



STRUCTURE AND DYNAMICS OF THE
U.S. FEDERAL PROFESSIONAL
SERVICES INDUSTRIAL BASE
————— 1995 - 2004 —————

DEFENSE -
INDUSTRIAL
INITIATIVES GROUP





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D E F E N S E -
I N D U S T R I A L
I N I T I A T I V E S G R O U P

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The authors wish to acknowledge the considerable support of the Professional Services Council to this project. The genesis of this project was a simple question asked by Stan Soloway, president of the Professional Services Council: “Has anyone ever analyzed the structure of the defense professional services industry? How different does it look relative to the defense hardware industry?” Nine months later, we believe we have the beginnings of an answer. We would also like to thank in particular, Alan Chvotkin, senior vice president of the Professional Services Council, and executives from Anteon, Aspen Systems, and Westat, who provided great insights into the dynamics of the industry. This project would have been impossible without the extremely hard work of Christopher Brengel and Nicholas Wilson, our two database gurus.

Executive Summary

During the past decade, the U.S. government has been increasing its reliance on the private sector for a wide range of professional and support services. This trend has been driven by a wide variety of factors—lean-government initiatives launched in the 1990s, surges in demand during crises such as the Y2K problem, the increased complexity of tasks, and the loss of skills within the government caused by workforce reductions and retirements. By 2004, providing professional services to the federal government has become a significant industry—with \$167 billion in contracts awarded, it is now equal in size to the government hardware market.

The largest segments within the federal professional services industry are professional administrative and management services (PAMS), which accounted for \$42 billion worth of contracts in 2004; research and development (R&D), which accounted for \$41 billion; and facilities-related services (FRS), which accounted for \$36 billion.

During the past ten years, the industry has expanded at an average compound annual growth rate of 6 percent a year. The fastest-growing segments were information and communications (ICT) services, which delivered a 14 percent compound annual growth rate between 1995 and 2004, and PAMS, which grew 9 percent a year during that same period. Growth in the ICT and PAMS segments was driven by all the factors identified above, and they are likely to remain the high-growth segments of the industry. Meanwhile, expansion in the equipment-related services (ERS) segment has been driven by the current conflicts in Iraq and Afghanistan. The R&D segment is more cyclical in nature. Given its large size and high growth rate, the PAMS segment should remain the largest part of the industry.

The Department of Defense is the biggest consumer of professional services, accounting for approximately 63 percent of total contract actions by value in 2004. The Department of Defense, the Department of Energy, and the General Services Administration make up more than three-quarters of the market.

There has been an evolution in the types of contracting vehicles used in the industry. Since the mid-1990s, the use of multiple-award, federal schedule contracts and simplified acquisition procedures has increased significantly. Under these broader contracting vehicles, the total number of contract actions has almost doubled since 1995 to more than 600,000 contract actions awarded in 2004. With the number of contract actions growing faster than the value of contracts awarded, the average value of contract actions has decreased from \$385,000 in 1995 to \$270,000 in 2004. The median contract action has also dropped, from \$63,000 in 1995 to \$30,000 in 2004. To be competitive, contractors need to win a position on these broader acquisition vehicles and then must scramble to win the contract actions. The declining contract action values imply that firms must compete harder just to sustain level revenues.

The number of firms in the professional services industrial base remained almost unchanged between 1995 and 2001 at 45,000 contractors. Between 2001 and 2004, however, the total number of contractors in the industry increased by 86 percent to 83,000 firms. A more detailed analysis of the contract base reveals that most of the growth has come from the entry of firms undertaking small (under \$25,000) contract actions. A preliminary analysis of the

2004 data indicates that, of the 83,000 professional services contractors, only a few thousand (2,000–4,000) have \$8 million or more of federal professional services revenues, and a few hundred firms have \$100 million or more of services revenues. Examining the data from this perspective implies that the vast majority of firms in the industry are small firms or medium-size firms that undertake relatively little federal professional services work relative to their overall corporate size.

The industry has become more integrated during the past decade. Firms in all segments of the industry have increased their presence in the PAMS segment, ICT companies are increasingly participating in the FRS segment, and the FRS providers are growing their presence in the ERS segment. Examined differently, the professional services industry and the defense hardware–defense platform industry have become more intertwined as the large platform primes have made significant acquisitions in the market. The other major shift in the structure of the industry has been the fourfold increase in the number of heavy engineering and construction firms in the ranks of the Top 20 contractors, a trend clearly driven by the reconstruction efforts in Iraq and Afghanistan.

Critical mass has changed for the industry. In 1995, the 20th-largest contractor had \$360 million in professional services contract awards, but in 2004 a firm needed \$1 billion of services awards to be the 20th-largest contractor. It is interesting, though, that the market share for the Top 5 services contractors has remained relatively steady: in 1995 it was 19 percent (with \$19 billion of service revenues), and in 2004 it was 21 percent (with \$35 billion).

When the market shares held by the small, medium, and large companies in the industry are examined, it is clear that middle-tier companies have suffered a significant erosion of their relative share. In 1995, middle-tier companies captured 44 percent of the total value of federal professional services contracts. By 2004, the middle-tier companies were able to capture only 29 percent of that value. Small-business set-aside laws and other policies assisting small firms have clearly worked in the professional services industry. Small companies have sustained a 19–22 percent market share in the value of prime contracts, and their share of the market is larger if the value of subcontracts is included. The large companies in this industry have been particularly active via mergers and acquisitions and have been able to increase their market share to 49 percent of the total market. Thus, the middle tier has been squeezed from above by consolidation and from below by small businesses holding on to their share of the market. How to replenish the middle tier is a key strategic and policy issue for the industry.

List of Acronyms

ADP	automatic data processing
BOA	basic ordering agreement
BPO	blanket purchase agreement
CAGR	compound annual growth rate
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOEd	Department of Education
DOI	Department of the Interior
DOJ	Department of Justice
DOL	Department of Labor
DOS	Department of State
DOT	Department of Transportation
EPA	Environmental Protection Agency
ERS	equipment-related services
FPDS	Federal Procurement Data System
FPDS–NG	Federal Procurement Data System–Next Generation
FRS	facilities-related services
FSC	federal supply classification
GAO	Government Accountability Office
GSA	General Services Administration
GWAC	government-wide acquirors contracts
HHS	Department of Health and Human Services
HUD	Department of Housing and Urban Development
ICT	information and communications technology
IDC	indefinite delivery contract
IDIQ	indefinite delivery indefinite quantity
IRS	Internal Revenue Service
NASA	National Aeronautics and Space Administration
NIH	National Institutes of Health
PAMS	professional, administrative and management support
R&D	research and development
USAID	U.S. Agency for International Development
VA	Department of Veterans Affairs

What Is the Professional Services Industrial Base?

In this chapter:

- Definition of the federal professional services industrial base
- Methodology of this study
- Description of primary professional services categories
- Definition of small, medium, and large companies

For the purpose of this study, the U.S. federal professional services industry is defined as all companies and individuals providing contract services to U.S. federal government departments and agencies. Contract services include all types of services except those that are:

- Tied directly to the production of weapons and other hardware systems;
- Related to the construction of facilities or structures; and
- Designed for the delivery of patient-related medical care or health care services.

Methodology of the Study

Most of the data used for this study were derived from the Federal Procurement Data System (FPDS). This government database covers all federal contract actions that have been awarded during a particular year by approximately 70 executive branch agencies (the largest exceptions are the U.S. Postal Service and the Federal Aviation Administration). Initially created in 1979 by the Department of Defense (DOD), the FPDS has been managed by the General Services Administration (GSA) since 1980. In 2004, the database was significantly restructured and renamed FPDS–Next Generation (FPDS-NG).

Any analysis based on the FPDS is naturally limited by the quality of the underlying data. Several Government Accountability Office (GAO) studies have highlighted the problems of FPDS (for example, the December 30, 2003, GAO report, “Reliability of Federal Procurement Data,” and the September 27, 2005, GAO report, “Improvements Needed for the Federal Procurement Data System–Next Generation”). Despite its flaws, FPDS is the only comprehensive data source of government contracting activity, and as long as any analysis is focused on trends and order-of-magnitude comparisons it is more than adequate.

The CSIS study team analyzed all federal contracts awarded between the years 1995 and 2004, more than 7 million contract actions overall. Because the structure of the FPDS database has changed over time, it was necessary for the study team to build a new database for the

1995–2004 period and reconcile the differences in the data. The study team created a smaller “professional services” database by eliminating those contract actions that were awarded for equipment as well as those that were awarded for services that were considered to be outside the scope of this study (construction and patient-related medical or health care services). To obtain a better degree of granularity when analyzing the data, the team chose five primary services categories to represent broad areas of professional services types. The categories were created with the federal supply classification (FSC) codes. All services—including research and development work—are assigned by the federal government a four-digit code, sometimes referred to as an “A–Z Code,” which identifies 24 main categories of services. The list of all 24 FPDS services categories can be found in appendix A.

The five primary categories created by the CSIS study team for this study are:

- **Information and communications technology (ICT) services:** Automatic data processing (ADP) services and telecommunications services. This category includes all contracts with FSC codes in category D (ADP and telecommunications).
- **Professional, administrative, management support (PAMS):** Studies and analyses that are not considered research and development (R&D); architect and engineering services; quality control, testing, and inspection; and technical representative services. This category includes all contracts with FSC codes in categories B (non-R&D studies and analyses), C (architect and engineering), H (quality control, testing, and inspection), L (technical representatives), and R (professional, administrative, and management support) as well as selected codes within category A (includes only codes in category A that end with the digit 6, which designate R&D management and support).
- **Research and development (R&D):** Basic and applied research, experimental and advanced development, engineering, and operational systems development. This category includes all contracts with FSC codes in category A (R&D), except those ending with the digit 6 (digit 6 represents R&D management and support services, which are included in the PAMS category).
- **Equipment-related services (ERS):** Installation, lease or rental, maintenance, repair, and rebuilding and modification of equipment. This category includes all contracts with FSC codes in categories J (maintenance, repair, and rebuilding of equipment), K (modification of equipment), N (installation of equipment), and W (lease or rental of equipment).
- **Facilities-related services (FRS):** Purchase, lease or rental, operation and maintenance of facilities. This category includes all contracts with FSC codes in categories E (purchase of structures and facilities), M (operation of government-owned facility), S (utilities and housekeeping), X (lease or rental of facilities), and Z (maintenance, repair, or alteration of real property).

All contracts with other FPDS codes were included in the category of “other.” These include services for natural resources management; social services; salvage services; photographic, mapping, printing, and publication services; education, training, and transport; and travel and relocation. However, they have been included in the calculations of total federal professional services.

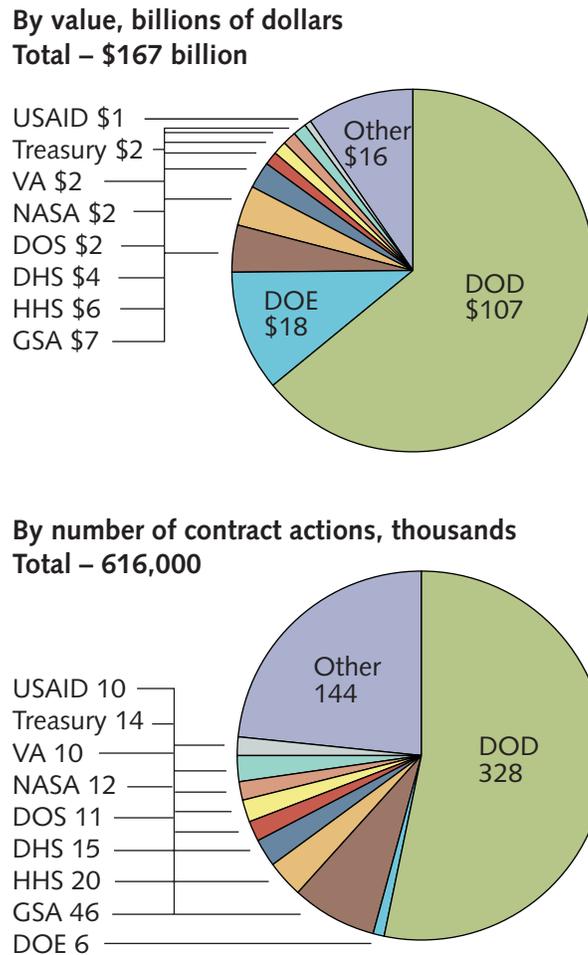
Small, Medium, and Large Companies

To analyze the breakdown of competitors in the market into small, medium, and large companies, the CSIS team assigned each contractor in the database to one of these size categories. Any company designated as small by the FPDS database—according to the criteria established by the federal government—was categorized as such. Companies with annual revenue of more than \$1 billion were classified as large. All companies not classified as either small or large were placed in the medium category. In its analysis of the companies in the federal professional services market, the study team made every effort to consolidate data related to subsidiary companies and merged companies into the parent company by year. For example, many of Boeing’s subsidiaries and predecessor companies are listed separately in the FPDS, but they were combined into a single Boeing entry in the CSIS professional services database. This enabled the study team to analyze more accurately the professional services industrial base, the number of players in it, and their level of activity.

Federal Professional Services Industry Today

In this chapter:

- Overall 2004 data for federal professional services contracting
- Top 10 customers by value and by number of contract actions
- Separation of defense from civilian federal professional services
- Value and number of contract actions for each of the main services

Figure 2.1. Top 10 Customers in the Federal Professional Services Market, 2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Professional Services Market in 2004 — Figure 2.1

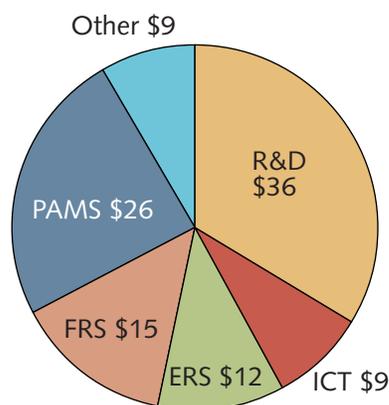
The purchasing of services by the federal government represents a significant market today and makes up a substantial portion of annual U.S. federal expenditures. In 2004, the most recent full year for which FPDS data were available, the federal government awarded \$167 billion worth of contracts for professional services. This amount was awarded via some 616,000 contract actions. In fact, the federal government currently spends more money on purchasing services than on buying hardware and goods.

DOD was the largest federal government consumer of services in 2004, with \$107 billion worth of contracts or 64 percent of the total market. A distant second was the Department of Energy (DOE), with \$18 billion or 11 percent of the market. GSA is the third-largest government customer and accounts for \$7 billion or 4 percent of the market. By value, the top three customers make up 79 percent of the market.

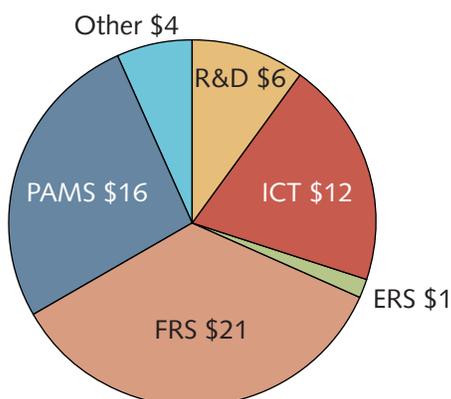
By number of contract actions, the largest three awarders of services contracts are the DOD with 328,000 contract actions let (53 percent of total contract actions awarded), the GSA with

Figure 2.2. Federal Professional Services Markets, Department of Defense Compared with Civilian, 2004

**Department of Defense
Total – \$107 billion**



**Civilian
Total – \$60 billion**



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

46,000 (7 percent of total), and Department of Health and Human Services with 20,000 (3 percent).

Defense and Civilian Contracting Compared — Figure 2.2

In 2004, the largest market segments were the professional, administrative, and management support (PAMS) segment and research and development (R&D), each representing about one-quarter of the total market. Not far behind was the facilities-related services (FRS) segment, with about 22 percent of the market.

The two largest segments within the DOD are R&D, which is not surprising, and PAMS. Civilian agencies are heavy users of PAMS and large consumers of FRS, which is heavily skewed

Table 2.1. Data for U.S. Professional Services Market, 2004

Service category	Value (\$, billions)	Number of contract actions	Average amount of each contract action (\$)	Median amount of contract actions (\$)	Number of contractors^a
ICT	21.4	73,093	292,576	72,615	6,370
PAMS	42.0	182,109	230,998	44,200	28,129
R&D	41.4	48,756	848,300	100,000	7,696
ERS	13.6	79,331	171,349	16,856	13,446
FRS	35.8	147,628	242,815	16,228	24,024
Others	12.8	85,071	150,462	32,000	16,612
Total	167.0	615,988	279,139	30,000	82,854

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

a. Some contractors are active in more than one service category.

by the contracts to the management of DOE facilities. It is interesting to note that civilian agencies are the largest consumers of information and communications technology (ICT) services.

Overview of Professional Services Market Segments — Table 2.1

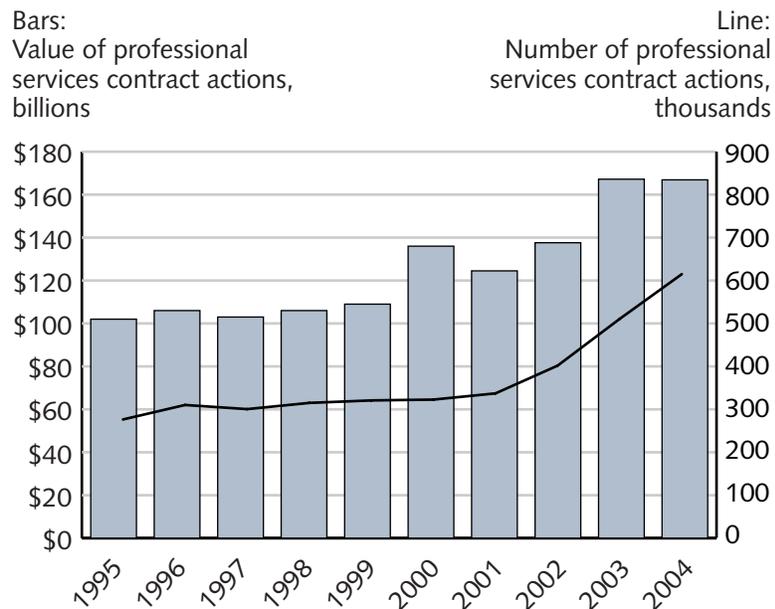
Table 2.1 provides key data for 2004, both overall data and data for each of the five main services categories.

As noted, the largest segments in terms of value are PAMS and R&D, with \$42 billion and \$41 billion worth of contract actions, respectively. The largest numbers of contract actions were awarded in the PAMS and FRS categories, two markets with large numbers of small tasks. It stands to reason that the sizes of the average contract actions in both the PAMS and FRS segments were at the lower end of the range, \$230,998 and \$242,815, respectively. The largest average contract actions were found in the R&D segment, at \$848,300 per contract action. The largest numbers of competitors were also found in the PAMS and FRS segments, further highlighting the fragmented nature of those markets—many players pursuing large numbers of small contracts. The R&D sector represents the other end of the spectrum, relatively fewer players (a bit fewer than 7,700) chasing relatively fewer but larger contract actions.

Evolution of the Federal Professional Services Industry, 1995–2004

In this chapter:

- Data on the evolution of the federal professional services industry in general
- Market growth trends by service type
- Types of contract actions, by both value and number of contract actions
- Distribution of contract actions
- Trends in growth in the number of contractors by service type
- Distribution of contractors among categories
- Trends in distribution of market share to small, medium, and large firms
- Top 20 contractors

Figure 3.1. Growth of the Federal Professional Services Market, 1995–2004

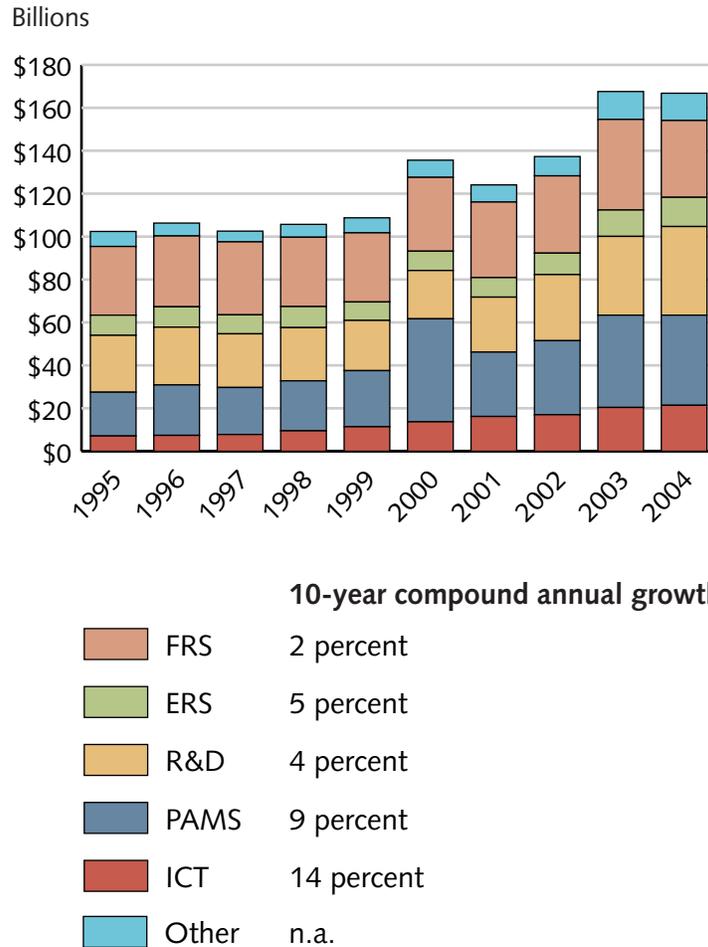
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Growth in Federal Services Contracting — Figure 3.1

During the past decade, 1995–2004, the federal professional services market has seen a marked increase in both the total value and the total number of contract actions. Figure 3.1 shows that the total value of contract actions grew from \$102 billion in 1995 to \$167 billion in 2003 and 2004, representing a compound annual growth rate (CAGR) for value of contract actions of 6.1 percent. The total number of contract actions more than doubled during this same time period, delivering a CAGR for number of contract actions of 8.5 percent.

Growth in the federal professional services market has been lumpy. A close examination of figure 3.1 shows that the market was essentially flat at around \$100 billion until 2000, despite a decade of policy recommendations that the government should outsource more of its service functions in order to create more efficiencies. The first spike in demand was in 2000, as the government turned to outside contractors to help deal with the Y2K computer conversion problem. Contracts declined in value and number in 2001, until the events of September 11, 2001, and the wars in Afghanistan and Iraq again created the need to turn to outside providers for services.

Figure 3.2. Growth Trends in the Federal Professional Services Market, by Service Category, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

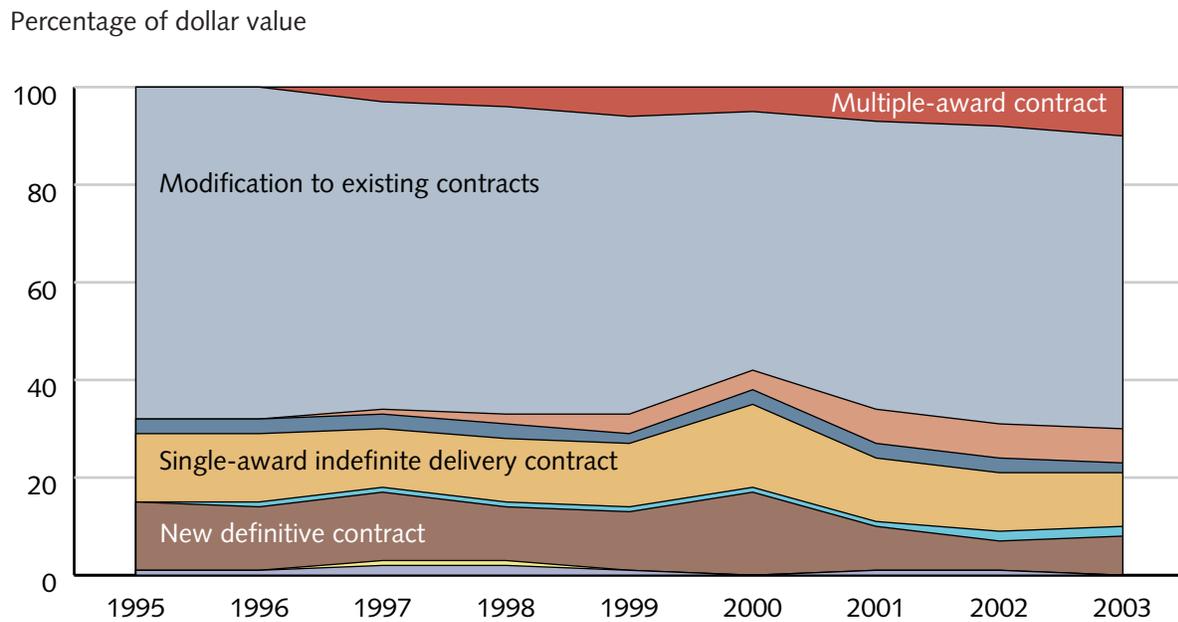
Growth by Market Segment — Figure 3.2

During the past decade, the fastest-growing market segments were the ICT services and the PAMS categories, with 14 percent and 9 percent compound annual growth. Although they are very large and represent almost half the services market, the R&D and FRS segments generated much slower growth: 4 percent for R&D, and only 2 percent for FRS.

Evolution of Contracting Vehicles — Figures 3.3 and 3.4

Figures 3.3 and 3.4 on the following two pages provide the makeup of overall contract actions awarded by type of contract. These figures show two important trends in the evolution of federal services contract types: modifications to existing contracts have been increasing, and large, multiple-award contracts have also been increasing.

Figure 3.3. Types of Federal Professional Services Contract Actions, by Percentage of Dollar Value of Contract Actions, 1995–2003

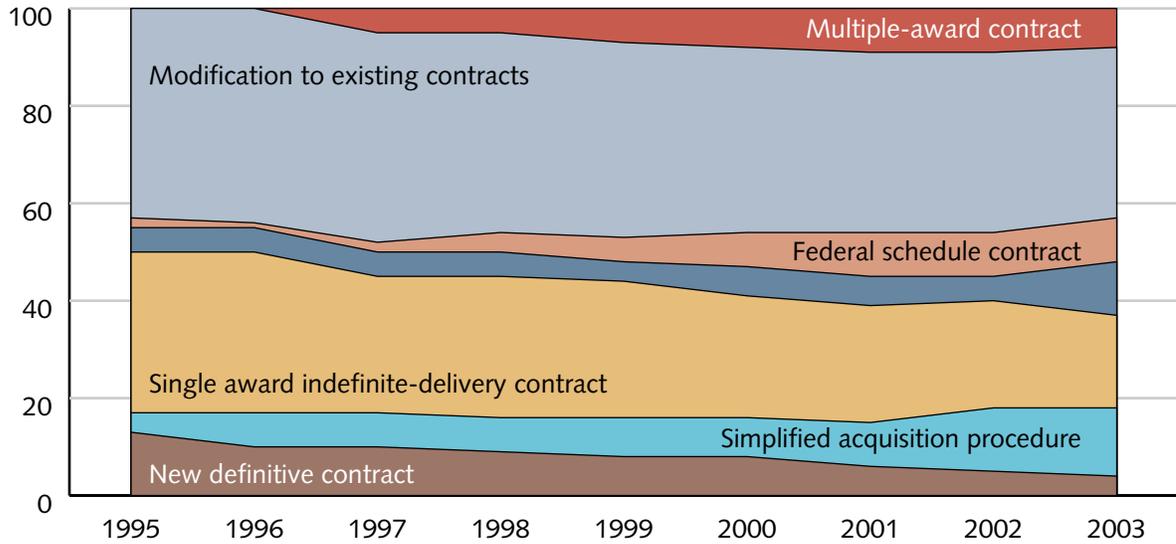


	9-year compound annual growth rate
Multiple-award contract	235%
Modification to existing contracts	5%
Federal schedule contract	57%
Basic ordering agreement	4%
Single-award indefinite delivery contract	1%
Simplified acquisition procedure	65%
New definitive contract	-1%
Contract superseding letter	6%
Initial-letter contract	-7%

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Figure 3.4. Types of Federal Professional Services Contract Actions, by Percentage of Number of Contract Actions, 1995–2003

Percentage of number of contract actions



	9-year compound annual growth rate
Multiple-award contract	187%
Modification to existing contracts	6%
Federal schedule contract	36%
Basic ordering agreement	16%
Single award indefinite-delivery contract	2%
Simplified acquisition procedure	29%
New definitive contract	-5%
Contract superseding letter (not visible)	8%
Initial-letter contract (not visible)	-2%

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Within this growing marketplace, the federal government has been changing the way it contracts for services. There are nine major categories of contract action types:

- Initial-letter contract,
- Definitive contract superseding letter,
- New definitive contract,
- Purchase order/blanket purchase agreement (BPO) with simplified acquisition procedures,
- Single-award indefinite delivery contract (IDC),
- Orders under basic ordering agreement (BOA),
- Order/modification under federal schedule contract,
- Modification to existing contract and exercise of extension options, and
- Multiple-award contract.

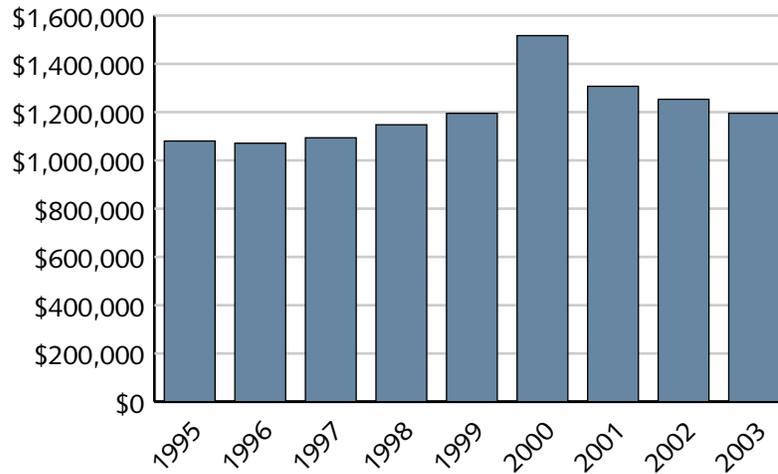
The first trend is that modifications to existing contracts represent more than half of the market in dollar terms. This implies that in any one year much of the market is already spoken for and that incumbents on existing programs retain a significant presence in the market. Even more striking is that the only two categories of contract action types in decline have been initial-letter contracts (7 percent annual decline in dollar volume) and new definitive contracts (1 percent annual decrease in dollar volume). This further reinforces the point that opportunities for entering the market by simply winning new contracts have become more limited.

The second important trend is where the opportunities for new entrants have developed. Over the past decade, there has been dramatic growth in the use of the newer, larger, multiple-award contract vehicles of either government-wide acquisitions contracts (GWACs) or department-wide indefinite delivery indefinite quantity (IDIQ) contracts. The dollar volume associated with multiple-award contracts grew at a 235 percent compound annual growth rate during 1995–2003, the value of federal schedule contracts has grown 57 percent per annum, and the worth of simplified acquisition procedure contracts has expanded 65 percent a year. By 2003, one-third of all contract actions were multiple-award, federal schedule, and simplified contracts.

A list of GWACs as of May 2006 includes:

- General Services Administration (12 GWACs): ACES, Alliant, Alliant Small Business, ANSWER, 8(a) STARS, HUBZone Contracts, ITOP II, Millennia, Millennia Lite, VETS, Smart Cards, Virtual Data Center Services;
- National Institutes of Health (3 GWACs): CIO-SP2i, Image World 2 New Dimensions, and Electronic Commodities Store (ECS) III;
- Department of Commerce: COMMITTS NexGen;
- National Aeronautics and Space Administration: SEWP III; and
- Environmental Protection Agency: READ.

To participate in the services industry now and in the future, it will be necessary for companies to compete for and participate in one or more of these multiple-award or federal schedule contract vehicles. Furthermore, the competitive implications of the growth in GWAC and IDIQ contract types is that industry participants must now compete twice—once to qualify for the overarching contracting vehicle and again for each major task under these IDIQs. Because half the market is represented by modifications to existing contracts and opportunities are reduced for winning new definitive contracts, a company that fails to win a position in one

Figure 3.5. Average Value of Federal Professional Services Contracts, 1995–2003

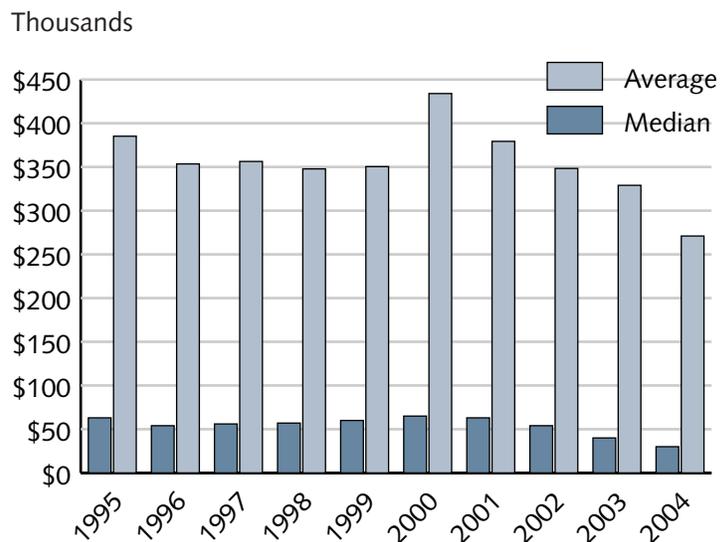
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

of these broad overarching vehicles has increasingly limited opportunities to enter the market, except through mergers and acquisitions.

Average Value of Contracts — Figure 3.5

Another dynamic under way in the services market has been the changes in average contract size and contract action size. Figure 3.5 shows that the value of the average contract during the past 10 years has grown overall from a little more than \$1 million per contract to \$1.2 million. One likely driver of this phenomenon is the increased use of the large multiple-award and federal schedule contract vehicles.

Figure 3.6. Average and Median Values of Federal Professional Services Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Average and Median Values of Contract Actions — Figure 3.6

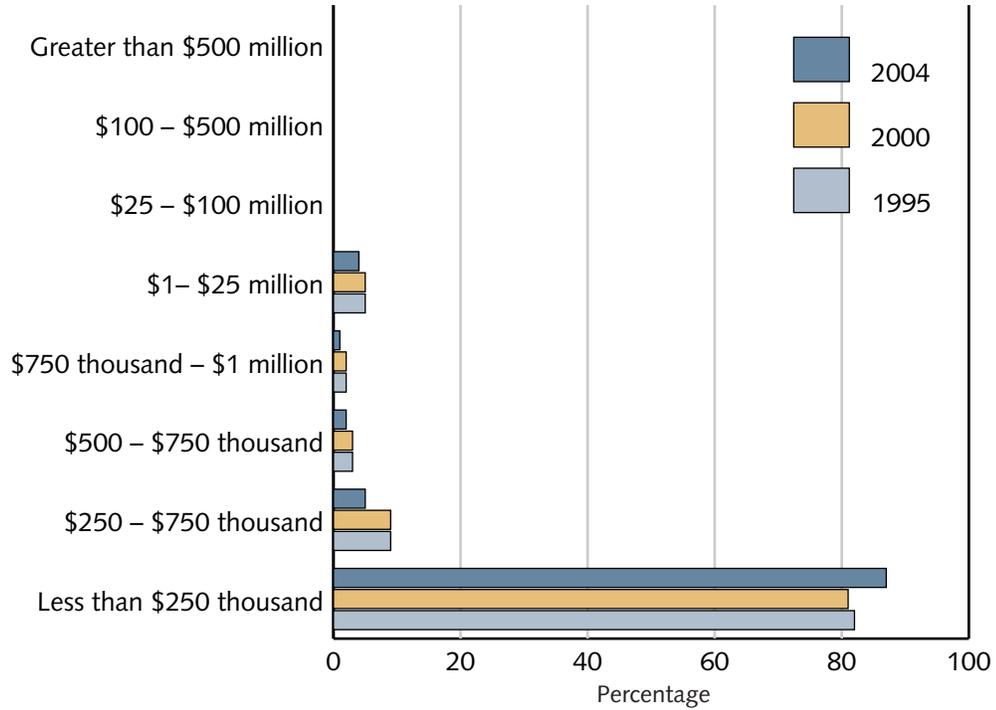
In contrast, as figure 3.6 shows, there has been a dramatic decline in the average and median values of individual contract actions during the past decade, in particular since 2001. Over the past 10 years, the average contract action size has decreased 30 percent, to \$271,000 in 2004, while the median contract action value has dropped more than 50 percent, to \$30,000 in 2004. Once again, the increased use of broad multiple-award contract types with their multiple contract actions underneath them has been driving this trend.

Distribution of Contract Actions — Figure 3.7

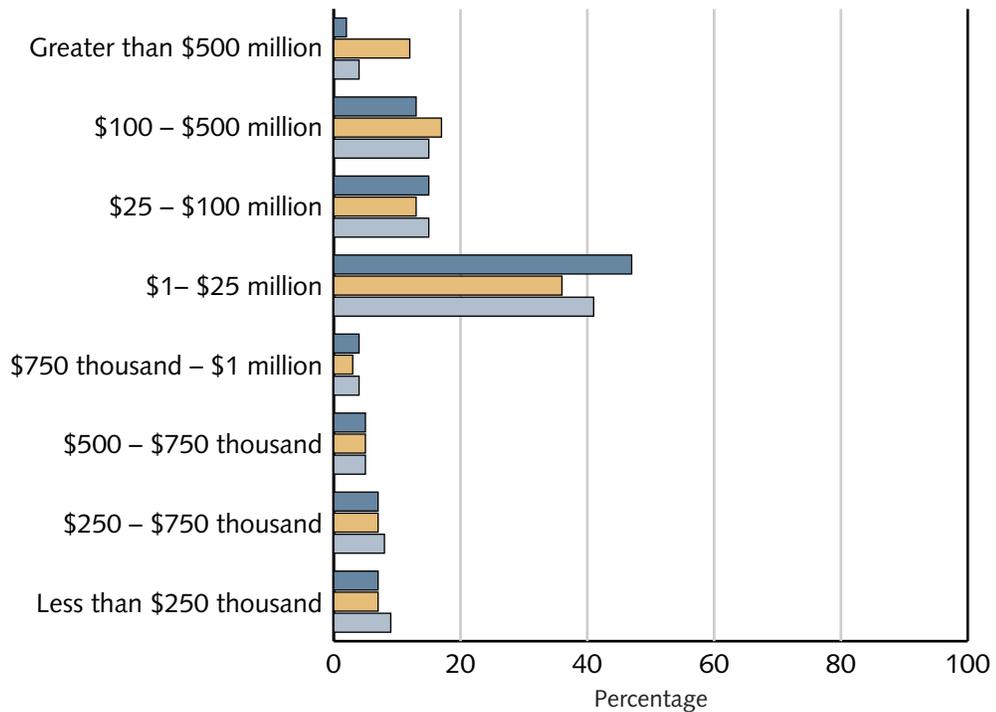
The distribution pattern of services contract actions shows that contract actions worth \$250,000 or less represent 85 percent of all actions awarded; however, the cumulative value of all these contract actions accounted for less than 10 percent of the total dollars awarded. This represents significant activity for a relatively small part of the market. Thus, 10 percent of the contract actions received approximately 85 percent of total federal dollars spent on professional services, with the sweet spot of the market represented by contracts with the value of \$1–25 million.

Figure 3.7. Distribution of Contract Actions, 1995, 2000, and 2004

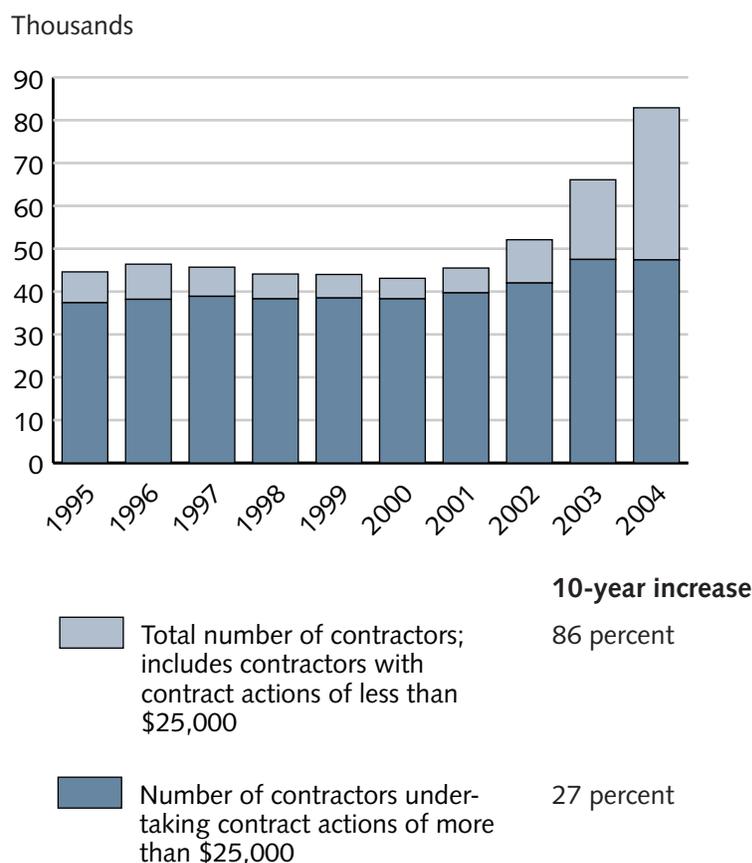
Distribution of contract actions, by size of actions



Distribution of contract dollars, by size of actions



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Figure 3.8. Number of Federal Professional Services Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of the Services Contractor Base — Figure 3.8

The overall professional services industrial base remained surprisingly stable at approximately 45,000 contractors for most of the past decade; however, since 2001, the size of the industry has exploded—almost doubling to almost 83,000 contractors in 2004. Thus, while the overall federal professional services market expanded 64 percent during the past decade, the number of contractors grew 86 percent, with the majority of that growth occurring in the most recent four years.

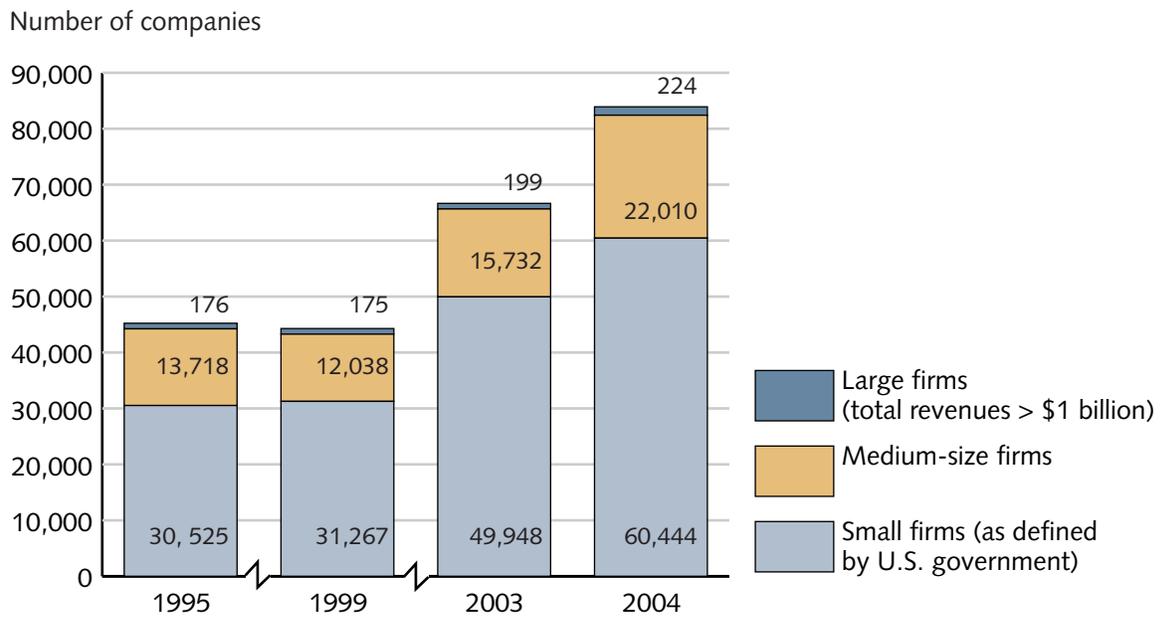
A more detailed look at the structure of the professional services industrial base indicates that the bulk of the growth in the number of contractors has occurred through the entry of firms undertaking only contract actions worth \$25,000 or less. It is difficult to determine whether this segment of the industrial base represents a permanent addition or whether it represents firms dabbling in a rapidly growing market. The core industrial base of contractors undertaking larger contract actions has expanded far more modestly. Figure 3.8 shows that the number of contractors undertaking the larger contract actions has risen from 37,000 to 47,000, an increase of only 27 percent.

The professional services industrial base can be further segmented into small, medium, and large firms. The government has issued rules for what constitutes a small business—\$8 million or less in total corporate revenues in most segments, and \$21 million or less in total corporate revenues for information technology companies—in order to implement small-business set-aside regulations. For the purposes of this analysis, the CSIS study team adopted the government definition of a small business. Large companies were defined as those with annual corporate revenues greater than \$1 billion, and medium-size companies were all those that fell between the small and large categories.

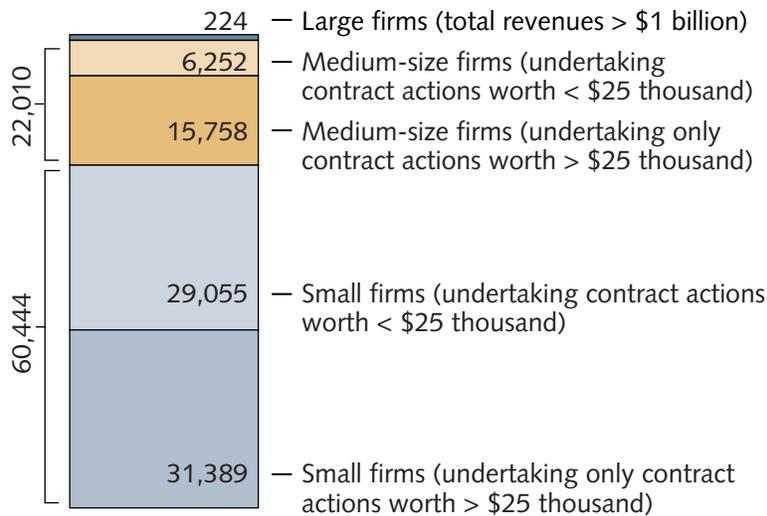
From 1995 to 1999, two-thirds of the industrial base was composed of small firms. Since then the ranks of small businesses have doubled, to the point where three-quarters of the industry is currently made up of small companies. The number of medium-size firms has increased by about 75 percent during that same time period.

Another way of characterizing the industry would be on the basis of the amount of federal services contracting a company undertakes, not the overall size of the firm. A preliminary analysis of the 2004 data indicates that, of the 83,000 professional services contractors, only a few thousand (2,000–4,000) have \$8 million or more of federal professional services revenues, and a few hundred firms have \$100 million or more of services revenues. This implies that the vast majority of the industry comprises small firms or medium-size firms that undertake relatively little federal professional services work relative to their overall corporate size.

Figure 3.9. Number of Small, Medium, and Large Firms Participating in the Federal Services Industry, 1995, 1999, 2003, and 2004



Details for 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

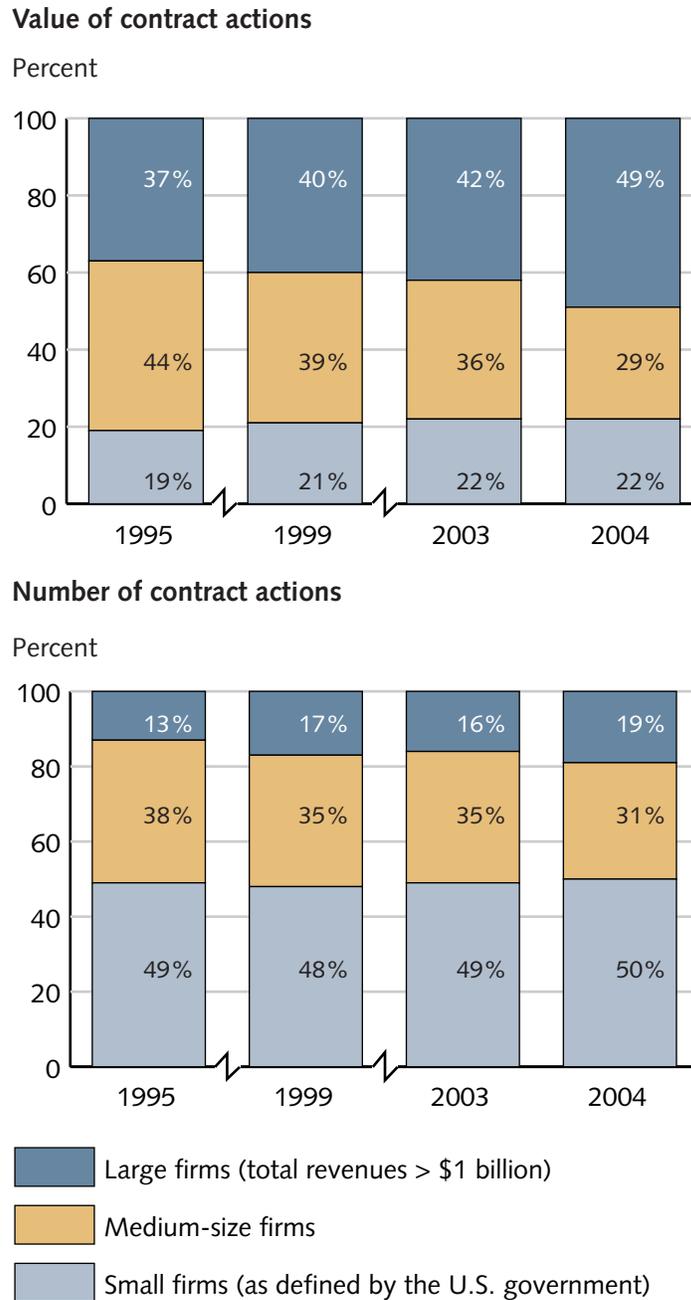
Segmentation of the Services Contractor Base — Figure 3.9

Figure 3.9 shows that one-half of the small firms and one-third of the medium-size firms execute only contract actions that are smaller than \$25,000. Almost all of the companies undertaking the small contract actions are small businesses. It remains to be seen what proportion of these small-business, small-contract participants will remain in this market should federal professional services budgets come under significant pressure at some point in the future.

Evolution of Market Shares — Figure 3.10

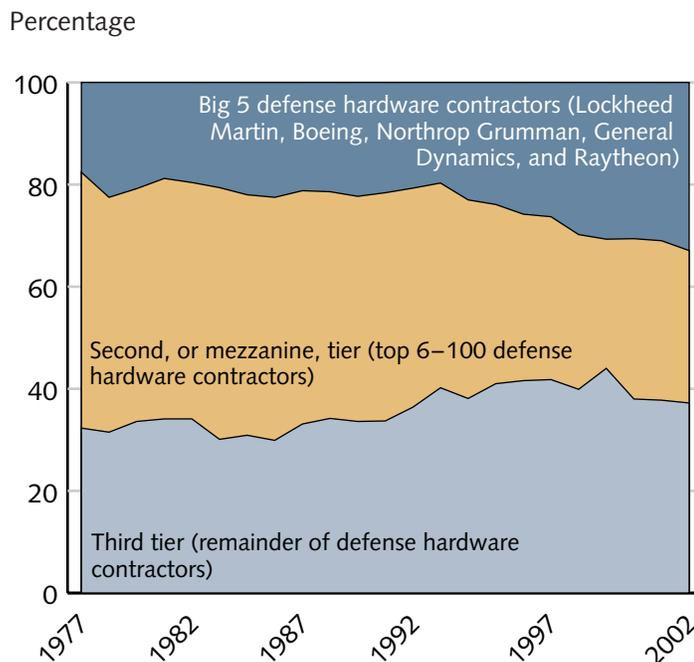
When the market shares held by the small, medium, and large companies in the industry are examined, it is clear that middle-tier companies have suffered a significant erosion of their relative share. In 1995, middle-tier companies captured 44 percent of the total value of federal professional services contracts. By 2004, the middle-tier companies were able to capture only 29 percent of that value. Small-business set-aside laws and other policies protecting small firms have clearly worked in the professional services industry. Small companies have sustained a 19–22 percent market share in the value of prime contracts (their share of the market is larger if the value of subcontracts is included). The large companies in this industry have been particularly active via mergers and acquisitions and have been able to increase their market share. Thus, the middle tier has been squeezed from above by consolidation and from below by small businesses holding on to their share of the market.

Figure 3.10. Market Share of Small, Medium, and Large Firms Participating in the Federal Services Industry, by Value of Contract and by Number of Contract Actions, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Figure 3.11. DOD Prime Contract Dollars Awarded to Small, Medium, and Large Contractors, 1977–2002



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of Defense Hardware Market Shares — Figure 3.11

This squeezing of the middle tier has also been seen in the defense hardware industrial base. During the past decade, the Top 5 defense hardware companies (Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, and Raytheon) have increased their market share from about 20 percent to about 35 percent of prime contract value awarded. The third tier of the defense hardware industry—in part assisted by small-business set-aside policies—has actually expanded market share to 37 percent of the value of contracts awarded. Again squeezed from above and below, the mezzanine tier of the defense hardware industry saw its market share decline from 50 percent to 30 percent during that same period.

Table 3.1. Distribution of Contractors in the Five Professional Services Categories, 1995 and 2004, percentage

	1995					2004				
	ICT	PAMS	R&D	ERS	FRS	ICT	PAMS	R&D	ERS	FRS
ICT	100	33	19	25	9	100	44	13	22	14
PAMS	7	100	13	6	6	10	100	10	8	9
R&D	9	30	100	9	4	11	35	100	11	9
ERS	11	13	8	100	12	11	17	6	100	16
FRS	1	4	1	3	100	4	11	3	9	100

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Cross-Category Participation by Contractors — Table 3.1

Many of these contractors provide the federal government with services in more than one category. Table 3.1 shows, as would be expected, that there is considerable overlap between contractors undertaking both ICT services and PAMS contract actions. In 2004, 44 percent of ICT contractors were also active in the PAMS category, and that interrelationship has only increased over the past decade. The other area of substantial and growing overlap, revealing the increased demand for studies, is between contractors undertaking both R&D work and PAMS services. On a small scale, there are more ERS and FRS firms undertaking PAMS work, again reflecting the growth in studies and analyses. Finally, ICT companies are taking on more FRS work. Overall, the past decade has witnessed the federal professional services industry becoming much more integrated.

The Top 20 Contractors — Table 3.2

An analysis of the Top 20 contractors (by value of contract actions) in the federal professional services industry further reveals how the industry has concentrated over time. The Top 20 companies in the industry had a 31 percent market share in 1995, but almost a 37 percent share in 2004. It is interesting, though, that the Top 5 companies have maintained essentially the same market share (19–21 percent) during the past decade. Furthermore, the definition of critical mass has changed. In 1995, contract awards of a few hundred million dollars allowed a company to be contractor number 20; in 2004 that ranking required annual awards of \$1 billion.

The composition of the Top 20 contractors also changed significantly between 1995 and 2004. As in the defense hardware market, there are fewer commercial conglomerates in the professional services industry today compared with 1995 (11 of the companies on the 1995 Top 20 list compared with 8 in 2004). The major new entrants in the Top 20 are the heavy engineering firms, which in 1995 accounted for just one of the Top 20 (Bechtel) but in 2004 made up four of the Top 20 (Halliburton, Bechtel, Fluor, and BWXT). Clearly this is a reflection of the Afghanistan and Iraq conflicts. Finally, defense hardware and platform companies are increasing their presence in the federal professional services market.

Table 3.2. Top 20 contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$, thousands)	Company	Value of contract actions (\$, thousands)
1	Lockheed Martin	9,189,708	Lockheed Martin	9,283,701
2	Westinghouse	3,216,178	Halliburton	7,613,166
3	Boeing	2,959,228	Northrop Grumman	7,141,335
4	Northrop Grumman	2,515,868	Boeing	6,990,515
5	Raytheon	1,624,159	Bechtel	3,560,520
	Subtotals for Top 5	19,505,141		34,589,236
6	CSC	1,505,354	SAIC	3,396,724
7	Rockwell	1,464,352	Raytheon	2,922,163
8	SAIC	1,236,287	EDS	2,142,829
9	Loral	1,203,619	L-3	2,054,880
10	Sandia Corporation	1,159,740	DynCorp	2,054,708
11	General Electric	1,121,452	CSC	1,933,198
12	TRW	1,097,035	General Dynamics	1,736,945
13	DynCorp	640,453	Westinghouse	1,711,543
14	Newport News	630,387	Booz Allen Hamilton	1,465,329
15	Bechtel	496,040	BAE Systems	1,350,732
16	IBM	446,053	Sandia Corporation	1,228,251
17	Unisys	425,543	Fluor	1,217,295
18	MITRE	380,305	CACI	1,137,641
19	United Technologies	377,825	BWXT	1,123,375
20	General Dynamics	360,028	Titan	1,047,445
	Totals for Top 20	32,049,614		61,112,295

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Details of Top 20 Contractors — Tables 3.3 and 3.4

The types of services in which industry leaders have specialized have also changed over time. Ten years ago Lockheed Martin received the bulk of its professional services contracts for R&D and FRS work. Today, R&D is still the largest of Lockheed Martin's services activities, but its FRS work has been replaced by a strong presence in the ICT and PAMS segments. Northrop Grumman has built leading positions in both the ICT and PAMS segments. Tables 3.3 and 3.4 on the following two pages provide further details about the Top 20 contractors.

Table 3.3. Top 20 Contractors, by Activity Category, 1995 (dollars, thousands)

Contractor	ICT	PAMS	R&D	ERS	FRS	Other	Total
Lockheed Martin	179,678	1,021,073	4,537,281	825,556	2,519,757	106,363	9,189,708
Westinghouse	213,000	101,889	218,167	22,795	2,865,366	(205,039)	3,216,178
Boeing	219,368	404,864	2,053,125	268,426	1,663	11,782	2,959,228
Northrop Grumman	389,466	783,388	1,060,062	206,657	56,757	19,538	2,515,868
Raytheon	44,639	574,654	635,547	170,677	195,087	3,555	1,624,159
CSC	857,588	255,358	234,933	27,645	127,670	2,160	1,505,354
Rockwell	1,168	195,128	763,278	465,145	17,862	21,771	1,464,352
SAIC	279,260	451,613	337,129	6,041	98,921	63,323	1,236,287
Loral	194,571	154,621	503,876	195,614	147,931	7,006	1,203,619
Sandia Corporation	0	0	34	0	1,159,706	0	1,159,740
General Electric	0	98,694	606,956	220,530	190,423	4,849	1,121,452
TRW	30,103	312,428	474,497	16,295	261,267	2,445	1,097,035
DynCorp	28,917	188,497	6,079	247,362	169,487	111	640,453
Newport News	0	120,571	10,045	497,918	1,275	578	630,387
Bechtel	0	171,725	7,184	5,335	200,240	111,556	496,040
IBM	120,787	29,396	131,911	164,284	47	(372)	446,053
Unisys	156,763	45,430	158,625	63,273	1,006	446	425,543
MITRE	10,710	88,116	273,833	0	0	7,646	380,305
United Technologies	0	14,729	274,775	86,804	770,000	(768,483)	377,825
General Dynamics	0	142,062	129,637	78,605	7,883	1,841	360,028
Total	2,726,018	5,154,236	12,416,974	3,568,962	8,792,348	(608,924)	32,049,614

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 3.4. Top 20 Contractors, by Activity Category, 2004 (dollars, thousands)

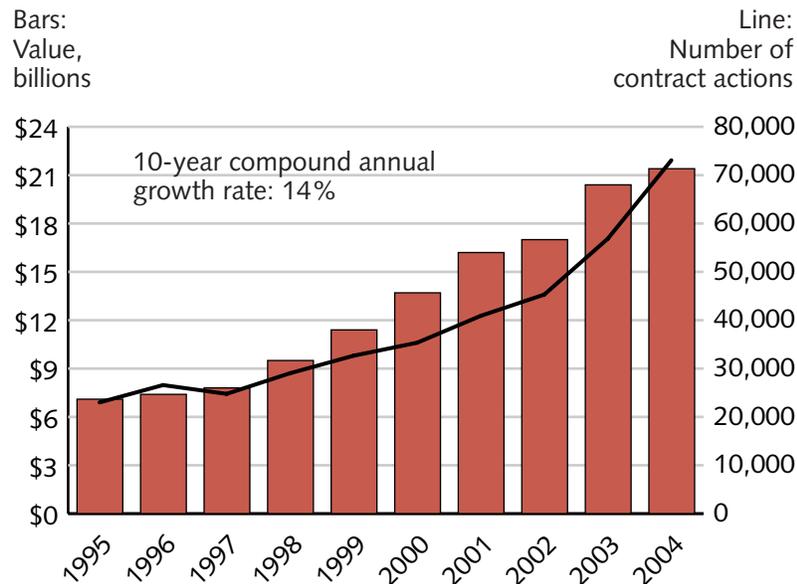
Contractor	ICT	PAMS	R&D	ERS	FRS	Other	Total
Lockheed Martin	980,480	1,448,445	5,621,741	1,009,125	71,923	151,987	9,283,701
Halliburton	0	145,839	6,202,586	0	1,264,740	1	7,613,166
Northrop Grumman	1,574,060	2,188,034	2,663,980	338,941	205,700	170,620	7,141,335
Boeing	11,667	693,994	5,920,507	282,143	23,785	58,419	6,990,515
Bechtel	0	244,396	475,053	0	1,922,603	918,468	3,560,520
SAIC	1,735,854	1,108,401	387,513	43,292	20,705	100,959	3,396,724
Raytheon	74,121	814,020	1,178,901	593,741	122,058	139,322	2,922,163
EDS	2,077,002	35,353	399,152	593,741	109	(962,528)	2,142,829
L-3	122,574	494,538	199,250	27,100	7,216	1,204,202	2,054,880
DynCorp	266,515	856,861	32,651	604,145	293,042	1,494	2,054,708
CSC	923,776	558,513	306,280	30,841	151,089	(37,301)	1,933,198
General Dynamics	269,840	11,855	624,490	501,579	9,375	319,806	1,736,945
Westinghouse	0	1,200	0	0	1,592,657	117,686	1,711,543
Booz Allen Hamilton	419,089	942,097	57,431	11,333	169	35,210	1,465,329
BAE Systems	180,523	577,282	425,828	132,265	26,949	7,885	1,350,732
Sandia Corporation	0	0	2,000	0	1,228,100	(1,849)	1,228,251
Fluor	0	69,988	(19,797)	0	816,404	350,700	1,217,295
CACI	295,441	519,396	123,751	147,763	1,452	49,838	1,137,641
BWXT	0	11,096	0	0	1,112,279	0	1,123,375
Titan	225,672	654,977	119,505	39,830	97	7,364	1,047,445
Total	9,156,614	11,376,285	24,720,822	4,355,839	8,870,452	2,632,283	61,112,295

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Information and Communications Technology Services

In this chapter:

- 10-year summary of ICT services
- Top 9 customers for ICT services
- Market growth by value and number of contract actions
- Median and average value of contract actions
- Number of contractors
- Market share trends of small, medium, and large companies
- Top 20 contractors (1995 and 2004 compared)

Figure 4.1. Growth of the Federal ICT Services Market, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

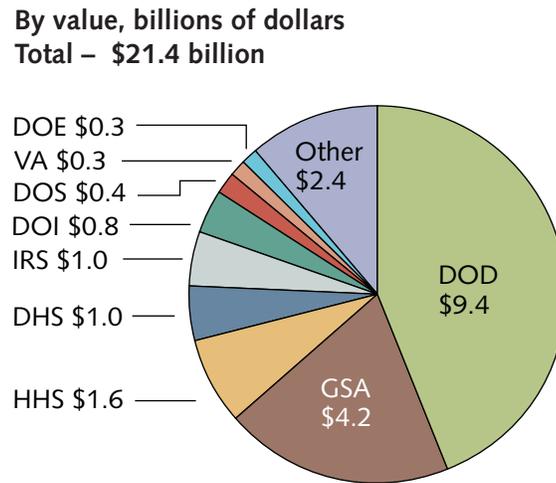
ICT Services Market Growth — Figure 4.1

Federal information and communications technology (ICT) professional services has been the fastest-growing contracting segment during the past decade, with a compound annual growth rate of 14 percent. The contracting for and outsourcing of information technology services by the federal government has certainly been a key trend of the past 10 years. This has allowed the ICT segment to be the only market segment to exhibit constant growth throughout this period. Overall, the market has grown from \$7.1 billion in 1995 to \$21.4 billion in 2004.

Key ICT Services Market Customers — Figure 4.2

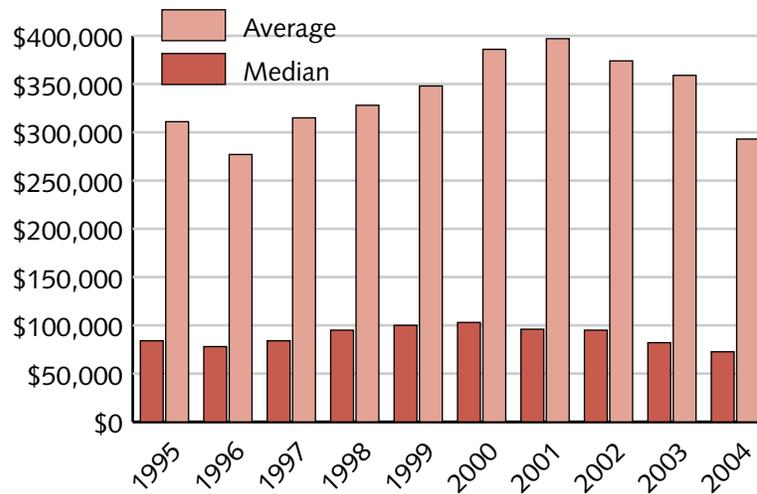
The Department of Defense accounts for almost 50 percent of this market (\$9.4 billion of awards in 2004). Other key customers are the General Services Administration (\$4.2 billion), the Department of Health and Human Services (\$1.6 billion), and the Department of Homeland Security (\$1 billion).

Figure 4.2. Federal ICT Services Market, by Customer, 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

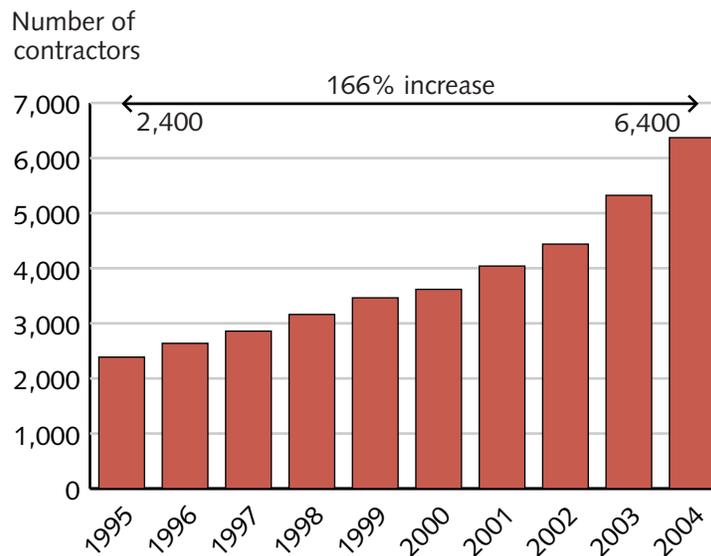
Figure 4.3. Average and Median Values of Federal ICT Services Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of ICT Contract Action Sizes — Figure 4.3

The average and median values of contract actions in the ICT segment rose steadily between 1996 and 2001 but have decreased each year since 2001. By 2004 the average contract action size was \$293,000, and the median was \$73,000.

Figure 4.4. Number of Federal ICT Services Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

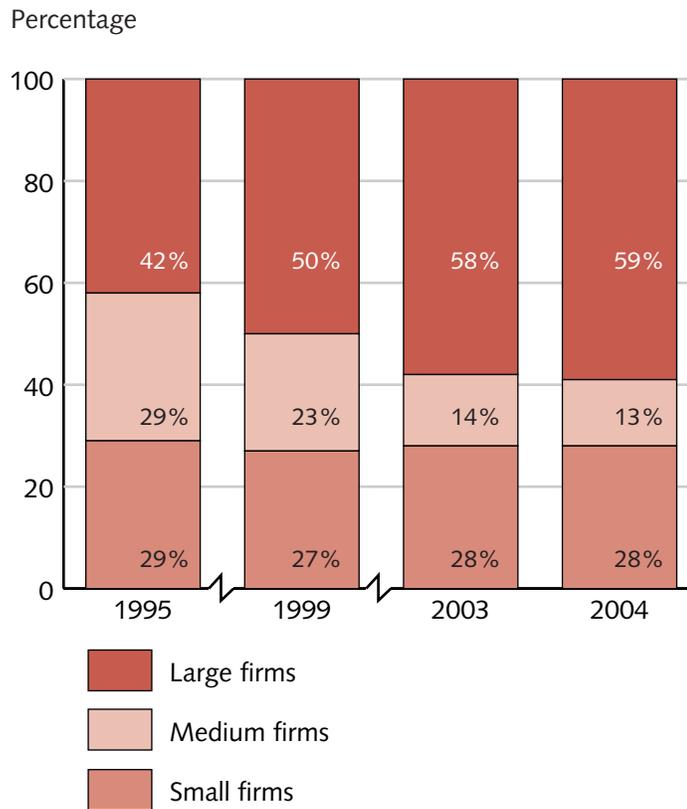
Evolution of the ICT Contractor Base — Figure 4.4

The number of federal ICT services contractors has grown in line with the expansion of the market—both have approximately tripled in the past decade.

Evolution of ICT Contractors' Market Shares — Figure 4.5

Despite the growth in the number of competitors, this is a market that has seen growing concentration. While the market share held by small companies has remained constant at a relatively high 28 percent, the share of contracts held by large companies has grown from 42 percent in 1995 to 59 percent in 2004. Because the minimum critical mass necessary to be deemed a major competitor in the ICT segment is rising and robust mergers and acquisitions activity by the major firms is taking place, the medium-size firms are being severely squeezed.

Figure 4.5. Distribution, by Value of Contracts, of Federal ICT Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 4.1 Percentage of ICT Contractors Participating in Other Professional Services Categories, 1995 and 2004

1995				2004			
PAMS	R&D	ERS	FRS	PAMS	R&D	ERS	FRS
33	19	25	9	44	13	22	14

Cross-Category Participation by ICT Contractors — Table 4.1

Companies in the ICT market have been very active in other services segments. There is a heavy and growing overlap between firms participating in the ICT segment and the professional, administrative, and management support (PAMS) segment, as would be expected. In 2004, 44 percent of all the ICT competitors were also involved in PAMS. There has also been an increase in the number of companies in both the ICT segment and the facilities-related services (FRS) segment, from 9 percent in 1995 to 14 percent in 2004.

Table 4.2. Top 20 Federal ICT Services Contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	CSC	857,588,000	EDS	2,077,001,924
2	Northrop Grumman	389,466,000	SAIC	1,735,854,348
3	SAIC	279,260,000	Northrop Grumman	1,574,060,476
4	Boeing	219,368,000	Lockheed Martin	980,479,822
5	Loral	194,571,000	CSC	923,776,295
	Subtotal for Top 5	1,940,253,000		7,291,172,865
6	EDS	187,180,000	Accenture	471,432,310
7	Lockheed Martin	179,678,000	IBM	466,871,375
8	Unisys	156,763,000	Booz Allen Hamilton	419,088,797
9	IBM	120,787,000	Unisys	365,908,080
10	AT&T	81,129,000	CACI	295,440,549
11	Xerox	68,003,000	Anteon	275,785,694
12	Comsat	64,495,000	General Dynamics	269,839,574
15	MCI	61,294,000	DynCorp	266,514,903
14	Logicon	50,613,000	SRA	257,117,678
15	Booz Allen Hamilton	49,804,000	Bearing Point	241,264,874
16	GTE	45,721,000	Titan	225,672,111
17	CACI	45,345,000	BAE Systems	180,523,121
18	Raytheon	44,639,000	Mantech	158,756,683
19	Mantech	34,238,000	AT&T	145,087,122
20	TRW	30,603,000	L-3	122,574,147
	Total for Top 20	3,160,545,000		11,453,049,882

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

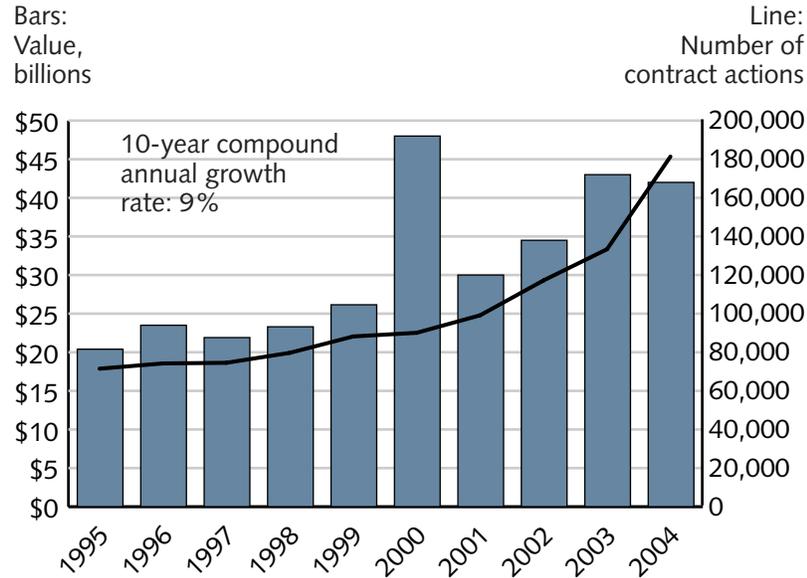
The Top 20 ICT Contractors — Table 4.2

In 1995, the Top 5 ICT services providers controlled 27 percent of the market, while the Top 20 controlled 44 percent. By 2004, the Top 5 providers' share of the market had grown to 34 percent, while the Top 20 had increased their share to 53 percent. See table 4.2 for dollar values of contract actions for the Top 20.

Professional, Administrative, and Management Support Services

In this chapter:

- 10-year summary of PAMS services
- Top 9 customers for PAMS services
- Market growth by value and number of contract actions
- Median and average value of contract actions
- Number of contractors
- Market share trends in distribution of small, medium, large companies
- Top 20 contractors (1995 and 2004 compared)

Figure 5.1. Growth of the Federal PAMS Market, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

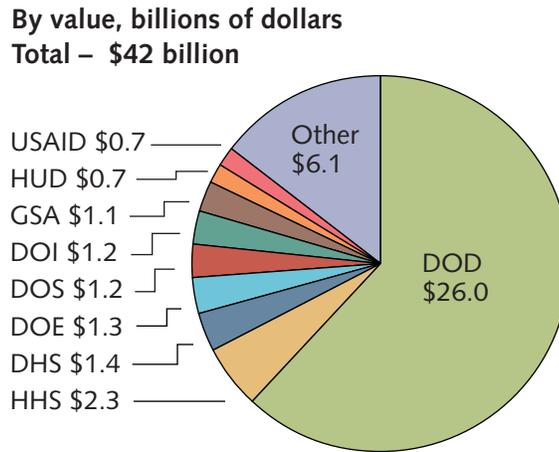
PAMS Market Growth — Figure 5.1

The market for federal professional, administrative, and management support (PAMS) services has witnessed relatively strong growth during the 10 years between 1995 and 2005. From slightly more than \$20 billion, it has climbed at a compound annual growth rate of 9 percent to some \$42 billion. There was one anomalous year in 2000 as the market spiked to \$48 billion worth of contracts in order to deal with the Y2K computer problem.

Key PAMS Customers — Figure 5.2

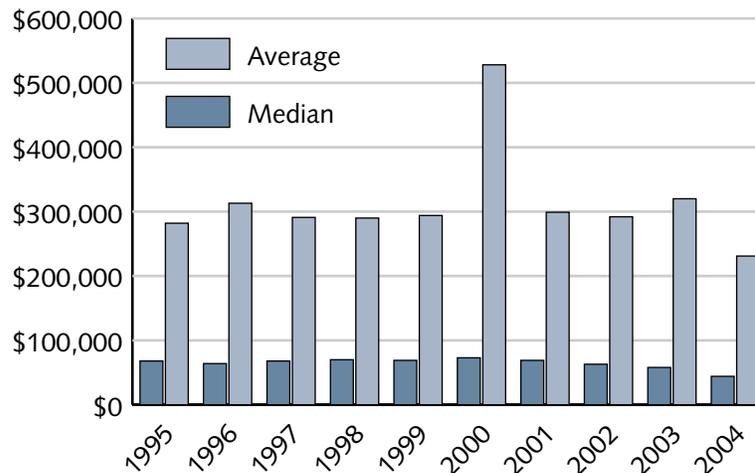
The Department of Defense accounts for almost two-thirds (62 percent) of contract actions—by value—awarded. The Department of Health and Human Services, primarily the National Institutes of Health, was a distant second-largest customer.

Figure 5.2. Federal PAMS Market, by Customer, 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

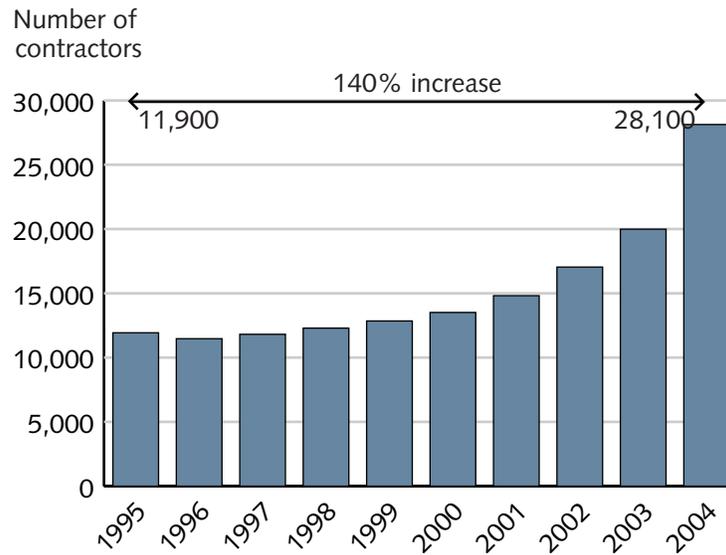
Figure 5.3. Average and Median Values of Federal PAMS Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of PAMS Contract Action Sizes — Figure 5.3

Average and median values for PAMS contract actions remained relatively constant throughout 1995–2004, at around \$300,000 and \$65,000–\$70,000, respectively. The only exception was in 2000, when the average contract action was approximately \$528,000—the result of contract actions awarded in response to the Y2K computer compliance issue.

Figure 5.4. Number of Federal PAMS Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

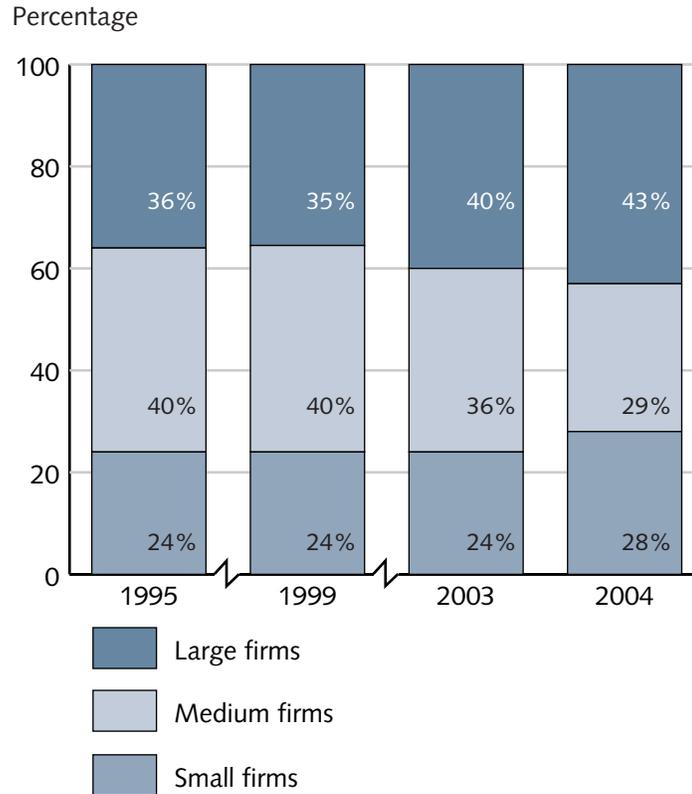
Evolution of the PAMS Contractor Base — Figure 5.4

The number of competitors in the PAMS market has more than doubled during the past 10 years, with the bulk of the increase occurring since 2001 and a very large jump in 2004.

Evolution of PAMS Contractors' Market Shares — Figure 5.5

Similar to all the other segments, the middle tier of the PAMS market has lost market share to the small and large companies. Small firms have increased their share of the PAMS market to 28 percent of the total value of all contract actions awarded in 2004, and large firms have increased their share of the market to 43 percent of contracts awarded. The PAMS segment remains one of the more fragmented parts of the services market.

Figure 5.5. Distribution, by Value of Contracts, of Federal PAMS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 5.1. Percentage of PAMS Contractors Participating in Other Professional Services Categories, 1995 and 2004

1995				2004			
ICT	R&D	ERS	FRS	ICT	R&D	ERS	FRS
7	13	6	6	10	10	8	9

Cross-Category Participation by PAMS Contractors — Table 5.1

Companies in the PAMS segment have for the most part not been very active in other categories. The highest level of cross-segment activity was seen among companies undertaking both PAMS studies and analysis contracts and research and development (R&D) contracts. In 2004, 10 percent of all firms in the PAMS segment also had R&D contracts. There is also some overlap as PAMS firms take on information and communications technology (ICT) contracts.

Table 5.2. Top 20 Federal PAMS Contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	1,021,073,000	Northrop Grumman	2,188,033,992
2	Northrop Grumman	783,388,000	Lockheed Martin	1,448,445,017
3	Raytheon	574,654,000	SAIC	1,108,401,507
4	SAIC	451,613,000	Booz Allen Hamilton	942,097,316
5	Boeing	404,864,000	DynCorp	856,861,451
	Subtotal for Top 5	3,235,592,000		6,543,839,283
6	TRW	312,428,000	Raytheon	814,020,405
7	CSC	255,358,000	Boeing	693,994,100
8	Rockwell	195,128,000	Titan	654,977,293
9	Booz Allen Hamilton	188,990,000	BAE Systems	577,282,520
10	DynCorp	188,497,000	CSC	558,513,909
11	Bechtel	174,725,000	Anteon	524,861,249
12	Loral	154,621,000	CACI	519,396,479
15	General Dynamics	142,062,000	L-3	494,538,192
14	Newport News	120,571,000	Parsons	392,242,308
15	EG&G	110,579,000	MITRE	325,184,774
16	EDS	102,622,000	Battelle	288,228,955
17	Westinghouse	101,889,000	CH2M Hill	263,530,452
18	General Electric	98,694,000	Honeywell	256,650,566
19	Logicon	93,189,000	Bechtel	244,396,349
20	Jacobs Engineering Group	89,606,000	General Dynamics	219,583,624
	Total for Top 20	5,564,551,000		13,371,240,455

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

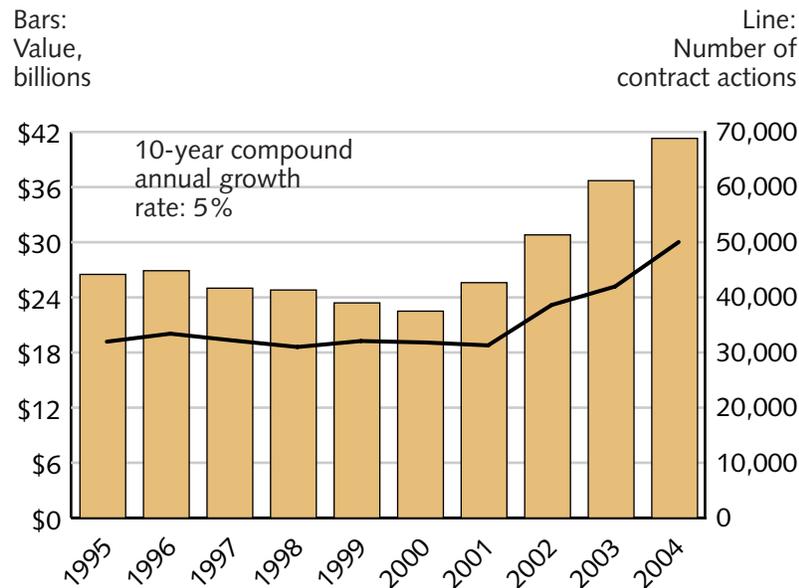
The Top 20 PAMS Contractors — Table 5.2

Reflecting the fragmented nature of the PAMS segment, the market share of the Top 5 players in the federal PAMS market fell from 16 percent of the value of all contract actions awarded in 1995 to 15 percent in 2004.

Research and Development Services

In this chapter:

- 10-year summary of the R&D services market
- Top 8 customers for R&D services
- Market growth by value and number of contract actions
- Median and average value of contract actions
- Number of contractors
- Market share trends in distribution of small, medium, and large companies
- Top 20 contractors (1995 and 2004 compared)

Figure 6.1. Growth of the Federal R&D Services Market, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

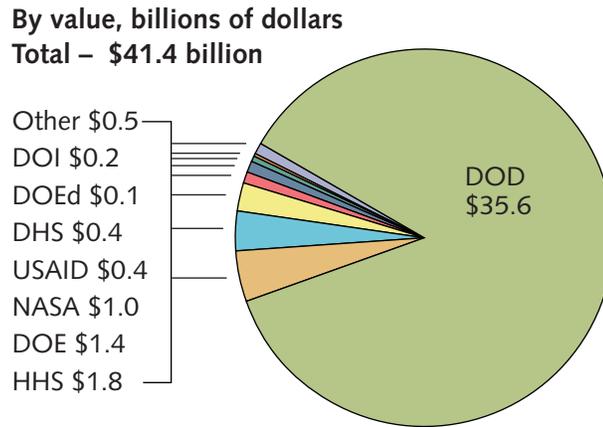
R&D Services Market Growth — Figure 6.1

The federal market for research and development (R&D) services has broadly followed the growth trends of the overall defense budget, declining through the 1990s and then seeing strong growth since 2001. At just over \$41 billion in 2004 contract awards, the R&D services segment is one of the largest in the professional services market.

Key R&D Services Market Customers — Figure 6.2

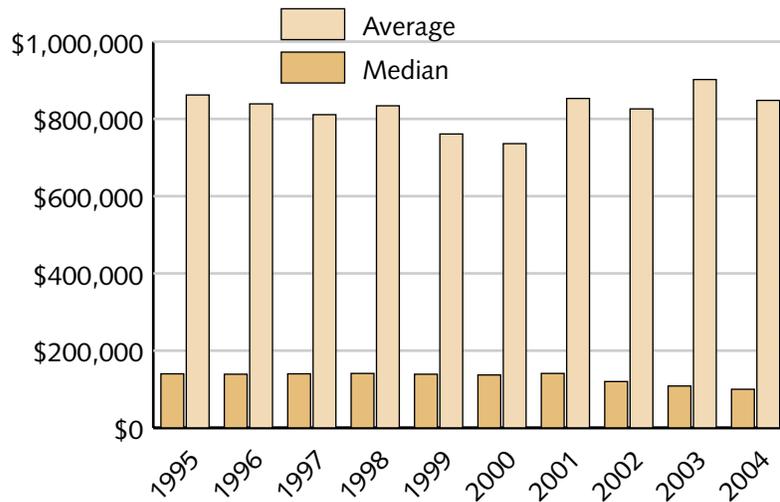
The biggest customer by far for R&D services is the Department of Defense, with 86 percent of the market. The Department of Health and Human Services, primarily the National Institutes of Health, and the Department of Energy are next largest customers.

Figure 6.2. Federal R&D Services Market, by Customer, 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

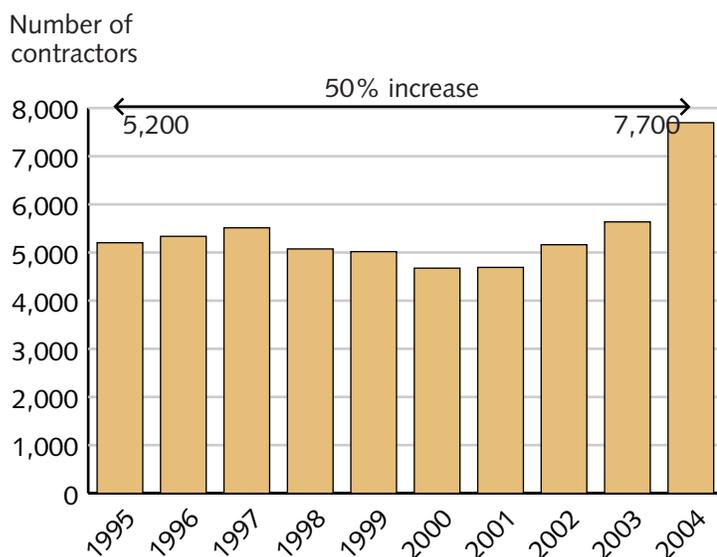
Figure 6.3. Average and Median Values of Federal R&D Services Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of R&D Contract Action Sizes — Figure 6.3

The value of the average R&D services contract action has remained relatively constant during the 1995–2004 period, at slightly more than \$800,000. This makes R&D services the segment with the highest average contract action value in the federal services market and the only segment to experience declines in average contract value.

Figure 6.4. Number of Federal R&D Services Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of the R&D Contractor Base Figure 6.4

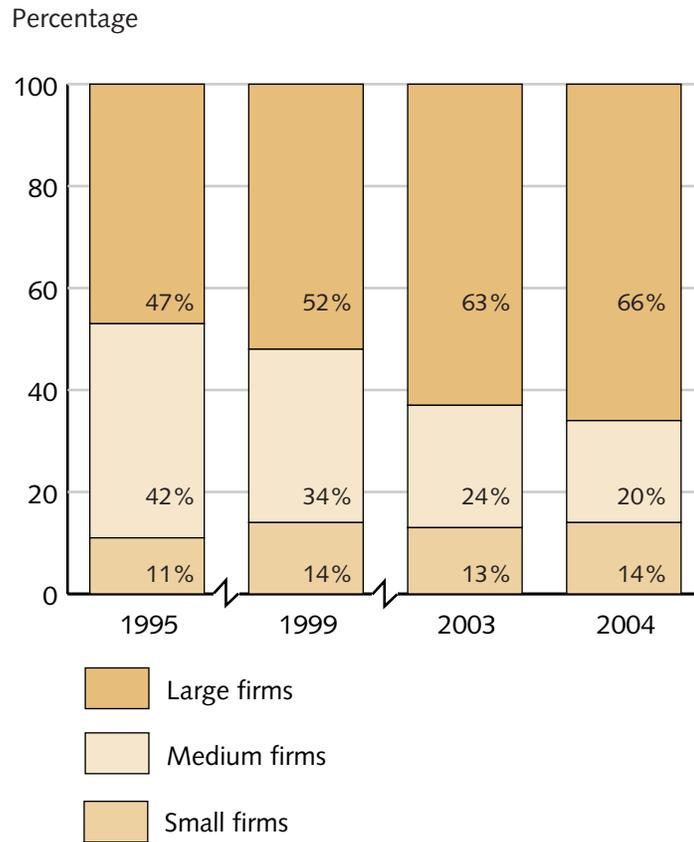
The number of competitors in the R&D market was very stable, at just over 5,000 firms, during the past decade, until the 50 percent growth of the past two years.

Evolution of R&D Contractors' Market Shares — Figure 6.5

The R&D services segment is oriented toward larger firms more than other market segments. This is the segment with the lowest share held by small businesses. In 2004 the Top 20 firms controlled almost two-thirds of this segment.

R&D data are skewed, however, by one large contract. The Halliburton LOGCAP contract is classified as R&D in the FPDS database; at \$6 billion, it is a very large contract and distorts the findings. For example, in figure 6.5, if the Halliburton data are removed, the market shares for small, medium, and large competitors remain fairly stable: approximately 50 percent for large firms, in the 30 percent range for the medium firms, and 12–14 percent for small businesses.

Figure 6.5. Distribution, by Value of Contracts, of Federal R&D Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 6.1. Percentage of R&D Contractors Participating in Other Professional Services Categories, 1995 and 2004

1995				2004			
ICT	PAMS	ERS	FRS	ICT	PAMS	ERS	FRS
9	30	9	4	11	35	11	9

Cross-Category Participation by R&D Contractors — Table 6.1

Companies involved in the R&D segment deepened their participation in every other segment of the professional services market during the 1995–2004 decade. The greatest increase occurred with R&D firms undertaking more professional, administrative and management support (PAMS) contracts—35 percent of all R&D contractors took on PAMS contract actions in 2004—and more facilities-related services (FRS) contracts as well. Because the R&D companies are primarily the major defense hardware firms, this trend is actually reflective of the broader phenomenon of defense hardware companies increasing their presence in the services market from 1995 to 2004.

Table 6.2. Top 20 Federal R&D Services Contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	4,537,281,000	Halliburton	6,202,586,256
2	Boeing	2,053,125,000	Boeing	5,920,506,925
3	Northrop Grumman	1,060,062,000	Lockheed Martin	5,621,740,827
4	Rockwell	763,278,000	Northrop Grumman	2,663,980,264
5	Raytheon	635,547,000	Raytheon	1,178,900,638
	Subtotal for Top 5	9,049,293,000		21,587,714,910
6	General Electric	606,956,000	United Technologies	769,633,435
7	Loral	503,876,000	Battelle	686,595,590
8	TRW	474,497,000	General Dynamics	624,490,216
9	SAIC	337,129,000	Aerospace Corp.	546,245,836
10	United Technologies	274,775,000	Bechtel	475,052,915
11	MITRE	273,833,000	BAE Systems	425,827,974
12	Texas Instruments	273,718,000	SAIC	387,512,647
15	CSC	234,933,000	Unisys	340,786,074
14	Westinghouse	218,167,000	CSC	303,280,189
15	Unisys	158,625,000	MITRE	296,465,752
16	United Defense	142,703,000	L-3	199,250,320
17	IBM	131,911,000	General Electric	166,916,311
18	General Dynamics	129,637,000	Oshkosh	131,105,203
19	Harris	84,287,000	Alion	129,821,602
20	Logicon	77,478,000	CACI	123,751,473
	Total for Top 20	12,971,818,000		27,194,450,448

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

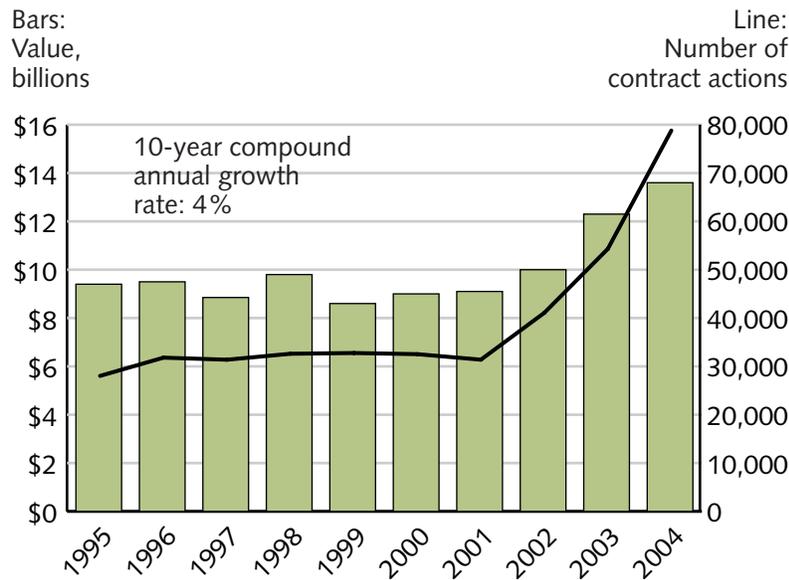
The Top 20 R&D Contractors — Table 6.2

The Top 20 list for federal R&D services contractors is somewhat distorted by the fact that the FPDS database records Halliburton's contracts as R&D. Nevertheless, the R&D market has become more concentrated during the past decade, with the Top 5 federal R&D services contractors receiving 52 percent of all the awards in 2004 compared with 34 percent in 1995. As expected, the Top 5 consist of the major defense hardware contractors.

Equipment-Related Services

In this chapter:

- 10-year summary of ERS
- Top 5 customers for ERS
- Market growth by value and number of contract actions
- Median and average value of contract actions
- Number of contractors
- Market share trends of small, medium, large companies
- Top 20 contractors (1995 and 2004 compared)

Figure 7.1. Growth of the Federal ERS Market, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

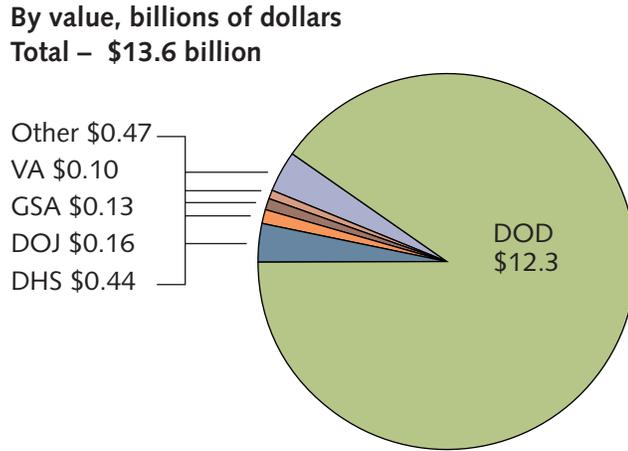
ERS Market Growth — Figure 7.1

From 1995 to 2001 the equipment-related services (ERS) market was essentially flat, despite calls for increased outsourcing of this type of work to private industry. It was not until the wars in Afghanistan and Iraq and the high operational tempo of the U.S. armed forces that the market demonstrated any substantial growth. In the past three years, the total value of ERS contract actions leaped from \$10 billion in 2002 to \$13.6 billion in 2004, and the total number of contract actions almost doubled, from 41,630 to 79,331.

Key ERS Customers — Figure 7.2

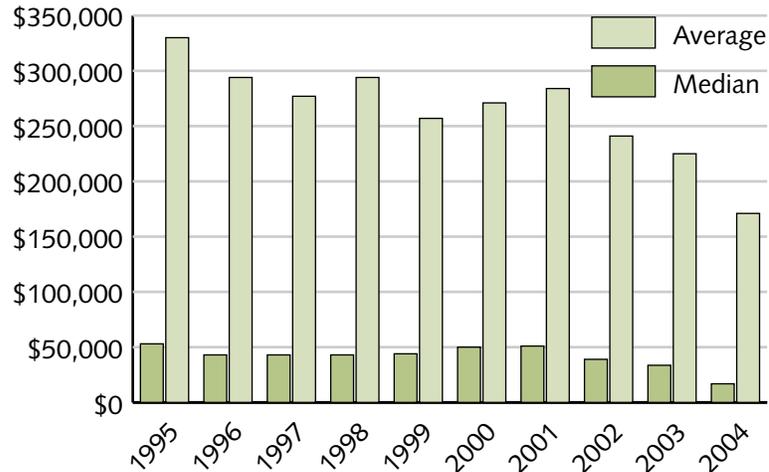
Because the Department of Defense is by far the largest customer for these types of services—90 percent of the 2004 market—this growth can be attributed to the increased operational tempo of U.S. military forces during the past three years.

Figure 7.2. Federal ERS Market, by Customer, 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

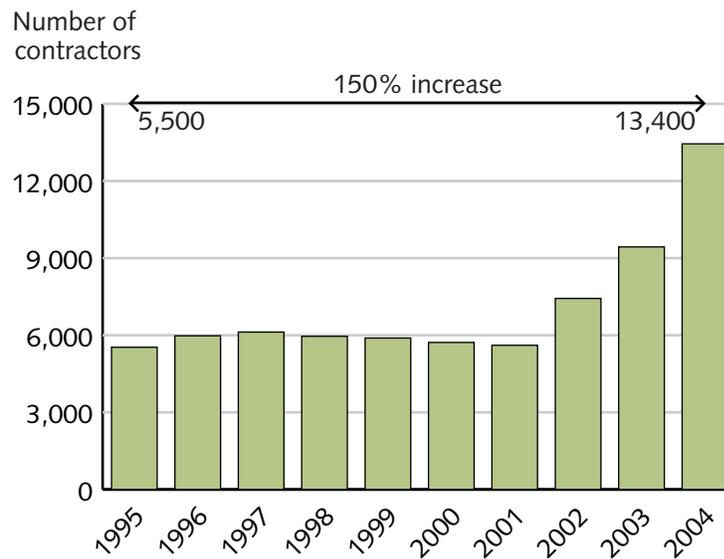
Figure 7.3. Average and Median Values of Federal ERS Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of ERS Contract Action Sizes — Figure 7.3

Because the post-2001 war-related activity has triggered large numbers of small contract actions, the average value of a contract action in the ERS segment has dropped significantly, from \$330,000 to \$171,000. Meanwhile, the median contract action has dropped from \$53,000 to \$16,850.

Figure 7.4. Number of Federal ERS Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

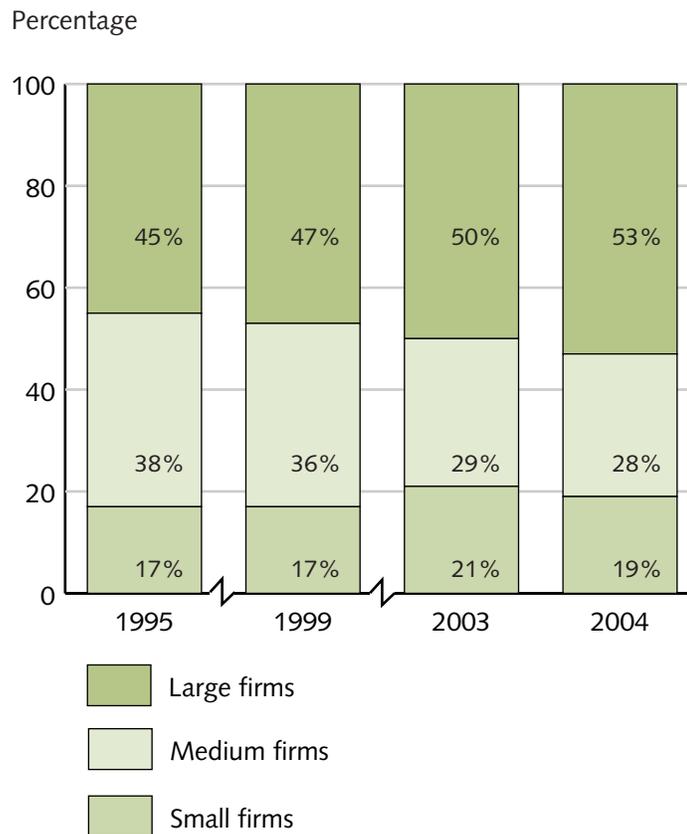
Evolution of the ERS Contractor Base — Figure 7.4

The number of competitors in the ERS market from 1995 to 2001 matched the lack of growth in the segment. The number of federal ERS contractors during that period remained constant at between 5,500 and 6,000 firms. With the jump in the number of ERS contracts since 2002, however, the number of competitors has increased two-and-a-half times, to 13,446 firms.

Evolution of ERS Contractors' Market Shares — Figure 7.5

Although the market share held by small companies has remained relatively constant, the share held by large companies has grown from 45 percent to 53 percent during the past decade. As with the other segments in the professional services industry, the market share of the medium-size companies has shrunk from 38 percent in 1995 to 28 percent in 2004.

Figure 7.5. Distribution, by Value of Contracts, of Federal ERS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 7.1. Percentage of ERS Contractors Participating in Other Professional Services Categories, 1995 and 2004

1995				2004			
ICT	PAMS	R&D	FRS	ICT	PAMS	R&D	FRS
11	13	8	12	11	17	6	16

Cross-Category Participation by ERS Contractors — Table 7.1

The companies in the ERS segment are not very active in other segments. Over the 10-year period, more of the firms became involved in the professional, administrative, and management support (PAMS) segment, and there has been increased penetration of the facilities-related services (FRS) segment, likely a result of combining the repair of equipment with the maintenance of repair facilities.

Table 7.2. Top 20 Federal ERS Contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	825,556,000	L-3	1,154,659,707
2	Newport News	497,918,000	Lockheed Martin	1,009,125,193
3	Rockwell	465,145,000	DynCorp	604,144,779
4	Boeing	268,426,000	Raytheon	593,741,018
5	DynCorp	247,362,000	General Dynamics	501,578,810
	Subtotal for Top 5	2,304,407,000		3,863,249,506
6	General Electric	220,530,000	General Motors	395,250,040
7	Northrop Grumman	206,657,000	Northrop Grumman	338,941,306
8	Loral	195,614,000	Boeing	282,143,165
9	GTE	189,009,000	Vertex	148,617,105
10	Raytheon	170,677,000	CACI	147,762,670
11	IBM	164,284,000	BAE Systems	132,264,967
12	Rolls Royce	95,838,000	Anteon	113,620,684
15	United Technologies	86,804,000	Honeywell	111,696,901
14	General Dynamics	78,605,000	ITT	77,783,692
15	Unisys	63,273,000	CSC	73,914,112
16	AT&T	63,101,000	Xerox	70,264,615
17	Harris	59,515,000	AT&T	66,778,493
18	Xerox	48,266,000	IAP Worldwide Services	64,642,866
19	CSC	27,645,000	Johnson Controls	64,355,985
20	Westinghouse	22,795,000	General Electric	57,348,663
	Total for Top 20	3,997,020,000		6,008,634,770

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

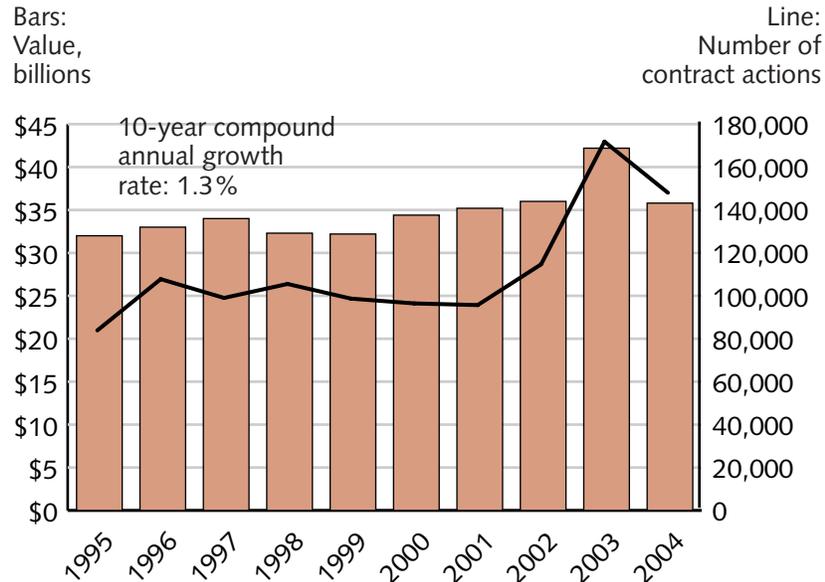
The Top 20 ERS Contractors Table — 7.2

There has been little change in the market shares of the Top 20 ERS companies. They controlled 43 percent of the market in 1995 and 44 percent in 2004. See table 7.2 for dollar values of contract actions for the Top 20.

Facilities-Related Services

In this chapter:

- 10-year summary of FRS
- Top 9 customers for FRS
- Market growth by value and number of contract actions
- Median and average value of contract actions
- Number of contractors
- Market share trends of small, medium, large companies
- Top 20 contractors (1995 and 2004 compared)

Figure 8.1. Growth of the Federal FRS Market, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

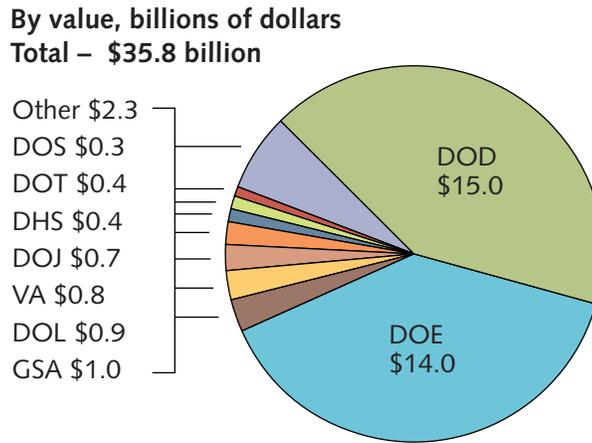
FRS Market Growth — Figure 8.1

The facilities-related services (FRS) segment has been a relatively large—\$36 billion in contract actions in 2004—but slowly growing market. During the past 10 years, the FRS market has expanded at a mere 1.3 percent compound annual growth rate. The number of contract actions awarded, however, has grown by 76 percent, from 83,500 in 1995 to 147,500 in 2004.

Key FRS Customers — Figure 8.2

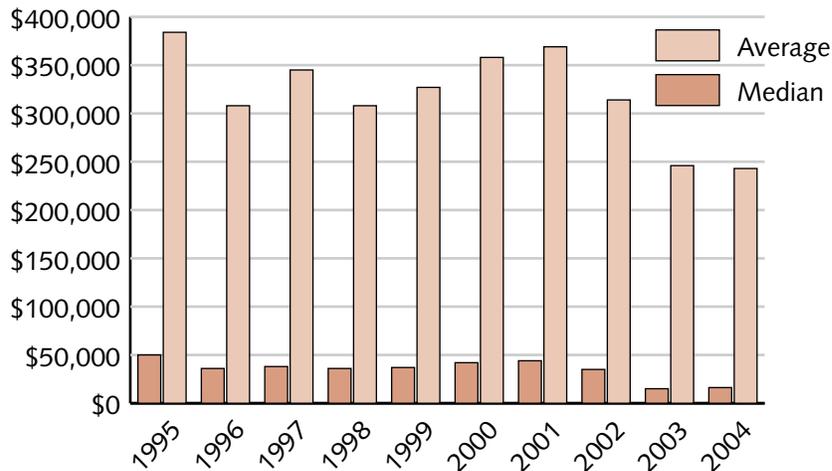
The Department of Defense and the Department of Energy are the two large customers in this segment. The \$15 billion worth of contract actions awarded by DOD and the \$14 billion awarded by DOE account for more than 80 percent of all federal expenditures on facilities-related services. The DOE market is driven by large contracts to manage DOE nuclear facilities and other research facilities.

Figure 8.2. Federal FRS Market, by Customer, 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

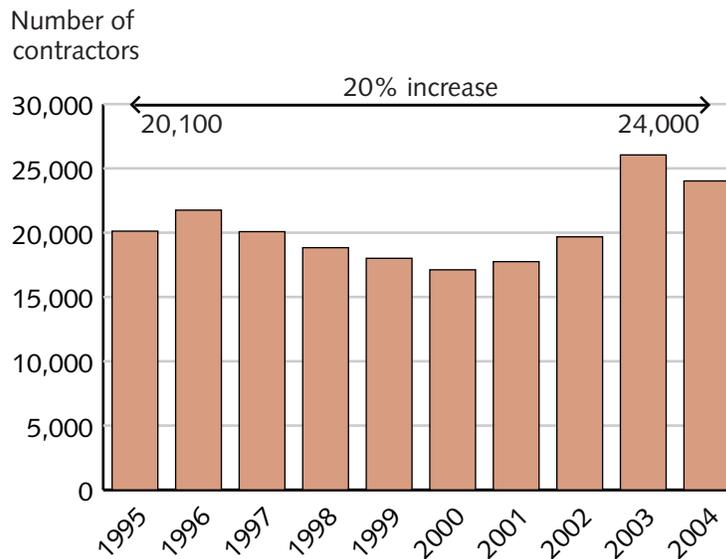
Figure 8.3. Average and Median Values of Federal FRS Contract Actions, 1995–2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Evolution of FRS Contract Action Sizes — Figure 8.3

The average and median values for contract actions in FRS have fluctuated greatly during the 1995–2004 period. The downtrend in size of average and median contract actions since 2001 leveled off in 2004 to \$243,000 per average contract action and \$16,000 per median contract action.

Figure 8.4. Number of Federal ERS Contractors, 1995–2004

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

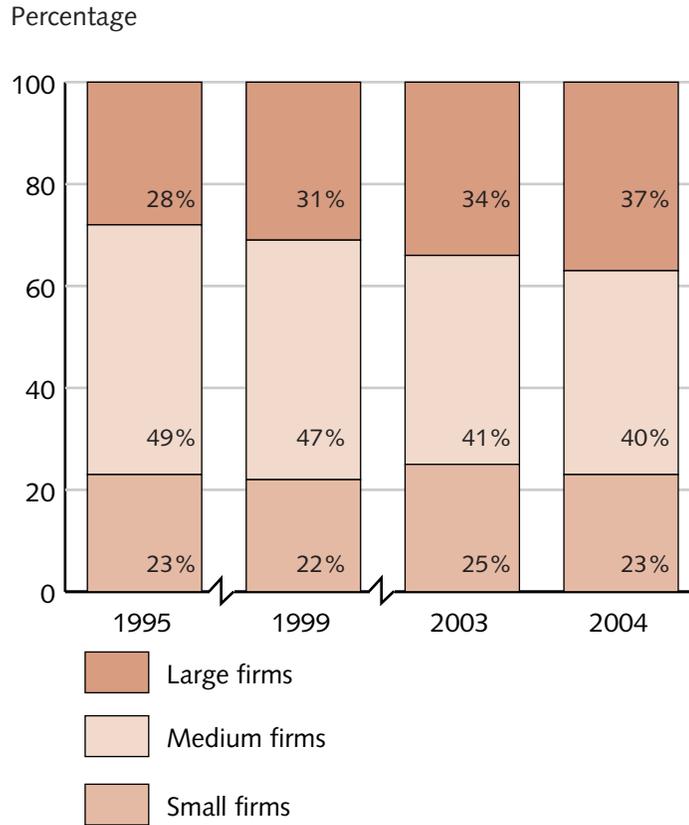
Evolution of the FRS Contractor Base — Figure 8.4

Of the five professional services categories analyzed in this report, the FRS segment has shown the least change in the number of competitors for contracts. This segment actually saw a decline in contractors at the end of the 1990s. The ranks of the FRS segment were replenished only after 2001.

Evolution of FRS Contractors' Market Shares — Figure 8.5

The FRS segment is one of the most fragmented sectors in the federal professional services market and is the market where the middle-size companies of the industry have been most able to retain their market share. Small companies have held a constant 23 percent share from 1995 to 2004, while the large firms have modestly increased their presence from 28 percent of the market in 1995 to 37 percent in 2004.

Figure 8.5. Distribution, by Value of Contracts, of Federal FRS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, and 2004



Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Table 8.1. Percentage of FRS Contractors Participating in Other Professional Services Categories, 1995 and 2004

1995				2004			
ICT	PAMS	R&D	ERS	ICT	PAMS	R&D	ERS
1	4	1	3	4	11	3	9

Cross-Category Participation by FRS Contractors — Table 8.1

Compared with competitors in other segments, companies in the FRS market are the least active in other federal services categories. But from a modest base, the FRS firms have been expanding their participation in other segments. The biggest increase has occurred in the professional, administrative, and management support (PAMS) segment, with 11 percent of FRS companies now taking on PAMS contracts—likely study and analyses contracts. In addition, FRS firms are taking on more equipment-related services (ERS) work as the maintenance of facilities and the support of equipment are beginning to converge.

Table 8.2. Top 20 Federal FRS Contractors, 1995 and 2004

Rank	1995		2004	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Westinghouse	2,865,366,000	Bechtel	1,922,602,717
2	Lockheed Martin	2,519,757,000	Westinghouse	1,592,657,031
3	Sandia Corporation	1,159,706,000	Halliburton	1,264,740,139
4	TRW	261,267,000	Sandia Corporation	1,228,089,575
5	Bechtel	200,240,000	BWXT	1,112,279,021
	Subtotal for Top 5	7,006,336,000		7,120,368,483
6	Raytheon	195,087,000	Fluor	816,403,754
7	General Electric	190,423,000	Kaiser Hill	642,800,636
8	DynCorp	169,487,000	Honeywell Inc.	483,441,267
9	Fluor	169,017,000	KAPL	416,417,286
10	Loral	147,931,000	CH2M Hill	349,754,865
11	Vinnell	132,119,000	DynCorp	293,041,692
12	CSC	127,670,000	Johnson Controls	241,102,568
15	SAIC	98,921,000	Wackenhut	206,171,016
14	Wackenhut	83,608,000	Northrop Grumman	205,700,487
15	Tokyo Electric Power	78,228,000	Res-care	166,588,152
16	Northrop Grumman	56,757,000	Raytheon	122,057,927
17	Johnson Control	49,098,000	VT Griffin	115,042,283
18	Korea Electric Power	39,920,000	CSC	108,892,263
19	Pacific Gas & Electric	38,270,000	Hensel Phelps Construction	91,124,464
20	Res-care	36,551,000	Vinnell	77,344,382
	Total for Top 20	8,619,423,000		11,456,251,524

Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

The Top 20 FRS Contractors — Table 8.2

The major engineering firms have become important participants in this market during the past decade. The share of the top contractors, however, has remained fairly constant, with 20–22 percent of the market controlled by the Top 5.

FPDS Services Categories

- A Research and development
- B Special studies and analyses (not research and development)
- C Architect and engineering services—construction
- D Automatic data processing and telecommunication services
- E Purchase of structures and facilities
- F Natural resources management
- G Social services
- H Quality control, testing, and inspection services
- J Maintenance, repair, and rebuilding of equipment
- K Modification of equipment
- L Technical representative services
- M Operation of government-owned facility
- N Installation of equipment
- P Salvage services
- Q Medical services (not included in this study)
- R Professional, administrative, and management support services
- S Utilities and housekeeping services
- T Photographic, mapping, printing, and publication services
- U Education and training services
- V Transportation, travel, and relocation services
- W Lease or rental of equipment
- X Lease or rental of facilities
- Y Construction of structures and facilities (not included in this study)
- Z Maintenance, repair, or alteration of real property

Merger and Acquisition Activity

Note: In the tables in appendix B, company names shown in italics indicate firms that deal in commercial information technology.

Table C.1. Lockheed Martin Mergers and Acquisitions, 1990–mid-2005

Interim acquirer (if applicable)	Acquisition	Date
	The SYTEX Group, Inc.	March 2005
	STASYS Ltd. (UK)	February 2005
	Affiliated Computer Services, Inc. (ACS)	November 2003
	OAO Corp.	December 2001
	COMSAT Corp.	August 2000
	Loral Corp.	April 1996
Loral Corp.	Unisys Corp Defense Systems	May 1995
Loral Corp.	IBM Federal Systems	March 1994

Table C.2. Northrop Grumman Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	XonTech, Inc.	July 2003
	Federal Data Corp.	October 2000
	Federal Systems Group (Sterling Software, Inc.)	October 2000
	Comptek Research, Inc.	August 2000
	DPC Technologies, Inc.	July 1999
	Inter-National Research Institute (INRI)	September 1998
Litton Industries, Inc.	TASC, Inc.	April 1998
Federal Data Corp.	Telos Corp.	March 1998
Federal Data Corp.	Technical and Management Assistance, Inc.	March 1998
Federal Data Corp.	R.O.W. Sciences, Inc.	March 1998
Federal Data Corp.	Tisoft, Inc.	December 1997
TRW	BDM International Inc.	December 1997
	Logicon, Inc.	July 1997
Federal Data Corp.	Sylvest Management Systems Corp.	June 1997
Federal Data Corp.	NYMA, Inc.	May 1997
Logicon, Inc.	Geodynamics Corp.	March 1996
Litton Industries, Inc.	PRC, Inc.	February 1996
Logicon, Inc.	Applied Technology Associates	October 1995
Logicon, Inc.	Syscon Corp.	February 1995
Logicon, Inc.	Ultrasystems Defense, Inc.	February 1991
Logicon, Inc.	Fourth Generation Technology, Inc.	February 1990

Table C.3. General Dynamics Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	Engineering Technology, Inc.	November 2004
	Tripoint Global Communications, Inc.	September 2004
	Digital System Resources, Inc.	September 2003
	Veridian Corp.	August 2003
Veridian Corp.	SIGNAL Corp.	September 2002
	Motorola Integrated Information Systems Corp.	September 2001
Veridian Corp.	Trident Data Systems	September 1999
Veridian Corp.	MRJ Technology Solutions	September 1999
Veridian Corp.	ERIM International, Inc.	September 1999
	GTE Government Systems Corp.	June 1999
Veridian Corp.	Pacific-Sierra Research Corp.	October 1998
Veridian Corp.	DatumCom Corp.	September 1998
	Computing Devices International, Inc.	April 1998
	Lucent Advanced Technology Systems	December 1997

Table C.4. Raytheon Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	Photon Research Associates, Inc.	October 2004
	Solipsys	March 2003
	JPS Communications, Inc.	December 2002

Table C.5. Boeing Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	<i>Frontier Systems, Inc.</i>	<i>May 2004</i>
	Conquest, Inc.	February 2003
	Jeppesen Sanderson, Inc.	October 2000
	Continental Graphics Corp.	September 2000
	Autometric, Inc.	August 2000
	<i>SVS, Inc.</i>	<i>July 2000</i>

Table C.6. L-3 Communications Mergers and Acquisitions, 1990–mid-2005

Interim acquirer (if applicable)	Acquisition	Date
	Titan Corp.	July 2005
	D.P. Associates, Inc.	October 2004
	Vertex Aerospace, LLC	December 2003
Titan Corp.	Advent Systems, Inc.	November 2003
	Bombardier, Inc. (Military Aviation Services)	October 2003
	Technology, Management & Analysis Corp.	September 2002
	Telos Corp. (Systems and Support Services)	July 2002
	Raytheon (AIS)	March 2002
Titan Corp.	<i>GlobalNet, Inc.</i>	<i>March 2002</i>
Titan Corp.	Jaycor, Inc.	March 2002
	SY Technology, Inc.	December 2001
	Emergent Government Services Group	November 2001
Titan Corp.	BTG, Inc.	November 2001
Titan Corp.	Datron Systems, Inc.	September 2001
	EER Systems Corp.	May 2001
Titan Corp.	Maxwell Technologies, Inc. (Systems Division)	March 2001
Titan Corp.	Research Planning, Inc.	March 2001
	Coleman Research Corp.	January 2001
	MPRI	June 2000
Titan Corp.	SenCom Corp.	June 2000
Titan Corp.	Averstar, Inc. (Intermetrics, Inc.)	June 2000
Titan Corp.	SSDS, Inc.	April 2000
Titan Corp.	Pulse Engineering, Inc.	March 2000
	Raytheon (Flight Training)	February 2000
Titan Corp.	Advanced Communications Systems, Inc.	February 2000
Titan Corp.	Atlantic Aerospace Electronics Corp.	July 1999
Titan Corp.	System Resources Corp.	June 1999
Titan Corp.	Computer Based Systems, Inc.	March 1999
Titan Corp.	STAC, Inc.	January 1999
Titan Corp.	Delfin Systems, Inc.	October 1998
Titan Corp.	VisiCom Laboratories, Inc.	August 1998
Titan Corp.	Horizons Technology, Inc.	June 1998
	ILEX Systems, Inc.	March 1998

Table C.6. L-3 Communications Mergers and Acquisitions, 1990–2005 *(continued)*

Interim acquirer (if applicable)	Acquisition	Date
Titan Corp.	DBA Systems, Inc.	March 1998
Titan Corp.	Validity Corp.	March 1998
Titan Corp.	Nations, Inc.	June 1997
Titan Corp.	Eldyne, Unidyne, and DCS	May 1996
Titan Corp.	Concept Automation, Inc.	October 1995
Titan Corp.	Delta Research Corp.	November 1994
Titan Corp.	M/A-COM Government Systems, Inc.	July 1990

Table C.7. BAE Systems North America Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	Alphatech	November 2004
	DigitalNet Holdings Inc.	October 2004
	<i>Boeing Commercial Electronics</i>	<i>August 2004</i>
	Practical Imagineering, Inc.	August 2004
	STI Government Systems	May 2004
	MEVATEC Corp.	March 2003
	Advanced Power Technologies, Inc.	March 2003
	Corbett Technologies	November 2002

Table C.8. SAIC Mergers and Acquisitions, 1990–mid-2005

Interim acquirer (if applicable)	Acquisition	Date
	Object Sciences Corp.	May 2005
	Procurenet Holdings, Inc.	November 2004
	Presearch, Inc.	October 2004
	Trios Associates, Inc.	August 2004
	Aquidneck Management Associates, Ltd.	February 2004
	Atlantic Coast Telesys Corp.	December 2003
	Jullien Enterprises Ltd.	October 2003
	Computer Systems Technology, Inc.	April 2003
	Quality Research, Inc.	February 2003
	SCIENTECH, Inc.	February 2003
	VGS, Inc.	January 2003
	Maxwell Technologies, Inc. (Systems Division)	March 2001
	Comarco Systems, Inc.	July 2000
	Boeing Information Services, Inc.	July 1999
	Data Systems and Solutions (50 percent)	February 1999
	Critical Path Software Corp.	February 1999
	Bell Communications Research	November 1997
	Synetics Corp.	June 1996
	Horizons Technology, Inc.	May 1996
	Network Solutions, Inc.	March 1995
	Ideas Inc.	November 1994
	Signal Science, Inc.	August 1993
	Touch Communications, Inc.	September 1992
	General Sciences Corp.	June 1992
	Logistics Systems Architects	November 1991
	Hicks & Co.	August 1991
	Megatek Corp.	April 1991

Table C.9. Computer Sciences Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	Dyncorp	March 2003
	<i>InfoSer SpA (Italy)</i>	March 2001
	<i>Mynd Corp.</i>	December 2000
	<i>IT Services (UK)</i>	April 2000
	<i>GE Capital ITS (Australia)</i>	December 1999
DynCorp	GTE Information Systems, LLC	December 1999
	Nichols Research Corp.	November 1999
	<i>ECS Integrated Technology Solutions LLC</i>	November 1999
	<i>Progres (Italy)</i>	March 1999
	<i>Computing Devices Co., Ltd. (UK)</i>	December 1998
	<i>SYS-AID (Netherlands)</i>	December 1998
	<i>KPMG Peat Marwick SA (France)</i>	October 1998
	TRW BDMO	May 1998
	Information Technology Solutions, Inc.	March 1998
	<i>GfAI (Switzerland)</i>	August 1997
	<i>The Continuum Company, Inc.</i>	August 1996
	<i>Datacentralen A/S (Denmark)</i>	June 1996
	<i>Lucas Industries Plc (IT operations) (UK)</i>	January 1996
DynCorp	CBIS Federal	November 1994
	<i>British Aerospace PLC (Information Systems)</i>	March 1994
	Atlantic Research Corp. (Prof. Svs. Group)	January 1994
DynCorp	Technology Applications Inc.	November 1993
	General Dynamics Corp. (Data Systems)	November 1991
	Intelicom Solutions	October 1991
	Compusource	July 1991
	May and Speh	July 1991
	<i>Butler Cox PLC (UK)</i>	May 1991
DynCorp	Viar & Co.	May 1991
	<i>Moria Informatique</i>	April 1991
	Paragon Consulting	March 1991
	Analytics, Inc.	January 1991
	Advanced Computer Communications, Inc.	April 1990
	Logic, Inc.	February 1990

Table C.10. Anteon Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	Integrated Management Services, Inc.	August 2004
	Simulation Technologies, Inc.	July 2004
	Information Spectrum, Inc.	May 2003
	SIGCOM, Inc. (Training Systems Division)	July 2001
	SHERIKON, Inc.	October 2000
	Analysis & Technology, Inc.	June 1999
	Techmatics Corp.	May 1998
	Vector Data Systems, Inc.	September 1997
	Ogden Corp.	April 1996

Table C.11. Electronic Data Systems Mergers and Acquisitions, 1990–2004

Interim acquirer (if applicable)	Acquisition	Date
	<i>The Feld Group</i>	<i>January 2004</i>
	<i>Loudcloud, Inc.</i>	<i>June 2002</i>
	<i>Structural Dynamics Research Corp.</i>	<i>September 2001</i>
	<i>Sabre (outsourcing business)</i>	<i>July 2001</i>
	<i>Systematics AG (Germany)</i>	<i>March 2001</i>
	<i>MCI Systemhouse (Canada)</i>	<i>April 1999</i>
	<i>Value Health Management</i>	<i>March 1997</i>
	<i>A. T. Kearney</i>	<i>September 1995</i>
	<i>GCS Ltd. (New Zealand)</i>	<i>November 1994</i>
	<i>JSA International, Inc.</i>	<i>August 1994</i>
	<i>Advanced Telecommunications Corp.</i>	<i>August 1992</i>
	<i>Energy Management Associates, Inc.</i>	<i>January 1992</i>
	<i>McDonnell Douglas GIS Division</i>	<i>December 1991</i>
	<i>McDonnell Douglas Systems Integration Co.</i>	<i>November 1991</i>
	<i>SD Scicon Plc (UK)</i>	<i>August 1991</i>
	<i>Infocel, Inc.</i>	<i>June 1991</i>

Table C.12. IBM Mergers and Acquisitions, 1990–mid-2005

Interim acquirer (if applicable)	Acquisition	Date
	<i>PureEdge Solutions, Inc. (Canada)</i>	<i>July 2005</i>
	<i>Rational Software Corp.</i>	<i>February 2003</i>
	<i>Matra Datavision (France)</i>	<i>January 2003</i>
	<i>Tarian Software (Canada)</i>	<i>November 2002</i>
	<i>PwC Consulting</i>	<i>October 2002</i>
	<i>Informix Corp.</i>	<i>April 2001</i>
	<i>Aragon Consulting Group</i>	<i>July 2000</i>
	<i>Commquest Technologies, Inc.</i>	<i>March 1998</i>
	<i>Software Artistry, Inc.</i>	<i>January 1998</i>
	<i>Unison Software</i>	<i>December 1997</i>
	<i>NetObjects</i>	<i>April 1997</i>
	<i>Tadiran Information Systems (Israel)</i>	<i>February 1997</i>
	<i>Edmark Corp.</i>	<i>November 1996</i>
	<i>Tivoli Systems</i>	<i>March 1996</i>
	<i>Data Sciences Ltd. (UK)</i>	<i>March 1996</i>
	<i>Object Technology International, Inc.</i>	<i>February 1996</i>
	<i>CGI Informatique SA (France)</i>	<i>June 1993</i>
	<i>McDonnell Douglas Information Services</i>	<i>December 1992</i>
	<i>Metaphor Computer Systems, Inc.</i>	<i>July 1991</i>

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The Defense-Industrial Initiatives Group (DIIG) at CSIS focuses on issues related to the health and management of the global defense technology-industrial base. The aim of this group is to generate leading, fact-based analyses and practical policy recommendations on the range of key issues facing companies and political leaders tasked with managing this complex area of national security.

The group's work is directed by Pierre A. Chao and is organized around four major thrusts: top-down analyses concerning the overall health of the defense industry, bottom-up research on specific industry sectors, initiatives on particular policy topics of importance to the defense-industrial community, and the impact of globalization (which encompasses the transatlantic relationship, export controls, technology transfer, and offsets).

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