

Report Required by Section 812  
of the  
National Defense Authorization Act for Fiscal Year 2004  
(Public Law 108-136)



Foreign Sources of Supply:  
Assessment of the United States Defense Industrial Base

November 2004

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## Executive Summary

Section 812 of the National Defense Authorization Act for Fiscal Year 2004 (Public Law 108-136) directs the Secretary of Defense to establish a program to assess the degree to which the United States is dependent on foreign sources of supply; and the capabilities of the United States defense industrial base to produce military systems necessary to support the national security objectives set forth in section 2501 of title 10, United States Code. The Department is to use existing data for the assessment program. Not later than February 1 of each year, the Secretary is to submit to the Committee on Armed Services of the Senate and House of Representatives a report on the assessment program covering the preceding fiscal year.

The report is based on three separate assessments that collectively provide visibility into the extent and impact of foreign suppliers: (1) an assessment of DoD prime contracts valued at over \$25,000 for defense items and components, (2) a recent assessment of foreign content in certain defense systems, and (3) comprehensive assessments of the industrial base supporting defense (i.e., the *Defense Industrial Base Capabilities Studies* series of assessments).

This report concludes that the Department employs foreign contractors and subcontractors judiciously, and in a manner consistent with national security requirements.

The Department procures very few defense articles and components from foreign suppliers. In Fiscal Year 2003, the Department awarded contracts to foreign suppliers for defense articles and components totaling just over \$1 billion, less than one-half of one percent of all DoD contracts; and only about 1.5% of all DoD contracts for defense articles and components.

The January 2004, DoD report *Study on Impact of Foreign Sourcing of Systems* concluded that foreign suppliers provide limited amounts of materiel for the systems, and that using those foreign subcontractors does not impact the long-term readiness or the economic viability of the national technology and industrial base. For the systems studied, foreign subcontracts collectively represented about 4% of the total contract value and less than 10% of the value of all subcontracts.

The *Defense Industrial Base Capabilities Studies* series of assessments completed to date (*Battlespace Awareness, Command and Control, and Force Application*) highlight those warfighting capabilities most important to 21<sup>st</sup> century warfighting, where U.S. leadership over adversaries is most important, and where Department attention and resources should be focused. The United States has a lead in the vast majority of the most critical technologies and associated industrial capabilities. For the most part, there are sufficient U.S. suppliers to preclude potential vulnerabilities resulting from dependency on foreign suppliers.

## 1. Section 812 Requirements

Section 812 of the National Defense Authorization Act for Fiscal Year 2004 directs the Secretary of Defense to establish a program to assess:

- the degree to which the United States is dependent on foreign sources of supply; and
- the capabilities of the United States defense industrial base to produce military systems necessary to support the national security objectives set forth in section 2501 of title 10, United States Code.<sup>1</sup>

The Department is to use existing data for the assessment program. The Department, at a minimum, is to use existing information on each prime contract with a value greater than \$25,000 for the procurement of defense items and components.

Not later than February 1 of each year, the Secretary is to submit to the Committee on Armed Services of the Senate and House of Representatives a report on the assessment program covering the preceding fiscal year. The first annual report is to cover fiscal year 2004 and is to be submitted not later than February 1, 2005. The report is to include, with respect to the prime contracts described above:

- The total number and value of such contracts awarded by the Department of Defense.
- The total number and value of such contracts awarded on a sole source basis.
- The total number and value of such contracts awarded to foreign contractors, summarized by country.
- The total number and value of such contracts awarded to foreign contractors through competitive procedures, summarized by country.

The report also is to include:

- the status of the program designed to assess the extent to which the United States is dependent on foreign sources of supply and the capability of the United States to produce military systems necessary to support the national security objectives of section 2501 of title 10, United States Code;
- the status of the Federal Procurement Data System described in section 6(d)(4)(A) of the Office of Federal Procurement Policy Act, or any successor procurement data management systems; and
- other matters as the Secretary considers appropriate.

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<sup>1</sup> Section 2501 states that it is the policy of Congress that the national technology and industrial base be capable of: (1) supplying and equipping the force structure of the armed forces; (2) sustaining production, maintenance, repair, and logistics for military operations; (3) maintaining advanced research and development activities; (4) reconstituting within a reasonable time the capability to develop and produce supplies and equipment; and (5) providing for the development, manufacture, and supply of items and technologies critical to the production and sustainment of advanced military weapon systems.

## 2. Status of the Department of Defense Industrial Assessment Program

Department of Defense (DoD) industrial assessment programs are designed to be an integral part of the Department's decisions-making processes because such integration is the cornerstone of a successful industrial strategy. The Department and the Defense Components periodically conduct analyses and assessments to identify and evaluate those industrial and technological capabilities needed to meet current and future defense requirements. The Department and its Components then use the results of these analyses and assessments to make informed budget, acquisition, and logistics decisions.

Title 10 of the United States Code includes several provisions that influence the Department's industrial assessment program:

- Section 2501 establishes national security objectives concerning the national technology and industrial base.
- Section 2503 requires that the Secretary of Defense establish a national defense program for analysis of the national technology and industrial base.
- Section 2504 requires that the Secretary of Defense submit an annual report to the Committee on Armed Services of the Senate and the Committee on National Security of the House of Representatives, by March 1<sup>st</sup> of each year. The report is to include:
  - A description of the departmental guidance prepared pursuant to section 2506.
  - A description of the methods and analyses being undertaken to identify and address concerns regarding technological and industrial capabilities of the national technology and industrial base.
  - A description of the assessments prepared pursuant to section 2505 and other analyses used in developing Department budget submissions.
  - Identification of each program designed to sustain specific essential technological and industrial capabilities.
- Section 2505 requires that the Secretary of Defense prepare selected assessments of the capability of the national technology and industrial base to attain the national security objectives set forth in section 2501.
- Section 2506 requires that the Secretary of Defense prescribe departmental guidance necessary to meet the requirements specified in the other sections, above.

The Department has provided an *Annual Industrial Capabilities Report to Congress*<sup>2</sup> each year since 1997 describing its industrial assessment program.

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<sup>2</sup> The 2004 *Annual Industrial Capabilities Report to Congress* is available on the Internet ([www.acq.osd.mil/ip](http://www.acq.osd.mil/ip)).

### 3. Assessment of Foreign Dependency

The Department is committed to providing the best capability to the warfighter. It wants to promote interoperability with its allies and take full advantage of the benefits offered by access to the most innovative, efficient, and competitive suppliers—worldwide. It also wants to promote consistency and fairness in dealing with its allies and trading partners while assuring that the U.S. defense industrial base is sufficient to meet its most critical defense needs. Consequently, the Department is willing to use reliable, non-U.S. suppliers—consistent with national security requirements—when such use offers comparative advantages in performance, cost, schedule, or coalition warfighting. For this reason, the Department and many friendly governments have established reciprocal procurement agreements that are the basis for waiving their respective “buy national” laws and put each other’s industries on par as potential suppliers.

DoD Handbook 5000.60-H, “Assessing Defense Industrial Capabilities” identifies conditions in which reliance on foreign suppliers for specific products may constitute unacceptable foreign vulnerabilities.

- Foreign sources may pose an unacceptable risk when there is a high “market concentration” combined with political or geopolitical vulnerability. For example, a sole source foreign supplier existing only in one physical location and vulnerable to serious political instability may not be available when needed. (Market concentration alone is not sufficient reason to exclude foreign sources; there also must be a credible threat of supply disruption due to political instability. Sheer physical distance from the U.S. is also not by itself a risk which merits foreign source exclusion.)
- Suppliers from politically unfriendly or anti-American foreign countries, as defined by statute or U.S. Government policy, are not used to meet U.S. defense needs.
- A U.S. source may be needed for technologies and products that are either classified, offer unique war fighting superiority, or could be used by foreign nations to develop countermeasures. However, the Department has agreements with many allied and friendly nations for safeguarding classified military information. Foreign sources are not automatically excluded on the basis of a need to protect classified or unique technologies or products; this must be determined by individual circumstance.
- Suppliers that can not or will not provide products for military applications for political reasons are not feasible sources.

This report on foreign dependency is based on three separate assessments that collectively provide visibility into the extent and impact of foreign suppliers: (1) an assessment of DoD prime contracts valued at over \$25,000 for defense items and components, (2) a recent assessment of foreign content in certain defense systems, and (3) comprehensive assessments of the industrial base supporting defense (i.e., the *Defense Industrial Base Capabilities Studies* series of assessments).

### 3.1 Prime Contract Assessment

Section 645 of Division F of the Consolidated Appropriations Act, FY 2004 (Public Law 108-199) requires the head of each Federal agency to submit a report to Congress on the amount of acquisitions made by the agency from entities that manufacture the articles, materials, or supplies outside of the United States in that fiscal year. The report includes the dollar value of any articles, materials, or supplies purchased that were manufactured outside the United States; and a summary of the total procurement funds spent on goods manufactured in the United States versus funds spent on goods manufactured outside the United States.

The information used for that report is based on DD Form 350 data compiled and distributed by the Department's Washington Headquarters. The most recent such report, *Department of Defense Fiscal Year 2003 Purchases of Supplies Manufactured Outside the United States*, was submitted to the Congress in October 2004.

The "Prime Contract Assessment" described in this report section addresses a subset of the information provided in that October 2004 DoD report to Congress. As specified in section 812 of the National Defense Authorization Act for Fiscal Year 2004, this "Prime Contract Assessment" report:

- Includes only prime contracts valued at over \$25,000 dollars.
- Includes only prime contracts for *defense articles and components* as categorized by Defense Claimant Program (DCP) codes summarized in the table below. It does not include contracts for other DCP codes, such as for subsistence, fuel, construction services, and other miscellaneous items.

DEFENSE CLAIMANT PROGRAM (DCP) CODES	
<b>A1A</b>	Airframes and related assemblies and spares
<b>A1B</b>	Aircraft engines and related spaes and spare parts
<b>A1C</b>	Other aircraft equipment and supplies
<b>A2</b>	Missile and space systems
<b>A3</b>	Ships
<b>A4A</b>	Combat vehicles
<b>A4B</b>	Non-combat vehicles
<b>A5</b>	Weapons
<b>A6</b>	Ammunition
<b>A7</b>	Electronics and communication equipment

This report is based on Fiscal Year 2003 contract data. Fiscal Year 2004 contract data will not be available until January 2005. At that time, the Department will issue an addendum to this report, providing Fiscal Year 2004 information.

The three tables on the following pages summarize the most current DoD information on prime contracts awarded to foreign entities. The data included in the tables does not indicate significant DoD use of foreign contractors.

The first table is a “Summary of all DoD Contracts for Defense Items and Components Awarded (Fiscal Year 2003).” It lists, by DCP, the number and value of competitive contracts awarded to both U.S. and foreign suppliers, the number and value of non-competitive contracts awarded to U.S. and foreign suppliers, and the total number and value of all contracts awarded to U.S. and foreign suppliers. In total, the Department awarded 42,055 competitive contracts to U.S. suppliers worth a total of \$19.357 billion in Fiscal Year 2003. During that same period, it awarded a total of 1,079 competitive contracts to foreign suppliers (2.5%) worth a total of \$450.664 million (2.2%). The Department awarded 29,914 non-competitive contracts worth \$45.783 billion to U.S. suppliers and 1,218 non-competitive contracts (4%) worth \$564.908 million to foreign suppliers (1.2%). In all, the Department awarded a total of \$65.140 billion in defense articles and components contracts to U.S. suppliers and \$1.016 billion to foreign suppliers (1.5%).<sup>3</sup>

The second table is a “Summary of All Awards to Foreign Entities (A1A-A7) for Fiscal Year 2003” for defense articles and components. It lists, by country, the number and value of competitive contracts awarded to foreign suppliers, the number and value of non-competitive contracts awarded to foreign suppliers, and the total number and value of all contracts awarded to foreign suppliers. The top five recipient nations (by value) of competitive DoD contracts were, in order, Canada, UK, Germany, Israel, and Japan. The top five recipient nations (by value) of non-competitive DoD contracts were, in order, UK, Canada, Sweden, France, and Israel. The top five recipient nations (by value) of all DoD contracts were, in order, Canada, UK, Israel, Germany, and Sweden.

The third table is a “Percentage Summary of all DoD Contracts for Defense Items and Components (Fiscal Year 2003).” It lists, by DCP, the percentage of the number and value of competitive, non-competitive, and all DoD prime contracts awarded to foreign entities. For example, for DCP A4A (combat vehicles): (1) 95.8% (96.8% by value) of DoD competitive contracts went to U.S. sources and 4.2% (3.2% by value) went to foreign suppliers, (2) 94.3% (98.3% by value) of DoD non-competitive went to U.S. sources and 5.7% (1.7% by value) went to foreign suppliers, and (3) 95.4% (97.6% by value) of all DoD contracts went to U.S. sources and 4.6% (2.4% by value) went to foreign suppliers. Additionally, the table indicates that DCP A4A (combat vehicles) contracts represented 7% (6.8% by value) of all competitive DoD contracts; 3.9% (3.5% by value) of all DoD non-competitive contracts; and 5.7% (4.6% by value) of all DoD contracts.

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<sup>3</sup> The *Department of Defense Fiscal Year 2003 Purchases of Supplies Manufactured Outside the United States* report to Congress notes that DoD procurement actions recorded on DD 350s during Fiscal Year 2003 totaled \$209 billion. Of this amount, \$8.6 billion (4.1%) was for contracts with a place of performance outside the United States. Services (24.2%), fuel (24.6%), and construction (19.5%) represented the bulk of those purchases.

Summary of all DoD Contracts for Defense Items and Components Awarded (Fiscal Year 2003)						
DCP	# of Competitive Contracts	Value of Competitive Contracts	# of Non-Competitive Contracts	Value of Non-Competitive Contracts	Total # of Contracts	Total Value of Contracts
<b>A1A</b>						
US	5,737	\$3,913,959	7,106	\$17,846,026	12,843	\$21,759,985
Foreign	164	\$73,757	372	\$90,126	536	\$163,883
<b>Total</b>	<b>5,901</b>	<b>\$3,987,716</b>	<b>7,478</b>	<b>\$17,936,152</b>	<b>13,379</b>	<b>\$21,923,868</b>
<b>A1B</b>						
US	4,014	\$962,215	4,460	\$5,217,324	8,474	\$6,179,539
Foreign	158	\$49,838	237	\$50,694	395	\$100,532
<b>Total</b>	<b>4,172</b>	<b>\$1,012,053</b>	<b>4,697</b>	<b>\$5,268,018</b>	<b>8,869</b>	<b>\$6,280,071</b>
<b>A1C</b>						
US	4,203	\$1,415,758	3,366	\$2,455,590	7,569	\$3,871,348
Foreign	71	\$34,786	136	\$91,090	207	\$125,876
<b>Total</b>	<b>4,274</b>	<b>\$1,450,544</b>	<b>3,502</b>	<b>\$2,546,680</b>	<b>7,776</b>	<b>\$3,997,224</b>
<b>A2</b>						
US	552	\$943,471	1,262	\$4,918,785	1,814	\$5,862,256
Foreign	5	\$310	42	\$45,553	47	\$45,863
<b>Total</b>	<b>557</b>	<b>\$943,781</b>	<b>1,304</b>	<b>\$4,964,338</b>	<b>1,861</b>	<b>\$5,908,119</b>
<b>A3</b>						
US	2,911	\$2,501,112	4,633	\$4,892,192	7,544	\$7,393,304
Foreign	82	\$22,457	43	\$4,178	125	\$26,635
<b>Total</b>	<b>2,993</b>	<b>\$2,523,569</b>	<b>4,676</b>	<b>\$4,896,370</b>	<b>7,669</b>	<b>\$7,419,939</b>
<b>A4A</b>						
US	2,909	\$1,304,811	1,131	\$1,615,509	4,040	\$2,920,320
Foreign	128	\$42,599	68	\$28,134	196	\$70,733
<b>Total</b>	<b>3,037</b>	<b>\$1,347,410</b>	<b>1,199</b>	<b>\$1,643,643</b>	<b>4,236</b>	<b>\$2,991,053</b>
<b>A4B</b>						
US	1,657	\$779,396	912	\$1,738,419	2,569	\$2,517,815
Foreign	147	\$74,888	27	\$9,432	174	\$84,320
<b>Total</b>	<b>1,804</b>	<b>\$854,284</b>	<b>939</b>	<b>\$1,747,851</b>	<b>2,743</b>	<b>\$2,602,135</b>
<b>A5</b>						
US	1,058	\$373,628	734	\$1,636,064	1,792	\$2,009,692
Foreign	27	\$8,645	47	\$53,689	74	\$62,334
<b>Total</b>	<b>1,085</b>	<b>\$382,273</b>	<b>781</b>	<b>\$1,689,753</b>	<b>1,866</b>	<b>\$2,072,026</b>
<b>A6</b>						
US	605	\$1,756,783	449	\$560,053	1,054	\$2,316,836
Foreign	27	\$40,104	45	\$65,990	72	\$106,094
<b>Total</b>	<b>632</b>	<b>\$1,796,887</b>	<b>494</b>	<b>\$626,043</b>	<b>1,126</b>	<b>\$2,422,930</b>
<b>A7</b>						
US	18,409	\$5,405,749	5,861	\$4,902,905	24,270	\$10,308,654
Foreign	270	\$103,280	201	\$126,022	471	\$229,302
<b>Total</b>	<b>18,679</b>	<b>\$5,509,029</b>	<b>6,062</b>	<b>\$5,028,927</b>	<b>24,741</b>	<b>\$10,537,956</b>
Total US	42,055	\$19,356,882	29,914	\$45,782,867	71,969	\$65,139,749
Total Foreign	1,079	\$450,664	1,218	\$564,908	2,297	\$1,015,572
<b>Totals</b>	<b>43,134</b>	<b>\$19,807,546</b>	<b>31,132</b>	<b>\$46,347,775</b>	<b>74,266</b>	<b>\$66,155,321</b>

Summary of All Awards to Foreign Entities (A1A -- A7) for Fiscal Year 2003						
Country	# of Competitive Contracts	Value of Competitive Contracts	# of Non-Competitive Contracts	Value of Non-Competitive Contracts	Total Number of Contracts	Total Value of Contracts
Afganistan	2	\$ 1,171,250	1	\$ 481,579	3	\$1,652,829
Australia	4	\$ 916,145	2	\$ 188,680	6	\$1,104,825
Austria	0	\$ -	4	\$ 1,803,475	4	\$1,803,475
Bahrain	4	\$ 647,549	1	\$ 50,350	5	\$697,899
Belgium	14	\$ 4,156,946	26	\$ 4,134,978	40	\$8,291,924
Bulgaria	0	\$ -	1	\$ 26,670	1	\$26,670
Canada	453	\$ 247,599,346	404	\$ 130,573,298	857	\$378,172,644
Comoros	0	\$ -	2	\$ 95,410	2	\$95,410
Denmark	0	\$ -	5	\$ 2,871,115	5	\$2,871,115
Egypt	0	\$ -	1	\$ 1,298,300	1	\$1,298,300
Finland	0	\$ -	2	\$ 464,206	2	\$464,206
Foreign	0	\$ -	3	\$ 222,617	3	\$222,617
France	14	\$ 5,980,782	43	\$ 59,747,576	57	\$65,728,358
Gabon	4	\$ 834,892	8	\$ 12,004,173	12	\$12,839,065
Germany	110	\$ 52,728,219	47	\$ 23,541,727	157	\$76,269,946
Gibraltar	0	\$ -	2	\$ 893,159	2	\$893,159
Greece	4	\$ 820,377	0	\$ -	4	\$820,377
Ireland	1	\$ 48,804	1	\$ 66,875	2	\$115,679
Israel	69	\$ 25,040,324	51	\$ 59,296,377	120	\$84,336,701
Italy	43	\$ 3,083,224	25	\$ 9,493,149	68	\$12,576,373
Japan	53	\$ 10,392,258	5	\$ 29,533	58	\$10,421,791
Korea	11	\$ 6,956,782	9	\$ 9,194,791	20	\$16,151,573
Kuwait	70	\$ 6,997,007	17	\$ 7,386,399	87	\$14,383,406
Luxembourg	1	\$ 38,608	0	\$ -	1	\$38,608
Malaysia	6	\$ 6,956,912	0	\$ -	6	\$6,956,912
Mexico	1	\$ 214,200	0	\$ -	1	\$214,200
Netherlands	15	\$ 1,927,439	2	\$ 150,790	17	\$2,078,229
New Zealand	0	\$ -	1	\$ 88,999	1	\$88,999
Norway	2	\$ 1,096,514	8	\$ 2,966,689	10	\$4,063,203
Panama	3	\$ 108,831	0	\$ -	3	\$108,831
Qatar	2	\$ 66,416	2	\$ 100,038	4	\$166,454
Russia	1	\$ 237,807	2	\$ 269,500	3	\$507,307
Saudi Arabia	2	\$ 125,000	12	\$ 12,900,525	14	\$13,025,525
Singapore	23	\$ 1,937,420	7	\$ 1,134,414	30	\$3,071,834
South Africa	1	\$ 45,000	0	\$ -	1	\$45,000
Sweden	1	\$ 61,290	34	\$ 67,739,313	35	\$67,800,603
Switzerland	0	\$ -	10	\$ 1,836,998	10	\$1,836,998
Turkey	4	\$ 348,775	0	\$ -	4	\$348,775
Ukraine	0	\$ -	1	\$ 1,435,555	1	\$1,435,555
United States*	11	\$ 4,236,134	6	\$ 3,925,024	17	\$8,161,158
UK	150	\$ 65,889,624	473	\$ 148,496,269	623	\$214,385,893
<b>Totals</b>	<b>1079</b>	<b>\$ 450,663,875</b>	<b>1218</b>	<b>\$ 564,908,551</b>	<b>2297</b>	<b>\$1,015,572,426</b>

\* Prime contracts awarded to firms located in the United States, owned by foreign entities.

Percentage Summary of all DoD Contracts for Defense Items and Components (Fiscal Year 2003)						
DCP (1)	% of Competitive Contracts	Percentage by Value of Competitive Contracts (\$M)	% of Non-Competitive Contracts	Percentage by Value of Non-Competitive Contracts (\$M)	Total % of Contracts	Total Percentage by Value of Contracts (\$M)
<b>A1A</b>						
US	97.2	98.2	95.0	99.5	96.0	99.3
Foreign	2.8	1.8	5.0	0.5	4.0	0.7
<b>Total</b>	<b>13.7</b>	<b>20.1</b>	<b>24.0</b>	<b>38.7</b>	<b>18.0</b>	<b>33.1</b>
<b>A1B</b>						
US	96.2	95.1	95.0	99.0	95.5	98.4
Foreign	3.8	4.9	5.0	1.0	4.5	1.6
<b>Total</b>	<b>9.7</b>	<b>5.1</b>	<b>15.1</b>	<b>11.4</b>	<b>11.9</b>	<b>9.5</b>
<b>A1C</b>						
US	98.3	97.6	96.1	96.4	97.3	96.9
Foreign	1.7	2.4	3.9	3.6	2.7	3.1
<b>Total</b>	<b>9.9</b>	<b>7.4</b>	<b>11.2</b>	<b>5.5</b>	<b>10.5</b>	<b>6.0</b>
<b>A2</b>						
US	99.1	<99.9	96.8	99.1	97.5	99.2
Foreign	0.9	>0.1	3.2	0.9	2.5	0.8
<b>Total</b>	<b>1.3</b>	<b>4.8</b>	<b>4.2</b>	<b>10.7</b>	<b>2.5</b>	<b>8.9</b>
<b>A3</b>						
US	97.3	99.1	99.1	99.9	98.4	99.6
Foreign	2.7	0.9	0.9	0.1	1.6	0.4
<b>Total</b>	<b>6.9</b>	<b>12.7</b>	<b>15.0</b>	<b>10.6</b>	<b>10.4</b>	<b>11.2</b>
<b>A4A</b>						
US	95.8	96.8	94.3	98.3	95.4	97.6
Foreign	4.2	3.2	5.7	1.7	4.6	2.4
<b>Total</b>	<b>7.0</b>	<b>6.8</b>	<b>3.9</b>	<b>3.5</b>	<b>5.7</b>	<b>4.6</b>
<b>A4B</b>						
US	91.9	91.2	97.1	99.5	93.7	96.8
Foreign	8.1	8.8	2.9	0.5	6.3	3.2
<b>Total</b>	<b>4.2</b>	<b>4.3</b>	<b>3.0</b>	<b>3.8</b>	<b>3.7</b>	<b>3.9</b>
<b>A5</b>						
US	97.5	97.7	94.0	96.8	96.0	97.0
Foreign	2.5	2.3	6.0	3.2	4.0	3.0
<b>Total</b>	<b>2.5</b>	<b>1.9</b>	<b>2.5</b>	<b>3.6</b>	<b>2.5</b>	<b>3.2</b>
<b>A6</b>						
US	95.7	97.8	91.0	89.5	93.6	95.6
Foreign	4.3	2.2	9.0	10.5	6.4	4.4
<b>Total</b>	<b>1.5</b>	<b>9.1</b>	<b>1.6</b>	<b>1.4</b>	<b>1.5</b>	<b>3.7</b>
<b>A7</b>						
US	98.6	98.1	96.7	97.5	98.1	97.8
Foreign	1.4	1.9	3.3	2.5	1.9	2.2
	<b>43.3</b>	<b>27.8</b>	<b>19.5</b>	<b>10.8</b>	<b>33.3</b>	<b>15.9</b>
Total US	97.5	97.8	96.1	98.8	96.9	98.5
Total Foreign	2.5	2.2	3.9	1.2	3.1	1.5
<b>Totals</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

### 3.2 Foreign Content in Defense Systems

The Department periodically evaluates the foreign content of selected defense systems to determine the extent to which defense systems use foreign suppliers.

Operations in Iraq raised concerns that foreign nations might restrict or preclude shipments of defense articles for DoD applications during internationally unpopular engagements. Given this possibility, the Department decided to review the extent to which it depends on foreign suppliers for operationally important defense systems. The Department published review results in a report entitled *Study on Impact of Foreign Sourcing of Systems*, in January 2004.<sup>4</sup>

As required by the Paperwork Reduction Act, the Department secured approval from the Office of Management and Budget (OMB) to collect the required data from industry. That approval was granted on May 28, 2003; authority expired on November 30, 2003. Industry participation in the study was voluntary. There was no statutory or contractual requirement for either domestic or foreign sources to respond to the Department's information request. DoD personnel did, however, take specific steps to explain the purpose of the study to the DoD program offices and contractors, and solicit the maximum possible cooperation. The prime contractors responded positively by providing the requested information and asking their subcontractors to do the same.

Using the authorities provided to it by OMB, the Department collected supplier information from the Military Departments and DoD program offices, prime contractors, first tier subcontractors, and second tier subcontractors. Therefore, the study identified and evaluated foreign sources for the identified programs from the prime contractors through the third subtier.

For the 2004 study, the Department contacted a total of 806 prime contractors and first and second tier subcontractors in order to collect and evaluate information for:

- Guided Multiple Launch Rocket System (GMLRS)
- Army Tactical Missile System (ATACMS)
- Patriot Advanced Capability (PAC3) Missile
- Tactical Tomahawk Missile
- Stand-Off Land Attack Missile - Expanded Response (SLAM-ER)
- Joint Standoff Weapon (JSOW)
- Paveway II Laser-Guided Bombs (LGB)
- Predator Unmanned Aerial Vehicle
- F414 Engine
- Sensor Fused Weapon (SFW)
- Wind Corrected Munition Dispenser (WCMD)
- Joint Service Lightweight Integrated Suit Technology (JSLIST) Chemical Protective Suit

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<sup>4</sup> The full report is available on the Internet ([www.acq.osd.mil/ip](http://www.acq.osd.mil/ip)).

The final report reached four conclusions:

1. *Foreign sources provide limited amounts of materiel for the identified programs.*

For the programs evaluated, the Department identified a total of 73 first, second, and third tier foreign subcontractors. The total value of the prime contracts totaled \$2.23 billion. No prime contracts were awarded to foreign suppliers. The total value of the subcontracted effort for the programs totaled \$986 million. About \$96 million of that amount was subcontracted to foreign sources. Collectively, foreign subcontracts represented about four percent of the total prime contract value and less than ten percent of the value of all subcontracts for these programs.

The aggregate value of foreign subcontracts was skewed by the inclusion of the Joint Service Lightweight Integrated Suit Technology (JSLIST) chemical protective suit. The JSLIST suit is unusual in that it is not a weapon system, nor a component of a weapon system. It is a piece of vital protective equipment, its cutting edge technology originates overseas, and the Department is bringing this cutting edge technology into the United States. The value of total program subcontracts, exclusive of JSLIST suits, awarded to foreign sources is significantly smaller (\$61.5 million versus \$96.5 million)—about six percent of the total subcontract value and about three percent of the prime contract value.

PROGRAM	# FOREIGN SUBCONTRACTORS	VALUE OF FOREIGN SUBCONTRACTS (\$M)	VALUE OF FOREIGN SUBCONTRACTS AS A % OF TOTAL SUBCONTRACTS	VALUE OF FOREIGN SUBCONTRACTS AS A % OF PRIME CONTRACT VALUE
JSLIST	8	\$35.0	62.5%	12.5%
PAC-3	25	\$23.1	12.3%	6.2%
F414	4	\$19.1	10.9%	4.6%
PREDATOR	5	\$1.0	14.5%	3.3%
WCMD	11	\$2.0	4.3%	3.2%
TACTICAL TOMAHAWK	3	\$6.8	5.5%	2.8%
SFW	4	\$2.9	7.8%	2.5%
GMLRS	3	\$2.6	6.1%	2.3%
SLAM-ER	5	\$1.0	3.3%	1.6%
ATACMS	3	\$2.2	3.8%	1.5%
PAVEWAY	1	\$0.7	0.4%	0.2%
JSOW	1	\$0.1	0.1%	0.1%
<b>Subtotal without JSLIST</b>	<b>65</b>	<b>\$61.5</b>	<b>6.6%</b>	<b>3.2%</b>
<b>Total</b>	<b>73</b>	<b>\$96.5</b>	<b>9.8%</b>	<b>4.3%</b>

*2. Utilizing these foreign sources for these programs does not impact long-term readiness.*

In general, the use of foreign sources, in and of itself, does not negatively impact national security. In fact, appropriate use of non-U.S. suppliers: (1) promotes consistency and fairness in dealing with U.S. allies,<sup>5</sup> (2) permits DoD to access state-of-the-art technologies and industrial capabilities, (3) exposes U.S. industry to international competition, helping to ensure that U.S. firms remain innovative and efficient, (4) encourages development of interoperable weapons systems, and (5) encourages development of mutually beneficial industrial linkages that enhance U.S. industry's access to global markets.

Utilizing the identified foreign sources does not impact the long-term readiness of the Armed Forces. The foreign sources are as likely to be able to meet program cost, performance, and delivery requirements as are domestic sources. Additionally, none of the identified foreign sources constitutes a foreign vulnerability that poses a risk to national security. The vast majority of the foreign sources are from NATO nations or other historically reliable trading partner nations. Experience with these systems during the active combat phases of Operations Enduring Freedom and Iraqi Freedom demonstrated that the selected suppliers (including 20 German and two French suppliers) have both the ability and resolve to meet performance, schedule, and cost requirements. In fact, the key German and Japanese suppliers for the JSLIST suit surged production during Operation Iraqi Freedom from 70,000 suits per month to 128,000 per month.

The availability of alternative domestic sources for most foreign sourced items further reduced the risk for supply disruption.

*3. Utilizing these foreign sources does not impact the economic viability of the national technology and industrial base.*

The value of total program subcontracts awarded to foreign sources was limited (about \$96.5 million – about four percent of the total contract value and less than ten percent of the total subcontract value). Business within the relevant industry segments will sustain essential industrial and technological capabilities sufficient to meet current and projected DoD needs. Domestic firms within those industry segments will continue to be capable of competing for the foreign-sourced items and similar items. Additionally, domestic capabilities have been established for the JSLIST liner fabric, and a domestic source is being established for the JSLIST carbon beads now being procured from a Japanese source.

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<sup>5</sup> By giving evidence to non-U.S. suppliers that they have a fair opportunity to be awarded contracts and subcontracts for DoD weapons systems

4. *In most cases, domestic suppliers are available for the parts, components, and materials provided by the foreign sources.*

The Department generally does not mandate supplier selections to its contractors. The Department expects its contractors to select reliable, capable suppliers consistent with obtaining best value, encouraging effective competition, and meeting national security requirements. Generally, prime contractors and first and second tier suppliers indicated they selected the foreign subcontractors for specific items because those subcontractors offered the best combination of price, performance, and delivery.

In some cases domestic suppliers were not available to compete for the items subcontracted to foreign sources (table below). With the exception of the lethality enhancer assembly for the PAC3 for which the German supplier is the only firm currently capable of producing the item, domestic sources could be qualified with little risk given some additional time and funding.

<b>Program</b>	<b>Item</b>	<b>Foreign Source Country</b>
JSLIST	Activated Carbon Beads	Japan
PAC3	Lethality Enhancer Assembly	Germany
WCMD	Electric Match	France
SFW	Thermal Battery	Israel

### 3.3 Defense Industrial Base Capabilities Studies Series

In addition to the contract-based assessments discussed previously, the Department has published reports on three of a five-part Defense Industrial Base Capabilities Studies (DIBCS) series of assessments. Collectively, these studies assess the ability of the industrial base to produce the technologies and components most critical for 21<sup>st</sup> century warfare. They do so within a construct based on functional concepts defined by the Joint Staff.

The Joint Staff has organized its requirements process around five functional concepts: Battlespace Awareness (BA), Command and Control (C2), Force Application (FA), Protection (P), and Focused Logistics (FL).<sup>6</sup> These five concepts, defined in the table below, are becoming the central basis for Department decision-making. The Department published DIBCS studies on *Battlespace Awareness, Command and Control, and Force Application* in 2004.<sup>7</sup> It will publish studies on *Protection and Focused Logistics* in 2005.

JOINT STAFF FUNCTIONAL CONCEPTS	
<b><i>Battlespace Awareness</i></b>	Capabilities of commanders and all force elements to understand the environment in which they operate and the adversaries they face. It uses a variety of surveillance capabilities to gather information; a harmonized, secure, network-centric environment to manage this information; and a collection of capabilities to analyze, understand and predict.
<b><i>Command and Control</i></b>	Capabilities that exercise a commander's authority and direction over forces to accomplish a mission. It involves planning, directing, coordinating, and controlling forces and operations. It provides the means for a commander to recognize what is needed and ensure that appropriate actions are taken.
<b><i>Force Application</i></b>	Capabilities to engage adversaries with lethal and non-lethal methods across the entire spectrum of conflict. It includes all battlefield movement and dual-role offensive and defensive combat capabilities in land, sea, air, space, and information domains.
<b><i>Protection</i></b>	Capabilities that defend forces and U.S. territory from harm. It includes missile defense and infrastructure protection and other capabilities to thwart force application by an adversary.
<b><i>Focused Logistics</i></b>	Capabilities to deploy, redeploy, and sustain forces anywhere in or around the world for sustained, in-theater operations. Includes the traditional mobility functions of airlift, sealift, and spacelift as well as short-haul (intra-theater and battlefield) transportation. It also includes logistics command and control, training, equipping, feeding, supplying, maintaining, and medical capabilities.
Source: Joint Staff Functional Concepts and ODUSD (IP)	

<sup>6</sup> The Joint Staff also is developing a sixth functional capability: Network Centric Operations.

<sup>7</sup> These reports are available on the Internet ([www.acq.osd.mil/ip](http://www.acq.osd.mil/ip)). The balance of the series will be available on the Internet when complete.

The DIBCS series assesses the sufficiency of the most crucial segments of the industrial base in each functional capability area. The study series uses a critical technology and industrial capability assessment methodology derived from the 2002 *Space R&D Industrial Base Study*.<sup>8</sup> The methodology is consistent with the operational ethos embodied in the U.S. defense industrial base: warfighting capabilities, and the warfighter as the primary constituent, must drive defense demand and the products the Department acquires.

The methodology categorizes warfighter capabilities according to the advantage they give the United States over potential adversaries. As described in the table below, extra attention is focused on those warfighter capabilities where the United States should lead any potential adversary. Less attention is focused where leadership is not possible or not particularly advantageous. Ideally, the Department would wish to have a significant lead in every warfighter capability. Practically, however, the Department cannot do so.

LEADERSHIP GOALS	
<i>Neutral</i>	Position relative to potential adversaries is immaterial.
<i>Equal</i>	Desire capability at least as good as potential adversaries; systems are likely in a common technological generation.
<i>Be Ahead</i>	Desire a significant capability difference over potential adversaries; systems should likely lead by a technology generation or order of magnitude better performance in key attributes.
<i>Be Way Ahead</i>	Desire a very significant capability difference over potential adversaries; systems should likely lead by multiple technology generations or orders of magnitude in performance.
Source: Booz Allen Hamilton and ODUSD(IP)	

In addition, operational concepts will change over time, and the Department should focus most on those capabilities where leadership will provide the warfighter the greatest military advantage. The DIBCS methodology gives added weight to the most important of these technologies. The objective is to concentrate DoD attention and scarce resources on the areas that make the biggest difference in 21<sup>st</sup> century joint military operations: those warfighting capabilities for which the Department must have *Be Ahead* and *Be Way Ahead* leadership goals.

The DIBCS series focuses first on those warfighter capabilities where the Department needs to achieve and maintain the greatest lead; then it identifies the key technologies that enable those capabilities and provide assessments of the associated industrial base. When an industrial base deficiency—whether immediate or projected—is identified, the reports examine it in more depth and recommend remedies. This analytical process has three basic steps:

1. *Identify U.S. leadership goals for warfighting capabilities.*

Since a detailed understanding of functional capabilities and associated architectures will continue to evolve within the Department, the specific warfighting capabilities and associated leadership goals are refined incrementally as details

<sup>8</sup> Published by Booz Allen Hamilton, August 2002.

continue to emerge from development of the Joint Staff's functional concepts and the associated integrated architectures.

2. *Determine enabling technologies for Be Ahead/Be Way Ahead warfighting capabilities.*

The next step in the process is to identify the key enabling technologies for those warfighting capabilities with leadership goals rated *Be Ahead* or *Be Way Ahead*. The priority of a technology is determined by the number of different critical warfighting capabilities to which it applies and the degree to which it enables those individual critical warfighting capabilities.

3. *Assess industrial base capabilities for each critical technology.*

Finally, the study examines the industrial capabilities necessary to support the prioritized critical technologies. This generally involves identifying major domestic and foreign suppliers and examining them for sufficiency and suitability.

The policy construct in which the studies deploy potential risk mitigation actions is based on employing three policy “levers” to remedy instances in which required industrial capabilities are insufficient to meet projected defense requirements: (1) fund innovation, (2) optimize program management structures and acquisition strategies, and (3) employ external corrective measures (measures taken outside the confines of individual defense programs). These policy levers can be deployed through five major “portals” throughout the technology and weapon system life cycle—insertion opportunities where managerial decisions have the most impact on developing and sustaining critical technologies and associated industrial capabilities: (1) science and technology, (2) laboratory to manufacturing transition, (3) weapon system design, (4) make-buy decisions, and (5) life cycle innovation for fielded systems. By highlighting industrial base deficiencies for critical technologies and implementing appropriate policy initiatives and remedies, the Department is positioned to facilitate innovation that promotes joint, cross-Service warfighting.

When an industrial base deficiency is identified, a DoD research and analysis team examines it in-depth and recommends remedies.

Part of a DIBCS assessment is to evaluate how domestic industrial capabilities compare with foreign capabilities. U.S. sources for those technologies and industrial capabilities supporting warfighting capabilities for which it has established leadership goals to *Be Ahead* or *Be Way Ahead* of potential adversaries could reduce certain risks associated with using non-U.S. suppliers. However, the Department must be, and is, prepared to use non-U.S. suppliers to support critical warfighting goals when necessary and appropriate, and when the supplier and the nation in which it resides have demonstrated reliability in:

- Responding to DoD technology and product development requirements.

- Meeting DoD delivery requirements during peacetime and/or periods of conflict or international tension.
- Precluding unauthorized transfer of technical information, technologies, or products within the nation or to third parties.

The DIBCS assessments completed to date do not support concerns about a fragile U.S. defense industrial base or rampant foreign dependency that puts readiness and national security at risk. As summarized in the table below, the Department identified over 1300 distinct warfighting capabilities in the first three studies that enabled the functional concepts. Then, the Department identified almost 800 associated technologies where the U.S. military should maintain at least a one-generation lead over potential adversaries. For the most pressing of those technologies, the reports list 765 suppliers with relevant industrial base capabilities. 438 (57%) of those suppliers are U.S. suppliers. The Department’s conclusion is that, for the most part, there are ample industrial sources of innovation available to meet the most important projected warfighting needs.

SUMMARY OF DIBCS RESULTS					
DIBCS:	# Warfighting Capabilities	# Be Ahead/Be Way Ahead Technologies	# U.S. Companies	# Foreign Companies	Total # Companies
BA	357	270	151	107	258
C2	189	293	124	102	226
FA	787	212	163	118	281
<b>Total</b>	<b>1,333</b>	<b>775</b>	<b>438</b>	<b>327</b>	<b>765</b>

The DIBCS assessments completed to date identified a total of one industrial base deficiency and 11 industrial base areas of concern (summarized in table on the next page). In only one instance (active hyperspectral imagers) did the studies indicate that U.S. capabilities for critical warfighting-enabling technologies trailed those of other nations. (Active hyperspectral imagers can be used to detect, locate, and track chemical, biological, radiological, and nuclear events. Civil environmental monitoring applications associated with efforts to comply with the Kyoto accords is driving overseas developments in these technologies.) All areas of concerns and potential remedies are discussed in more detail in the individual DIBCS reports (available on the Internet at [www.acq.osd.mil/ip](http://www.acq.osd.mil/ip)).

The Department will continue to closely monitor *Be Ahead* and *Be Way Ahead* warfighting capabilities as identified in the DIBCS series, their enabling technologies, and the associated industrial base. The Department also is prepared to deploy appropriate policy levers to maximize innovation and competition within the industrial base when deficiencies are identified. The methodology developed for the DIBCS series and the associated portals and levers provide the Department with the necessary tools to identify, develop, and sustain those industrial capabilities most critical to 21<sup>st</sup> century warfighting. Applying these tools with diligence will greatly increase confidence that critical technologies and associated industrial base capabilities are available when needed to maintain U.S. warfighting superiority over any potential adversary.

INDUSTRIAL BASE ISSUES					
	Technology	Industrial Base Sufficiency Analysis			Rationale
		Domestic Sources	Foreign Sources		
Battlespace Awareness	Active Hyperspectral Imager	4	3		U.S. capability trails potential adversaries' capabilities due to foreign technology advancements in civil applications.
	Active Electronically Scanned Array (AESA) Radar	2 major	5		Number of major domestic suppliers of AESA radars is probably still sufficient. However, degree of U.S. leadership is threatened by significant overseas competition.
	Maser Clocks	2	3		Maser clocks provide better precision and reliability than cesium atomic clocks and are standard in foreign GPS-like systems. U.S. capability is at best equal, and small market demand limits supplier base.
Command & Control	Helmet Mounted Display	5	4		Traditionally used for pilot applications, use of HMDs is now expanding into land warfare and U.S. leadership may be insufficient given new applications and essentiality to future warfighting concepts.
	Swarming Control Tools	Many*	Many*		U.S. research efforts are even with foreign institutions, with many foreign developers performing research in this technology area essential for remote vehicle control.
	Optical (Laser) Intersatellite Links	2	3		Competition with European and Japanese developers has been growing. Market is still small and presently two suppliers are adequate.
Force Application	Pulsed Plasma Thruster	2*	0		This technology offers a unique approach to space maneuvering (aiming) and is maturing with two companies in development and a number of companies and universities in research. U.S. has a significant lead but only two domestic sources which appears sufficient, but warrants monitoring.
	Hypersonic Weapon Propulsion System	1	1		Propulsion system for long range air-to-ground and surface-to-surface weapon applications. Limited market size not likely able to support more than one supplier at this time. U.S. is even with no discernable technology lead—need to lead.
	Small Caliber Projectile Control Surfaces	0*	0		Early technology development, only two domestic researchers which lead the world. This supply base may be adequate at this time—particularly with no identified foreign competition—but the situation could change quickly and should therefore be closely monitored.
	GPS-Guided Small Diameter Bomb (SDB)	1	0		Breakthrough technology applicable to targets requiring low yield and high precision. U.S. has significant lead but only one supplier. Reconsider sole source policy decision and competitively fund a second source or alternative solution.
	Chemical Oxygen-Iodine Laser (COIL) (High/Low Power)	2 High 3* Low	0 High 3* Low		New way of defeating air targets. Two suppliers appear adequate for weapons-class chemical lasers, with a number of U.S. and foreign entities working similar technologies at lower power. U.S. leads but foreign research could be applied to higher power weapon system—further monitoring warranted.
	Self-Propagating High-Temperature Synthesis Device	1*	0*		Futuristic technical concept in the area of explosives. One supplier (13 employees) is probably not sufficient if U.S. military desires to move technology to production. U.S. does not have a leadership position, one foreign research source identified. This situation warrants monitoring.

\* Technologies still in R&D, not production.

#### **4. Status of The Federal Procurement Data System**

The Federal Procurement Data System – Next Generation (FPDS-NG) replaces the former Federal Procurement Data System (FPDS). The transition began in Fiscal Year 2004. The General Services Administration (GSA) manages the FPDS-NG within the Federal eGov Integrated Acquisition Environment initiative. The FPDS-NG will be the central repository of statistical information on all Federal contracting. When implementation is complete, all Federal Agencies will report their procurement actions within the FPDS-NG. Additionally, the new FPDS-NG is to use state-of-the-art technology to streamline the reporting process and allow direct machine-to-machine reporting.

The GSA placed Version 1.2 (Build 2) of the FPDS-NG into production on October 1, 2004. Each Federal Agency will develop a schedule to migrate their procurement data to this version.<sup>9</sup>

The Department of Defense projects that it will migrate its historical data (Fiscal Year 1997 - Fiscal Year 2003) and its Fiscal Year 2004 reporting to FPDS-NG by December 8, 2004. To take full advantage of the new technology options available through FPDS-NG for reporting, the Department is implementing machine-to-machine reporting directly from contract writing systems to the FPDS-NG. The Department projects that it will complete implementation of machine-to-machine reporting throughout the Department in the second quarter of Fiscal Year 2005.

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<sup>9</sup> These schedules are available from the GSA's FPDS-NG Program manager, Mr. Rod Lantier; telephone: (202) 501-2647; e-mail: rod.lantier@gsa.gov.

## 5. Conclusions

The information presented in this report indicates that the Department employs foreign contractors and subcontractors judiciously, and in a manner consistent with national security requirements. Furthermore, an ongoing, comprehensive, *forward-looking*, DoD examination of the most important warfighting capabilities, critical supporting technologies, and associated industrial capabilities indicates that the U.S. industrial base is well positioned to maintain its world leadership position.

The Department procures very few defense articles and components from foreign suppliers. In Fiscal Year 2003, DoD procurement actions totaled \$209 billion. Of that amount, DoD contracts for defense articles and components totaled just over \$65 billion. Of that \$65 billion, the Department awarded contracts to foreign suppliers for defense articles and components totaling just over \$1 billion. Therefore, DoD contracts for defense articles and components awarded to foreign suppliers represented less than one-half of one percent of all DoD contracts; and only about 1.5% of DoD contracts for defense articles and components. The top five recipient nations (by value) of DoD contracts (Canada, UK, Israel, Germany, and Sweden) collectively received contracts totaling almost \$821 million (about 81% of the total for all such contracts). All five nations are long-standing, reliable, trading partners of the United States.

The January 2004, DoD report *Study on Impact of Foreign Sourcing of Systems* examined the extent and implications of foreign subcontractors for twelve operationally-important defense systems. The report concluded that foreign suppliers provide limited amounts of materiel for the systems; and that using those foreign subcontractors does not impact long-term military readiness or the economic viability of the national technology and industrial base. For the systems studied, foreign subcontracts collectively represented about 4% of the total contract value and less than 10% of the value of all subcontracts.

The Defense Industrial Base Capabilities Studies (DIBCS) series of assessments completed to date (*Battlefield Awareness, Command and Control, and Force Application*) highlight those warfighting capabilities most important to 21<sup>st</sup> century warfighting; where U.S. leadership over adversaries is most important; and where Department attention and resources should be focused. The United States has a lead in the vast majority of the most critical technologies and associated industrial capabilities. For the most part, there are sufficient U.S. suppliers available now, and projected to be available in the future, to preclude vulnerabilities resulting from foreign supplier dependencies.