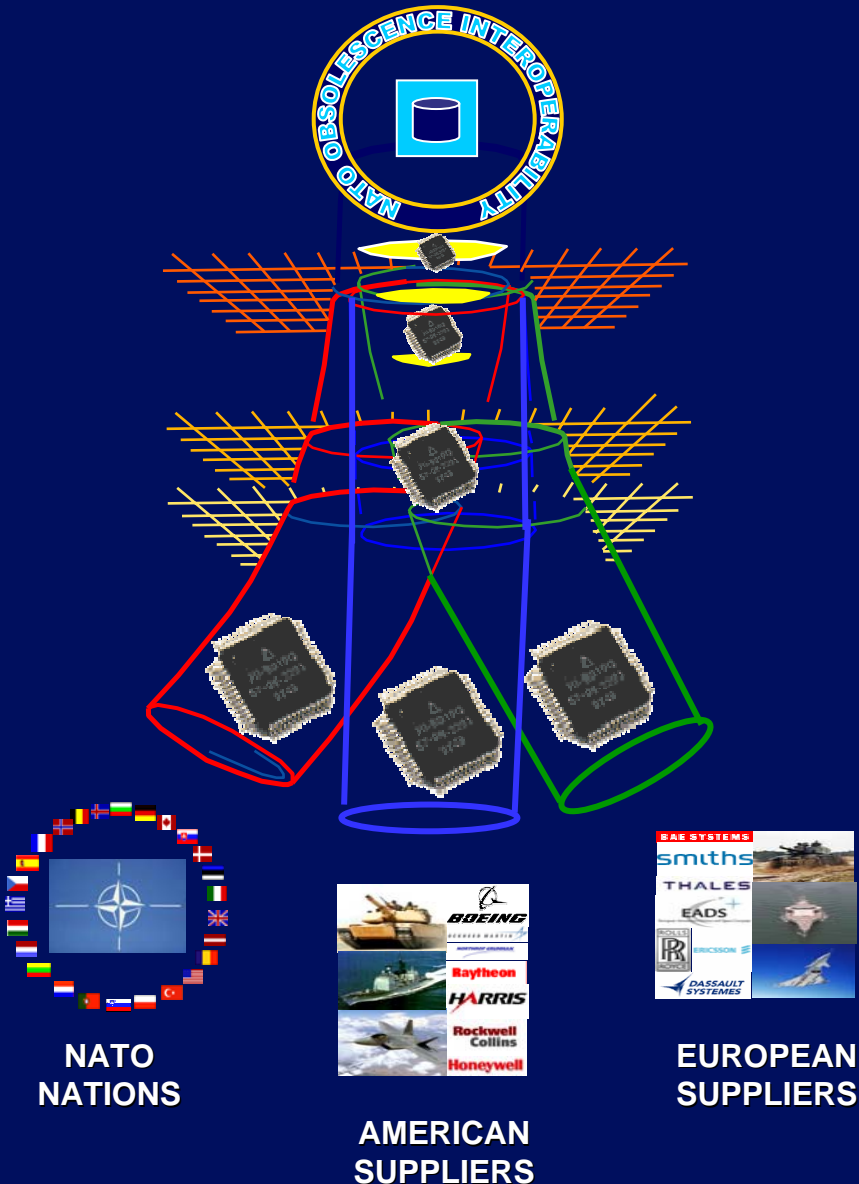
NATO NATIONS AND ALLIED COUNTRIES THAT WANT TO PARTICIPATE



FOR EXAMPLE



# THE VALUE OF QCCS DATA CENTRIC INTEROPERABILITY!



IF... WHERE AND HOW...?

**NATO** Reduce Redundant Research

**AMERICAN SUPPLIERS**

Lower Solution Cost  
**EUROPEAN SUPPLIERS**

Faster Reaction Time

Consolidate Purchasing Power  
...**ADOPTED DATA CENTRIC**  
Lower Cost of Ownership  
**OBSOLESCENCE**

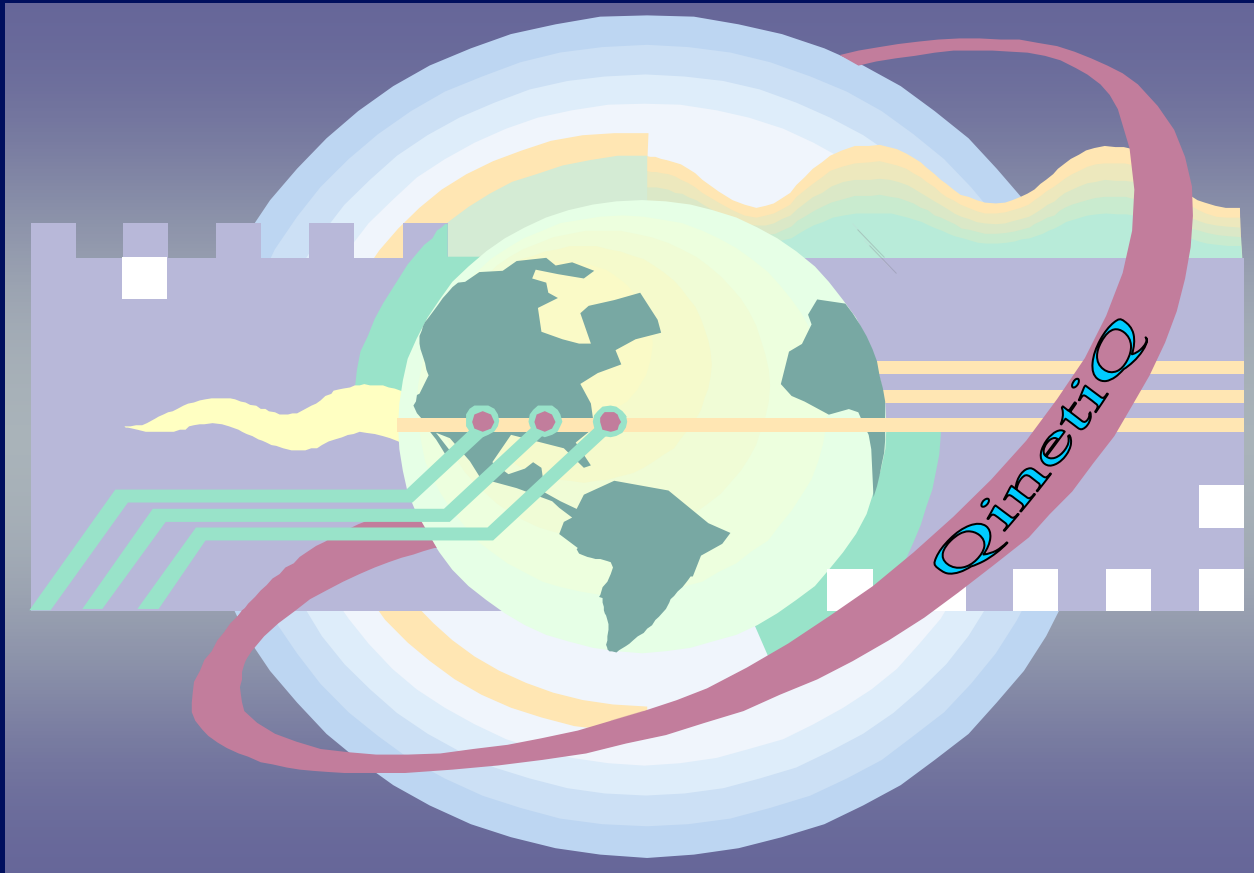
**INFORMATION TECHNOLOGY**

**\$BILLIONS COULD BE SAVED**  
Improve Combat Readiness

Improve War Fighter Support



# Thank You!



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