

Ft Monmouth

LOSS OF INTELLECTUAL CAPITAL A CRITICAL PROBLEM

NDU Letter Extracts—Request From Admiral Gehman

- **Efficiencies In Consolidation Are Overshadowed By Loss Of Key Personnel And By A Loss Of Innovation.**
- **The DoD S&T Workforce Has Become Somewhat Fragile Due To Previous BRAC Closures And the Outsourcing Of the Expertise.**
- **Data From The Last BRAC Indicate That On Average Only About 25-30% Of S&Es Relocate ----Many Of Those Who Do Relocate Subsequently Leave The Government**
- **Closure Of Fort Monmouth & Relocation Of The Communications And Electronics Research, Development And Engineering Center (CERDEC) & The Relocation Of The CERDEC Night Vision And Electronics Sensors Directorate To Aberdeen Are Troubling.**
- **Because Of The Need To Construct New Facilities At Aberdeen (No Core C4ISR Expertise Or Culture) The Consolidation Would Take Several Years**
- **A Serious Slump In Productivity In An Area Where Maintaining A Vigorous S&T Program Is Of National Importance**

Ft. Monmouth/Belvoir R&D—Technology/Demonstrators

Technical Discipline	# People	Degrees BA/BA, M, PhD	Clearances Conf.—TS/SCI
Command & Control	355	289 (81%)	340 (96%)
Intelligence & Info Warfare	372	311 (84%)	372 (100%)
Software	244	243 (100%)	230 (94%)
Communication	461	394 (84%)	400 (87%)
Night Vision & Sensors	517	378 (73%)	500 (96%)
Headquarters	106	73 (69%)	100 (94%)
Totals	2055	1688 (82%)	1942 (95%)

Multi Disciplined S&E Staff With 18 Years Average Experience In A Very Complex But Key Area For The Current & Future Warfighter

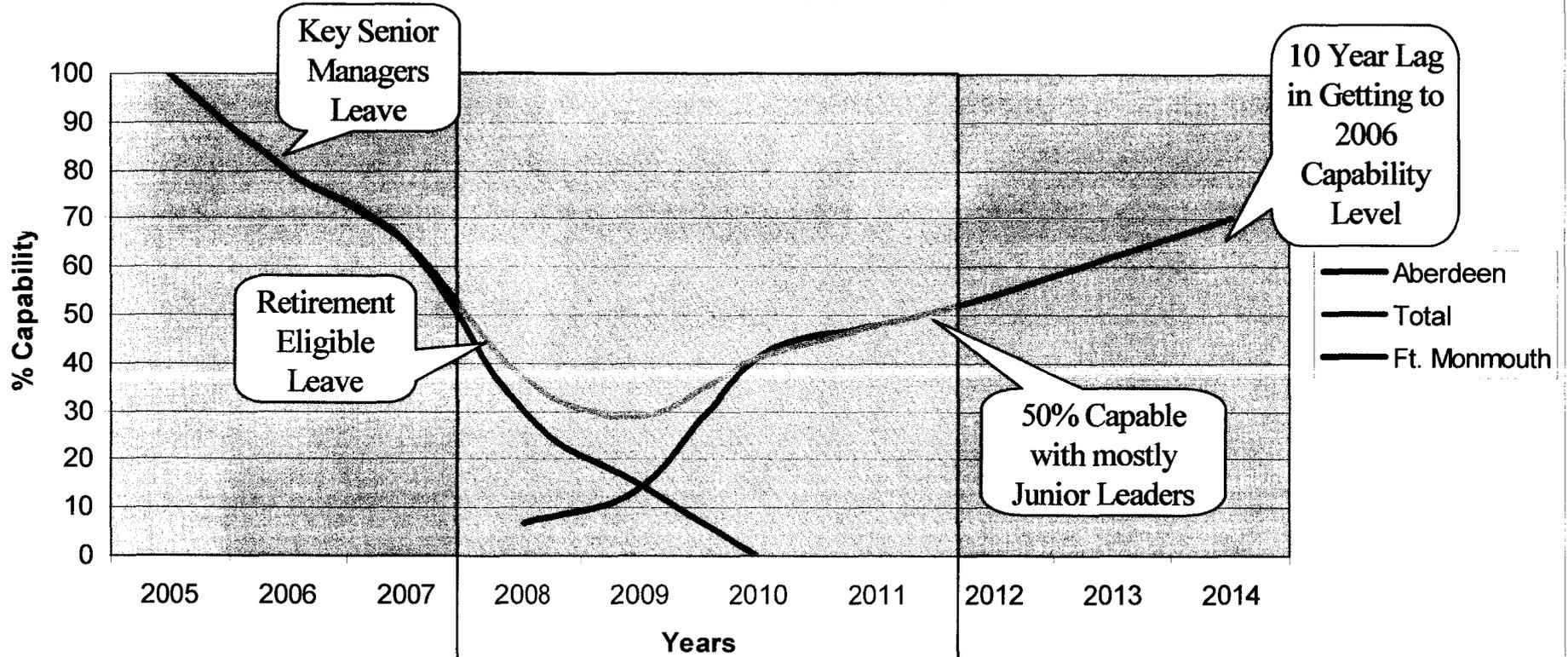
Ft. Monmouth/Belvoir D& A—PEO/PM , Production & Logistics

AREA	# People	Degrees	Clearances
Cmd. Control, Communication	275	BA/BA, M, PhD 176 (64%)	Conf.—TS/SCI 275 (100%)
Intell. EW & Sensors	106	67 (63%)	106 (100%)
Software Engineering	156	101 (65%)	156 (100%)
Logistics & Headquarters	1943	1071 (55%)	1943 (100%)
Totals	2480	1415 (57%)	2480 (100%)

\$10B Acquisition Per Year; 98 Major Programs; 215 Million Line Of Software Code; 51,000 Line Items----A Big Business With A Team Of Experts



Aberdeen Move Scenario



A Huge Loss of Capability with Significant Program Disruption occurs in this Window

CONCLUSIONS

- **BRAC Analysis Has Not Given Sufficient Weight To The C4ISR Intellectual Capital.**
 - **The Combined Workforce For Government and Industry In Direct Support Will Result In A Loss Of Skilled Personnel**
 - **With The Shortage Of DoD S&E Recruitments & The Excessive Delays In Obtaining High Level Security Clearances (12- 18 Months) A Critical Personnel Vacuum Will Be Created**
 - **The Existing Skills At Aberdeen Do Not Match The Needed C4ISR Skills And Cannot Fill These Jobs**
 - **The Length Of Time To Recruit, Hire, & Train This NEW Workforce Has Not Been Considered & The Impact On The Warfighter Never Considered**

only 25 currently doing C4ISR

PROGRAM DISRUPTION

War Time Disruption—Selected Examples

Providing Quick Reaction Solutions To Warfighter Needs

Joint Network Nodes

-- Connects Joint Warfighter To Global Grid



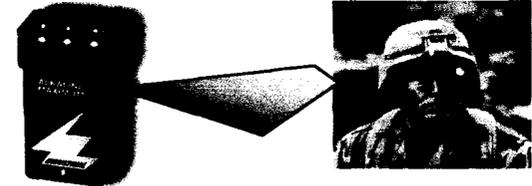
Blue Force Tracking/FBCB2

*-- Joint Coalition Answer To “Where Am I?
Where Are My Buddies?”*



Joint Combat Friendly Identification

-- 384,000 Devices Provided In 90 Days



Improvised Explosive Device Jammers

-- Protection For Platforms & Personnel



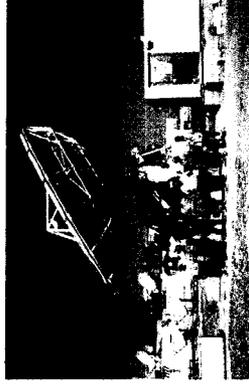
Support Critical Systems In A War Zone

*-- Improved Performance & 100%
Operational Readiness*



War Time Disruption – Selected Examples

Providing Quick Reaction Solutions To Warfighter Needs



Coalition Military Network

-- Building The Global Grid In A War Zone

Persistent Surveillance & Dissemination

-- Rapid Dissemination Of Actionable Intelligence



Hand Held Standoff Mine Detection

-- New System With Low False Alarms



Changing Intelligence Paradigms

-- Focus On Individuals Not Units



Long Range Advanced Scout Surveillance

-- Extend The Eyes Of The Scout



FUTURE DISRUPTION---Four Major Programs

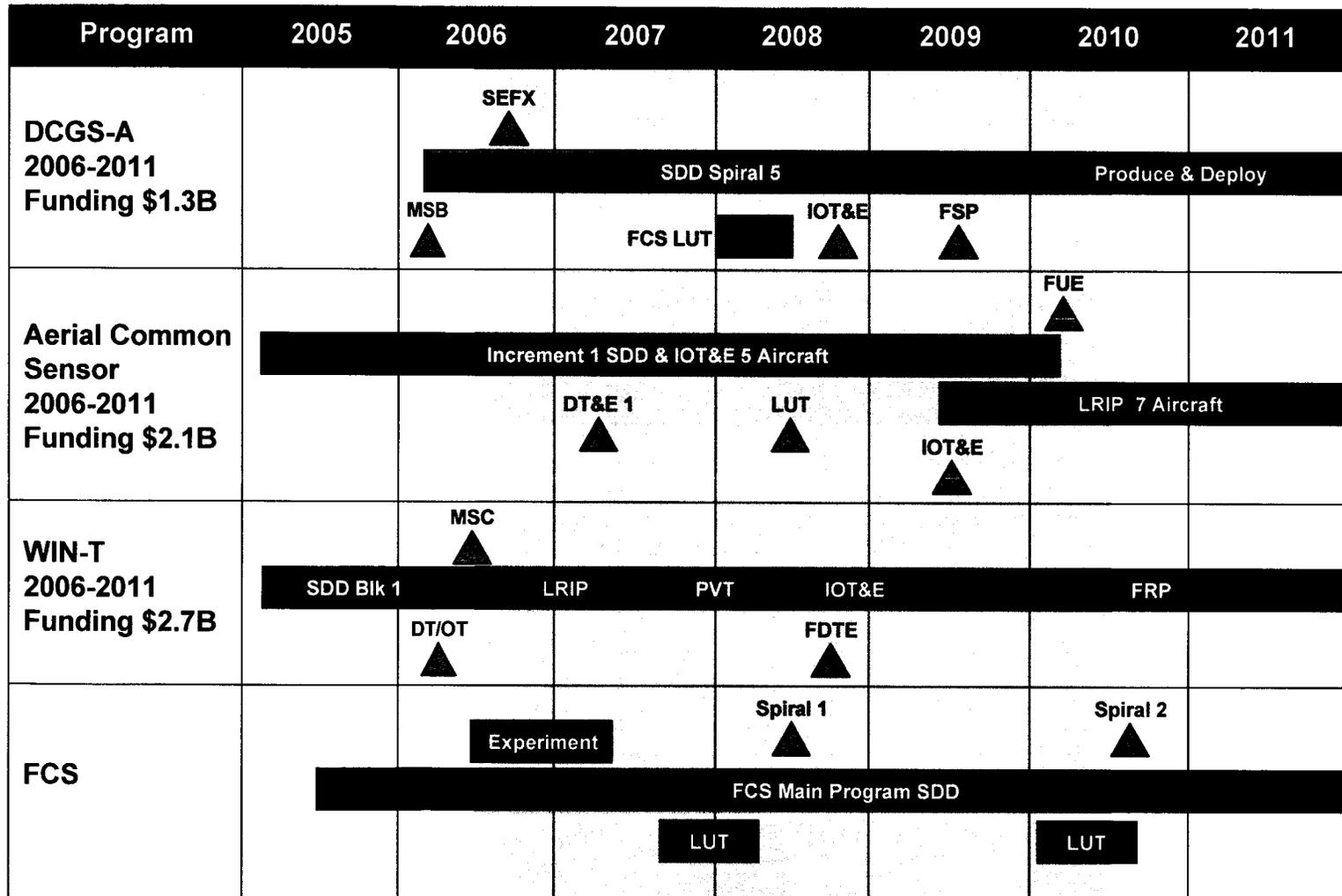
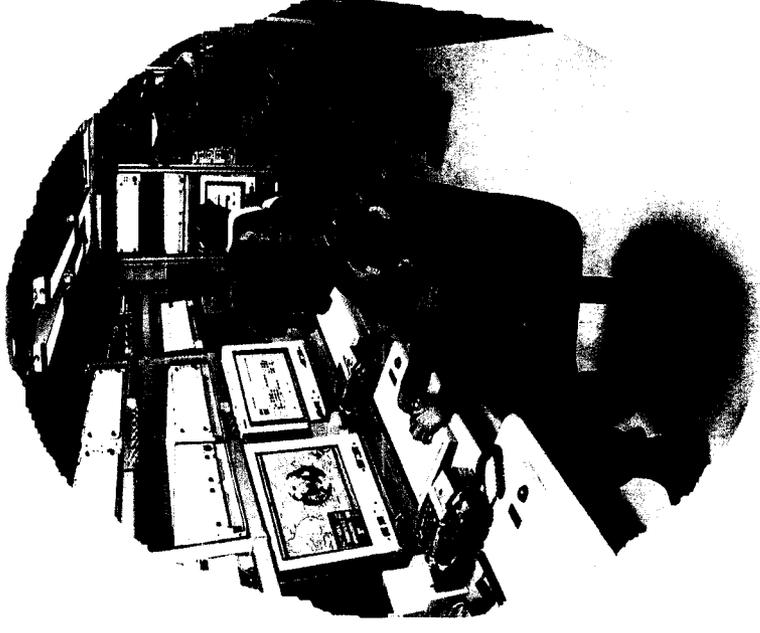


Figure 12: BRAC Impact on Major Programs

Significant Program Disruption Likely

- **Disruption to Both Current & Future Programs Will Occur**
- **Disruption Never Considered In Military Value Analysis**
- **Cost Implications Are In The Billions**
- **Schedule Implications Directly Impact Warfighter**





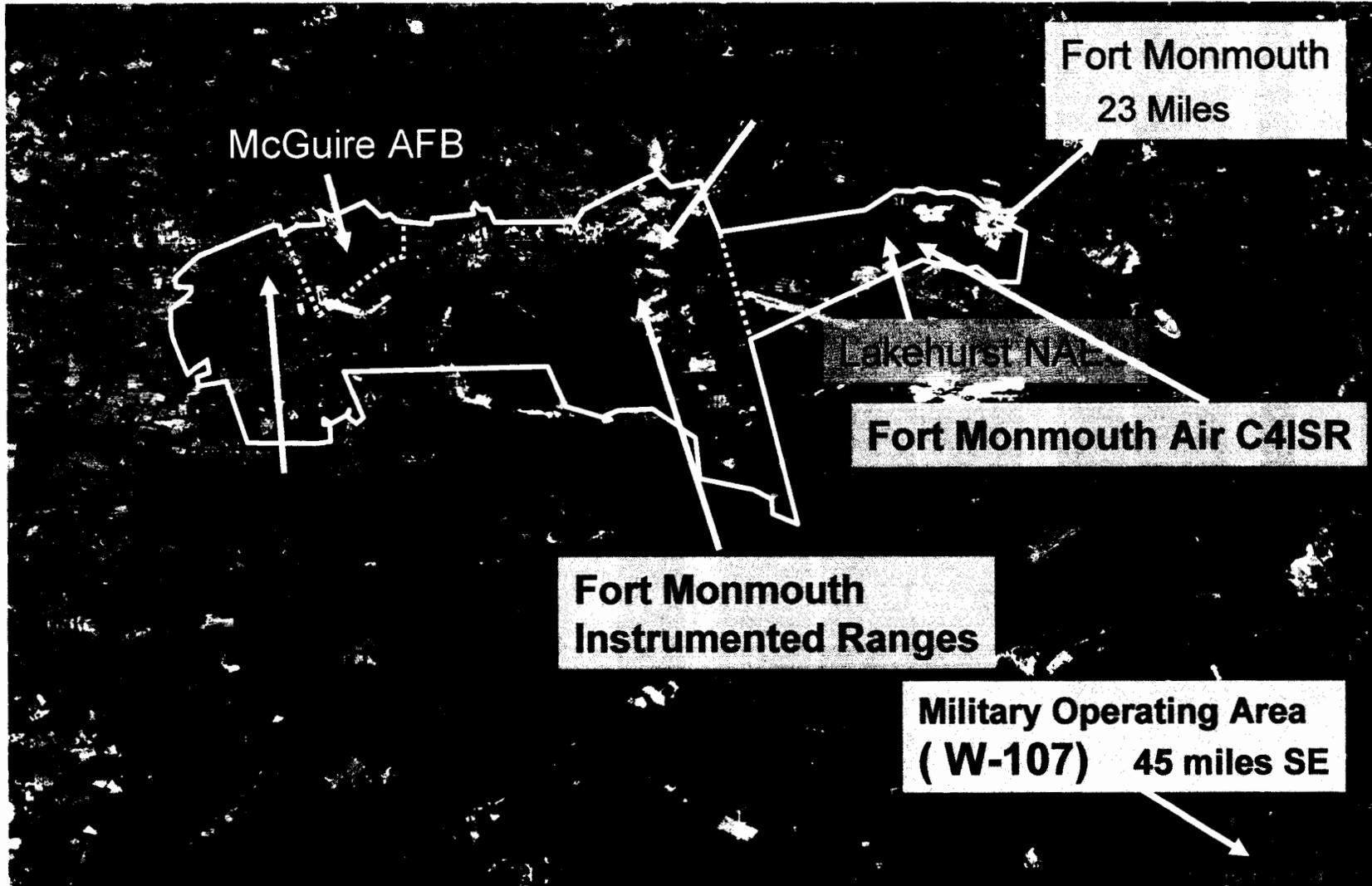
Military Value & The Opportunity For Joint Experimentation

Mission Military Value

- Relates to Criteria 1-4
- Military Value for technical mission
 - Monmouth scores ~2X the rest; Aberdeen last
- Source: DOD BRAC Army Recommendation Supporting Information 09 May 05, Tab 1

	R Info Systems	R Sensors EW	D&A Info Systems	D&A Sensors EW
Monmouth	0.46 1st	0.34 3rd	0.48 1st	0.43 1st
Belvoir	0.07 5th	0.39 2nd	0.23 5th	0.25 3rd
Adelphi	0.25 3rd	0.50 1st	---	---
Redstone	0.24 4th	0.23 4th	0.23 4th	0.34 2nd
Aberdeen	0.28 2nd	0.17 5th	---	0.22 4th

Dix, Lakehurst, McGuire Joint Base “ DLM Joint Base ”

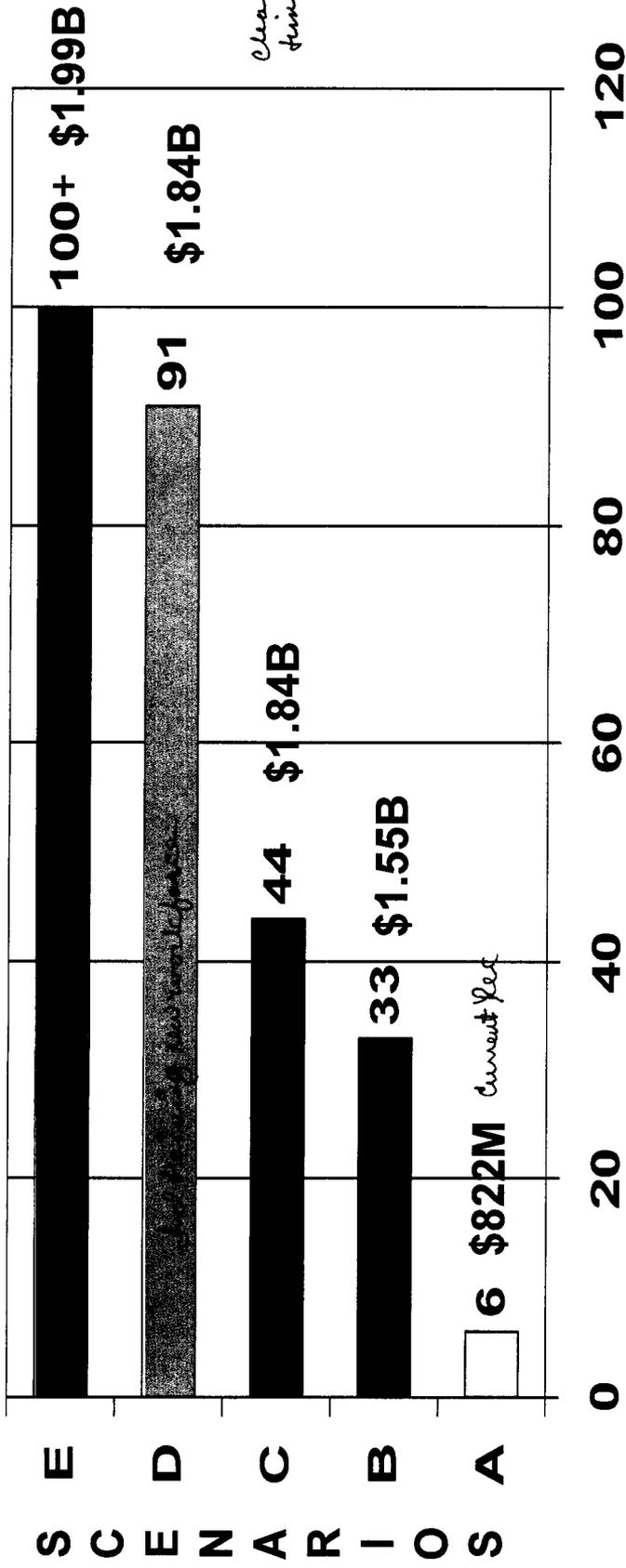


MV & Joint Experimentation Conclusions

- **Can Take Advantage Of A Premier Installation & A Premier C4ISR Organization Without Any Disruption Caused By BRAC**
- **Joint Experiments Are Being Conducted Frequently And Are Sanctioned By Senior Army Leadership**
 - Provide Insights Into Future Directions
 - Identify Technology Needs To Focus Programs
 - Integrates C4ISR With Weapons and Platforms To Determine System of System Implications
 - Utilize Army Test Community So They Learn How To Instrument and Test Future Systems
 - Involves Industry To Obtain Insights Into Their Technology
- **Recognizing The Joint Potential Will Further Expand The Opportunities & Provide A Significant Step Forward In Integrating Joint Capabilities**

**COST –Significantly Higher
Than Army Estimates**

Cost Summary---Validated Results With BRAC Army Staff Pay Back Years & Associated 1-Time Costs



- DoD Estimate Fails to Include many Costs & Overstates Savings
- Corrected Estimate (Scenario B) Demonstrates Reality is a 33 yr Payback
- Additional Non-COBRA Costs Significantly Extend Payback Years
- With Regard to Cost - Recommendation FAILS to Pass Muster

Benefits Of Recommendation To Make Fort Monmouth An Enclave Of The Joint Base

- Allows Army To Eliminate An Installation While Preserving The Capability Of The Experienced C4ISR Workforce.
- Enhances Opportunity For Joint Experimentation And Takes Advantage Of An Instrumented Capability In Place At The Joint Base
- Review The Fort Monmouth "Footprint" ---Potential To Shed Acreage By 40%
- Eliminates The Need For Expenditure Of Considerable Funds With A Resultant Extended Payback Period (unattainable and unrealistic in POM plus Extended Planning Annex period)
- No Disruption To Critical C4ISR Programs And Enables Continuity Of Current Force and Future Force C4ISR Modernization
- Takes Advantage Of Military Value Of Premier Joint Installations Coupled With The Highest C4ISR RDT&E Military Value Ranking
- Eliminates Any Impact On Supporting War Time Forces
- Recognizes An Existing Land Warfare C4ISR Center Of Excellence And Eliminates The Need To Begin A 10 Year "Rebuilding" Effort

Handwritten notes:
The current C4ISR program is not needed for the Joint Base. The current C4ISR program is not needed for the Joint Base. The current C4ISR program is not needed for the Joint Base.

DCN: 5110



**DEPARTMENT OF DEFENSE
NATIONAL DEFENSE UNIVERSITY
WASHINGTON, D.C. 20319-5066**

REPLY TO
ATTENTION OF:

NDU-CTNSP

29 June 2005

The Honorable Anthony J. Principi
Chairman, Base Realignment and Closure Commission
2521 South Clark Street, Suite 600
Arlington, VA, 22202.

Dear Mr. Chairman:

The Center for Technology and National Security Policy has been in touch with Commissioner Hal Gehman to see if our experience in the area of Science and Technology (S&T) can be useful to the Base Realignment and Closure (BRAC) Commission. The Center employs several very senior scientists, including former directors of each Service Defense Lab (see list attached). We have also conducted the so-called Section 913 study on the relevance of the Defense Labs. Admiral Gehman and the Commission staff encouraged us to prepare a letter with our views on the impact of BRAC recommendations on the Defense Labs. Our review considered only the potential impact of the BRAC recommendations on DOD S&T programs.

We are in general pleased with the discretion shown in recommending relocations and closures regarding S&T. Efficiencies in consolidation are often overshadowed by a loss of key personnel and by a loss of the innovation brought about by diversity. The DOD S&T workforce has also become somewhat fragile due to previous BRAC closures and the outsourcing of the expertise the DOD requires to participate in the global S&T enterprise. While we did have a few concerns (given below), we found positive recommendations for relocation as well. For example the consolidation of sensors related S&T from Hanscom and Rome to Wright Patterson Air Force Base should strengthen the Air Force sensor program even though a few senior S&T personnel may be lost. Similarly, the actions proposed for the Naval Air Warfare Center, China Lake; Naval Surface Warfare Center, Dahlgren; and Naval Surface Warfare Center, Indian Head accomplish a long sought after Navy objective of rationalizing the S&T programs among those locations. In addition, there are positive steps being taken in the cross-service area. These include the realignment and consolidation of several service gun and ammunition activities to the Integrated Weapons and Specialty Site for Guns and Ammunition to be located at Picatinny Arsenal. The concerns mentioned above are detailed below:

1. The future will be characterized increasingly by the globalization of science and technology. While the United States will continue to be a major force in science and technology, its share of the world's program will decline. In such a world the DOD would be wise to move toward greater engagement and diversity regarding science and technology. The BRAC recommendations indicate some worrisome trends in this regard. For example, the co-location of DOD science and technology funding organizations at Bethesda and the removal of DOD contingents from other government locations could reduce the diversity of DOD science and technology efforts and hamper the coordination of DOD science and technology with efforts funded by other government agencies. Such an outcome would not be in the best long-term interests of DOD.

2. Though figures vary from location to location, data from the last BRAC round indicate that on average only about 25-30 percent of scientists and engineers assigned to relocate actually do so, and many of those who do relocate subsequently leave the government.¹ If this BRAC round results in a similar proportion of resignations, it would mean a very serious loss of technical talent. In this regard, the proposed closure of Fort Monmouth and the relocation of the Communications and Electronics Research, Development and Engineering Center (CERDEC) to Aberdeen Proving Ground and the relocation of the CERDEC Night Vision and Electronics Sensors Directorate from Fort Belvoir to Aberdeen are troubling. Also, because of the need to construct new facilities at Aberdeen (there is no core of C4ISR expertise or culture there) the consolidation would take several years. During this time, again based on past experience, there could be a serious slump in productivity in an area where maintaining a vigorous S&T program is of national importance for combating terrorism as well as for the network-centric operations of the Army's Future Combat System.

As a concluding observation, even at the S&T level it is important to facilitate the concept of "Jointness." It is important to keep this in mind as S&T activities move from one location to another as a result of BRAC decisions. The establishment of the proper infrastructure is often a key to enabling "Joint" activities at the S&T (and higher) level. For example, C3 is an area that clearly requires "Joint" S&T work. By its very nature, C3 is a distributed activity and need not be conducted at only one location. However, "Joint" geographically distributed work in this area requires deliberate infrastructure investments and planning. While not equivalent to C3 from a warfighter's perspective, a successful example in this regard is the

¹ Michael L. Marshall, "Defense Laboratories and Military Capability: Headed for a BRACdown?" *Defense Horizons* 44 (Washington, DC: National Defense University Press, July 2004). Also based on data supplied by Army Research Laboratory for early 1990s BRAC consolidation at Adelphi, Maryland.

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DOD High-performance Computing Program. This is a cross-Service activity that is distributed among a number of DOD laboratories and selected universities. The program has been very valuable in modernizing and facilitating computing for DOD S&T purposes. It has also facilitated "Joint" activity among the laboratories. However, without infrastructure investments, coordination and planning, the program would not have been successful. The time to consider the necessary investments is the time at which moves are decided upon. Such planning may therefore be relevant to BRAC decisions.

The above considerations are called to your attention in the hope that they may contribute to the very thorough inquiry that your Commission will perform regarding the BRAC recommendations. We would be pleased to discuss these matters with you should you so desire.

Sincerely,



Hans Binnendijk,
Director
Center for Technology and
National Security Policy
The National Defense University

Attachment

DCN: 5110

Senior Scientists at the Center for Technology and National Security Policy

Dr. Timothy Coffey
Former Director of Research, Naval Research Laboratory

Dr. Richard Chait
Former Director of Army Research and Laboratory Management

Dr. Donald Daniel
Former Deputy Assistant Secretary of the Air Force for Science, Technology and Engineering

Dr. John Lyons
Former Director of the National Bureau of Standards and former Director of the Army Research Laboratory

Dr. Elihu Zimet
Former Head of the Expeditionary Warfare Science and Technology Department, Office of Naval Research