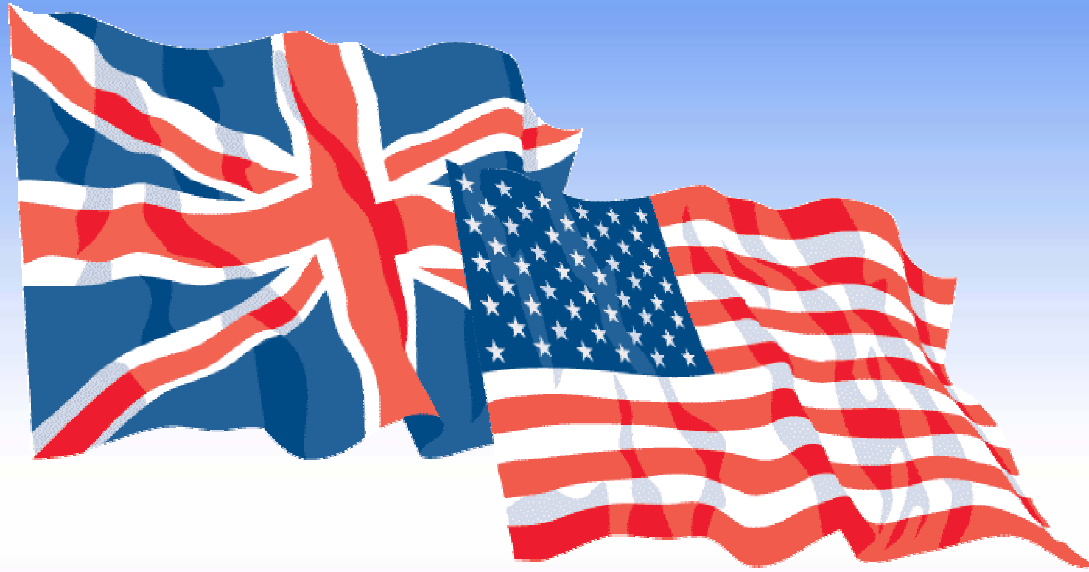


# UK-US Defense Industry Seminar



## Naval and Maritime Workshop

**Rino Pivrotto**

**Director, Technology Security & Cooperative Programs**

**Navy International Programs Office**

**25 February 2003**

# What We Do

Navy IPO Develops and Implements DoN International Policy and Manages International Efforts in Research, Development and Acquisition for DoN IAW SECNAV Instruction 5430.103 of 23 Dec 92.

## Security Assistance

- Foreign Military Sales
- Excess Defense Article (EDA) Transfers
- International Training
- Presidential Drawdowns
- Direct Commercial Sales

## Technology Security

- Disclosure Policy/Oversight (TT SARBs)
- Export Licensing

## Cooperative Programs

- International Agreements (MOUs)
- Foreign Comparative Testing (FCT)
- Data and Personnel Exchange (DEAs/ESEP)

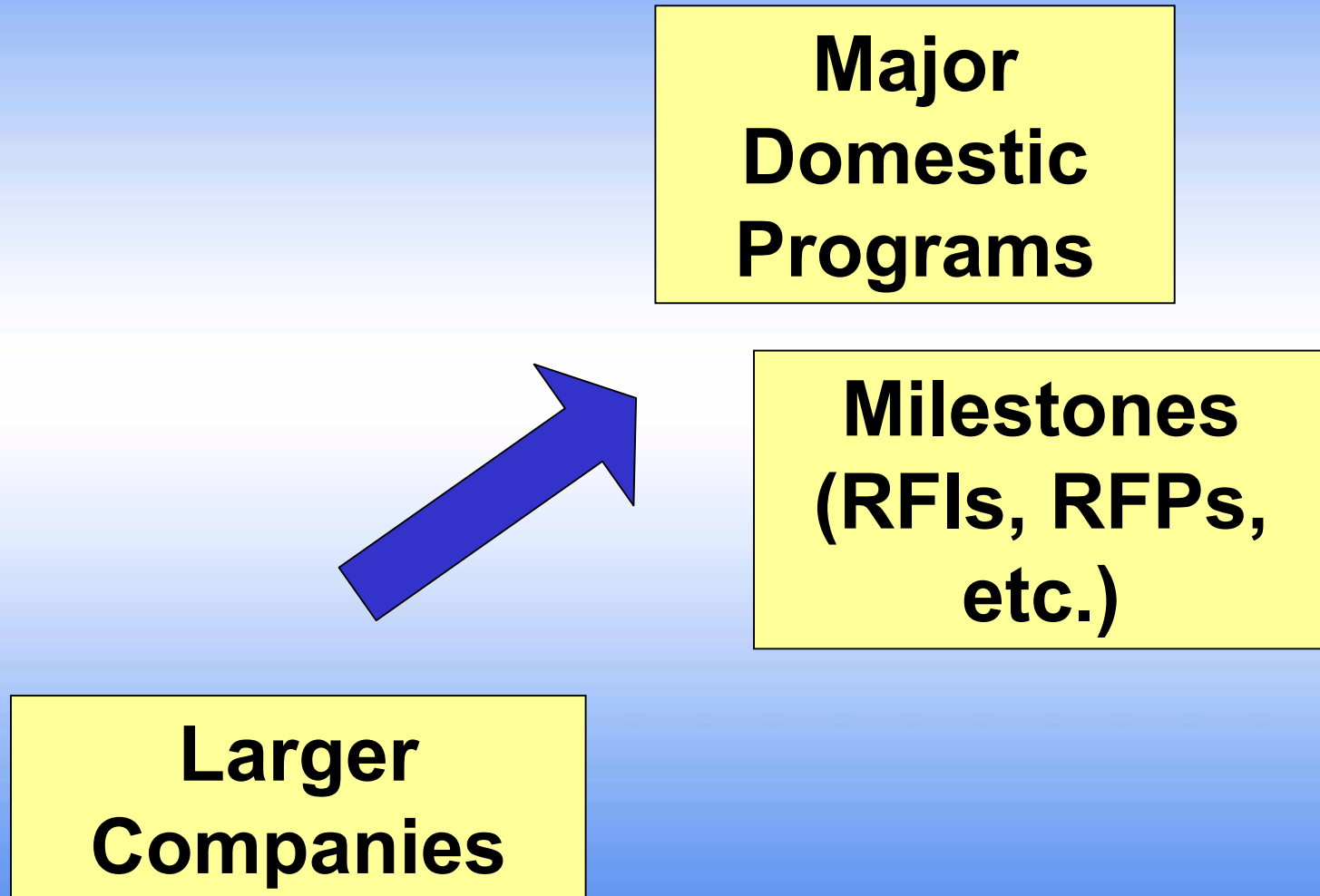
## Customer

DoN  
Foreign Countries

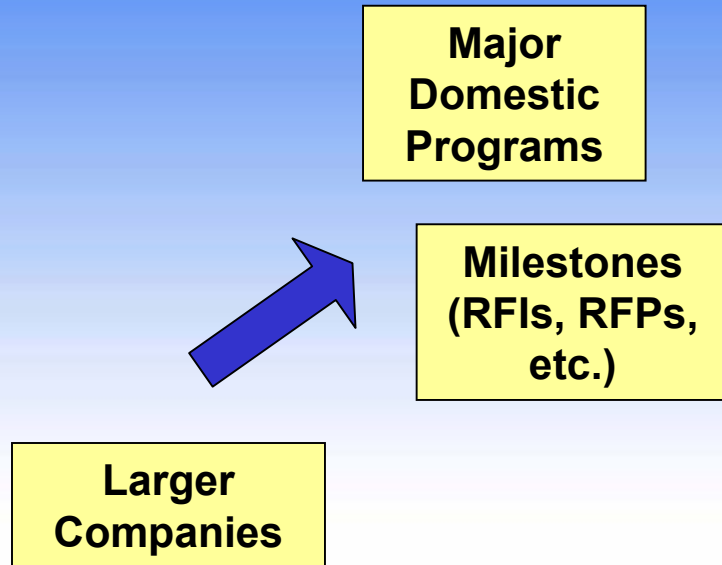
## Stakeholders

Regional Commanders  
OSD  
Secretariat  
OPNAV  
State Dept.  
Industry  
PEOs/SYSCOMs  
Commerce Dept.

# Tracking Business Opportunities

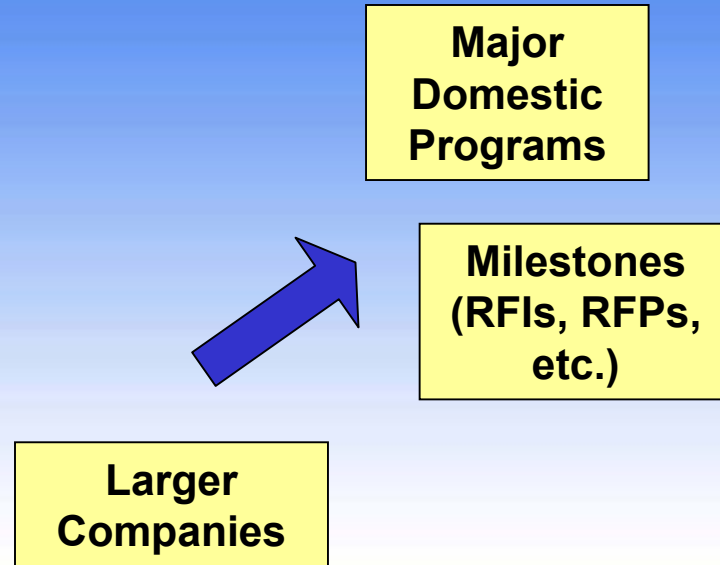


# Tracking Business Opportunities

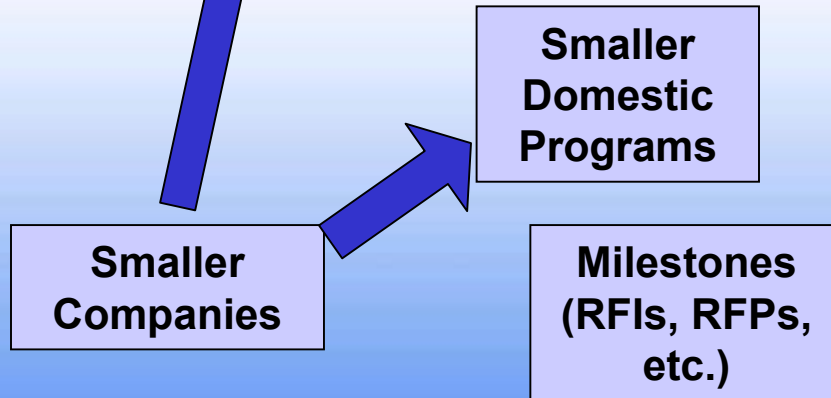


# Tracking Business Opportunities

Large



Small



# Tracking Business Opportunities

Large

Major  
Domestic  
Programs

Milestones  
(RFIs, RFPs,

Larger  
Companies

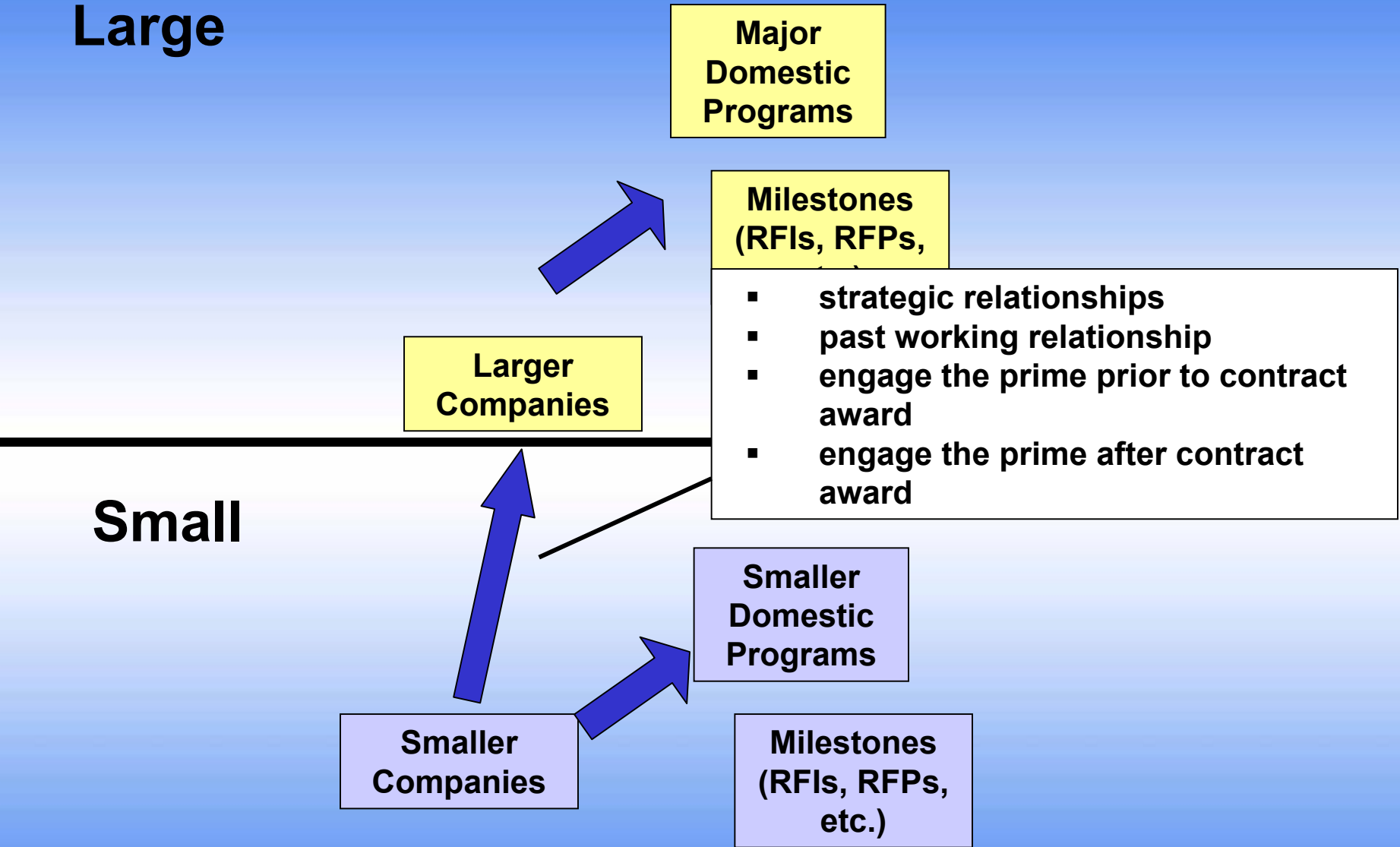
- strategic relationships
- past working relationship
- engage the prime prior to contract award
- engage the prime after contract award

Small

Smaller  
Domestic  
Programs

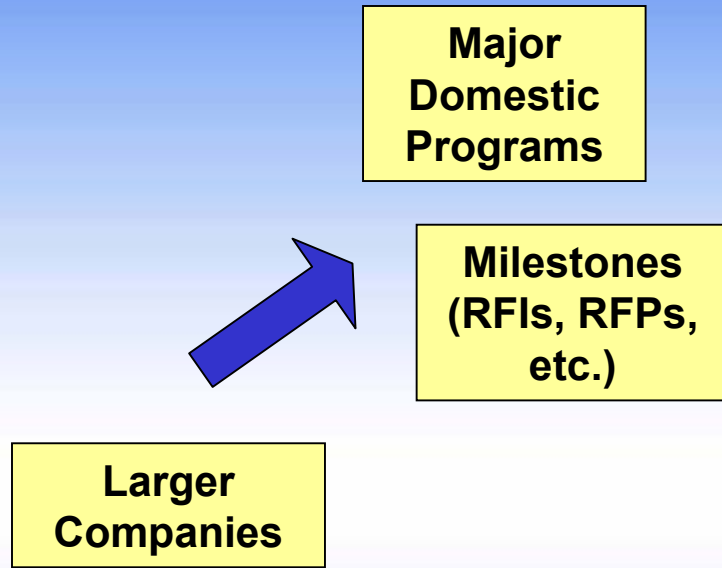
Smaller  
Companies

Milestones  
(RFIs, RFPs,  
etc.)

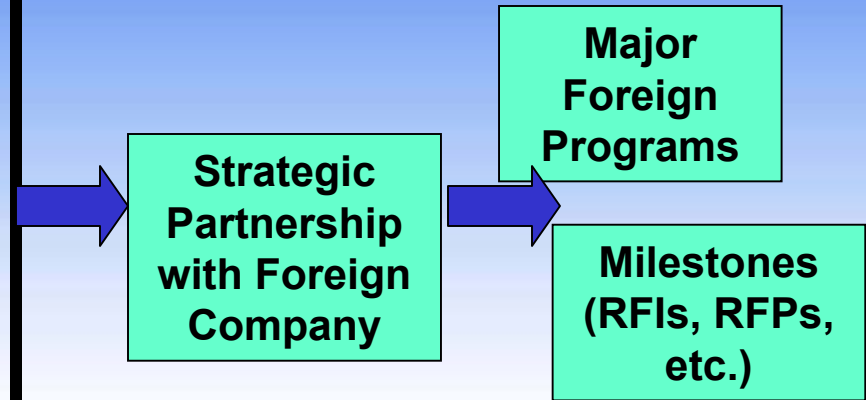


# Tracking Business Opportunities

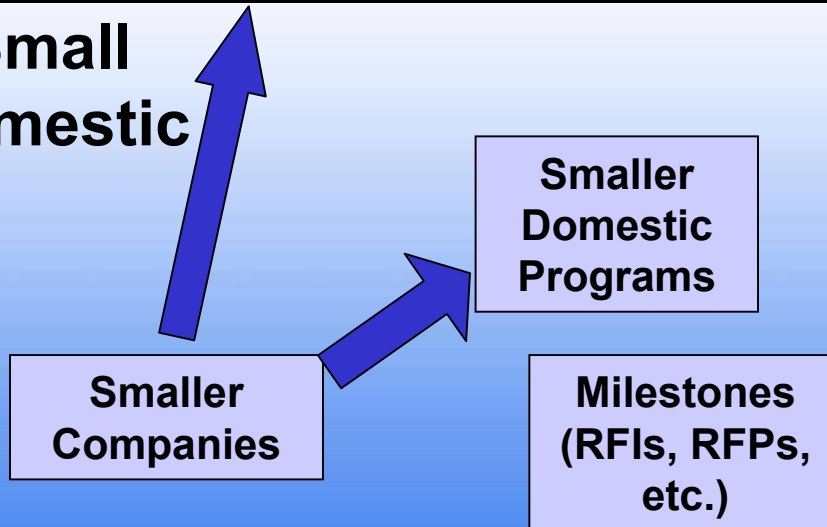
## Large Domestic



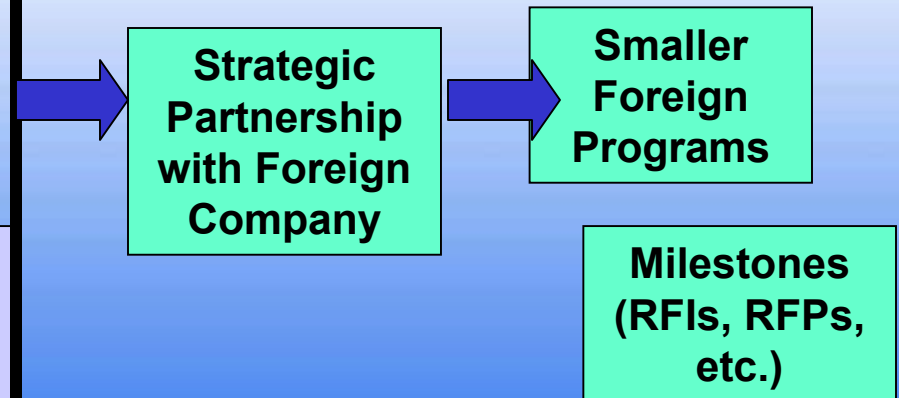
## Large Foreign



## Small Domestic



## Small Foreign

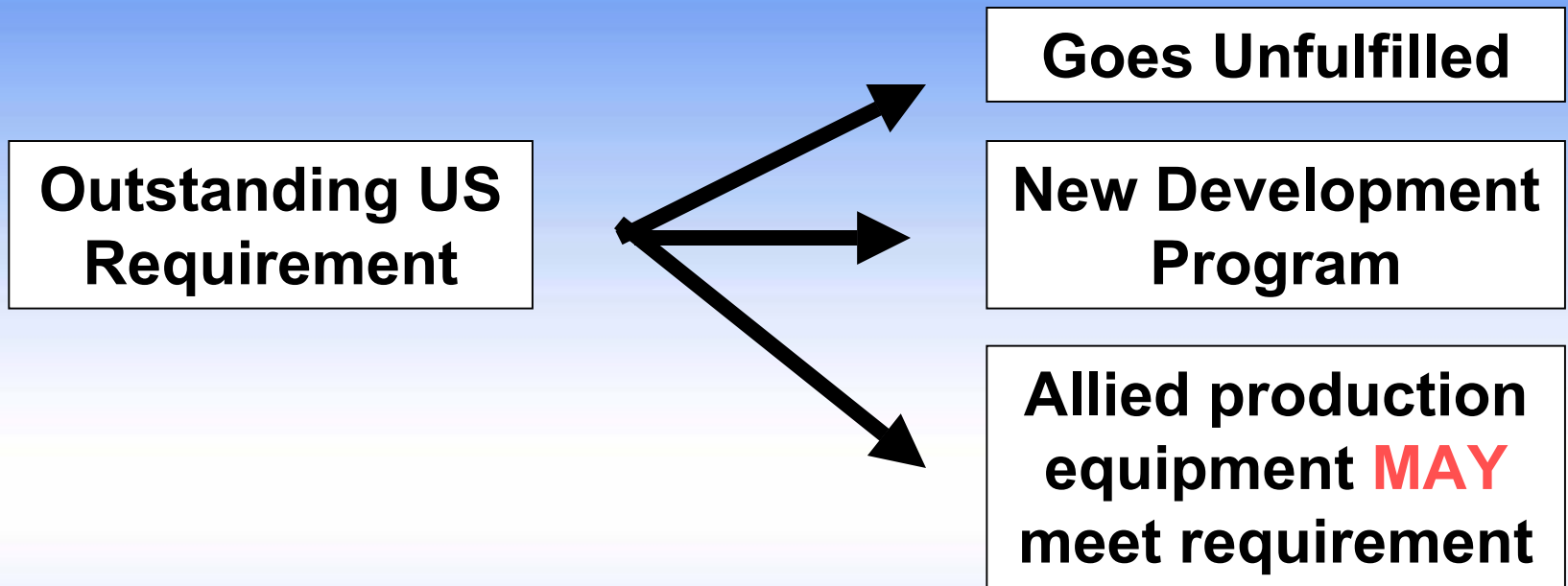


# Agenda

- **Deepwater**
- **Littoral Combat Ship (LCS)**
- **Foreign Comparative Test (FCT)**
- **Defense Acquisition Challenge Program**
- **US-UK Government-to-Government Agreements**



# Foreign Comparative Test

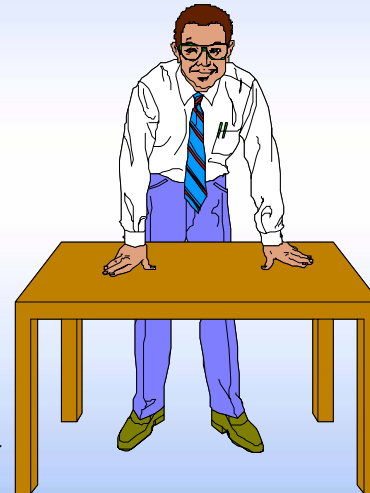


- **FCT Program provides funds to test allied equipment**
- **Budgeted funds for production of item is a key criteria**

# Foreign Comparative Test Process



**US Program  
Manager  
drafts FCT  
project  
proposal**



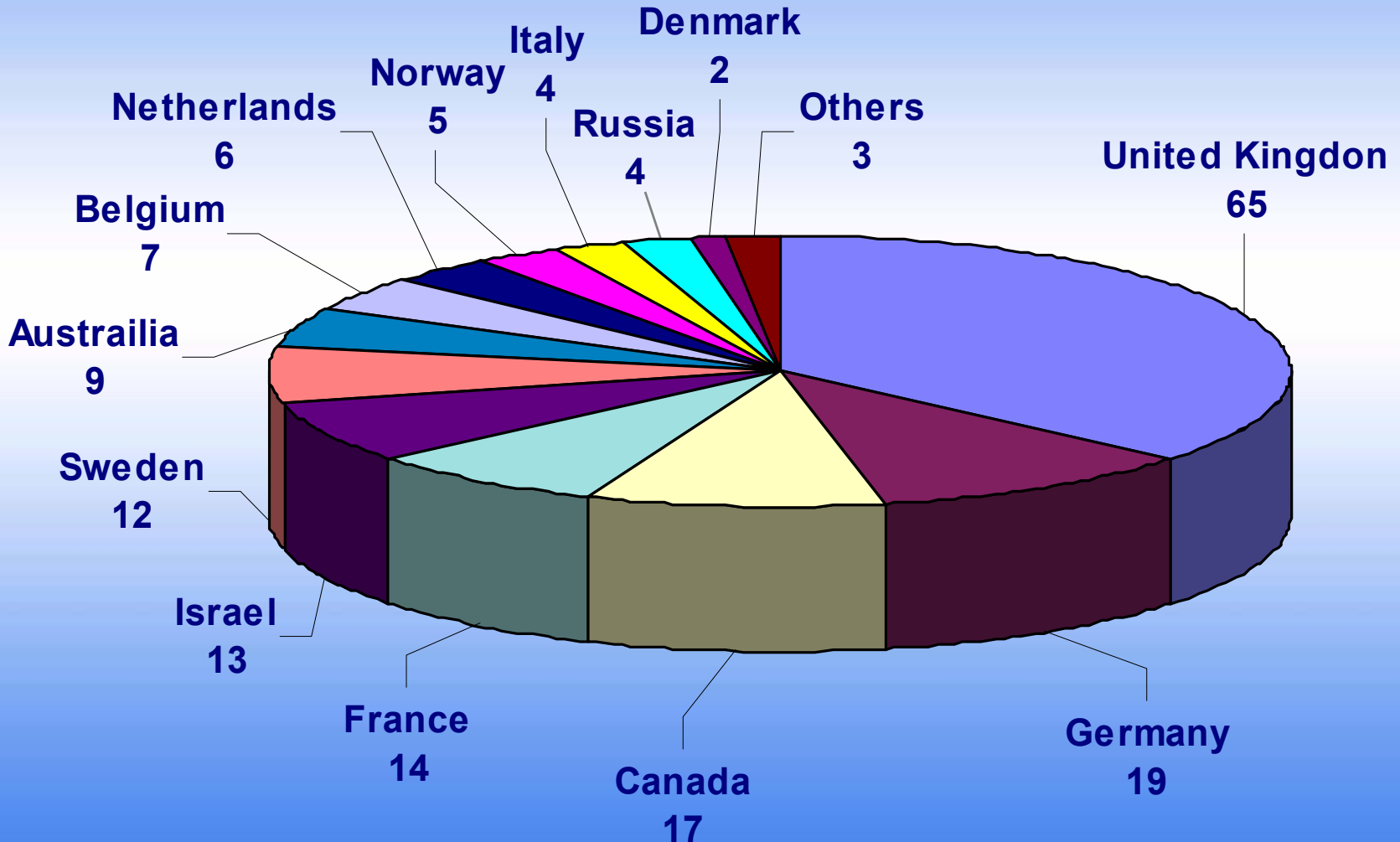
**OSD reviews  
all Service  
proposals and  
selects project  
IAW criteria  
and funding  
constraints**



**Foreign  
contractor  
sells idea to US  
Program  
Manager**

**Navy IPO ranks  
all DoN  
proposals**

# International Participation in DoN's Foreign Comparative Testing (FCT) Program



# UK Companies Participating in FCT Program Since 1980

- AARDVARK CLEAR MINE
- ADVANCED POWER SOURCES
- AEROTECH/DERA
- AIRBORNE INDUSTRIES
- AIRCRAFT MAINTENANCE SUPPORT SVCS.
- AIRCRAFT MATERIALS, LTD
- ALVIS W/SCHEIBEL OF AUSTRIA
- ARMAMENT EXPERIMENTAL ESTABLISHMENT
- AVON INDUSTRY POLYMERS
- BAE SYSTEMS
- BAE-ROYAL ORDNANCE
- BAE-ROYAL ORDNANCE-THOMSON THORN
- BDL SYSTEMS
- BEAUFORT AIR-SEA
- BRIDPORT GUNDRY
- BRITISH AEROJET
- BRITISH AEROJET, VICKERS
- BRITISH AEROSPACE CORP
- C&S ANTENNA
- CAMBRIDGE CONSULTANTS
- CHEM-BIO DEFENCE ESTABLISHMENT (PW DEFENCE LTD, NEE PAINS-WESSEX)
- CHEMRING LTD
- CLOGWYLN
- COLEBRAND

- COMPTON-WEBB, CATALFA HOUSE
- COSSOR ELECTRONICS
- COSSOR, PLESSEY
- DATA SCIENCES
- DEFENCE EQUIPMENT SYSTEMS
- DOWTY MAGNETICS
- IRVIN G.B.
- IRVIN INDUSTRIES
- ISTECH
- E.P. BARRUS
- ELETTRONICA UK, LTD.
- EML
- ENGLANDS, LTD.
- EPS LOGISTICS TECH
- FAIREY ALLDAY MARINE
- FERRANTI COMPUTER SYSTEMS
- FERRANTI
- FILTRONICS COMPONENTS AND SPECTRUM SOLUTIONS
- FLIGHT REFUELING LTD.
- GEC MARCONI
- GKN
- GLOSTER SARIO
- GQ PARACHUTES
- GRASEBY DYNAMICS, LTD.
- GRASEBY IONICS
- HEYWOOD WILLIAMS
- HUNTING ENGINEERING
- IMPERIAL METAL INDUSTRIES
- INMOS
- LAURENCE SCOTT DEFENCE SYSTEMS

- MARCONI
- MARCONI AVIONICS
- MARCONI DEFENCE SYSTEM
- MARCONI SPACE AND DEFENCE
- MARK INDUSTRIES
- MARLOWE ROPES
- MATRA-MARCONI
- MEGGITT
- METALITE AVIATION LIGHTING
- MID-WEST ENGINES
- ML AVIATION
- ML WALLOP DEFENCE SYSTEMS
- MODULAR DIST. (EX-JOLODA)
- MONARFLEX
- MULTI-FAB
- NORMALAIR-GARRETT
- OCTEC LTD
- PAINS-WESSEX
- PEARSON ENGINEERING
- PERKINS
- PILKINGTON OPTRONICS
- PLESSEY MARINE
- PLESSEY NAVAL SYSTEMS
- PLESSEY RADAR COMPANY
- PLESSEY RADIO
- PORTSMOUTH AVIATION
- PTARMIGAN SWITCH
- PURIFICATION PRODUCTS LTD.
- TQINETIQ
- RACAL
- RACAL ACOUSTICS
- RAYTHEON SYSTEMS LTD. OF THE UK
- REDIFFUSION RADIO SYSTEMS
- ROLLS ROYCE

- ROYAL ORDNANCE
- SCHERMULY
- SENSOR ELECTRONICS, LTD.
- SIEBE GORMAN, PROTECTOR SAFETY
- SMITHS INDUSTRIES
- SOS LTD.
- STANDARD TEL., MARCONI UNDERWATER
- STELLA-META FILTERS
- STONEFIELD-OMICRON ELEC
- STRACHEN AND HENSHAW
- SURREY SATELLITE TECHNOLOGY
- THALES
- THALES DEFENCE (NEE RACAL), QINETIQ
- THALES UNDERWATER SYS (NEE THOMSON MARCONI SONAR)
- THOMSON MARCONI SONAR, LTD.
- THOMSON-MARCONI
- THORN EMI
- THORN EMI ELECTRONICS
- UK METEOROLOGICAL OFFICE
- ULTRA ELECTRONICS
- ULTRA ELECTRONICS (DOWTY FUEL SYSTEMS)
- UMC INTERNATIONAL
- VICKERS DEFENCE SYSTEMS
- W.L. GORE
- WALLOPS INDUSTRIES
- WAVETEK
- WESTLAND HELICOPTER
- WIDNEY AISH, CORRINTEC

# Foreign Comparative Test Process

<b>Total Program FY 2003</b>		<b>\$33M (OSD PE)</b>
<b>Management/POC:</b>		<b>OSD (AT&amp;L/AS&amp;C/FCT) COL Linda Palmer email: Linda.palmer@osd.mil phone: (703)602-3740</b>
<b>Navy/POC:</b>		<b>Navy International Programs Office Mr. Michael Locke email: Michael.locke@navy.mil phone: (202)764-2448</b>
<b>Key Dates</b>	<b>15 December</b>	<b>Summary proposal submission deadline for following fiscal year</b>
	<b>1 May</b>	<b>Final proposal submission deadline for following fiscal year</b>
	<b>1 July</b>	<b>Project selection announcement for following fiscal year</b>
<b>"Typical" Project Funding</b>		<b>\$200K - \$4M</b>

# Defense Acquisition Challenge Program

- **Provides increased opportunities to insert innovative and cost-saving technologies into acquisition programs of the Department of Defense.**
- **For current acquisition programs, funds the test and evaluation of technologies and products that have the potential to improve**
  - **performance**
  - **affordability**
  - **manufacturability**
  - **operational capability**

# Challenge Program Process

US or Foreign contractor submits, i.a.w. Broad Area Announcement, Summary Proposal to OSD Comparative Testing Office

OSD selects proposals that meet preliminary criteria, then forwards to the Services for consideration

Contractor selected above sells idea to US Program Manager

US Program Manager drafts Full Proposal and submits to OSD

OSD reviews all Service proposals and selects project i.a.w. criteria and funding constraints

**BAA projected to be out by 15 March. Response time for 2003 likely to be 15 days. (To be 30 days in out years.)**



# Defense Acquisition Challenge Program

<b>Total Program FY 2003</b>		<b>\$12.8M (OSD PE)</b>
<b>Management/POC:</b>		<b>OSD (AT&amp;L/AS&amp;C/FCT) COL Linda Palmer email: Linda.palmer@osd.mil phone: (703)602-3740</b>
<b>Navy/POC:</b>		<b>Navy International Programs Office Mr. Michael Locke email: Michael.locke@navy.mil phone: (202)764-2448</b>
<b>Key Dates</b>	<b>15 December</b>	<b>Summary proposal submission deadline for following fiscal year</b>
	<b>1 May</b>	<b>Final proposal submission deadline for following fiscal year</b>
	<b>1 July</b>	<b>Project selection announcement for following fiscal year</b>
<b>"Typical" Project Funding</b>		<b>\$500K - \$3M</b>



# Contrasting the FCT and Challenge Programs

<b>FCT</b>	<b>Challenge</b>
<b>Open to Non-US firms only</b>	<b>Open to US or Non-US firms</b>
<b>Requirement for prior notification requirement to Congress</b>	<b>No requirement for prior notification requirement to Congress</b>
<b>Scope - test and evaluation of non-development items from allied and friendly nations to satisfy U.S. defense requirements,</b>	<b>Scope - test and evaluation of technologies and products that have the potential to improve performance, affordability, manufacturability, or operational capability of current acquisition programs</b>

# MOUs with the UK

**The U.K. is the Largest International Cooperative Partner for the U.S. Department of the Navy  
(Measured by number of MOUs)**

- 65 Active MOUs
- 18 New In-Process MOUs

Highlights of **Potential** MOUs Follows

# Harrier Post-Production Support

## Project Summary

- U.S. has two separate cooperative MOUs for the Harrier program with UK and with Italy and Spain.
- New Framework MOU among Italy, Spain, UK, and U.S. will allow identification and investigation of collaborative opportunities related to post-production support of Harriers.
- Objectives include:
  - Promote interoperability and systems safety.
  - Identify and pursue cooperative cost-effective post-production support.
  - Identify and implement upgrades to enhance warfighting effectiveness and improve readiness.
- Project Arrangements (PA) may be established to carry out specific projects identified under the Framework MOU.

## Project Status

- 1<sup>st</sup> Negotiation session held on 22-23 January 2003.
- Anticipated Efforts under the Framework MOU will cost approximately \$11M and last 10 years.



# Unmanned Undersea Vehicle (UUV) Technology

## Project Summary

- Potential U.S.-UK project to develop and demonstrate advanced capabilities and mature technologies for UUVs to support development of a large UUV (>21 inch diameter) while also benefiting elements of existing UUV programs:
  - Autonomous operations
  - Remote communications
  - Sensing and integration
  - Autonomous deployment of advanced sensor arrays
- Project will be a Project Arrangement (PA) under U.S.-UK Research and Development umbrella MOU.

## Project Status

- Project proposal in pre-negotiation national staffing in the U.S.
- Anticipate PA signature in mid-2003.
- PA cost approximately \$30M, shared equally by U.S. and UK.

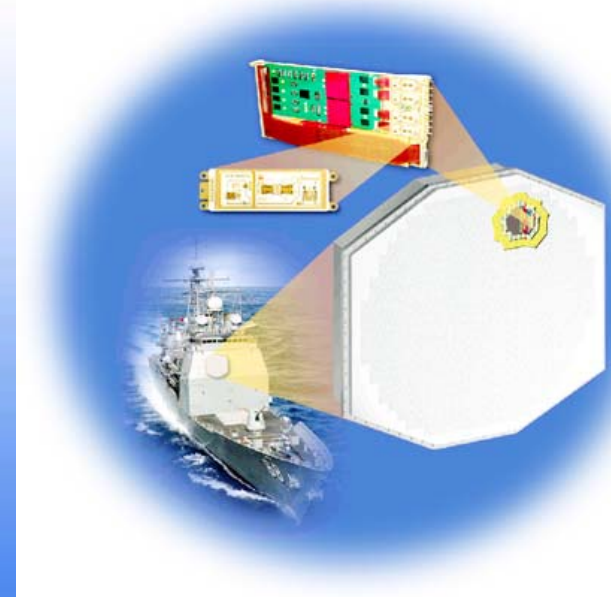
# Advanced Radar Technology Integrated System Testbed (ARTIST) PA

## Project Summary

- R&D of advanced maritime active phased array radars to support future maritime radars and/or upgrades to existing systems.
- Lead to an advanced digital phased array baseline design for maritime TBMD application as an upgrade to the U.S. Navy SPY-1 radar or as a new development forward-fit radar to U.S. SOLID STATE SPY and UK SAMPSON. Three tasks:
  - Specification of common digital Multi-Functional Radar control system;
  - Joint testing; and
  - Integration of high power solid state active phased array antenna in an open digital array architecture.

## Project Status

- Technical Discussions completed
- PA is awaiting ASN(RDA) approval to negotiate
- Approx. \$88M project cost



# Standoff High-Speed Option for Counterproliferation (SHOC) ACTD PA

## Project Summary

- Potential UK participation in parts of overall U.S. ACTD for Supersonic Cruise Missile known as SHOC.
- Proposed SHOC ACTD is to design, integrate, demonstrate and deliver a weapon system capable of:
  - Defeating hard and deeply buried chem-bio targets
  - Defeating time sensitive targets
  - Shorten sensor-to-shooter cycle
  - Improving weapon survivability through high-altitude/high speed

## Project Status

- ACTD proposal in Navy staffing
- Technical Discussions ongoing pending Navy decision on ACTD
- ACTD cost (cooperative project cost will be a subset – yet to be discussed) approx. \$120M



# Anti-Ship Missile MOU

## Project Summary

- Potential multilateral project
- Proposed project IOC 2010 or later
- Areas being studied:
  - Improved Target Selectivity
  - Coastal Target Suppression Improvements
  - Extending Missile Range
  - Mission Planning System & Launch System Improvements

## Project Status

- NAVAIR/OPNAV conducting analysis of alternatives study
- Technical Discussions ongoing, next round week of 24 FEB 2003
- Efforts expected to cost approx. \$195M





# Submarine Communications PA

## Project Summary

- Potential project for Submarine Satellite Information Exchange System (SSIXS) Transition to Internet Protocol (IP) Format
- Will enhance communications interoperability & compatibility
- Will facilitate communications during operations when one Navy is under the Operational Control (OPCON) of the other

## Project Status

- U.S./UK Technical Discussions ongoing
- SPAWAR developing staffing package for Navy IPO to get approval to negotiate the PA
- PA to supplement activities ongoing under DEAs and FMS





# Conclusion

- **FCT and Challenge programs provide opportunities for large and small, US and UK contractors alike.**
- **Many MOUs are in work, and if consummated, a mixture of US and UK content is expected.**