

CSIS REPORT



STRUCTURE AND DYNAMICS OF THE U.S. FEDERAL PROFESSIONAL SERVICES INDUSTRIAL BASE

1995 - 2005

DEFENSE -
INDUSTRIAL
INITIATIVES GROUP





STRUCTURE AND DYNAMICS OF THE
U.S. FEDERAL PROFESSIONAL
SERVICES INDUSTRIAL BASE
————— 1995 - 2005 —————

DEFENSE -
INDUSTRIAL
INITIATIVES GROUP

Project Director
Pierre A. Chao

Investigators
Guy Ben-Ari
Greg Sanders
David Scruggs
Nicholas Wilson

May 2007

About CSIS

The Center for Strategic and International Studies (CSIS) seeks to advance global security and prosperity in an era of economic and political transformation by providing strategic insights and practical policy solutions to decisionmakers. CSIS serves as a strategic planning partner for the government by conducting research and analysis and developing policy initiatives that look into the future and anticipate change. Our more than 25 programs are organized around three themes:

- *Defense and Security Policy*—With one of the most comprehensive programs on U.S. defense policy and international security, CSIS proposes reforms to U.S. defense organization, defense policy, and the defense industrial and technology base. Other CSIS programs offer solutions to the challenges of proliferation, transnational terrorism, homeland security, and post-conflict reconstruction.
- *Global Challenges*—With programs on demographics and population, energy security, global health, technology, and the international financial and economic system, CSIS addresses the new drivers of risk and opportunity on the world stage.
- *Regional Transformation*—CSIS is the only institution of its kind with resident experts studying the transformation of all of the world's major geographic regions. CSIS specialists seek to anticipate changes in key countries and regions—from Africa to Asia, from Europe to Latin America, and from the Middle East to North America.

Founded in 1962 by David M. Abshire and Admiral Arleigh Burke, CSIS is a bipartisan, nonprofit organization headquartered in Washington, D.C., with more than 220 full-time staff and a large network of affiliated experts. Former U.S. senator Sam Nunn became chairman of the CSIS Board of Trustees in 1999, and John J. Hamre has led CSIS as its president and chief executive officer since 2000.

© 2007 by the Center for Strategic and International Studies. All rights reserved.

Center for Strategic and International Studies
1800 K Street, N.W.
Washington, D.C. 20006
Tel: (202) 887-0200
Fax: (202) 775-3119
Web: www.csis.org

Contents

List of Figures	iv
List of Tables	vii
Acknowledgments	viii
Executive Summary	ix
List of Acronyms	xi
1. What Is the Professional Services Industrial Base?	1
2. Federal Professional Services Industry Today	5
3. Evolution of the Federal Professional Services Industry, 1995–2005	9
4. Policy Implications	29
5. Information and Communications Technology Services	33
6. Professional, Administrative, and Management Support Services	41
7. Research and Development Services	49
8. Equipment-Related Services	57
9. Facilities-Related Services	65
Appendix A. FPDS Services Categories	73
Appendix B. Merger and Acquisition Activity	74
About the Authors	87
About DIIG	89

List of Figures

2.1	Top 10 Customers in the Federal Professional Services Market, 2004 and 2005	6
2.2	Federal Professional Services Markets, Department of Defense Compared with Civilian, 2004 and 2005	7
3.1	Growth of the Federal Professional Services Market, 1995–2006	10
3.2	Growth Trends in the Federal Professional Services Market, by Service Category, 1995–2006	11
3.3	Types of Federal Professional Services Contract Actions, by Percentage of Dollar Value of Contract Actions, 1995–2005	12
3.4	Types of Federal Professional Services Contract Actions, by Percentage of Number of Contract Actions, 1995–2005	13
3.5	Average Value of Federal Professional Services Contracts, 1995–2005	16
3.6	Average and Median Values of Federal Professional Services Contract Actions, 1995–2006	17
3.7	Distribution of Contract Actions, 1995, 2000, 2004, and 2005	18
3.8	Number of Federal Professional Services Contractors, 1995–2005	19
3.9	Number of Small, Medium, and Large Firms in the Federal Services Industry, 1995, 1999, 2003, 2004, and 2005	21
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, 2004, and 2005	22
3.11	DOD Prime Contract Dollars Awarded to Small, Medium, and Large Contractors, 1977–2005	23
5.1	Growth of the Federal ICT Services Market, 1995–2005	34
5.2	Federal ICT Services Market, by Customer, 2004 and 2005	35
5.3	Average and Median Values of Federal ICT Services Contract Actions, 1995–2005	35

5.4	Number of Federal ICT Services Contractors, 1995–2005	36
5.5	Distribution, by Value of Contracts, of Federal ICT Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005	37
5.6	Number of Small, Medium, and Large Firms in the Federal ICT Services Market, 2004–2005	37
6.1	Growth of the Federal PAMS Market, 1995–2005	42
6.2	Federal PAMS Market, by Customer, 2004 and 2005	43
6.3	Average and Median Values of Federal PAMS Contract Actions, 1995–2005	43
6.4	Number of Federal PAMS Contractors, 1995–2005	44
6.5	Distribution, by Value of Contracts, of Federal PAMS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005	45
6.6	Number of Small, Medium, and Large Firms in the Federal PAMS Services Market, 2004 and 2005	45
7.1	Growth of the Federal R&D Services Market, 1995–2005	50
7.2	Federal R&D Services Market, by Customer, 2004 and 2005	51
7.3	Average and Median Values of Federal R&D Services Contract Actions, 1995–2005	51
7.4	Number of Federal R&D Services Contractors, 1995–2005	52
7.5	Distribution, by Value of Contracts, of Federal R&D Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005	53
7.6	Number of Small, Medium, and Large Firms in the Federal R&D Services Market, 2004 and 2005	53
8.1	Growth of the Federal ERS Market, 1995–2005	58
8.2	Federal ERS Market, by Customer, 2004 and 2005	59
8.3	Average and Median Values of Federal ERS Contract Actions, 1995–2005	59
8.4	Number of Federal ERS Contractors, 1995–2005	60
8.5	Distribution, by Value of Contracts, of Federal ERS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005	61

8.6	Number of Small, Medium, and Large Firms in the Federal ERS Market, 2004–2005	61
9.1	Growth of the Federal FRS Market, 1995–2005	66
9.2	Federal FRS Market, by Customer, 2004 and 2005	67
9.3	Average and Median Values of Federal FRS Contract Actions, 1995–2005	67
9.4	Number of Federal FRS Contractors, 1995–2005	68
9.5	Distribution, by Value of Contracts, of Federal FRS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005	69
9.6	Number of Small, Medium, and Large Firms in the Federal FRS Market, 2004 and 2005	69
Appendix B Merger and Acquisition Activity		
	BAE Systems North America	75
	Boeing	76
	CACI	77
	Computer Sciences Corporation	78
	Electronic Data Systems	79
	General Dynamics	80
	Booz Allen Hamilton	81
	IBM	81
	L-3 Communications	82
	Lockheed Martin	83
	Northrop Grumman	84
	Raytheon	85
	SAIC	86

List of Tables

2.1.	Data for U.S. Professional Services Market, 2005	8
3.1.	Distribution of Contractors in the Five Professional Services Categories, 1995 and 2005, percentage	24
3.2.	Top 20 contractors, 1995 and 2005	25
3.3.	Top 20 Contractors, by Activity Category, 1995 (dollars, thousands)	26
3.4.	Top 20 Contractors, by Activity Category, 2005 (dollars, thousands)	27
5.1.	Percentage of ICT Contractors Participating in Other Professional Services Categories, 1995 and 2005	38
5.2.	Top 20 Federal ICT Services Contractors, 1995 and 2005	39
6.1.	Percentage of PAMS Contractors Participating in Other Professional Services Categories, 1995 and 2005	46
6.2.	Top 20 Federal PAMS Contractors, 1995 and 2005	47
7.1.	Percentage of R&D Contractors Participating in Other Professional Services Categories, 1995 and 2004	54
7.2.	Top 20 Federal R&D Services Contractors, 1995 and 2005	55
8.1.	Percentage of ERS Contractors Participating in Other Professional Services Categories, 1995 and 2005	62
8.2.	Top 20 Federal ERS Contractors, 1995 and 2005	63
9.1.	Percentage of FRS Contractors Participating in Other Professional Services Categories, 1995 and 2005	70
9.2.	Top 20 Federal FRS Contractors, 1995 and 2005	71

Acknowledgments

The authors wish to acknowledge the considerable support of the Professional Services Council to this project. The genesis of this project—now in its second year —was a simple question asked in 2005 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?” In May 2006 the first edition of this report, covering the years 1995–2004, was published. We would also like to thank in particular, Alan Chvotkin, senior vice president and counsel of the Professional Services Council, for his insights into the dynamics of the industry; and Guy Ben-Ari and Greg Sanders, both of the Center for Strategic and International Studies, for the considerable effort they put into this study.

Executive Summary

The macro trends driving the professional services industry over the past decade extended into 2005 and 2006. There is a continuing and growing reliance on the private sector for a wide range of professional and support services by the U.S. government. For a third year in a row, providing professional services to the federal government has represented a larger market than the selling of hardware to the government. What has changed in the past year is a growing awareness of the industry's magnitude and importance on the part of policymakers and the emergence of significant policy issues as the industry develops.

During the past 11 years, the industry has expanded at an average compound annual growth rate (CAGR) of 7 percent a year, with greater growth occurring in the last five years (11 percent a year in 2001–2006). The fastest-growing segments over the past decade were information and communications (ICT) services, which delivered a 13 percent CAGR; and professional, administrative, and management services (PAMS), which grew 11 percent a year during that same period (but 16 percent a year between 2001 and 2006). The cyclical nature of the research and development (R&D) segment revealed itself as the market peaked in 2004, declined in 2005, and was essentially flat in 2006. Meanwhile, expansion in the equipment-related services (ERS) segment continued into 2005, driven by the current conflicts in Iraq and Afghanistan.

The largest segments within the federal professional services industry are PAMS, which accounted for \$58 billion worth of contracts in 2005; R&D, which accounted for \$48 billion; and facilities-related services (FRS), which accounted for \$45 billion. Given its large size and high growth rate, the PAMS segment should remain the largest part of the industry.

The Department of Defense remains the biggest consumer of professional services, accounting for approximately 60 percent of total contract actions by value in 2005. The Department of Defense, the Department of Energy, and the National Aeronautics and Space Administration made up more than three-quarters of the market in 2005. Preliminary 2006 data indicate that the Department of Homeland Security supplanted NASA as the third-largest contractor of services.

The trend of ever-increasing use of multiple-award, federal schedule contracts and simplified acquisition procedures decelerated in 2005. Although the use of these vehicles has increased significantly since the mid-1990s, the dollars contracted through these methods remained flat at around \$32–33 billion in 2004 and 2005. The contracting mechanism with the largest increase in 2005 spending was “modifications to existing contracts,” implying that market positions were more static. 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 \$290,000 in 2005. The median contract action has also dropped, from \$63,000 in 1995 to \$19,000 in 2005. 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 2005, however, the total number of contractors in the industry increased by 115 percent to 96,000 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) contracts. An analysis of the 2005 data indicates that, of the 96,000 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 also 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 increasing 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 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.

Furthermore, critical mass has changed for the industry. In 1995, the 20th-largest contractor had \$360 million in professional services contract awards, but in 2005 a firm needed \$1.3 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 2005 it was 19 percent (with \$38 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 an erosion of their relative share. In 1995, middle-tier companies captured 44 percent of the total value of federal professional services contracts. By 2005, the middle-tier companies were able to capture only 33 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 46 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 remains a key strategic and policy issue for the industry.

The information presented in this report raises other important policy issues regarding the management of the professional services industrial base. One question that will have to be addressed concerns the limits to the government's outsourcing of services; another concerns the issue of how much competition is beneficial to the government (and under what circumstances). The effects that the rapid increase in the volume of contracting activity is having on the federal government contract management workforce should be given some thought. More broadly, the structural sustainability of the professional services industrial base sustainable must be considered, including ways to avoid organizational conflicts of interest resulting from mergers and acquisitions activity among industry participants and the possible need for a fundamentally different set of acquisition regulations for professional services contracting.

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
FAR	Federal Acquisition Regulation
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 acquisition contract
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
SETA	scientific engineering and technical assistance
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). The CSIS study team was, in most cases, able to straightforwardly maintain the pre-2004 methodology when using the FPDS-NG data. The only exceptions are figures 3.3 and 3.4, for which new methods of analysis had to be developed owing to broader changes in the structure of the relevant data.

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, report, “Reliability of Federal Procurement Data,” and the September 27, 2005, report, “Improvements Needed for the Federal Procurement Data System–Next Generation”). In addition, the FPDS data for past years are updated over time.

The data for 2004 used in this report were last modified on October 12, 2006 (which explains the discrepancies between the numbers for that year presented in this report and in our previous report); the 2005 data were last updated on October 13, 2006. 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.

Although there is no complete database for 2006, this version of the report includes some preliminary data for this year. These data are presented here solely for information purposes, and we recommend using these data with caution. The data may change significantly as additional updates are made during 2007.

The CSIS study team analyzed all federal contracts awarded between the years 1995 and 2005. 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 1995–2005 period and reconcile the differences in the data. The study team created a smaller “professional services” database comprising approximately 5 million contract actions 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.

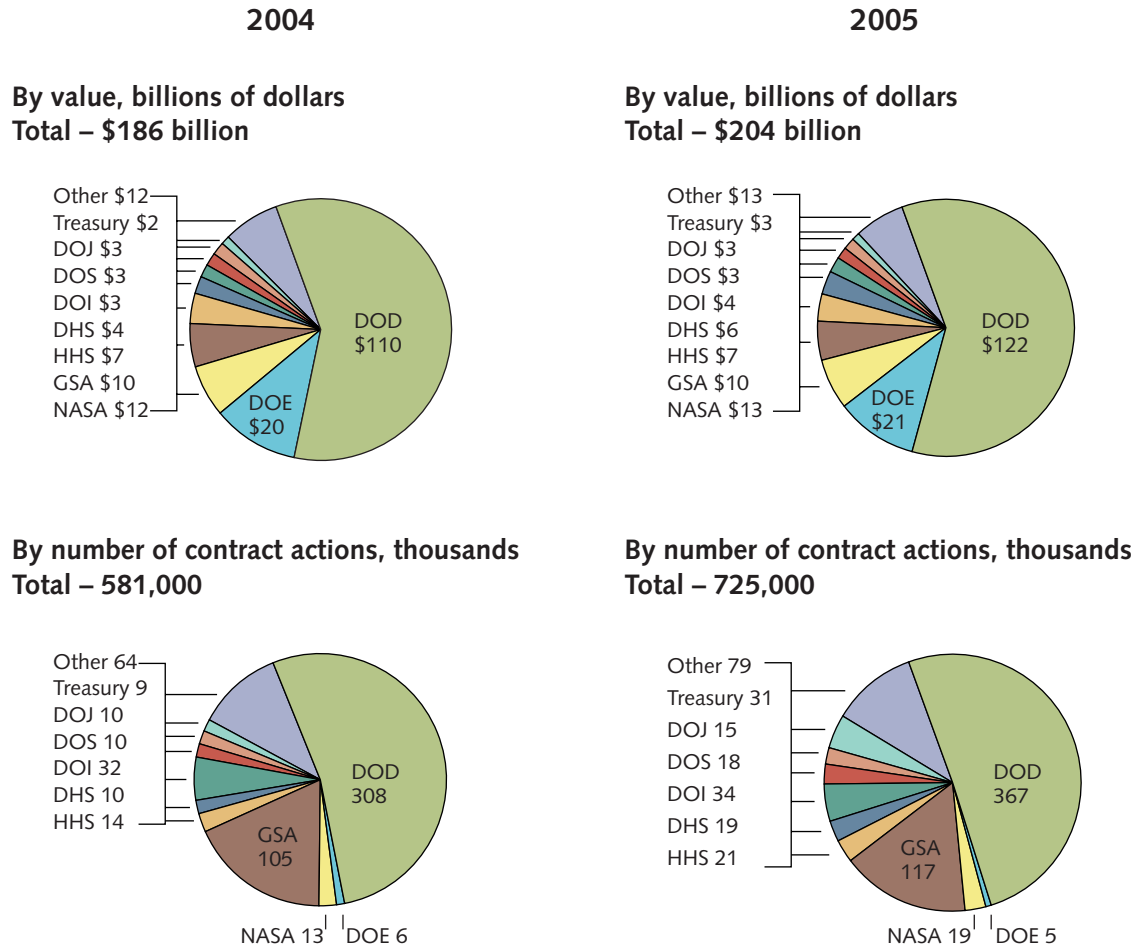
Small, Medium, and Large Companies

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 2005 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 and 2005

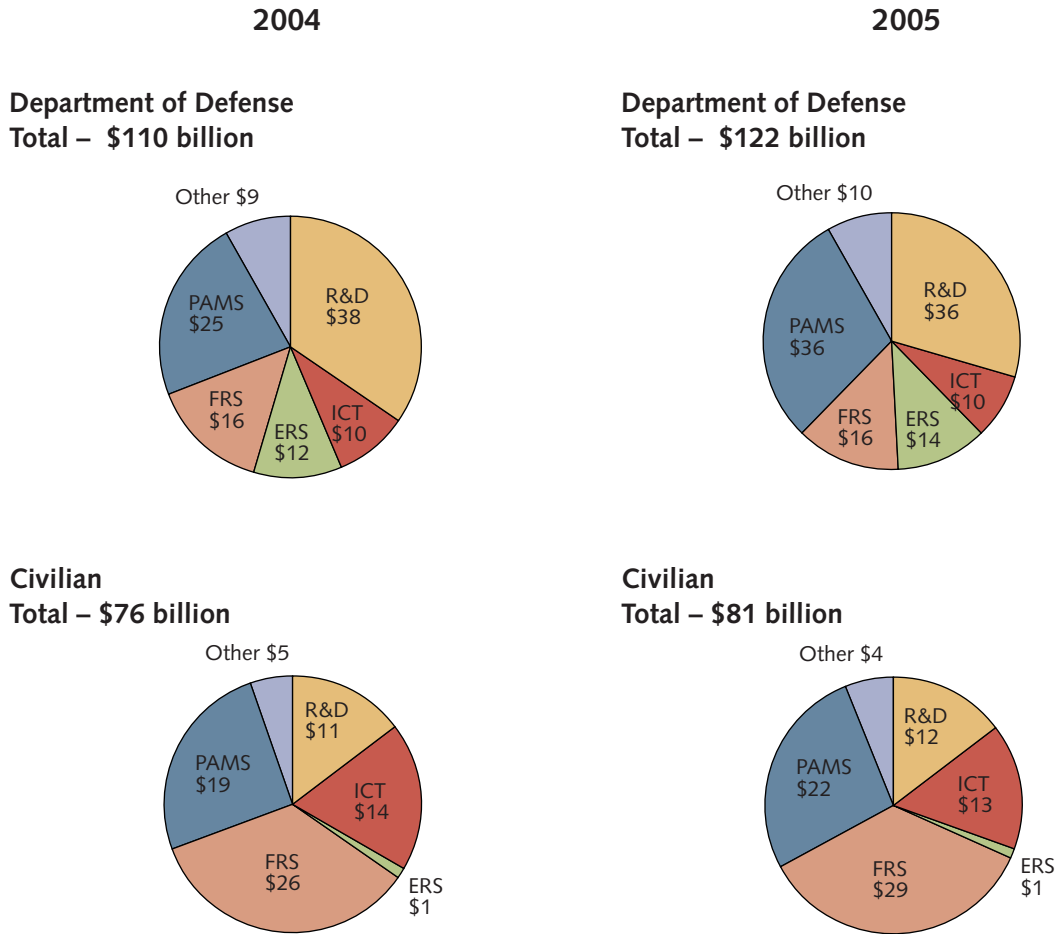
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Professional Services Market in 2005 — 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 2005, the most recent full year for which FPDS data were available, the federal government awarded \$204 billion worth of contracts for professional services. This amount was awarded via some 725,000 contract actions. In fact, today the federal government currently spends more money on purchasing services than on buying hardware and goods. Preliminary 2006 data indicate the market expanded to \$211 billion, awarded via 887,000 contract actions.

DOD was the largest federal government consumer of services in 2005, with \$122 billion worth of contracts or 60 percent of the total market. A distant second was the Department of Energy (DOE), with \$21 billion or 10 percent of the market. NASA is the third-largest government customer and accounts for \$13 billion or 6 percent of the market. By value, the top three customers make up 76 percent of the market. An examination of preliminary 2006 data indicates that DOD and DOE maintained their number one and number two positions; however,

Figure 2.2. Federal Professional Services Markets, Department of Defense Compared with Civilian, 2004 and 2005



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

the Department of Homeland Security tied NASA as the third-largest contractor of professional services.

By number of contract actions, the largest three awarders of services contracts are the DOD with 367,000 contract actions let (51 percent of total contract actions awarded), the GSA with 117,000 (16 percent of total), and Department of the Interior with 34,000 (5 percent).

Defense and Civilian Contracting Compared — Figure 2.2

The two largest segments within the DOD in 2005 are research and development (R&D) and professional, administrative, and management support (PAMS), each accounting for 30 percent of the budget spent on professional services. A preliminary look at 2006 data indicates that DOD facilities-related services (FRS) are becoming a major segment. Civilian agencies were heavy users of FRS in 2005, which account for 36 percent of dollars spent. This is heavily skewed by the contracts for the management of DOE facilities. Civilian agencies are also large consumers of PAMS; these account for 27 percent of all professional services procured. It is

Table 2.1. Data for U.S. Professional Services Market, 2005

Service category	Value (\$, billions)	Number of contract actions	Average amount of each contract action (\$)	Median amount of contract actions (\$)	Number of contractors ^a
ERS	15.23	86,181	179,540	11,854	16,835
FRS	45.37	223,191	207,742	14,496	30,553
ICT	23.23	71,646	335,595	29,409	7,745
PAMS	57.98	205,458	293,464	25,000	32,308
R&D	47.20	60,193	794,482	89,601	10,245
Other	14.74	78,390	198,311	11,114	20,807
Total	203.75	725,059	281,014	19,200	95,712

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

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

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

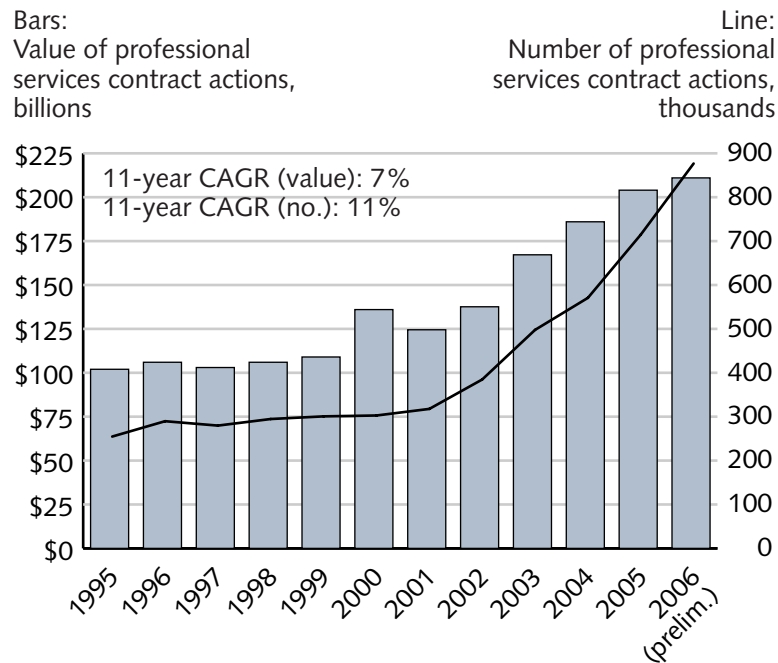
Table 2.1 provides key data for 2005, both overall data and data for each of the five main services categories.

As noted, the largest segments in terms of value are PAMS, R&D, and FRS, with \$58 billion, \$47 billion and \$45 billion worth of contract actions, respectively. The largest numbers of contract actions were awarded in the FRS and PAMS categories, two markets with large numbers of small tasks. It stands to reason that the sizes of the average contract actions in both the FRS and PAMS segments were at the lower end of the range, \$207,742 and \$293,464, respectively. The largest average contract actions were found in the R&D segment, at \$794,482 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 (fewer than 11,000) chasing relatively fewer but larger contract actions.

Evolution of the Federal Professional Services Industry, 1995–2005

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, 1995–2006

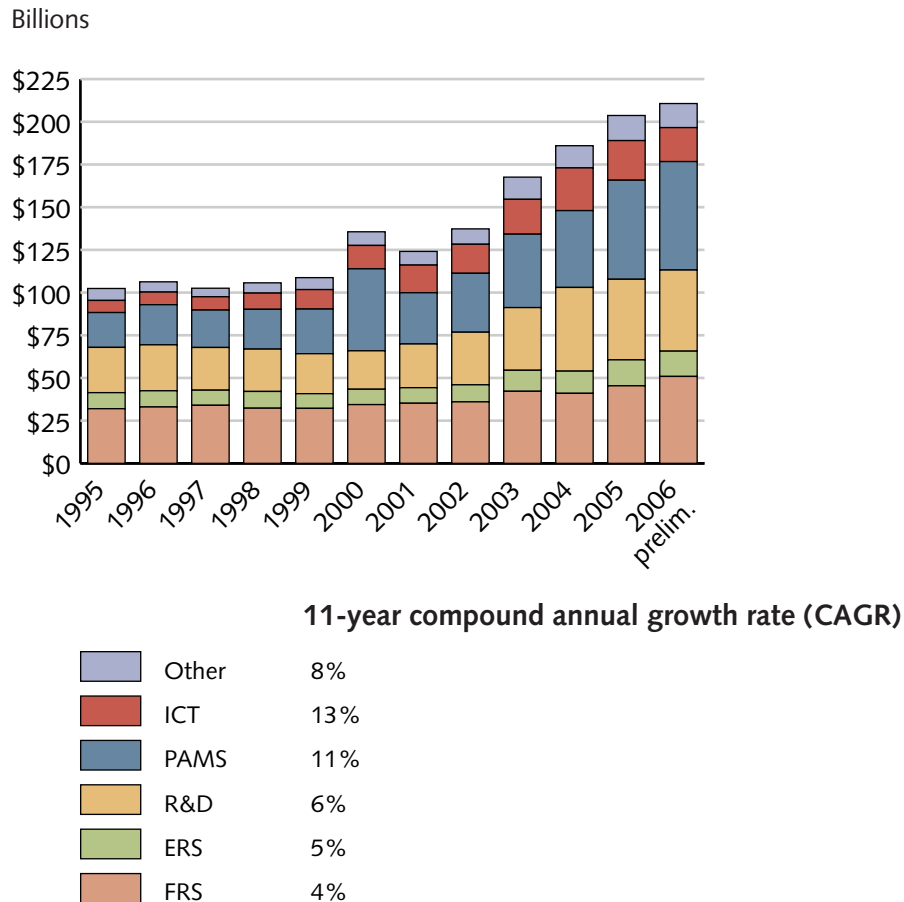
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Growth in Federal Services Contracting — Figure 3.1

During the past decade, 1995–2005, 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 \$204 billion in 2005, representing a compound annual growth rate (CAGR) for value of contract actions of 7 percent (although the CAGR was 11 percent for the years 2001–2006). The total number of contract actions more than doubled during this same time period, from 265,000, to 725,000 delivering a CAGR for number of contract actions of 11 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. Preliminary 2006 data indicate that the federal professional services market was \$211 billion.

Figure 3.2. Growth Trends in the Federal Professional Services Market, by Service Category, 1995–2006



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

Growth by Market Segment — Figure 3.2

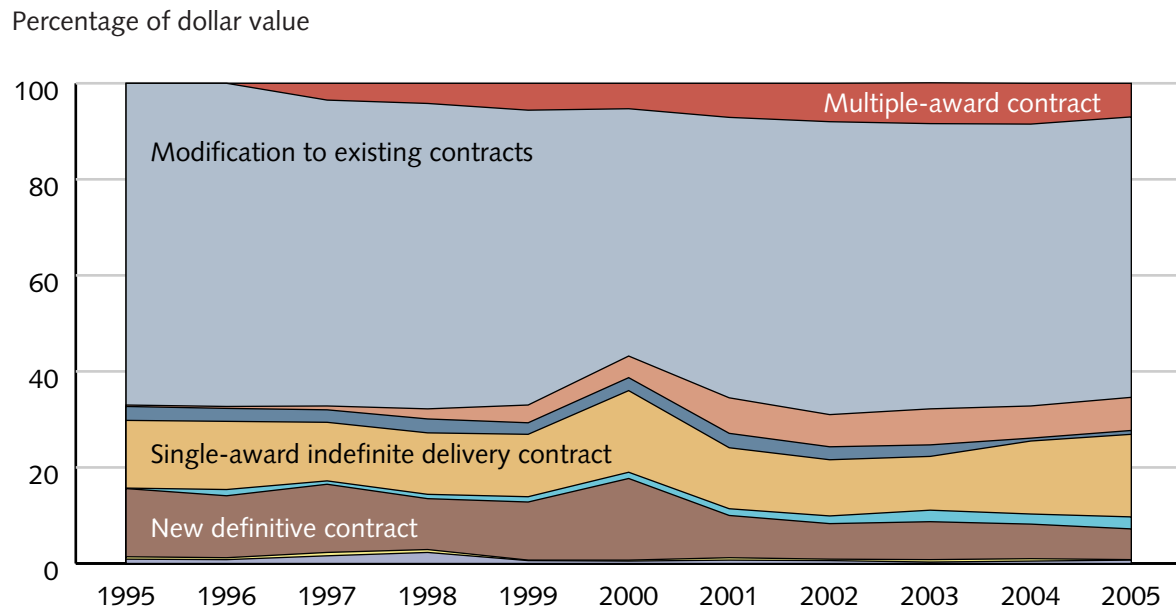
During the past 11 years, the fastest-growing market segments were the ICT services and the PAMS categories, with 13 percent and 11 percent compound annual growth. Although they are very large and represent almost half the services market, the R&D and FRS segments generated much slower growth: 6 percent for R&D, and only 4 percent for FRS. ERS generated 5 percent growth.

The year 2005 was the first year since 2001 in which year-over-year growth was in the single digits, dragged down by declines in the ICT and R&D segments. As noted, preliminary 2006 data indicate that the deceleration continued with a shrinking ICT segment, offset by very robust PAMS growth.

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, 1995–2005

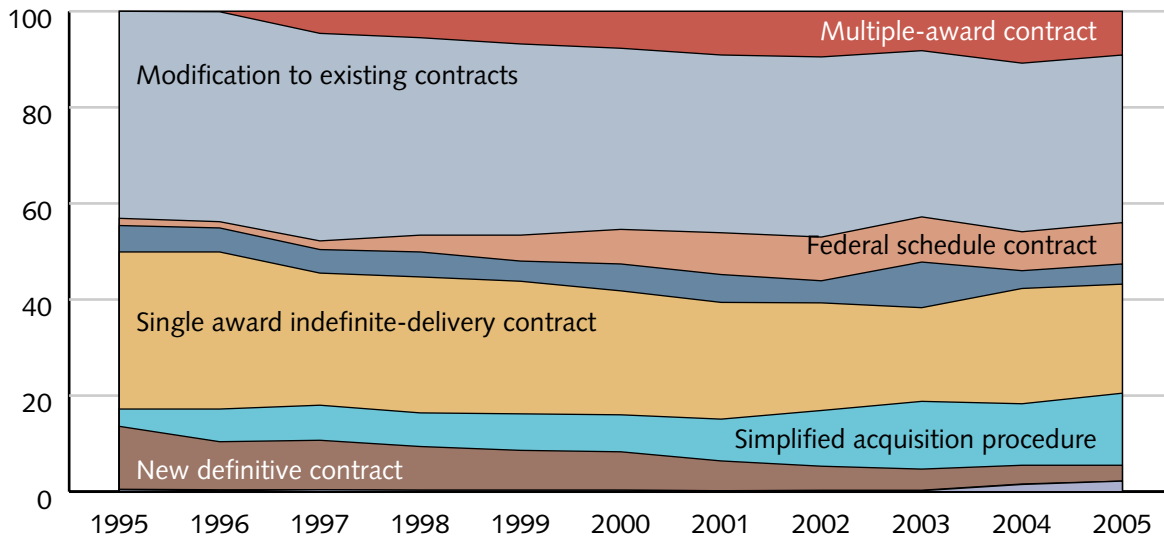


	11-year compound annual growth rate (CAGR)
Multiple-award contract	163%
Modification to existing contracts	6%
Federal schedule contract	45%
Basic ordering agreement	-6%
Single-award indefinite delivery contract	9%
Simplified acquisition procedure	52%
New definitive contract	-1%
Contract superseding letter	-12%
Initial-letter contract	6%










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, 1995–2005

Percentage of number of contract actions



11-year compound annual growth rate (CAGR)

	Multiple-award contract	144%
	Modification to existing contracts	8%
	Federal schedule contract	32%
	Basic ordering agreement	8%
	Single-award indefinite delivery contract	7%
	Simplified acquisition procedure	28%
	New definitive contract	-4%
	Contract superseding letter (not visible)	-19%
	Initial-letter contract	31%

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:¹

- 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 three categories of contract action types in decline have been contract superseding letter (12 percent annual decline in dollar volume), basic ordering agreement (6 percent annual decline in dollar volume), and new definitive contracts (1 percent annual decrease in dollar volume)—all vehicles that are typically used in direct, one-on-one relationships. 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. These include government-wide acquisition contracts (GWACs) although these have experienced a significant decline in 2004–2006, multiagency indefinite delivery indefinite quantity (ID/IQ) contracts, and agency-wide ID/IQ contracts. The dollar volume associated with multiple-award contracts grew at a 163 percent CAGR during 1995–2005, the value of federal schedule contracts has grown 45 percent per annum, and the worth of simplified acquisition procedure contracts has expanded 52 percent a year. By 2005, one-sixth of all contract actions were multiple-award, federal schedule, and simplified contracts.

A list of GWACs as of December 2006 includes:

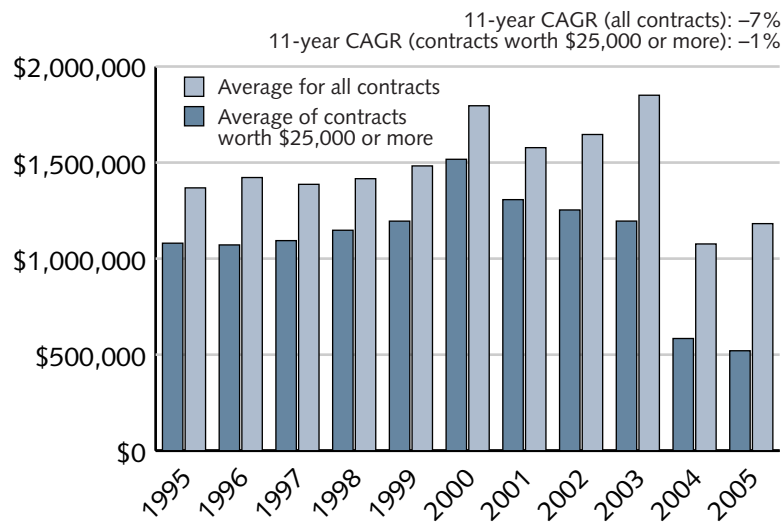
- General Services Administration (12 GWACs): Alliant (not yet awarded), Alliant Small Business (not yet awarded), ANSWER, HUBZone, ITOP II, Millennia, Millennia Lite, VETS, Virtual Data Center, Disaster Recovery, Seat Management, and STAR (the latter four are no longer receiving new orders);
- National 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;
- Environmental Protection Agency: READ.

1. These categories are based on the FPDS database used in 1995–2003; 2004 and onward uses similar—but not equivalent—categories.

The list of multiagency and agency-wide contracts is much longer; some 240 existed at the end of 2006. The growth in the use of agency- and enterprise-wide multiple-award contract vehicles raises interesting policy questions. No interagency or intraagency review is undertaken when they are created, which often results in a duplication of efforts. For example, various departments and agencies have issued enterprise-wide contracts to procure IT services (rather than leveraging government-wide vehicles) despite the fact that most of these services are almost identical across all of government.

The phenomenon of proliferating agency-, enterprise-, and government-wide contracting vehicles is actually raising transaction costs for industry as well as government. To participate in the services industry now and in the future, it is mandatory 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 ID/IQ 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 ID/IQs. 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 of these broad overarching vehicles has increasingly limited opportunities to enter the market, except through mergers and acquisitions.

In recent years there has been an increasing demand for more transparency in government- and enterprise-wide contracting procedures. The Office of Federal Procurement Policy (OFPP) under the Office of Management and Budget (OMB) is now surveying the contracts currently in operation, their scope, their primary users, and the rationale for why they exist. In 2007, it is expected to publish clearer guidelines for issuing and managing enterprise-wide contracts. This may cause a slowdown in the growth of these types of contracts, although they will remain part of the landscape for many years to come.

Figure 3.5. Average Value of Federal Professional Services Contracts, 1995–2005

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

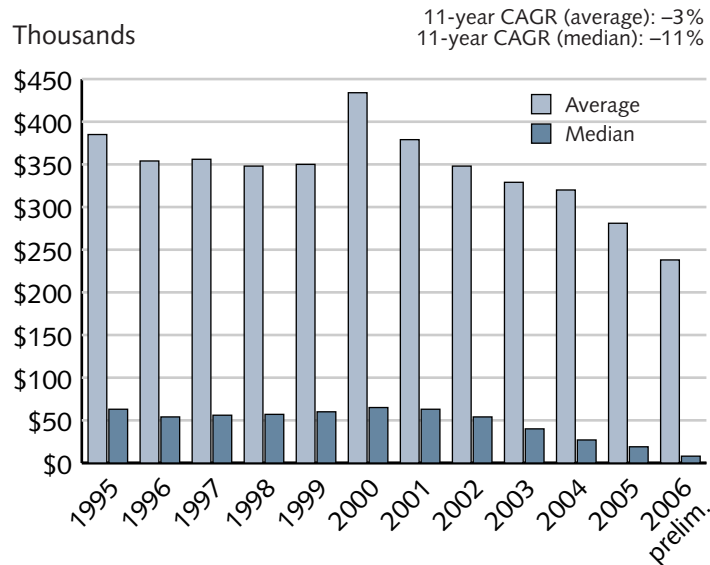
Average Value of Contracts — Figure 3.5

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 average value of all contracts during the past 11 years has almost halved, from a little more than \$1 million per contract to \$0.5 million in 2005. This is largely explained by the fact that in 2004 it became mandatory to report to FPDS any contract action of \$2,500; until that year, only contracts of \$25,000 and over were to be reported. When contract actions worth less than \$25,000 are not counted throughout the 11-year period, the average contract size remains quite constant. Despite a four-year peak (2000–2003) when the average contract was approximately \$1.5–\$1.8 million, the majority of years saw the value relatively steady at \$1.2–\$1.4 million.

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. During the past 11 years, the average contract action size has decreased 25 percent, to \$280,000 in 2005, while the median contract action value has dropped more than 70 percent, to \$19,000 in 2005. The increased use of broad multiple-award contract types with multiple contract actions underneath them has been driving this trend.

Figure 3.6. Average and Median Values of Federal Professional Services Contract Actions, 1995–2006



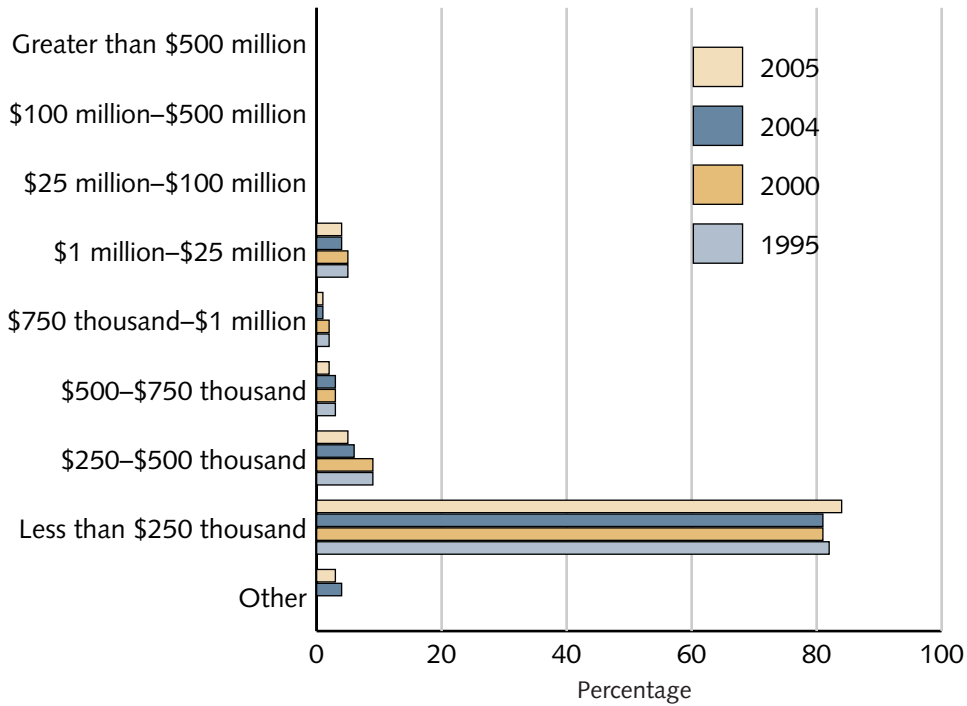
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

Distribution of Contract Actions — Figure 3.7

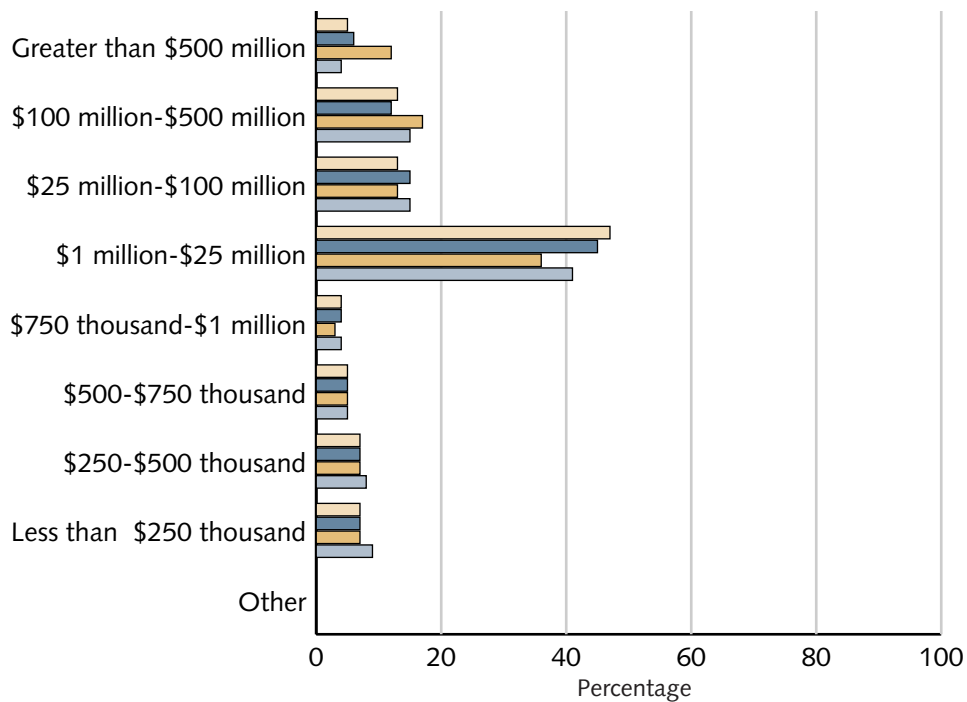
The distribution pattern of services contract actions shows that contract actions worth \$250,000 or less represent 85 percent of all actions awarded; however, the cumulative value of all these contract actions accounted for less than 10 percent of the total dollars awarded. This represents significant 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, 2004, and 2005

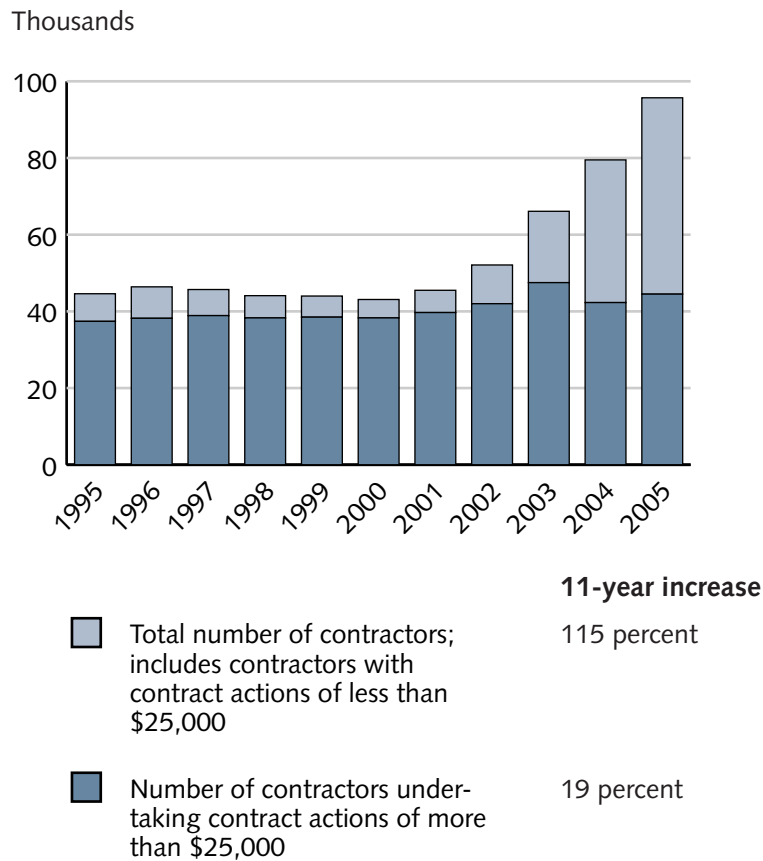
Distribution of contract actions, by size of actions



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, 1995–2005

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—more than doubling to almost 96,000 contractors in 2005. Thus, while the overall federal professional services market doubled during the past decade, the number of contractors grew by 113 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. Even factoring in the inclusion of companies doing \$2,500 and above in FPDS since 2004, 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 modestly. Figure 3.8 shows that the number of contractors undertaking the larger contract actions has risen from 37,000 to 44,500, an increase of only 22 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 56 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. An analysis of the 2005 data indicates that, of the 96,000 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.

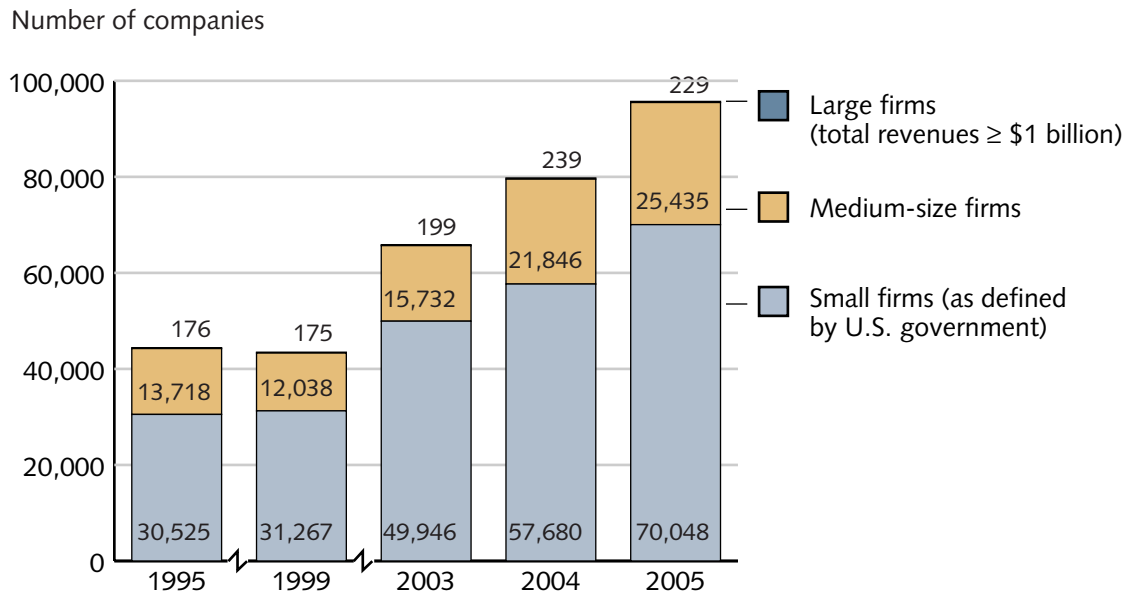
Segmentation of the Services Contractor Base — Figure 3.9

Figure 3.9 shows that more than one-half of the small firms and almost one-half of the medium-size firms execute only contract actions that are smaller than \$25,000. Three-quarters 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.

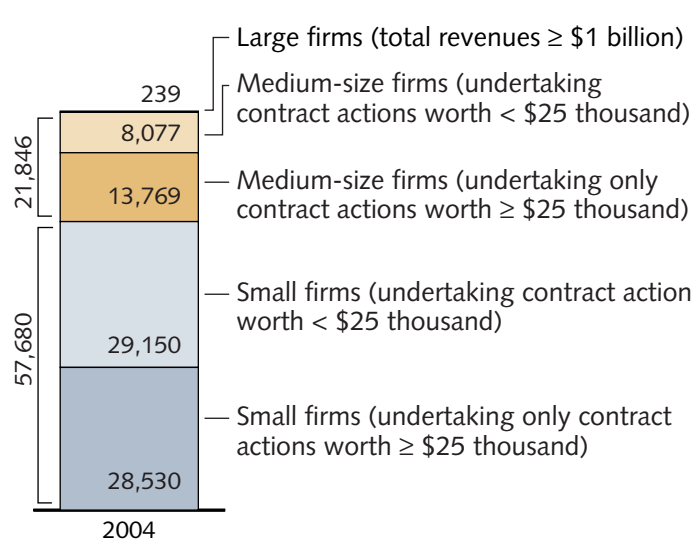
Evolution of Market Shares — Figure 3.10

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 2005, the middle-tier companies were able to capture only 33 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, from 37 to 46 percent. 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.

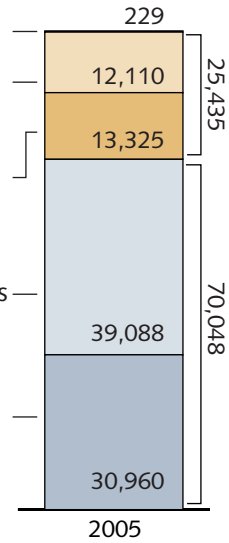
Figure 3.9. Number of Small, Medium, and Large Firms in the Federal Services Industry, 1995, 1999, 2003, 2004, and 2005



Details for 2004

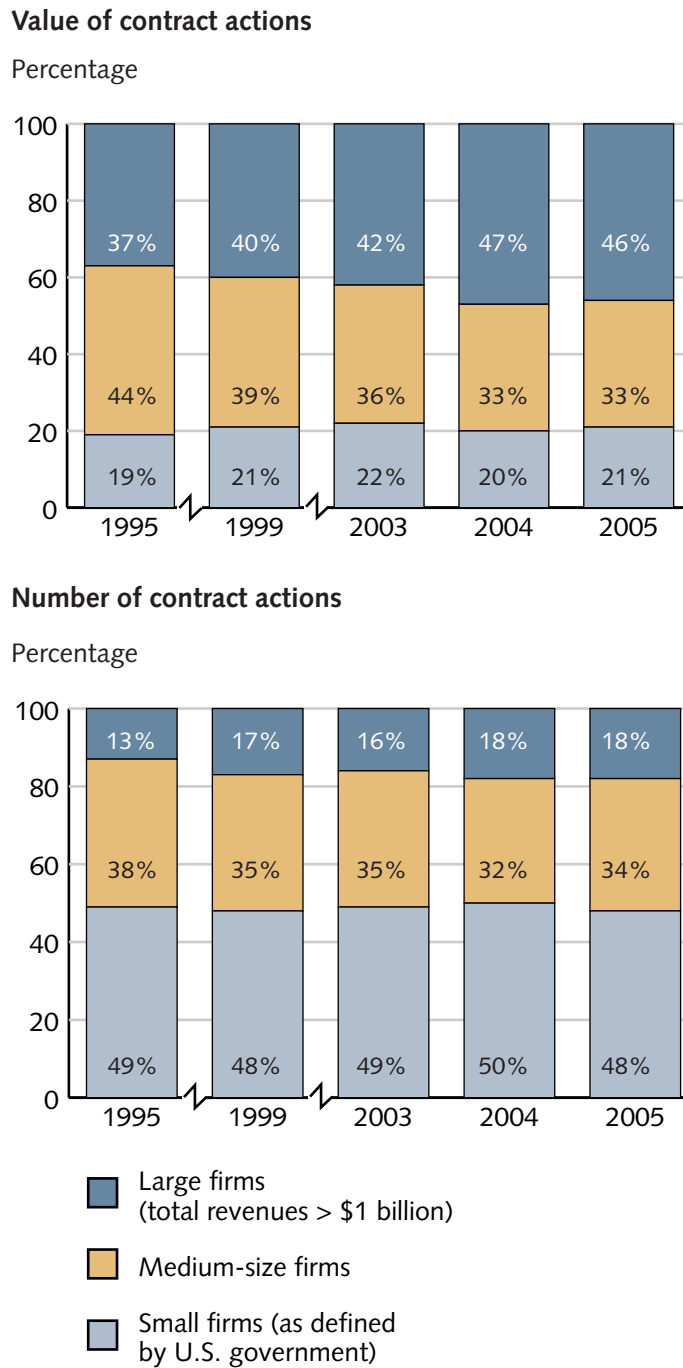


Details for 2005



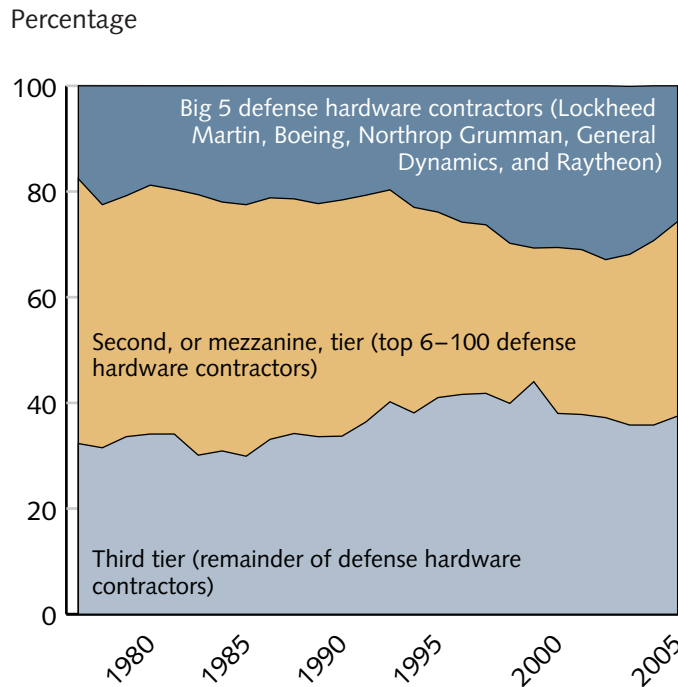
Source: Federal Procurement Data System; analysis by CSIS Defense Industrial Initiatives Group.

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, 2004, and 2005



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, 1977–2005



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 was for a while also seen in the overall defense industrial base. During the past decade, the Top 5 defense companies (Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, and Raytheon) increased their market share from about 26 percent to about 33 percent of prime contract value awarded by 2002, before dropping back to 26 percent in 2005. 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 to 30 percent during through 2002, before making somewhat of a comeback, reclaiming a portion of their share from the Top 5 and returning to 37 percent in 2005.

Table 3.1. Distribution of Contractors in the Five Professional Services Categories, 1995 and 2005, percentage

	1995					2005				
	ICT	PAMS	R&D	ERS	FRS	ICT	PAMS	R&D	ERS	FRS
ICT	100	33	19	25	9	100	40	14	22	14
PAMS	7	100	13	6	6	10	100	10	9	10
R&D	9	30	100	9	4	11	33	100	13	11
ERS	11	13	8	100	12	10	17	8	100	16
FRS	1	4	1	3	100	3	10	4	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 2005, 40 percent of ICT contractors were also active in the PAMS category, and that interrelationship has only increased during 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 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.

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 industrial base has changed over time. The Top 20 companies in the industry had a 31 percent market share in 1995, and a 32 percent share in 2005 (down from almost 37 percent in 2004). The Top 5 companies have lost some of their market share (19 to 17 percent) since 1995, although the majority of this decrease, from 21 to 17 percent, occurred in 2004–2005. 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 2005 that ranking required annual awards of almost \$1.3 billion.

The composition of the Top 20 contractors also changed significantly between 1995 and 2005. 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 9 in 2005). 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 2005 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 2005

Rank	1995		2005	
	Company	Value of contract actions (\$, thousands)	Company	Value of contract actions (\$, thousands)
1	Lockheed Martin	9,189,708	Lockheed Martin	13,058,761
2	Westinghouse	3,216,178	Northrop Grumman	8,852,592
3	Boeing	2,959,228	Boeing	6,550,319
4	Northrop Grumman	2,515,868	Halliburton	5,553,026
5	Raytheon	1,624,159	Raytheon	4,399,741
	Subtotals for Top 5	19,505,141		38,414,439
6	CSC	1,505,354	SAIC	3,804,292
7	Rockwell	1,464,352	CSC	3,766,990
8	SAIC	1,236,287	Bechtel	3,039,078
9	Loral	1,203,619	L-3 Communications	2,956,697
10	Sandia Corporation	1,159,740	General Dynamics	2,952,399
11	General Electric	1,121,452	Sandia Corp.	2,291,547
12	TRW	1,097,035	Booz Allen Hamilton	1,920,729
13	DynCorp	640,453	BAE Systems	1,828,549
14	Newport News	630,387	Battelle	1,740,467
15	Bechtel	496,040	EDS	1,657,149
16	IBM	446,053	Westinghouse	1,483,748
17	Unisys	425,543	Dyncorp	1,438,481
18	MITRE	380,305	Fluor Enterprises, Inc.	1,385,150
19	United Technologies	377,825	CACI	1,358,643
20	General Dynamics	360,028	BWXT	1,298,510
	Totals for Top 20	32,049,614		71,336,866

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. Eleven 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 more complex and skills-intensive ICT and PAMS segments. Northrop Grumman has also 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, 2005 (dollars, thousands)

Contractor	ICT	PAMS	R&D	ERS	FRS	Other	Total
Lockheed Martin	1,307,332	2,142,596	8,155,901	1,118,826	78,282	255,824	13,058,761
Northrop Grumman	1,382,887	2,402,126	4,458,294	246,304	222,137	140,844	8,852,592
Boeing	10,075	733,681	5,348,178	333,237	45,914	79,235	6,550,319
Halliburton	0	5,267,233	4,624	0	281,168	0	5,553,026
Raytheon	165,275	814,310	1,898,302	1,020,723	255,313	245,819	4,399,741
SAIC	1,702,978	1,411,296	452,649	43,955	74,509	118,905	3,804,292
Computer Sciences Corporation	1,516,623	942,905	278,797	809,941	203,381	15,343	3,766,990
Bechtel	0	260,249	463,131	0	1,327,882	987,816	3,039,078
L-3 Communications	252,425	1,505,266	346,667	773,712	13,020	65,608	2,956,697
General Dynamics	535,762	974,591	683,016	708,872	7,688	42,470	2,952,399
Sandia Corp.	0	0	-7	0	2,291,554	0	2,291,547
Booz Allen Hamilton	551,797	889,789	384,938	37,975	5,517	50,713	1,920,729
BAE Systems	195,008	820,337	459,143	283,942	67,253	2,866	1,828,549
Battelle	16,317	270,116	783,897	15,701	640,489	13,947	1,740,467
Electronic Data Systems	1,545,533	96,614	19	5,593	446	8,944	1,657,149
Westinghouse	0	0	468	0	1,483,280	0	1,483,748
Dyncorp	0	460,599	853,738	14,248	88,680	21,215	1,438,481
Fluor Enterprises	0	123,363	3,908	452	856,435	400,992	1,385,150
CACI	422,160	637,379	150,516	103,906	8,479	36,202	1,358,643
BWXT	0	9,341	0	0	1,289,169	0	1,298,510
Total	9,604,172	19,761,792	24,726,178	5,517,385	9,240,597	2,486,743	71,336,866

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

Policy Implications

Professional services providers have clearly become a major resource for the U.S. federal government. Federal spending on services now exceeds \$200 billion and represents 21 percent of the total federal discretionary budget. This spending level has more than doubled during the past decade. The benefits of this growth in the public use of private firms are fairly well known. Contracting to private industry for the provision of traditional as well as emerging government functions has allowed the federal departments to redeploy resources to more value-added functions as they increase their responsiveness and create surge capacity for emergencies.

This increased scope and visibility of the federal professional services industry raises important public policy issues. Legitimate questions of limits, incentives, fairness, value received, and appropriateness of regulatory frameworks need to be considered carefully when such large sums of the public treasury are at stake. The balancing of private and public equities will require thoughtful deliberation. Overzealous regulation will drive away the innovative and efficient firms that government is seeking to attract. Lack of proper oversight risks the loss of public trust and acceptance of private contracting as a viable means of executing federal responsibilities. Because the allocation of contracts in our system occurs within both a political and an industrial context, care must be taken not to sacrifice long-term goals for short-term benefits.

Of the multiple policy issues related to the management of the professional services industrial base, we focus on key issues related to the facts analyzed in this study:

WHAT ARE THE NATURAL LIMITS TO THE GOVERNMENT’S OUTSOURCING OF SERVICES? Every category of professional services analyzed in this report exhibited at least mid-single-digit or double-digit compound growth during the past decade. The FAR prohibits the outsourcing of all tasks that are “inherently governmental,” but the exact meaning of inherently governmental has varied over time depending on the urgency of the government’s needs and its ability to fulfill its own requirements organically. Most senior government executives agree that government should retain the right to make policy, commit public funds, and evaluate the results of services and products procured. Yet these limits have eroded somewhat as demands on government expand, the federal workforce shrinks, and the technical skills within the government atrophy. Examining the line of what is inherently government and articulating a clear policy that can be embraced by all the parties will be critical to maintaining a healthy government-industry relationship.

HOW MUCH COMPETITION IS BENEFICIAL TO THE GOVERNMENT AND UNDER WHAT CIRCUMSTANCES? Competition can be an extremely effective tool for managing the industrial base, particularly when there is asymmetry of information between industry and government. Sometimes, however, other tools better fit the job at hand. As a general policy, competition is used to create incentives for suppliers to keep costs down and quality up. In practice though, situations arise in which running repeated competitions for specialized services in areas where

very limited numbers of qualified suppliers exist actually costs the government more money than it saves. The facts that half of the value of federal services contracts is in modifications to existing contracts and that the fastest-growing categories of contract actions are in multiple-award vehicles may or may not indicate that sufficient competition is occurring. A one-size-fits-all approach will not work. The real answers depend on an honest evaluation of where and when the government derives its greatest benefits from competition.

WHAT EFFECT IS THE RAPIDLY INCREASING VOLUME OF CONTRACTING ACTIVITY HAVING ON THE FEDERAL GOVERNMENT CONTRACT MANAGEMENT WORKFORCE? As the size of contract actions continues to decrease, the number of contract actions to be processed increases by at least 11 percent per year. Are the newer contract vehicles really saving the government time and money, or are they just adding to the burden of an already stretched contracting staff?

IS THE CURRENT STRUCTURE OF THE SERVICES INDUSTRIAL BASE SUSTAINABLE? There are two related but different factors at play here. The first is that the existing small- and disadvantaged-business set-aside laws have clearly been working in the professional services market, as small businesses have consistently maintained a 20–22 percent share of total government services contracts. There is some anecdotal evidence, however, of some negative side effects—companies that never graduate from their protected status, for example—that is worth further study. The other important factor is the growing clout of the companies that are worth more than \$1 billion. Together these forces are slowly squeezing out a viable cadre of mid-tier companies. Traditionally, mid-tier companies have served as a conduit for new ideas and improved business practices. Policymakers must determine whether a robust middle tier of services companies is important or desirable for the federal marketplace. If so, current incentives for companies to enter and remain in this mid-market level must be changed in order to encourage this to happen.

HOW SHOULD GUIDELINES BE SET TO AVOID ORGANIZATIONAL CONFLICTS OF INTEREST RESULTING FROM MERGERS AND ACQUISITIONS ACTIVITY AMONG INDUSTRY PARTICIPANTS? Since 2001, the transaction volume of merger and acquisition (M&A) deals in the professional services sector has doubled. As a by-product of all this activity, several scientific engineering and technical assistance (SETA) contractors have ended up as part of larger firms, sometimes supervising their parent or sister companies for the federal government. Concern within the government is mounting over the potential for organizational conflict of interest. Although there are many remedies, ranging from firewalls to divestiture of the conflicted entities, a clearly articulated policy and industrial-base strategy addressing this issue is lacking.

DOES THE GROWTH AND DIVERSITY OF THIS MARKETPLACE INDICATE A NEED FOR A FUNDAMENTALLY DIFFERENT SET OF ACQUISITION REGULATIONS, MORE IN TUNE WITH THE VAGARIES OF SERVICES CONTRACTING? The current FAR was developed over the past quarter century and with a bias toward the acquisition of material goods and weapons. Matériel can be specified, developed, tested, and accepted over a period of time. Services, by contrast, fill more immediate needs. Although service contracts may extend over many years, services support often starts upon contract signature and can be more direct and personal in nature—even though personal services are prohibited under the current FAR—depending on the exact nature of the contract in question. Many seasoned contracting officers both inside

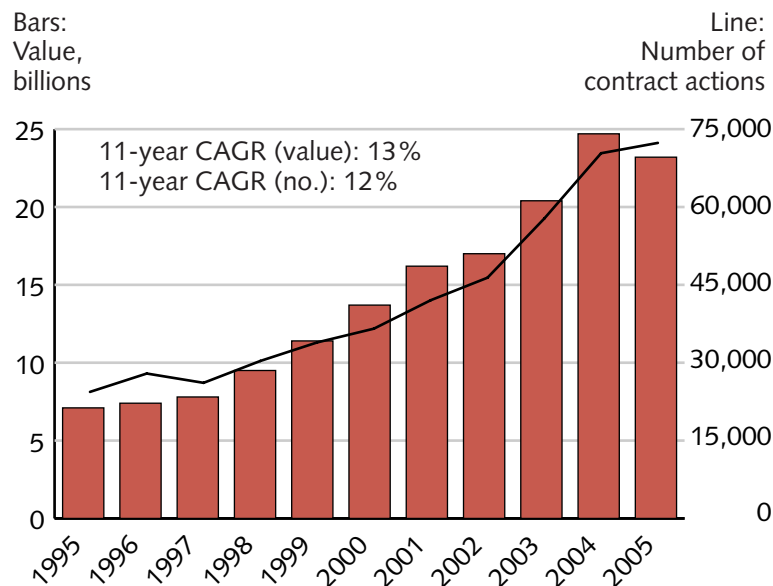
and outside of government today are raising the question: Should services be treated differently? To the extent that a revised set of services regulations would result in substantial cost or time savings to the federal bureaucracy, this topic should be examined.

A host of other key policy issues, such as the legal implications of contractors deployed outside of the United States under battlefield conditions, are also topics of debate. These issues, while important, are beyond the scope of this study. We focus instead on policy questions related to the size, scope, and development of the federal professional services industrial base.

Information and Communications Technology Services

In this chapter:

- 11-year summary of ICT services
- Top 10 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 2005 compared)

Figure 5.1. Growth of the Federal ICT Services Market, 1995–2005

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

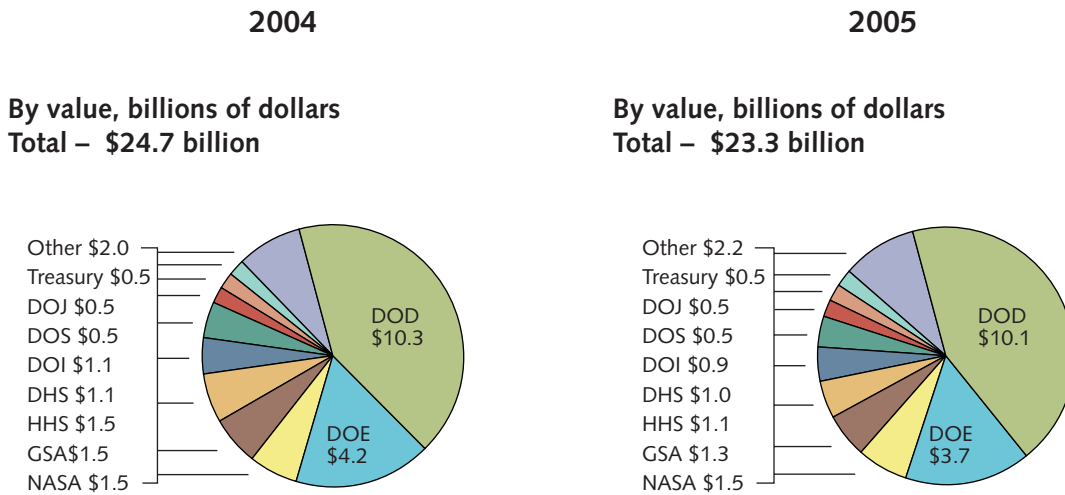
ICT Services Market Growth — Figure 5.1

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 (CAGR) of 13 percent. Overall, the market has grown from \$7.1 billion in 1995 to \$23.2 billion in 2005. The contracting for and outsourcing of information technology services by the federal government has certainly been a key trend of the past 11 years. This has allowed the ICT segment to be the only market segment to exhibit constant growth from 1995 to 2004. That growth, however, peaked in 2004 and the segment shrank in 2005 and 2006 (according to preliminary data).

Key ICT Services Market Customers — Figure 5.2

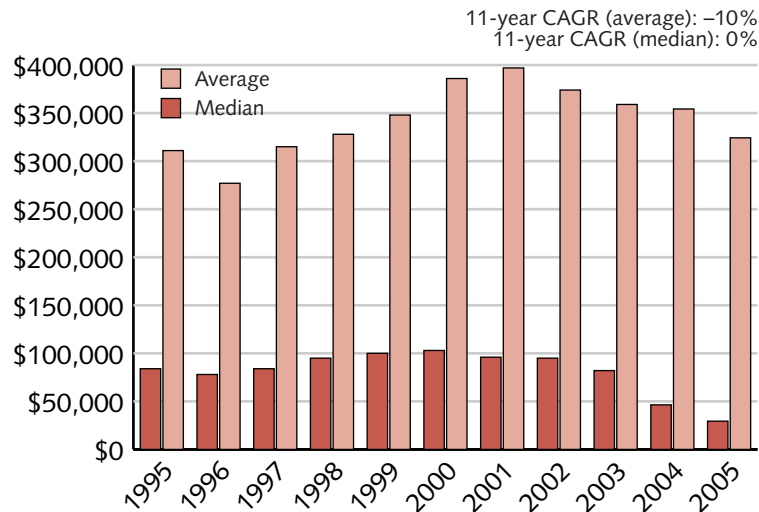
The Department of Defense accounts for 43 percent of this market (\$10.1 billion of awards in 2005). Other key customers are the Department of Energy (\$3.7 billion), NASA (\$1.5 billion), and the General Services Administration (\$1.3 billion).

Figure 5.2. Federal ICT Services Market, by Customer, 2004 and 2005



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

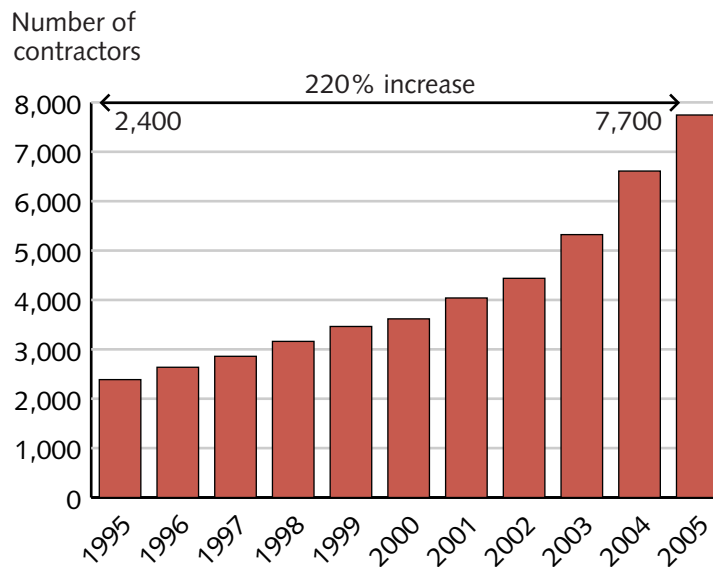
Figure 5.3. Average and Median Values of Federal ICT Services Contract Actions, 1995–2005



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

Evolution of ICT Contract Action Sizes — Figure 5.3

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 2005 the average contract action size was \$324,000 and the median was \$29,000.

Figure 5.4. Number of Federal ICT Services Contractors, 1995–2005

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

Evolution of the ICT Contractor Base — Figure 5.4

The number of federal ICT services contractors has grown in line with the expansion of the market—both have approximately tripled in the past 11 years.

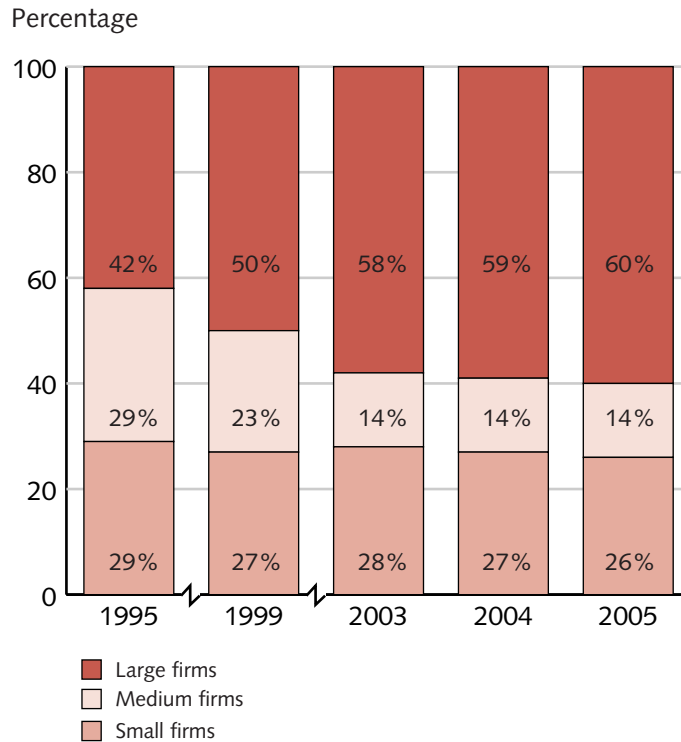
Evolution of ICT Contractors' Market Shares — Figure 5.5

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 27–28 percent, the share of contracts held by large companies has grown from 42 percent in 1995 to 60 percent in 2005. ICT is a market segment where having critical mass is important and the threshold for being deemed a major competitor continues to rise. This is driving robust mergers and acquisitions activity by the major firms, and the medium-size firms are being squeezed in the process.

Breakdown According to Size of ICT Contractors — Figure 5.6

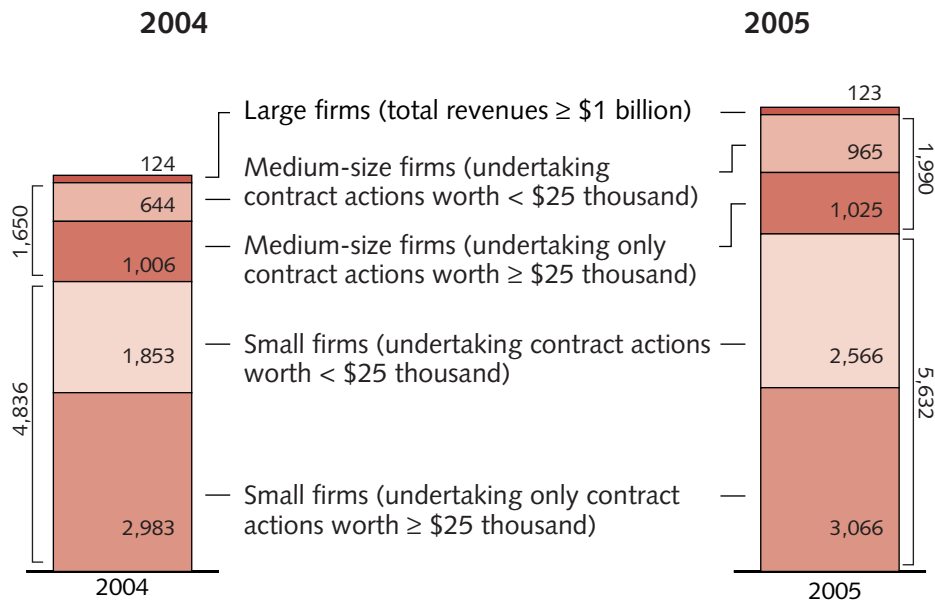
The number of large companies has remained stable, while the number of small and medium sized companies rose at 16.5 and 21 percent, respectively. However, in most cases more than 80 percent of that growth was in companies undertaking only contracts worth less than \$25,000.

Figure 5.5. Distribution, by Value of Contracts, of Federal ICT Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005



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

Figure 5.6. Number of Small, Medium, and Large Firms in the Federal ICT Services Market, 2004 and 2005



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

Table 5.1 Percentage of ICT Contractors Participating in Other Professional Services Categories, 1995 and 2005

1995				2005			
PAMS	R&D	ERS	FRS	PAMS	R&D	ERS	FRS
33	19	25	9	40	14	22	14

Cross-Category Participation by ICT Contractors — Table 5.1

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 2005, 40 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 2005.

Table 5.2. Top 20 Federal ICT Services Contractors, 1995 and 2005

Rank	1995		2005	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	CSC	857,588,000	SAIC	1,702,978,074
2	Northrop Grumman	389,466,000	EDS	1,545,533,188
3	SAIC	279,260,000	CSC	1,516,622,707
4	Boeing	219,368,000	Northrop Grumman	1,382,887,218
5	Loral	194,571,000	Lockheed Martin	1,307,331,542
	Subtotal for Top 5	1,940,253,000		7,455,352,729
6	EDS	187,180,000	Accenture	591,916,725
7	Lockheed Martin	179,678,000	Booz Allen Hamilton	551,796,960
8	Unisys	156,763,000	SRA	548,678,987
9	IBM	120,787,000	General Dynamics	535,762,014
10	AT&T	81,129,000	MCI	504,642,494
11	Xerox	68,003,000	CACI	422,160,302
12	Comsat	64,495,000	UNISYS	324,440,474
15	MCI	61,294,000	IBM	304,731,143
14	Logicon	50,613,000	L-3 Communications	252,424,860
15	Booz Allen Hamilton	49,804,000	AT&T	251,384,445
16	GTE	45,721,000	Anteon Corporation	205,498,615
17	CACI	45,345,000	BearingPoint	197,143,496
18	Raytheon	44,639,000	BAE Systems	195,008,037
19	Mantech	34,238,000	Honeywell	179,914,109
20	TRW	30,603,000	Raytheon	165,275,014
	Total for Top 20	3,160,545,000		12,686,130,404

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

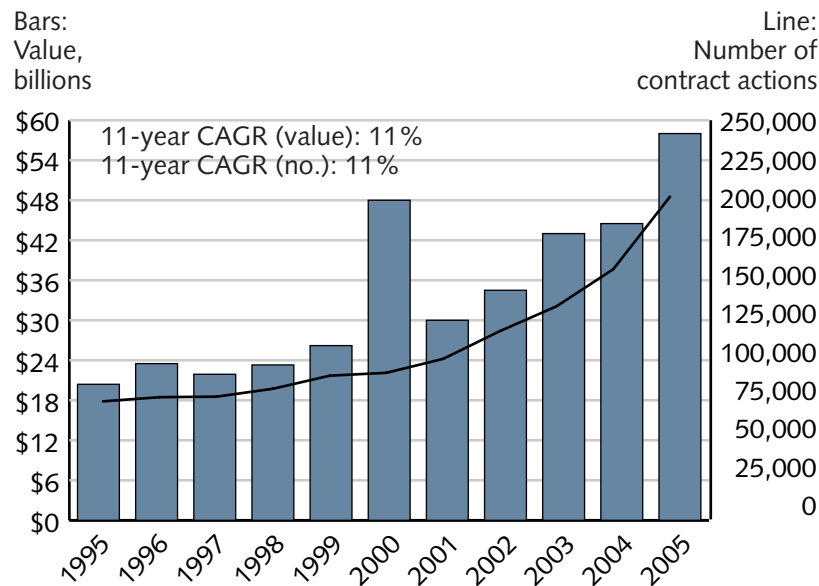
Top 20 ICT Contractors — Table 5.2

In 1995, the Top 5 ICT services providers controlled 27 percent of the market, while the Top 20 controlled 44 percent. By 2005, the Top 5 providers' share of the market had grown to 32 percent, while the Top 20 had increased their share to 54 percent. See table 5.2 for dollar values of contract actions for the Top 20.

Professional, Administrative, and Management Support Services

In this chapter:

- 11-year summary of PAMS services
- Top 10 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 2005 compared)

Figure 6.1. Growth of the Federal PAMS Market, 1995–2005

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

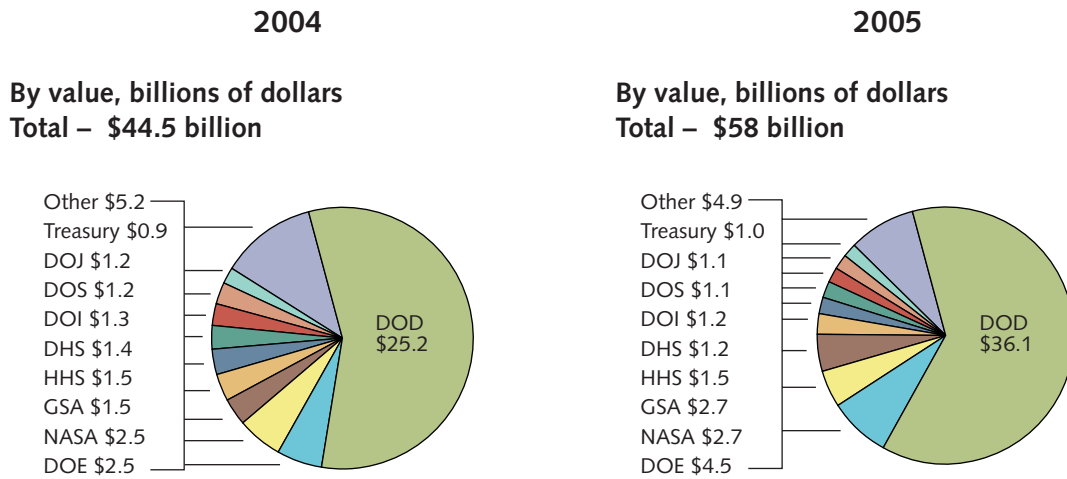
PAMS Market Growth — Figure 6.1

The market for federal professional, administrative, and management support (PAMS) services has witnessed relatively strong growth during the 11 years between 1995 and 2005. From slightly more than \$20 billion, it has climbed at a compound annual growth rate (CAGR) of 11 percent to some \$58 billion (although the CAGR for the years 2001–2006 was 16 percent per year). 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. An examination of preliminary 2006 data indicates that the PAMS segment remains one of the most robust and fastest growing in the industry.

Key PAMS Customers — Figure 6.2

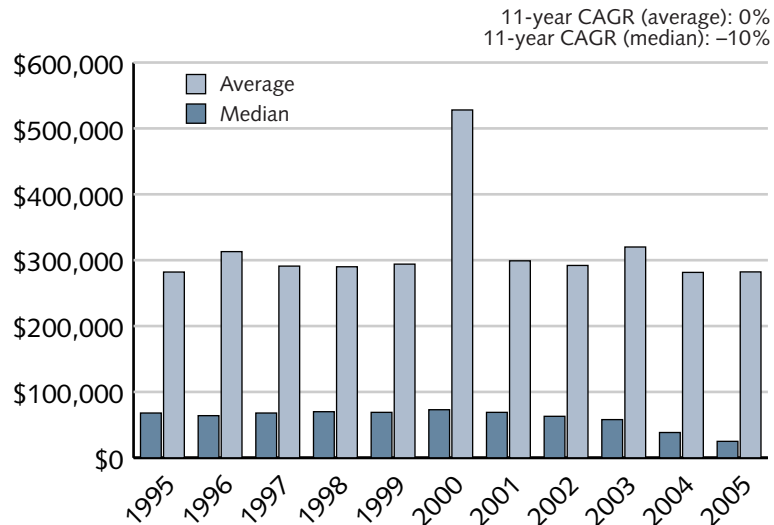
The Department of Defense accounts for almost two-thirds (62 percent) of contract actions—by value—awarded. The Department of Energy was a distant second-largest customer at 8 percent.

Figure 6.2. Federal PAMS Market, by Customer, 2004 and 2005



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

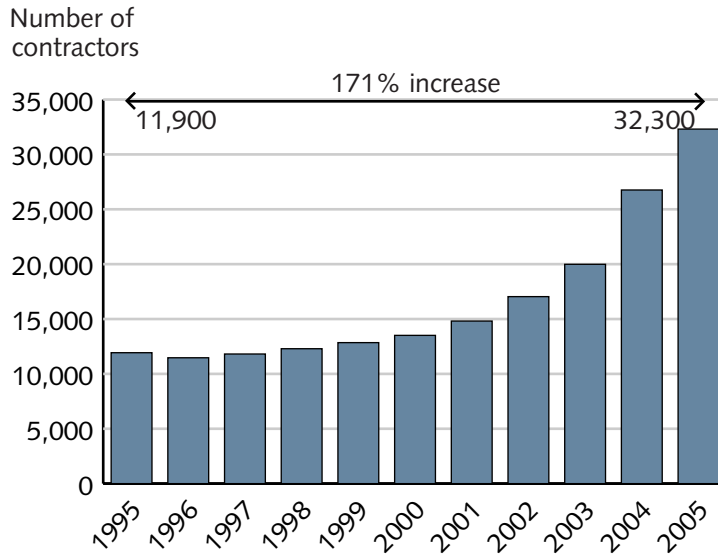
Figure 6.3. Average and Median Values of Federal PAMS Contract Actions, 1995–2005



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

Evolution of PAMS Contract Action Sizes — Figure 6.3

Average value for PAMS contract actions remained relatively constant throughout 1995–2005, at around \$300,000. 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. The median value remained constant at about \$70,000 until 2001 and then dropped sharply to \$25,000 in 2005.

Figure 6.4. Number of Federal PAMS Contractors, 1995–2005

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

Evolution of the PAMS Contractor Base — Figure 6.4

The number of competitors in the PAMS market has almost tripled during the past 11 years, with the bulk of the increase occurring since 2001 and very large jumps in 2004 and 2005.

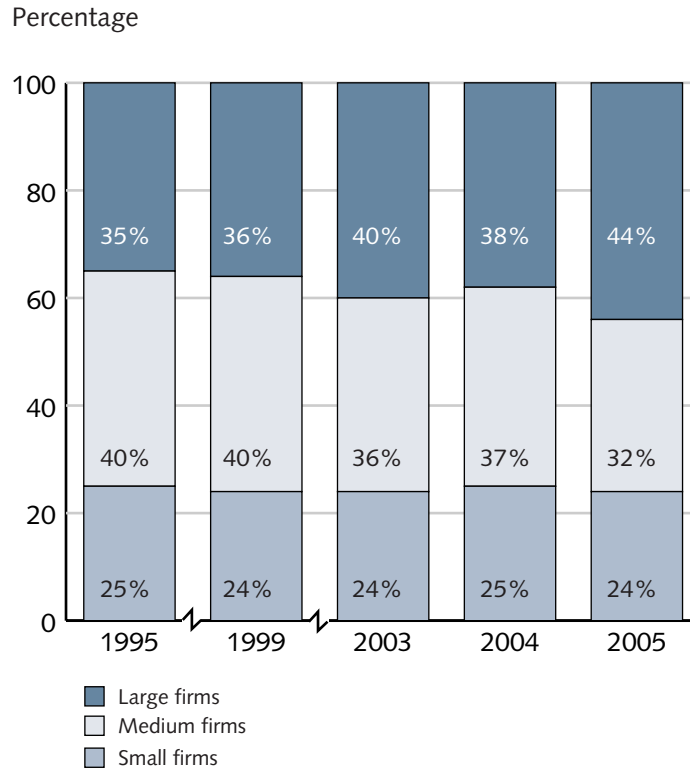
Evolution of PAMS Contractors' Market Shares — Figure 6.5

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 maintained their share of the PAMS market at 24 percent of the total value of all contract actions awarded in 2005, and large firms have increased their share of the market to 44 percent of contracts awarded. Note that the Halliburton LOGCAP contract is classified as a PAMS contract in the 2005 FPDS database; at approximately \$5 billion, it accounts for the majority of Halliburton's government services work. The PAMS segment remains one of the more fragmented parts of the services market.

Breakdown According to Size of PAMS Contractors — Figure 6.6

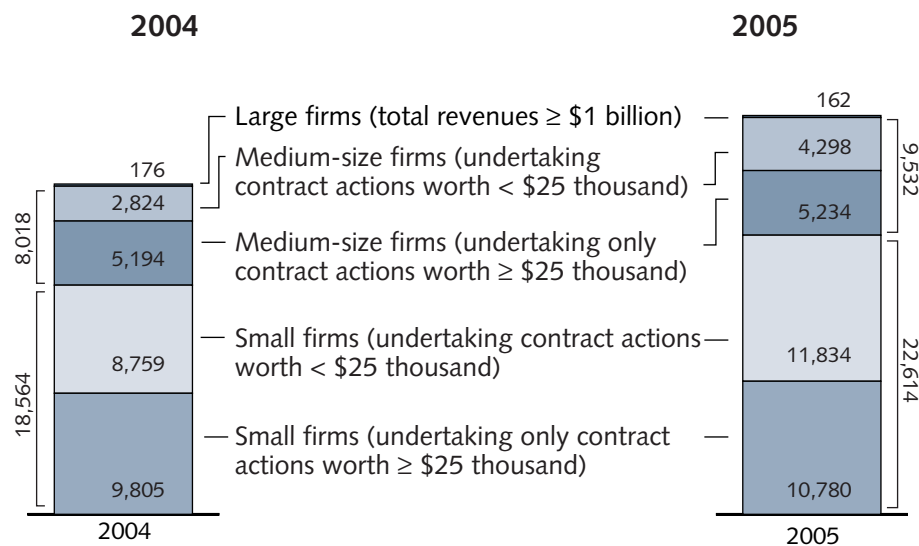
The number of large firms dropped notably from 176 to 162 (an 8 percent decrease) while the numbers of medium and small firms grew by 19 and 22 percent, respectively. However, while most of the growth in the small-sized companies was in those taking small contracts (worth less than \$25,000), the growth of small firms taking larger contracts (worth \$25,000 or more) was robust at 10 percent.

Figure 6.5. Distribution, by Value of Contracts, of Federal PAMS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005



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

Figure 6.6. Number of Small, Medium, and Large Firms in the Federal PAMS Services Market, 2004 and 2005



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

Table 6.1. Percentage of PAMS Contractors Participating in Other Professional Services Categories, 1995 and 2005

1995				2005			
ICT	R&D	ERS	FRS	ICT	R&D	ERS	FRS
7	13	6	6	10	10	9	10

Cross-Category Participation by PAMS Contractors — Table 6.1

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 2005, 10 percent of all firms in the PAMS segment also had R&D contracts. There is also some overlap as PAMS firms take on ICT and FRS contracts.

Top 20 PAMS Contractors — Table 6.2

The market share of the Top 5 players in the federal PAMS market grew from 16 percent of the value of all contract actions awarded in 1995 to 22 percent in 2005.

Table 6.2. Top 20 Federal PAMS Contractors, 1995 and 2005

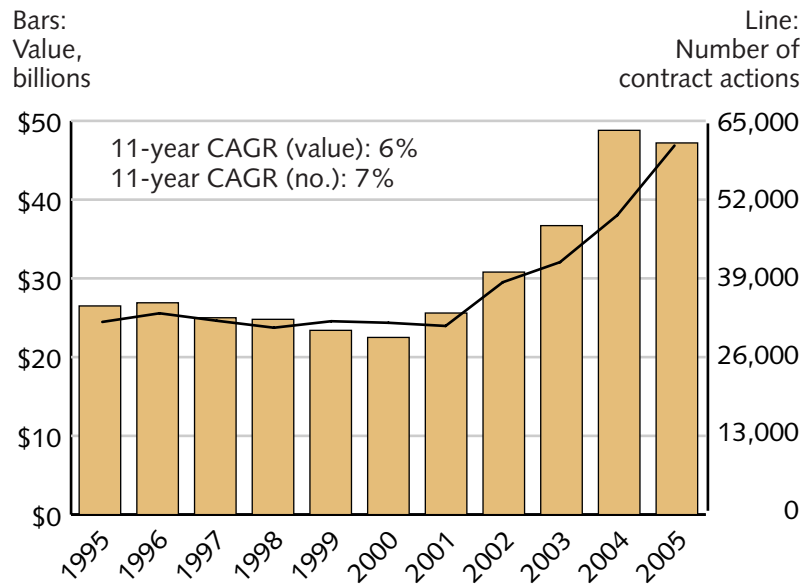
Rank	1995		2005	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	1,021,073,000	Halliburton	5,267,233,213
2	Northrop Grumman	783,388,000	Northrop Grumman	2,402,126,492
3	Raytheon	574,654,000	Lockheed Martin	2,142,596,373
4	SAIC	451,613,000	L-3 Communications	1,505,265,573
5	Boeing	404,864,000	SAIC	1,411,295,540
	Subtotal for Top 5	3,235,592,000		12,728,517,192
6	TRW	312,428,000	General Dynamics	974,590,870
7	CSC	255,358,000	CSC	942,904,834
8	Rockwell	195,128,000	Booz Allen Hamilton	889,788,556
9	Booz Allen Hamilton	188,990,000	BAE Systems	820,337,312
10	DynCorp	188,497,000	Raytheon	814,310,327
11	Bechtel	174,725,000	Boeing	733,681,426
12	Loral	154,621,000	CACI	637,379,033
15	General Dynamics	142,062,000	Anteon Corporation	619,759,887
14	Newport News	120,571,000	Dyncorp	460,599,214
15	EG&G	110,579,000	MITRE	394,637,595
16	EDS	102,622,000	Mantech	324,019,650
17	Westinghouse	101,889,000	Honeywell	294,241,682
18	General Electric	98,694,000	Battelle	270,116,222
19	Logicon	93,189,000	EG&G Technical Services	268,869,021
20	Jacobs Engineering Group	89,606,000	Bechtel	260,249,068
	Total for Top 20	5,564,551,000		21,434,001,890

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

Research and Development Services

In this chapter:

- 11-year summary of the R&D services market
- Top 10 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 2005 compared)

Figure 7.1. Growth of the Federal R&D Services Market, 1995–2005

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

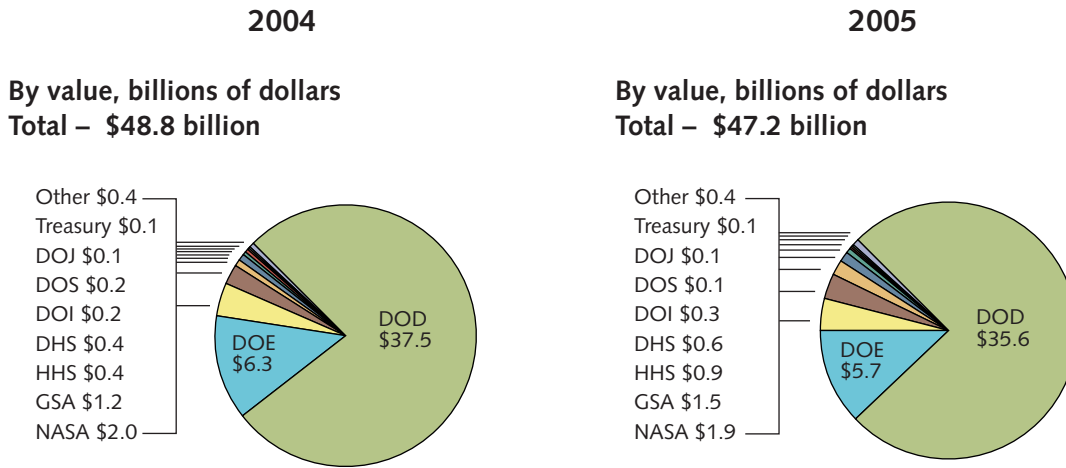
R&D Services Market Growth — Figure 7.1

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 \$47 billion in 2005 contract awards, the R&D services segment is one of the largest in the professional services market. Reflecting its cyclical nature, it appears that 2004 was the peak of the market segment, as 2005 shows a decline and preliminary 2006 data indicate there was no growth that year.

Key R&D Services Market Customers — Figure 7.2

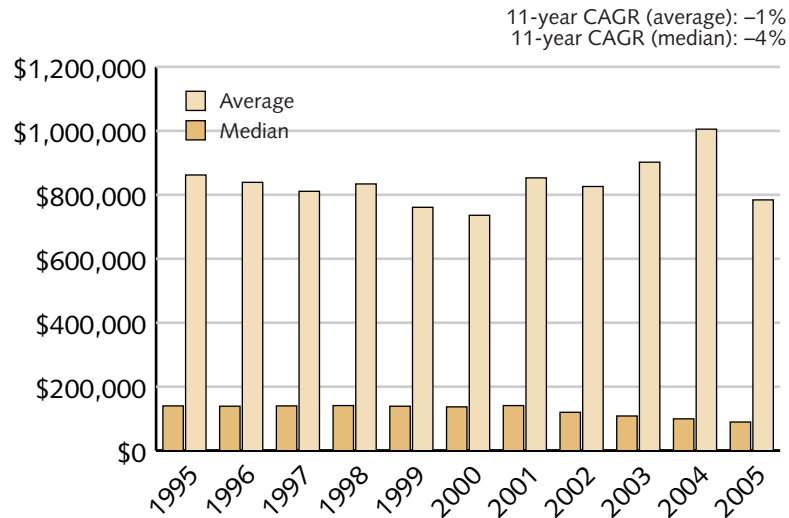
The biggest customer by far for R&D services is the Department of Defense, with 75 percent of the market. The Department of Energy (12 percent) and NASA (4 percent) are next largest customers.

Figure 7.2. Federal R&D Services Market, by Customer, 2004 and 2005



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

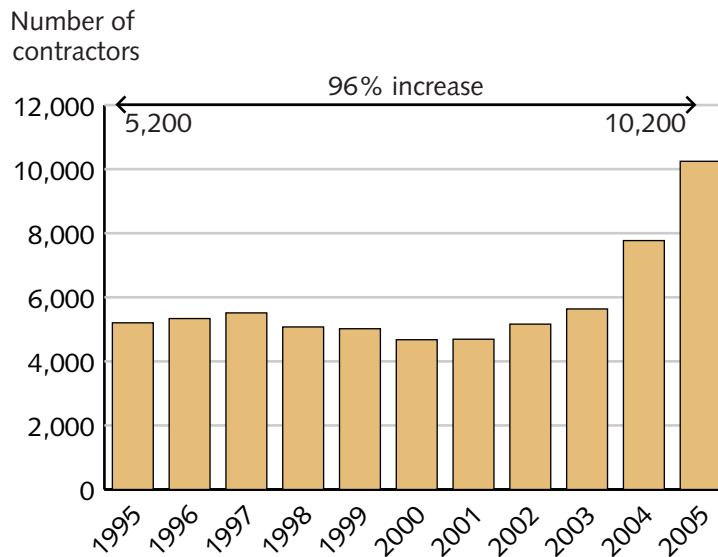
Figure 7.3. Average and Median Values of Federal R&D Services Contract Actions, 1995–2005



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

Evolution of R&D Contract Action Sizes — Figure 7.3

The value of the average R&D services contract action remained relatively constant during the 1995–2003 period, at around \$800,000, spiked a \$1,000,000 in 2004, then dropped back to just under \$800,000. This makes R&D services the segment with the highest average contract action value in the federal services market.

Figure 7.4. Number of Federal R&D Services Contractors, 1995–2005

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

Evolution of the R&D Contractor Base Figure 7.4

The number of competitors in the R&D market was very stable, at just over 5,000 firms, during the past decade, until the 80 percent growth of the past three years.

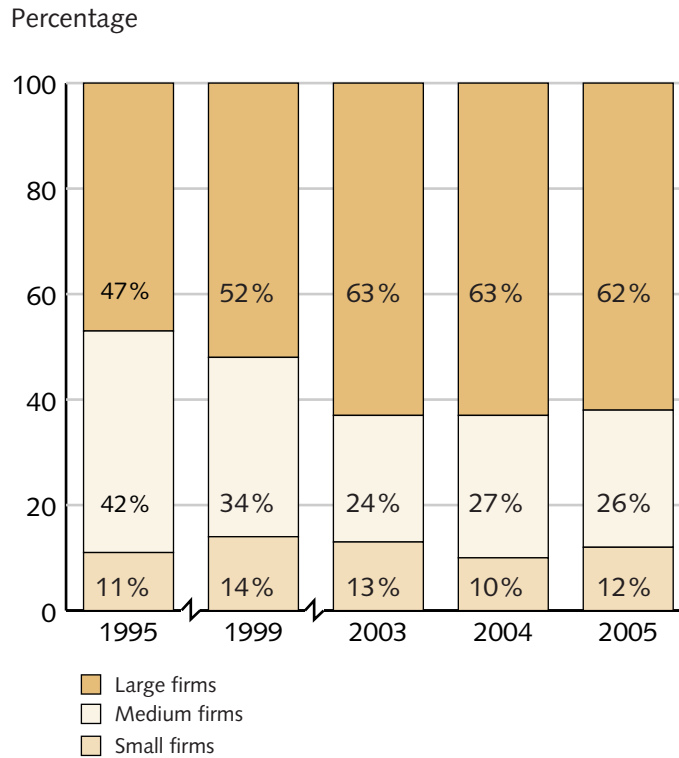
Evolution of R&D Contractors' Market Shares — Figure 7.5

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 2005 the Top 20 firms controlled almost 60 percent of this segment.

Breakdown According to Size of R&D Contractors — Figure 7.6

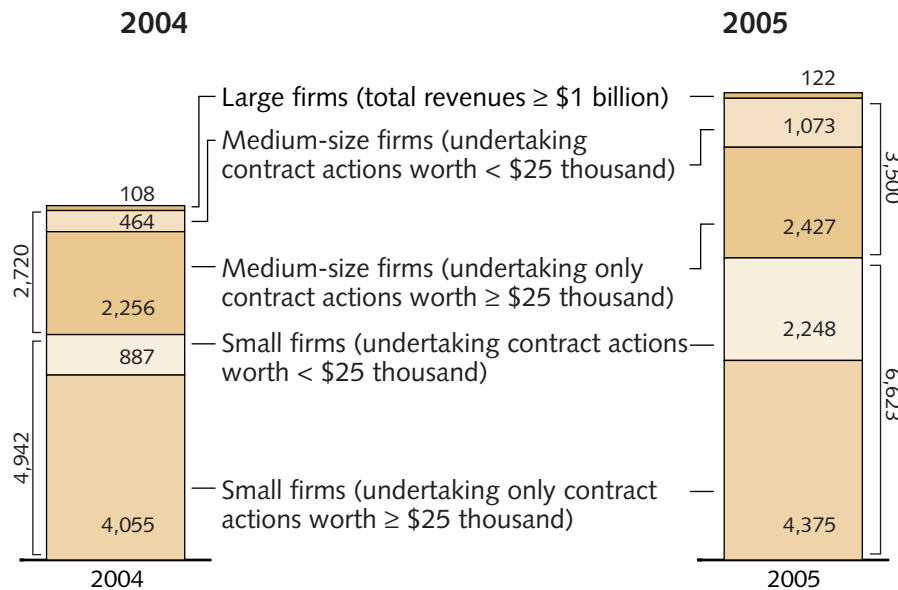
The numbers of large, medium, and small firms all increased by 13, 29, and 34 percent, respectively. The numbers of small and medium-sized firms taking only small contracts (worth less than \$25,000) more than doubled. The expansion in small and medium-sized firms taking large contracts (worth \$25,000 or more) also rose, but by less than 10 percent.

Figure 7.5. Distribution, by Value of Contracts, of Federal R&D Services Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005



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

Figure 7.6. Number of Small, Medium, and Large Firms in the Federal R&D Services Market, 2004 and 2005



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

Table 7.1. Percentage of R&D Contractors Participating in Other Professional Services Categories, 1995 and 2005

1995				2005			
ICT	PAMS	ERS	FRS	ICT	PAMS	ERS	FRS
9	30	9	4	11	33	13	11

Cross-Category Participation by R&D Contractors — Table 7.1

Companies involved in the R&D segment deepened their participation in every other segment of the professional services market during the 1995–2005 decade. The greatest increase occurred with R&D firms undertaking more professional, administrative, and management support (PAMS) contracts—33 percent of all R&D contractors took on PAMS contract actions in 2005—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 2005.

Top 20 R&D Contractors — Table 7.2

The R&D market has become more concentrated during the past decade, with the Top 5 federal R&D services contractors receiving 44 percent of all the awards in 2005 compared with 34 percent in 1995. As expected, the Top 5 consist of the major defense hardware contractors.

Table 7.2. Top 20 Federal R&D Services Contractors, 1995 and 2005

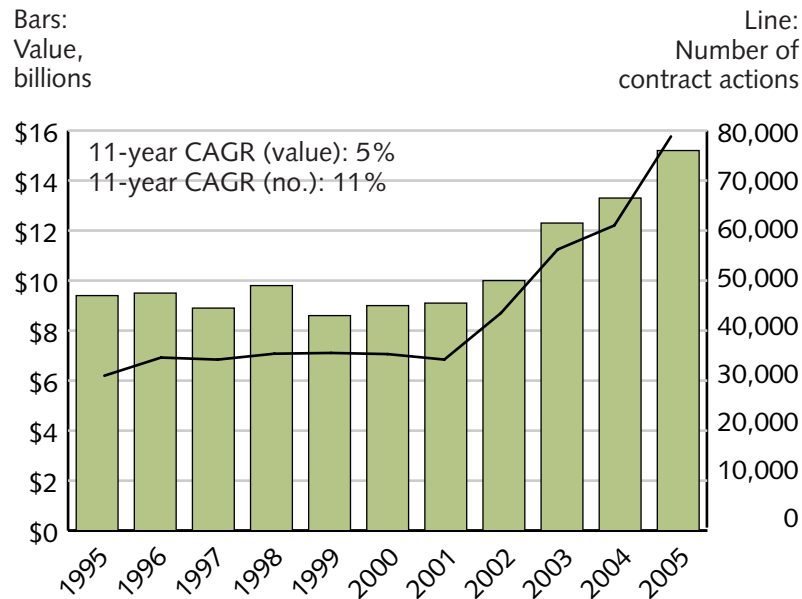
Rank	1995		2005	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	4,537,281,000	Lockheed Martin	8,155,901,188
2	Boeing	2,053,125,000	Boeing	5,348,177,735
3	Northrop Grumman	1,060,062,000	Northrop Grumman	4,458,293,723
4	Rockwell	763,278,000	Raytheon	1,898,301,647
5	Raytheon	635,547,000	United Technologies	1,050,285,674
	Subtotal for Top 5	9,049,293,000		20,910,959,967
6	General Electric	606,956,000	Dynacorp	853,737,917
7	Loral	503,876,000	Battelle	783,897,255
8	TRW	474,497,000	General Dynamics	683,015,645
9	SAIC	337,129,000	Aerospace Corp.	677,356,217
10	United Technologies	274,775,000	Bechtel	463,131,029
11	MITRE	273,833,000	BAE Systems	459,142,970
12	Texas Instruments	273,718,000	SAIC	452,648,995
15	CSC	234,933,000	Booz Allen Hamilton	384,938,201
14	Westinghouse	218,167,000	L-3 Communications	346,666,579
15	Unisys	158,625,000	Institute for Defense Analyses	345,328,847
16	United Defense	142,703,000	Unisys	327,276,055
17	IBM	131,911,000	Mitre Corporation	292,053,636
18	General Dynamics	129,637,000	CSC	278,796,865
19	Harris	84,287,000	General Electric	194,329,713
20	Logicon	77,478,000	Oshkosh Truck Corp.	186,619,866
	Total for Top 20	12,971,818,000		27,639,899,757

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

Equipment-Related Services

In this chapter:

- 11-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 2005 compared)

Figure 8.1. Growth of the Federal ERS Market, 1995–2005

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

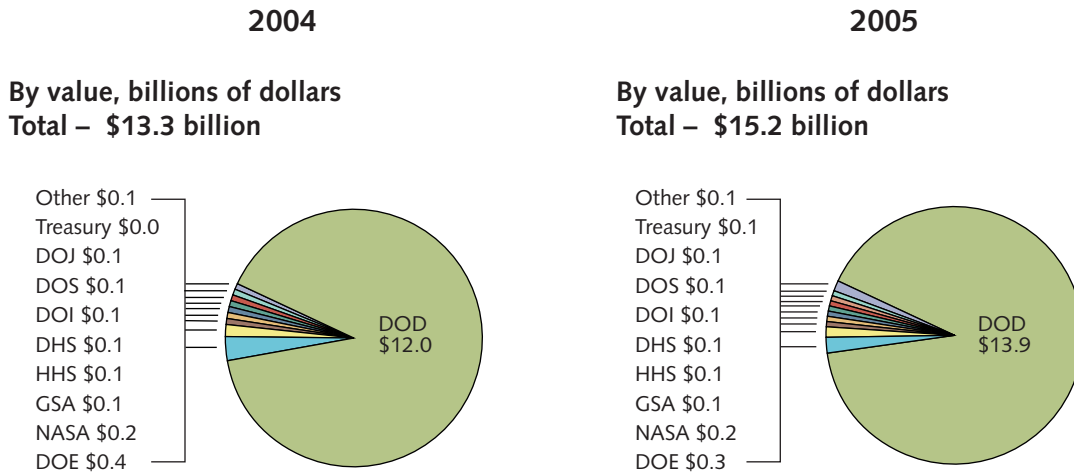
ERS Market Growth — Figure 8.1

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 \$15.2 billion in 2005, and the total number of contract actions almost doubled, from 41,630 to 78,390.

Key ERS Customers — Figure 8.2

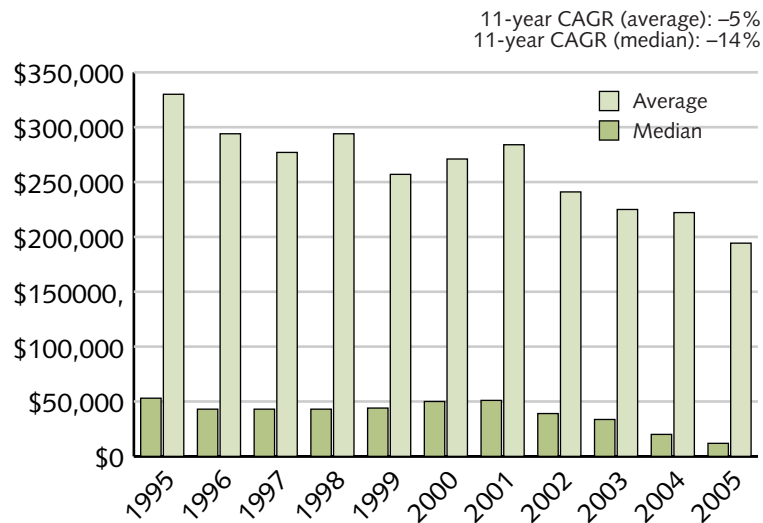
Because the Department of Defense is by far the largest customer for these types of services—91 percent of the 2005 market—this growth can be attributed to the increased operational tempo of U.S. military forces during the past four years.

Figure 8.2. Federal ERS Market, by Customer, 2004 and 2005



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

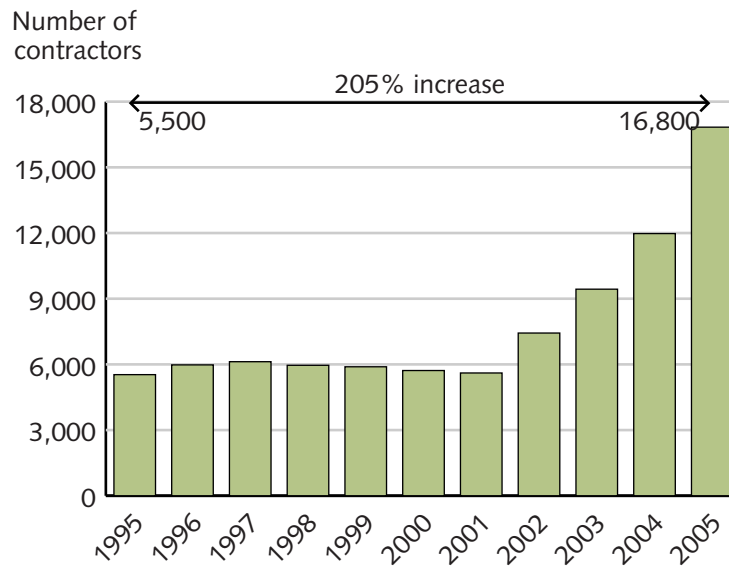
Figure 8.3. Average and Median Values of Federal ERS Contract Actions, 1995–2005



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

Evolution of ERS Contract Action Sizes — Figure 8.3

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 in 1995 to \$194,000 in 2005. Meanwhile, the median contract action has dropped from \$53,000 to \$12,000.

Figure 8.4. Number of Federal ERS Contractors, 1995–2005

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

Evolution of the ERS Contractor Base — Figure 8.4

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 threefold, to 16,835 firms.

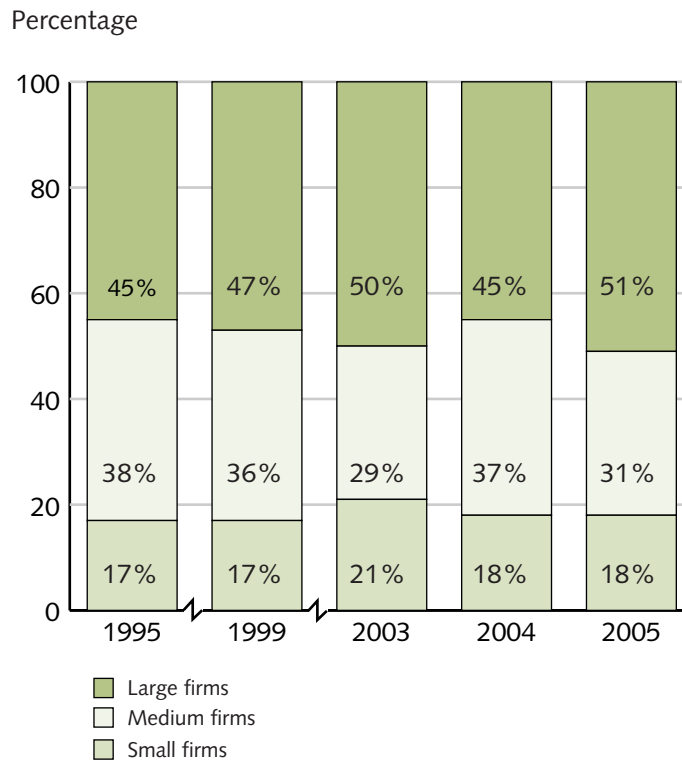
Evolution of ERS Contractors' Market Shares — Figure 8.5

Although the market share held by small companies has remained relatively constant, the share held by large companies has grown from 45 percent to 51 percent during the past 11 years. 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 31 percent in 2004.

Breakdown According to Size of ERS Contractors — Figure 8.6

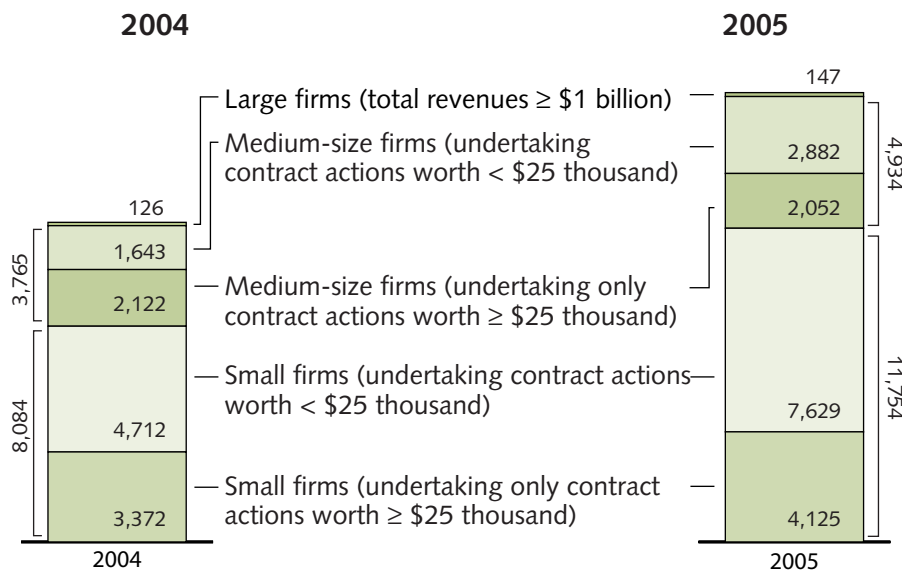
The numbers of large, medium, and small firms all increased by 17, 31 and 45 percent, respectively. Medium and small-sized firms taking only small contracts (worth less than \$25,000) increased by more than 50 percent each. The growth of small firms taking large (worth \$25,000 or more) contracts was substantial at 22 percent. Surprisingly, this widespread growth masked a small drop (3 percent) in the number of medium firms taking large contracts.

Figure 8.5. Distribution, by Value of Contracts, of Federal ERS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005



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

Figure 8.6. Number of Small, Medium, and Large Firms in the Federal ERS Market, 2004 and 2005



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

Table 8.1. Percentage of ERS Contractors Participating in Other Professional Services Categories, 1995 and 2005

1995				2005			
ICT	PAMS	R&D	FRS	ICT	PAMS	R&D	FRS
11	13	8	12	10	17	8	16

Cross-Category Participation by ERS Contractors — Table 8.1

The companies in the ERS segment are not very active in other segments. Over the 11-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.

Top 20 ERS Contractors — Table 8.2

There has been some change in the market shares of the Top 20 ERS companies. They controlled 43 percent of the market in 1995 and 49 percent in 2005. See table 8.2 for dollar values of contract actions for the Top 20.

Table 8.2. Top 20 Federal ERS Contractors, 1995 and 2005

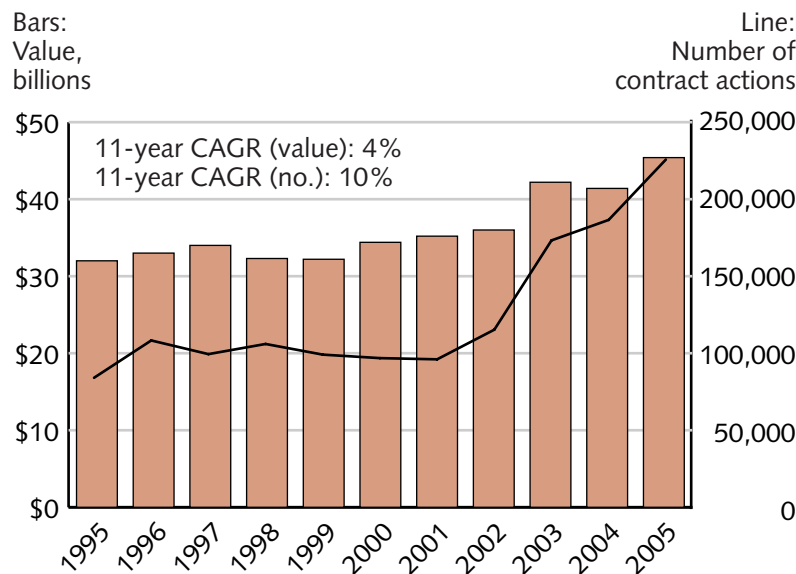
Rank	1995		2005	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Lockheed Martin	825,556,000	General Motors	1,157,058,290
2	Newport News	497,918,000	Lockheed Martin	1,118,825,610
3	Rockwell	465,145,000	Raytheon	1,020,722,812
4	Boeing	268,426,000	CSC	809,940,968
5	DynCorp	247,362,000	L-3 Communications	773,712,119
	Subtotal for Top 5	2,304,407,000		4,880,259,799
6	General Electric	220,530,000	General Dynamics	708,872,002
7	Northrop Grumman	206,657,000	Boeing	333,236,842
8	Loral	195,614,000	BAE Systems	283,941,568
9	GTE	189,009,000	Northrop Grumman	246,303,701
10	Raytheon	170,677,000	Anteon Corporation	209,845,879
11	IBM	164,284,000	Johnson Controls	146,979,579
12	Rolls Royce	95,838,000	CACI	103,905,689
15	United Technologies	86,804,000	Xerox	99,315,571
14	General Dynamics	78,605,000	ITT	95,879,147
15	Unisys	63,273,000	Honeywell	80,002,506
16	AT&T	63,101,000	General Electric	56,694,381
17	Harris	59,515,000	Mantech	46,406,694
18	Xerox	48,266,000	SAIC	43,954,841
19	CSC	27,645,000	Booz Allen Hamilton	37,975,108
20	Westinghouse	22,795,000	Harris Corp.	25,767,380
	Total for Top 20	3,997,020,000		7,399,340,685

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

Facilities-Related Services

In this chapter:

- 11-year summary of FRS
- Top 10 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 2005 compared)

Figure 9.1. Growth of the Federal FRS Market, 1995–2005

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

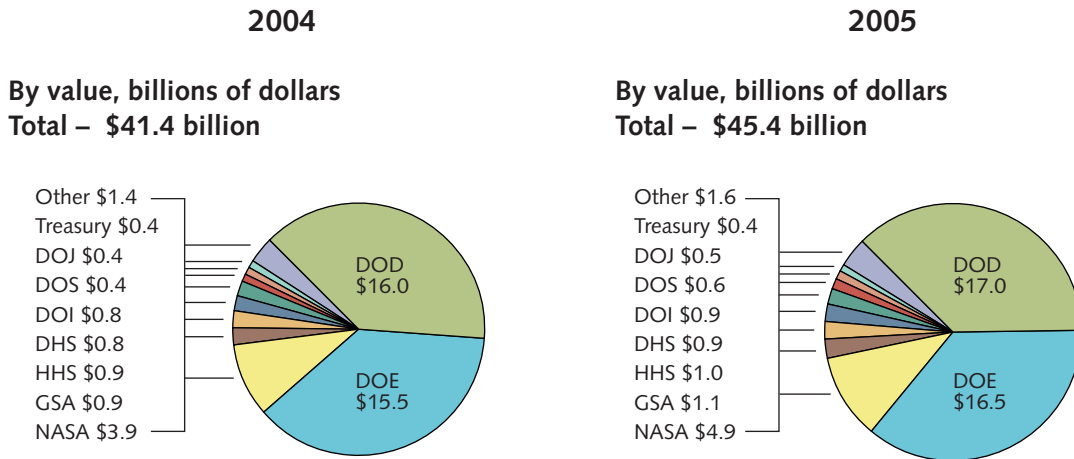
FRS Market Growth — Figure 9.1

The facilities-related services (FRS) segment has been a relatively large—\$45.4 billion in contract actions in 2005—but slowly growing market. During the past 11 years, the FRS market has expanded at a mere 4 percent compound annual growth rate (CAGR). In 2005, however, the market jumped almost 10 percent. The number of contract actions awarded has grown by 167 percent, from 83,500 in 1995 to 223,191 in 2005.

Key FRS Customers — Figure 9.2

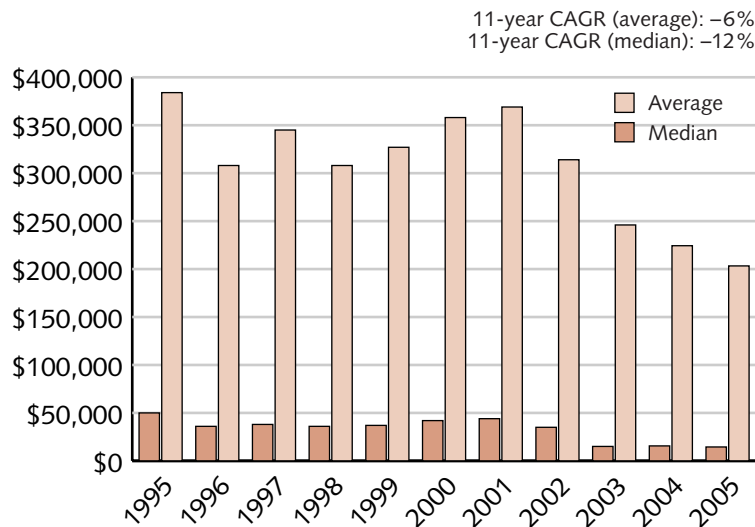
The Department of Defense and the Department of Energy are the two large customers in this segment. The \$17 billion worth of contract actions awarded by DOD and the \$16.5 billion awarded by DOE account for more than 74 percent of all federal expenditures on facilities-related services. The DOE market is driven by large contracts to manage DOE nuclear facilities and other research facilities.

Figure 9.2. Federal FRS Market, by Customer, 2004 and 2005



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

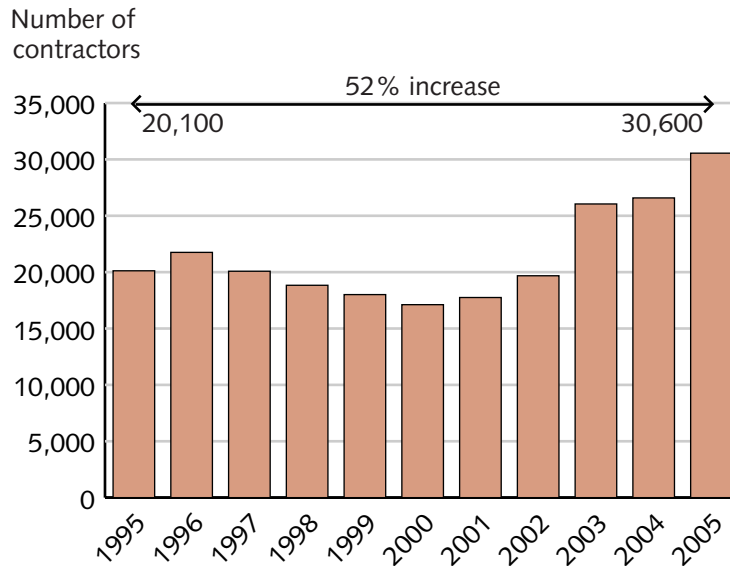
Figure 9.3. Average and Median Values of Federal FRS Contract Actions, 1995–2005



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

Evolution of FRS Contract Action Sizes — Figure 9.3

The average and median values for contract actions in FRS have fluctuated greatly during the 1995–2005 period. The downtrend in size of average and median contract actions since 2001 leveled off in 2005 to \$203,000 per average contract action and \$15,000 per median contract action.

Figure 9.4. Number of Federal FRS Contractors, 1995–2005

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

Evolution of the FRS Contractor Base — Figure 9.4

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, with significant jumps occurring in 2003 and 2005.

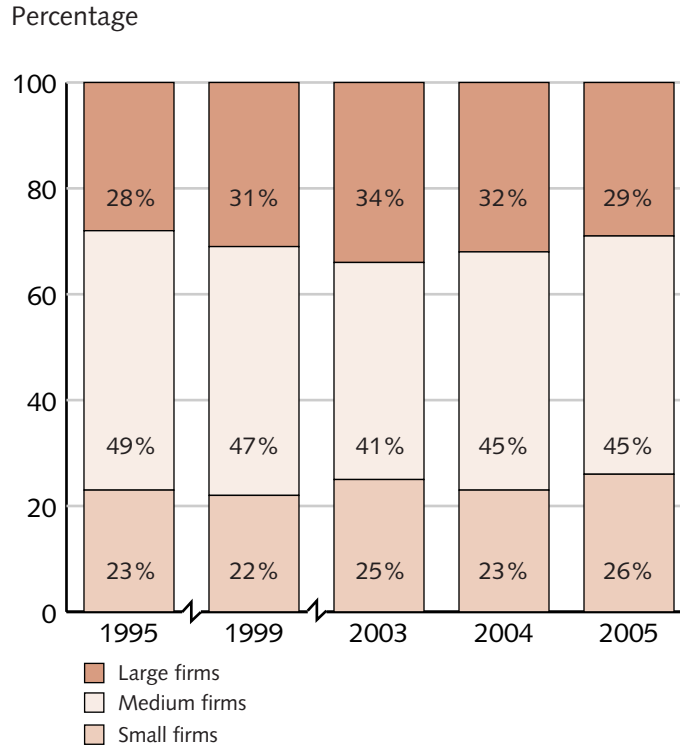
Evolution of FRS Contractors' Market Shares — Figure 9.5

The FRS segment is one of the most fragmented sectors in the federal professional services market. Small companies have increased their share from 23 percent in 1995 to 26 percent in 2005, while the large firms have modestly increased their presence from 28 percent of the market in 1995 to 29 percent in 2005. The middle tier was squeezed from 49 percent to 45 percent during same period.

Breakdown According to Size of FRS Contractors — Figure 9.6

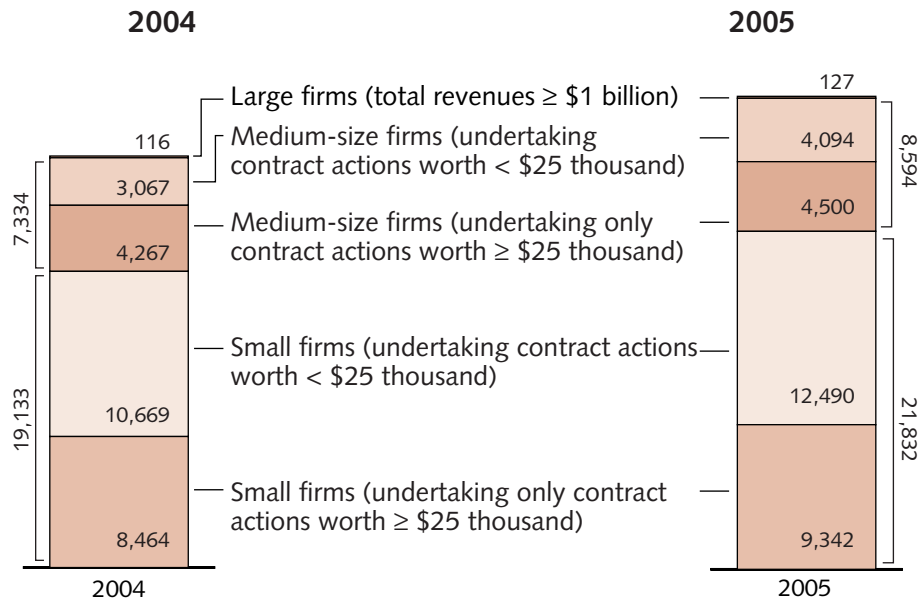
The numbers of large, medium, and small firms all increased by 9.5, 17, and 14 percent respectively. Medium-sized company growth was small relative to other categories of professional services, but the growth in medium-sized companies undertaking large (worth \$25,000 or more) contract actions was not trivial (5.5 percent). The story was different for small companies, where the growth in firms doing only small contracts (worth less than \$25,000) was relatively low at 17 percent (half the rate of growth for the industry as a whole). At the same time, the growth in small companies taking large contracts was a relatively robust 10 percent.

Figure 9.5. Distribution, by Value of Contracts, of Federal FRS Market to Small, Medium, and Large Firms, 1995, 1999, 2003, 2004, and 2005



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

Figure 9.6. Number of Small, Medium, and Large Firms in the Federal FRS Market, 2004 and 2005



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

Table 9.1. Percentage of FRS Contractors Participating in Other Professional Services Categories, 1995 and 2005

1995				2005			
ICT	PAMS	R&D	ERS	ICT	PAMS	R&D	ERS
1	4	1	3	3	10	4	9

Cross-Category Participation by FRS Contractors — Table 9.1

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) and equipment related services (ERS) segments, with 10 and 9 percent of FRS companies now taking on these contracts.

Top 20 FRS Contractors — Table 9.2

The major engineering firms have become important participants in this market during the past decade. The share of the top contractors, however, has grown from 22 percent of the market controlled by the Top 5 in 1995 to in 26.5 in 2005.

Table 9.2. Top 20 Federal FRS Contractors, 1995 and 2005

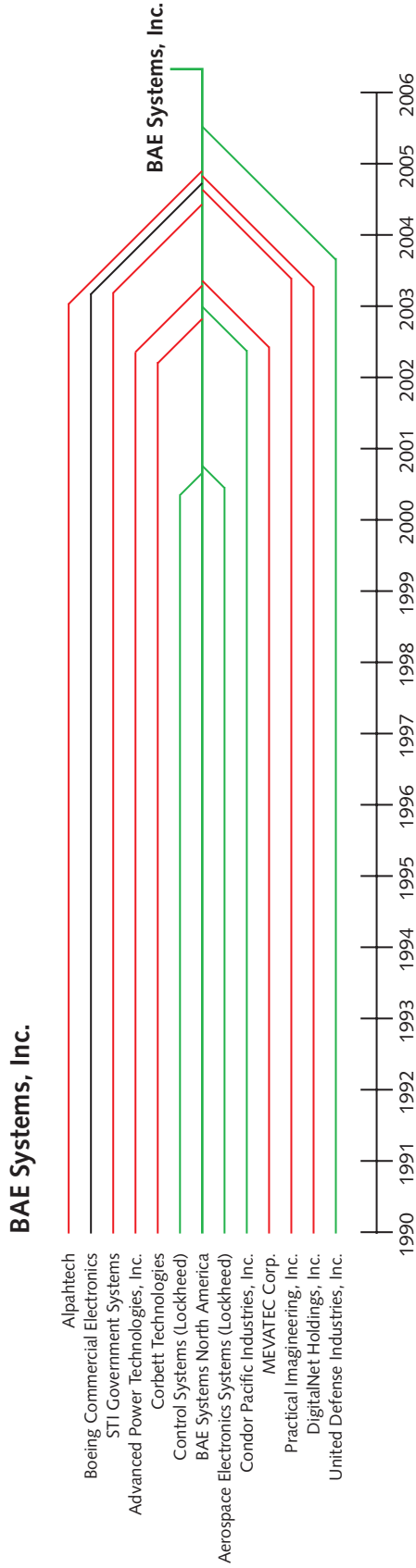
Rank	1995		2005	
	Company	Value of contract actions (\$)	Company	Value of contract actions (\$)
1	Westinghouse	2,865,366,000	Sandia Corporation	2,291,554,411
2	Lockheed Martin	2,519,757,000	Westinghouse	1,483,280,296
3	Sandia Corporation	1,159,706,000	Bechtel	1,327,881,926
4	TRW	261,267,000	BWXT	1,289,168,848
5	Bechtel	200,240,000	Fluor Enterprises	856,435,185
	Subtotal for Top 5	7,006,336,000		7,248,320,667
6	Raytheon	195,087,000	CH2M Hill	767,429,952
7	General Electric	190,423,000	Kaiser Hill	647,906,989
8	DynCorp	169,487,000	Battelle	640,488,848
9	Fluor	169,017,000	Honeywell	562,227,443
10	Loral	147,931,000	KAPL	391,168,207
11	Vinnell	132,119,000	Halliburton	281,168,037
12	CSC	127,670,000	Raytheon	255,312,827
15	SAIC	98,921,000	Johnson Controls	252,881,042
14	Wackenhut	83,608,000	Northrop Grumman	222,136,783
15	Tokyo Electric Power	78,228,000	Wackenhut	209,244,579
16	Northrop Grumman	56,757,000	CSC	203,381,166
17	Johnson Control	49,098,000	VT Griffin Services	93,758,802
18	Korea Electric Power	39,920,000	Dyncorp	88,680,184
19	Pacific Gas & Electric	38,270,000	ResCare Inc.	88,538,114
20	Res-care	36,551,000	Lockheed Martin	78,282,454
	Total for Top 20	8,619,423,000		12,030,926,093

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

FPDS Services Categories

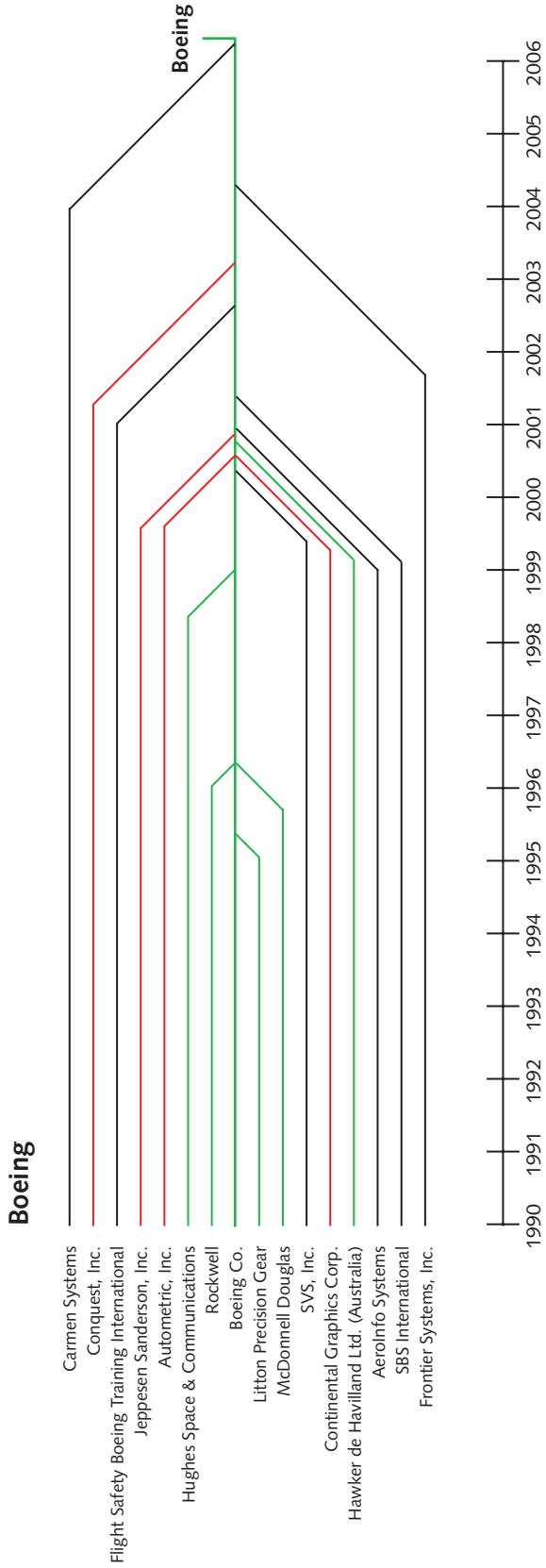
- A Research and development
- B Special studies and analyses (not research and development)
- C Architect and engineering services—construction
- D Automatic data processing and telecommunication services
- E Purchase of structures and facilities
- F Natural resources management
- G Social services
- 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, January 1990–December 2006



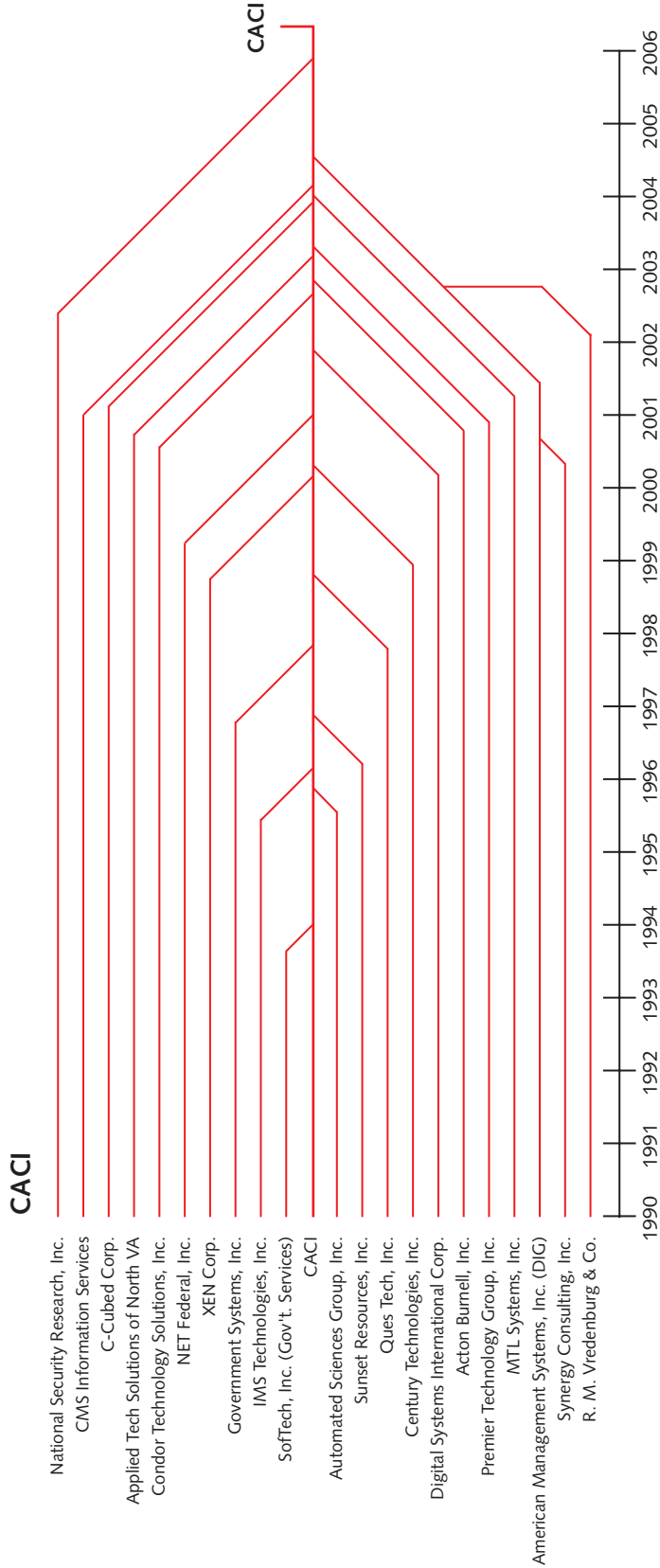
Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

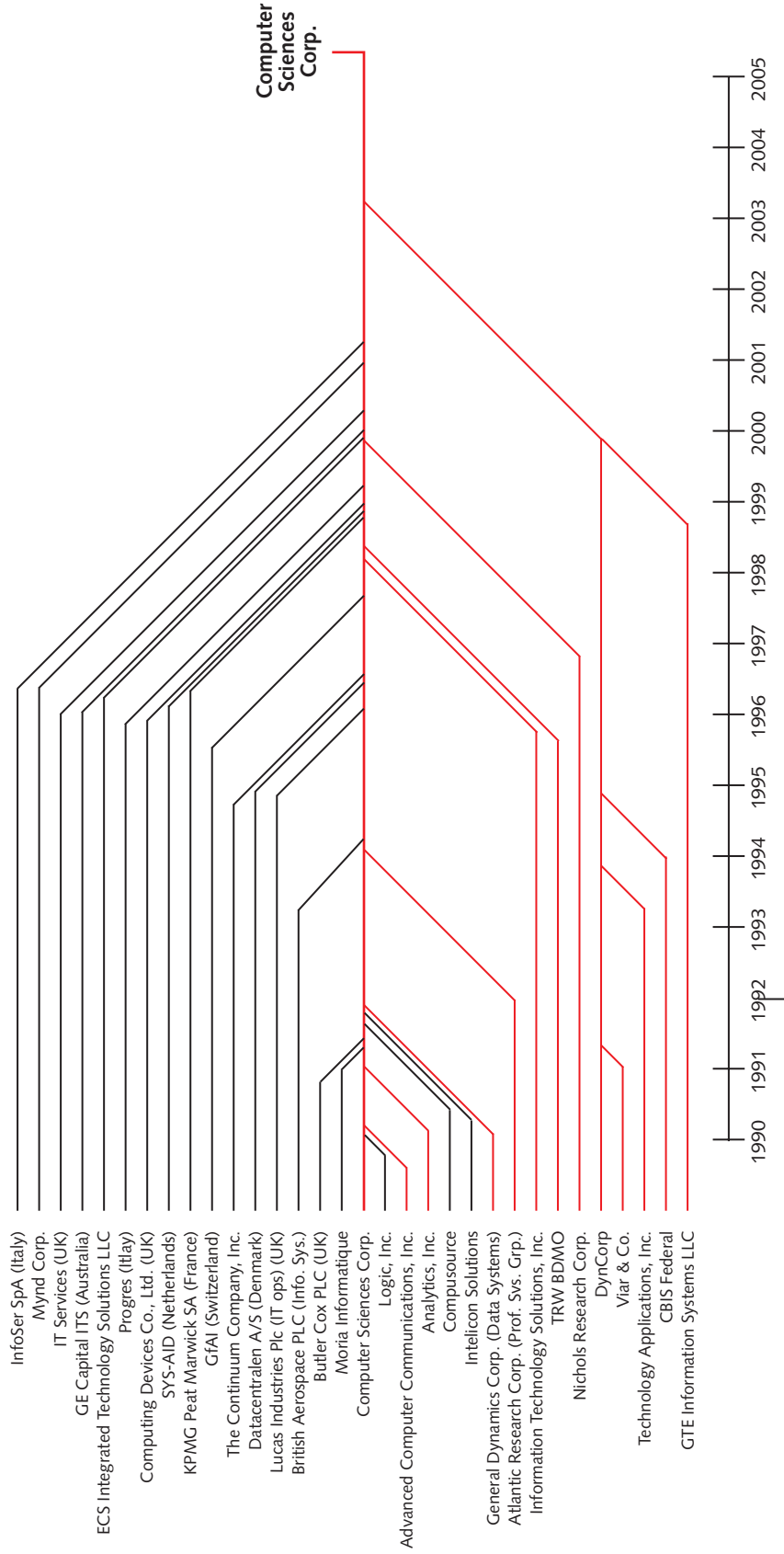
Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

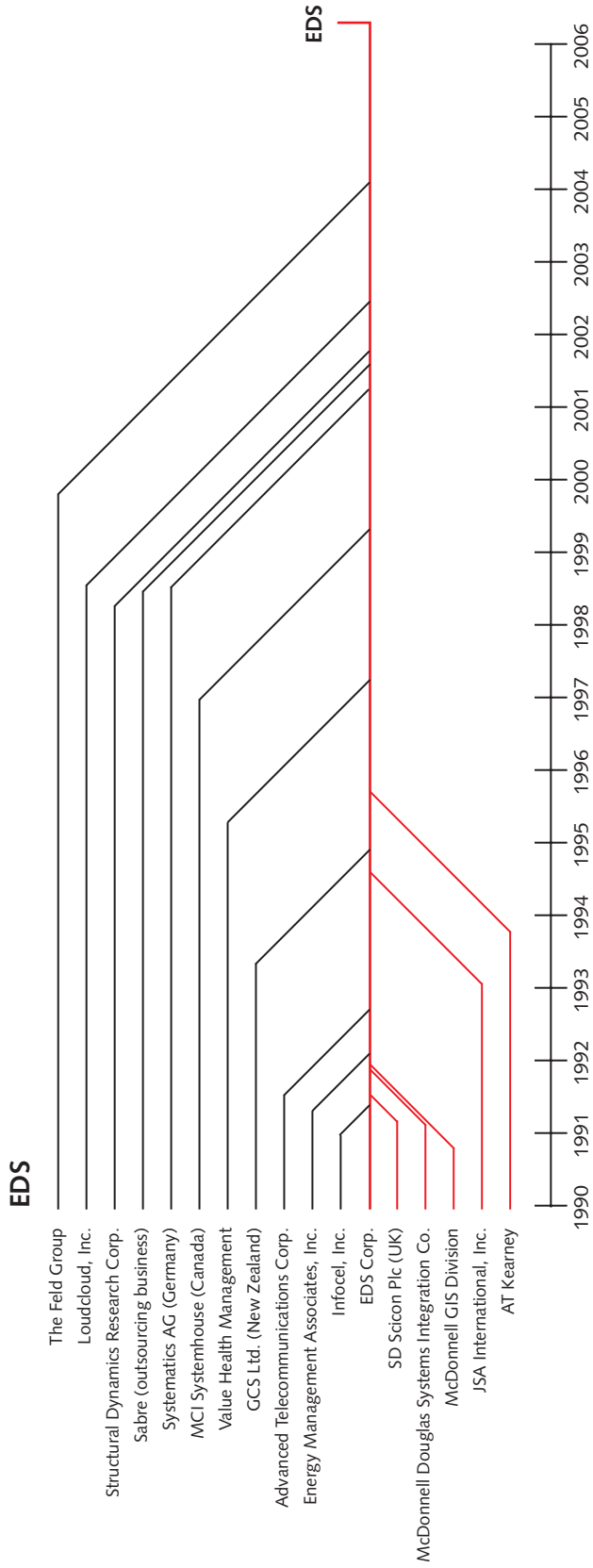
Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —

Computer Sciences Corp.



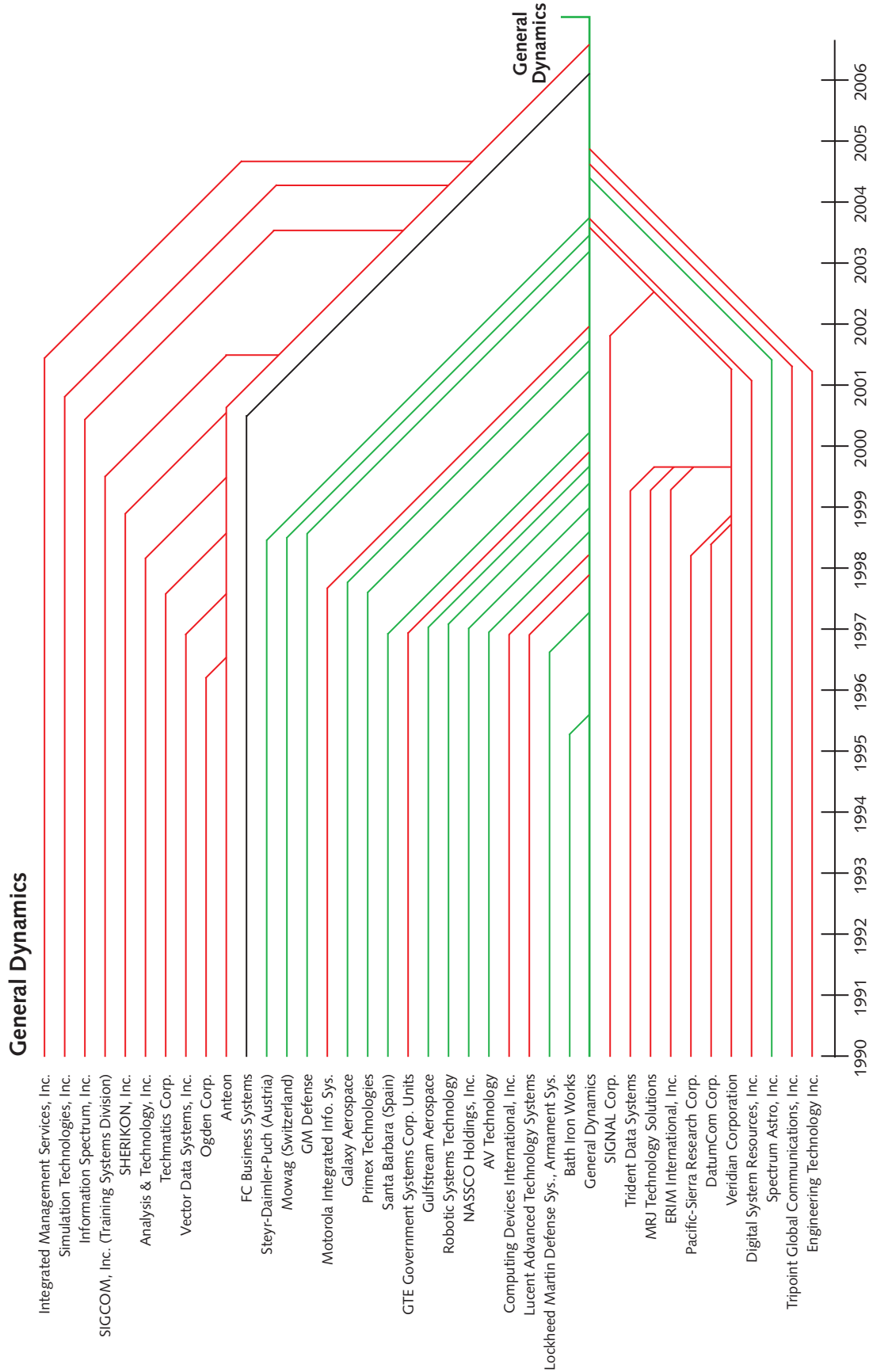
Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: —; defense hardware companies: —; commercial IT: —



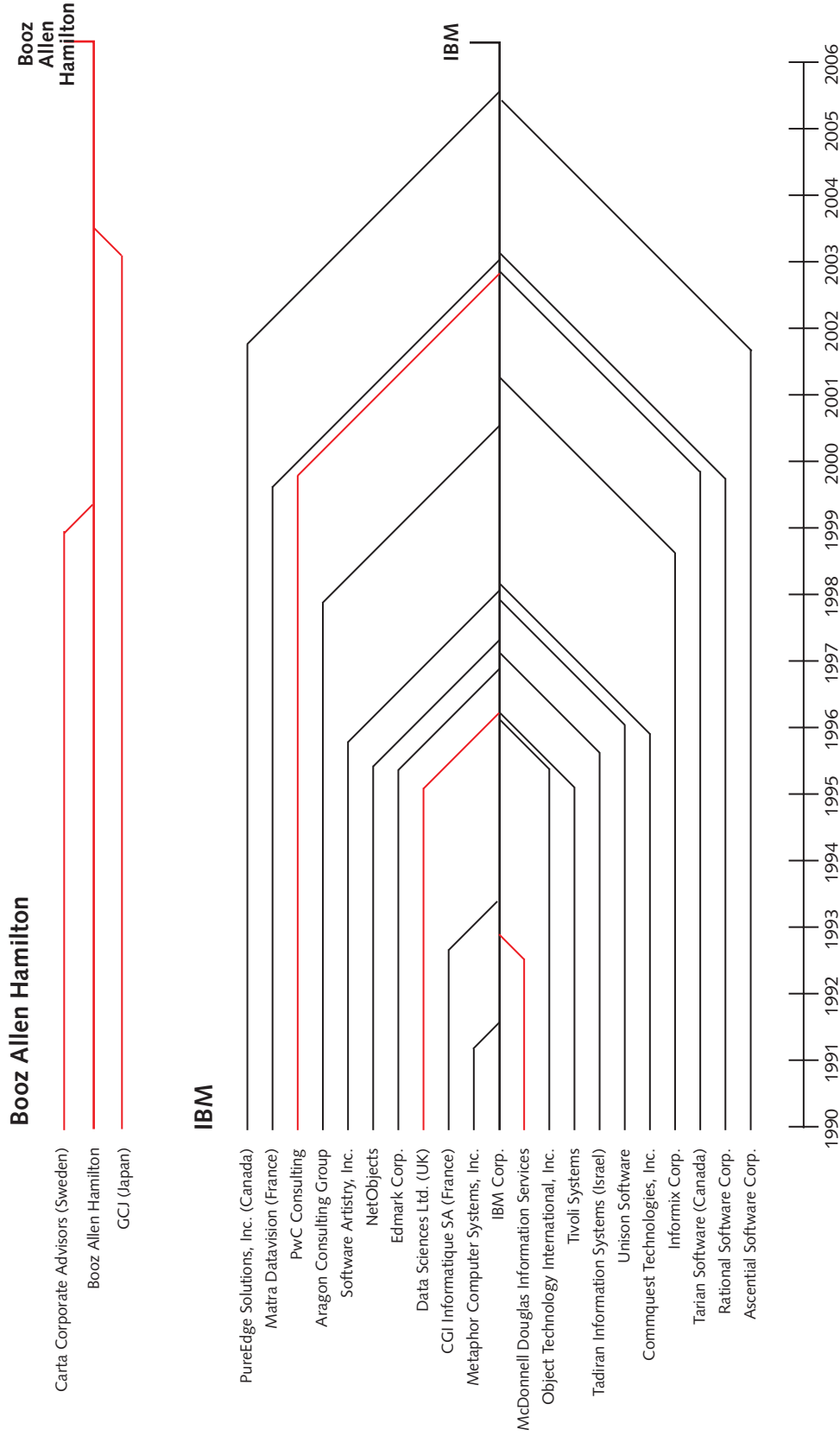
Sources: DM&A, Washington Technology, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —



Sources: DM&A, Washington Technology, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

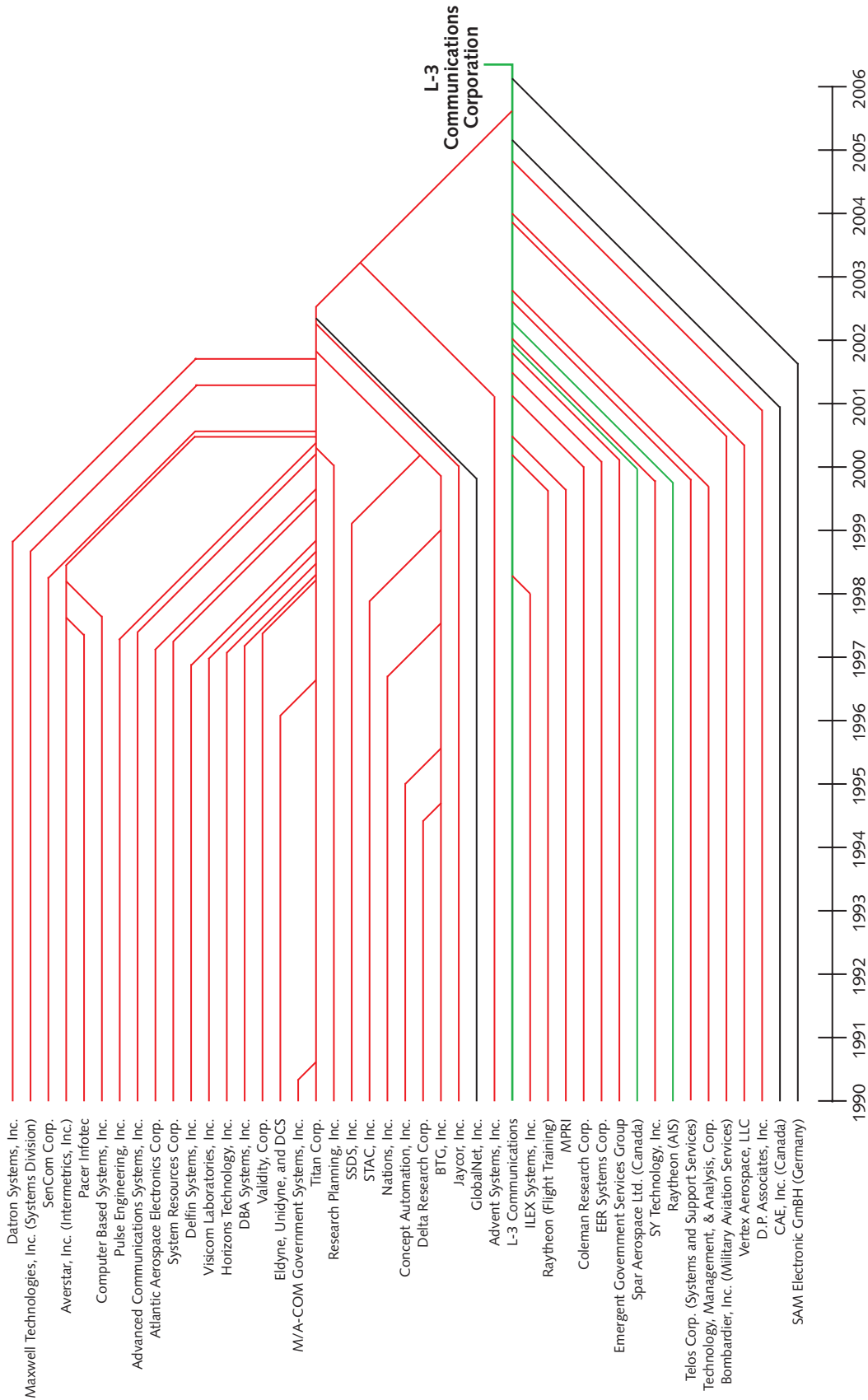
Key: Federal services companies: —; defense hardware companies: —; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

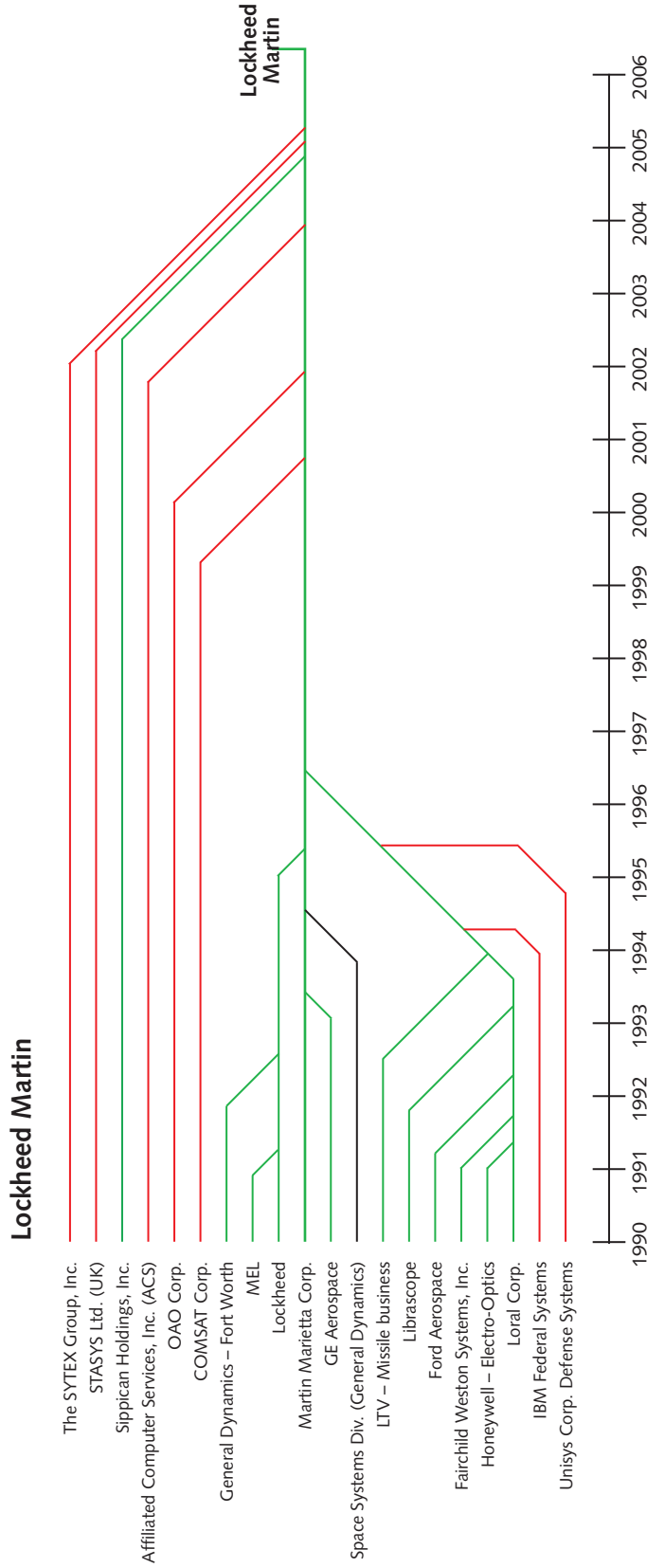
Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —

L-3 Communications Corporation



Sources: DM&A, Washington Technology, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

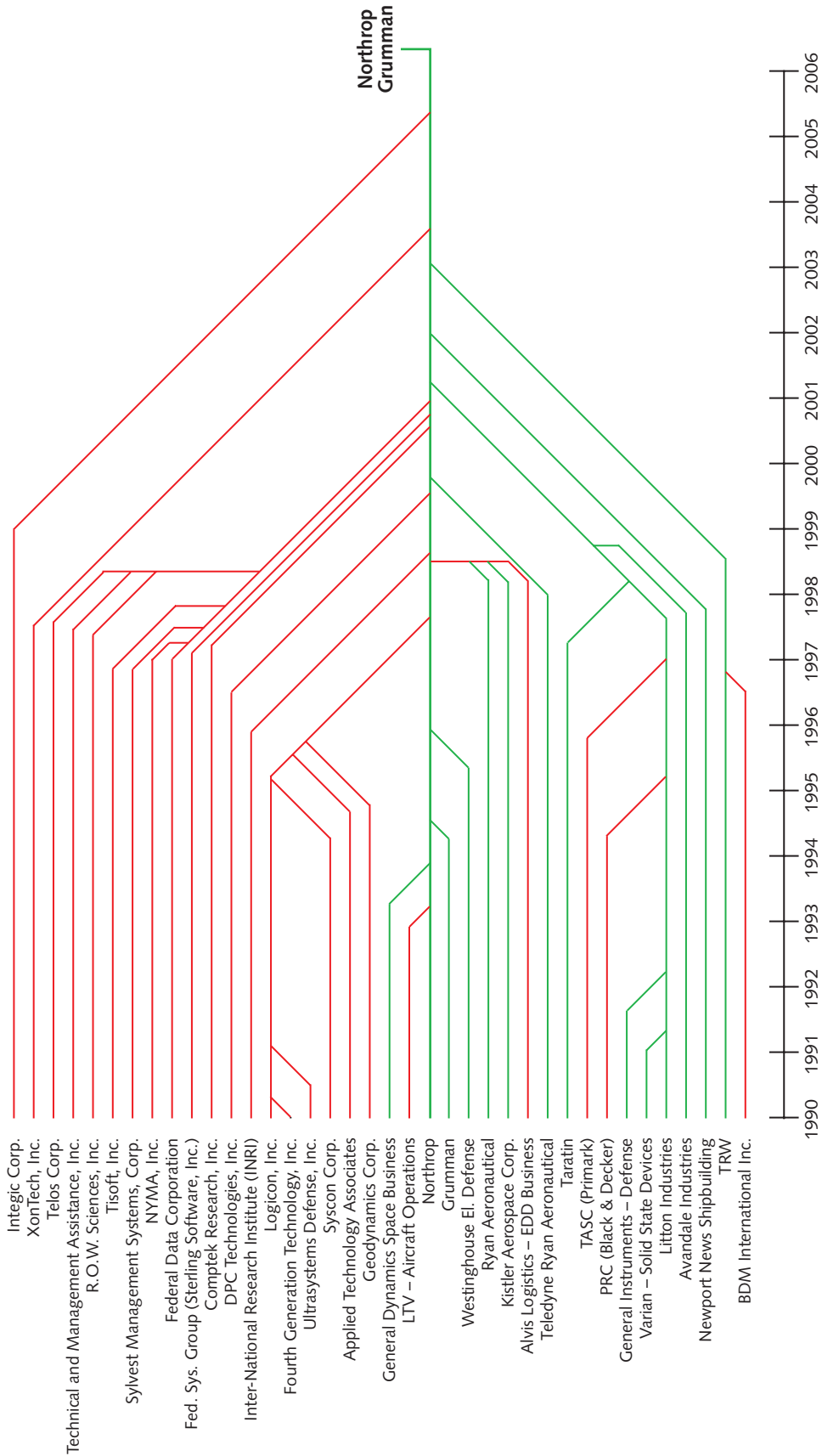
Key: Federal services companies: —; defense hardware companies: —; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

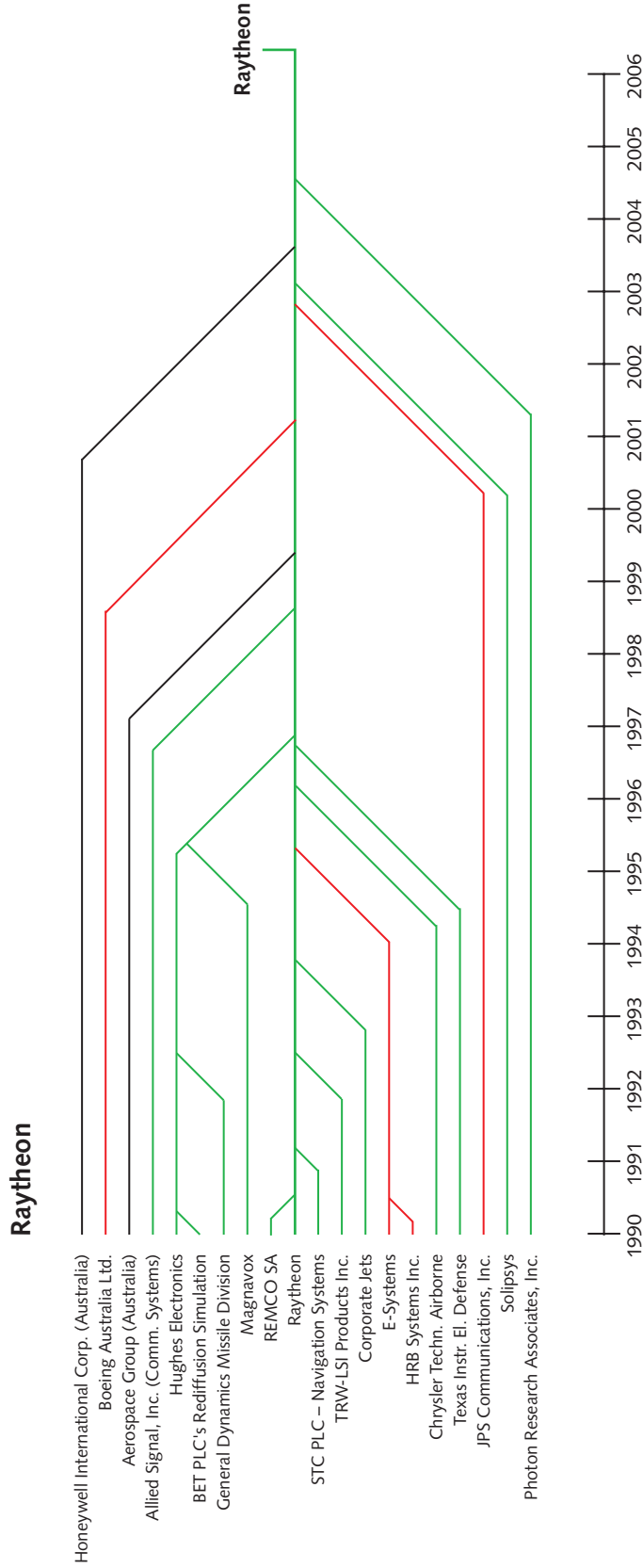
Key: Federal services companies: —; defense hardware companies: —; commercial IT: —

Northrop Grumman



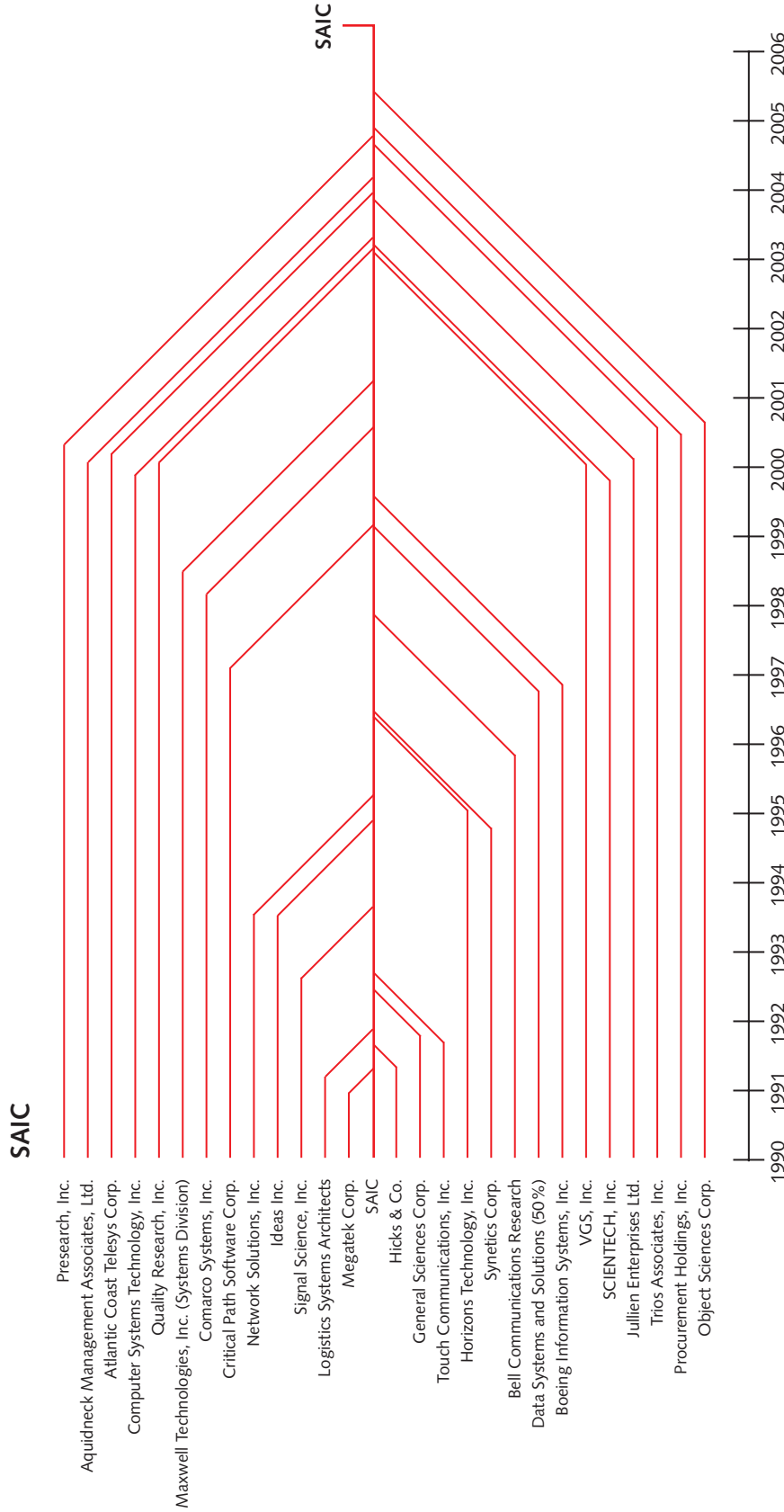
Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: —; defense hardware companies: —; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —



Sources: DM&A, *Washington Technology*, various company reports, and analysis by CSIS Defense Industrial Initiatives Group.

Key: Federal services companies: — ; defense hardware companies: — ; commercial IT: —

About the Authors

Pierre A. Chao is a senior fellow at CSIS and has directed the CSIS Defense-Industrial Initiatives Group since 2003. Before joining CSIS, he was a managing director and the senior aerospace/defense analyst at Credit Suisse First Boston; in the middle and late 1990s he was the senior aerospace/defense analyst for Morgan Stanley Dean Witter and for Smith Barney. In the late 1980s and early 1990s, he was a director at JSA International, a Boston-based management consulting firm focusing on the aerospace and defense industries, and a cofounder of JSA Research, an equity research boutique specializing in the aerospace and defense industry. Earlier he was a mergers and acquisitions banker focusing on aerospace and defense for Prudential-Bache Capital Funding in both New York and London. He is a guest lecturer at the National Defense University and the Defense Acquisition University. He served on the Presidential Commission on Offsets in International Trade and has been a consultant to the Defense Science Board and the Army Science Board. His university degrees are from the Massachusetts Institute of Technology.

David Scruggs is a senior fellow with the CSIS Defense-Industrial Initiatives Group. Before he joined CSIS, he was the director of Washington, D.C., operations for JSA Partners, a Boston-based management consulting firm serving aerospace, defense, and telecommunications clients in the United States and Europe, and he also worked closely with the Office of the Secretary of Defense. From 1994 to 1999 he was a manager with A. T. Kearney's Global Aerospace and Telecommunications Practices, working on issues of technical due diligence on commercial satellite programs, analyzing aerospace and defense opportunities in emerging and post-communist countries, and performing market and strategy analyses for aerospace and defense primes. He holds a master's degree in international law and diplomacy from Tufts University, and bachelor's degrees in economics and history from the University of California, Santa Barbara.

Guy Ben-Ari is a fellow with the Defense-Industrial Initiatives Group at CSIS, where he specializes in U.S. and European defense technology policies. Before he joined CSIS, he was a research associate at the George Washington University's Center for International Science and Technology Policy as well as a consultant focusing on innovation policy and evaluation for the European Commission and the World Bank. He is coauthor of *Transforming European Militaries: Coalition Operations and the Technology Gap* (Routledge, 2006) and of various book chapters and articles. He holds a bachelor's degree in political science from Tel Aviv University and a master's degree in science, technology, and public policy from the George Washington University.

Gregory Sanders is a research associate with the Defense-Industrial Initiatives Group at CSIS, where he gathers and analyzes data on U.S. defense policy issues. He previously worked as an intern for CSIS's Global Strategy Institute, where he focused on studying long-term global

trends. Mr. Sanders holds a master's degree in international relations from the University of Denver and a bachelor's degree in government and politics and another bachelor's degree in computer science from the University of Maryland.

Nicholas Wilson is the program coordinator in the International Security Program at CSIS, where he runs the day-to-day activities of the program and coordinates the program's budgets, personnel, and projects, and a research analyst for the Defense-Industrial Initiatives Group. Before he joined CSIS, he worked as an assistant director for patient services at the American Kidney Fund and as a consultant on numerous political campaigns. Mr. Wilson holds a bachelor's degree in political science and a master's degree in international commerce and diplomacy, both from the University of Kentucky.

About DIIG

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).

DIIG works closely with the wide range of experts at CSIS, including specialists focused on security issues, technology policy, and particular geographic regions.

