Office of Governmentwide Policy

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U.S. General Services Administration

Office Space Use Review

Current Practices and Emerging Trends

Office of Real Property

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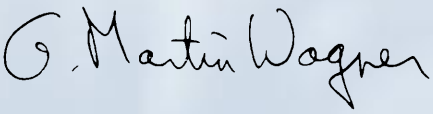
Foreword

The Office of Governmentwide Policy is pleased to issue the Office Space Use Review: Current Practices and Emerging Trends. I think you will find that it contains valuable data and practical advice pertinent to all real property professionals.

The review was undertaken in response to an Office of Management and Budget request for follow-on actions to implement the Federal Real Property Asset Management Principles. In an effort to improve the use of office space by Federal agencies, the Office of Real Property conducted an extensive review of space management priorities and practices prevalent in the private and public sectors. The review provides findings and recommendations as to how best practices may be used within the Federal community. The review breaks new ground for the Federal sector by emphasizing flexibility, individual agency responsibility, strategic planning for real property needs and an overall average utilization rate measured in private sector terms.

I want to recognize David Bibb whose Office of Real Property spearheaded this review. Under the leadership of Marjorie Lomax, the Evaluation and Outreach Division assumed responsibility for the planning and completion of this important effort. Sandy Brooks and Stan Kaczmarczyk researched, analyzed and wrote the report.

Most importantly, I would like to acknowledge and extend my appreciation to those who assisted in our review with special thanks to Lucent Technologies, Australia's Department of Administrative Services, Canada's Public Works and Government Services, and Alberta Public Works, Supply and Services for outstanding contributions. Please know that you have played an important part in our endeavors to improve Federal asset management by recognizing and sharing best practices and policies.



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Executive Summary

As a result of the National Performance Review, the General Services Administration (GSA), Office of Governmentwide Policy, Office of Real Property, using collaboration, partnering and customer involvement, developed the Federal Real Property Asset Management Principles. As a follow-on action, the Office of Management and Budget (OMB), in its FY98 budget passback, requested that GSA develop guidance and best practices to implement these principles.

The following factors support a review of the office workplace and how to improve its use:

- OMB's request (as part of the passback) for the development of space standards
- Past regulatory attempts to control space use
- Government reengineering and downsizing efforts
- The President's Management Council's National Telecommuting Initiative
- The Administration's Family Friendly Work Arrangement Initiative
- Rapid changes in technology
- The need for improved customer service

The workplace is rapidly changing:

- A Department of Agriculture employee was able to maintain her job in Ohio and stay with her family....in a rural town in France.
- Federal Railroad Administration safety inspectors more efficiently cover their territories by working full-time out of their homes.
- GSA's Northwest Arctic Region offers hotelling workstations to GSA and other Federal agency employees on a daily reservation basis.

Our intention was to not only satisfy OMB's request, but to reach a wider audience by reviewing space use practices for purposes of improving and promoting the efficient and optimum use of office space by Federal agencies. A literature review was completed to identify available reports, articles, policy documents and other information on space management in the public and private sectors. Both traditional approaches and Internet research were used in the review. We made telephone calls, held personal meetings, and used electronic mail to consult with professionals and identify practices and priorities prevalent in the private sector, other governments, and other landholding Federal agencies. The results of this review are presented in this report.

The Findings are:

1) **The workplace is changing, and evaluating space use is more complex as a result.** The Office of Management and Budget (OMB) asked our office to develop "utilization standards for various uses of building space, such as office space, storage, laboratory space, etc." Although all organizations look at some kind of utilization rate as a target or benchmark, a utilization rate is an oversimplified way of looking at space use. Our review addressed the spirit of OMB's request by focusing on overall space, and went beyond the issue of utilization rates to address larger workplace and management issues. From a strategic planning standpoint, and in consideration of the fundamental changes in the ways that people work, we recommend that customer agencies not rely totally on utilization rate but consider additional measures such as cost per employee housed, whether in an office environment, working at home, or any other arrangement.

2) **All organizations look at some type of square feet per person measure.** Both government and private sector organizations pay attention to efficiency measures based on square feet per person. Utilization rate remains a common sense space use measure in a traditional office setting, despite the measure's drawbacks. Some organizations use an overall square foot per person number as a planning guide. Most organizations set space use standards according to job function or rank. Private sector organizations pay attention to utilization rate but also look at measures such as cost per person and cost per square foot.

3) **The appropriate U.S. Government average for space use is 200 usable square feet per person, as compared to the U.S. private sector average of 250 usable square feet per person.** Based on the historical trend in the BOMA experience data, our analyses of the PBS inventory and lease prospectuses, and the benchmark data, we believe that this average is appropriate and typical for Federal space use in office type buildings. The 200 usable square feet per person average refers to total space (office plus associated storage and special space).

4) **Federal agencies could use additional incentives to improve or reduce space use.** The downsizing of the Federal workforce has not resulted in a proportionate reduction in office space. We believe that downsizing, combined with the trend towards alternative workplaces, must eventually lead to some space reduction. We would like to see an improved incentive structure for Federal agencies so that it can happen. While profit and loss are motivating factors for the private sector, Federal agencies lack similar incentives to improve real property asset management.

5) **Our space use review, advocacy of an overall average utilization rate, and broadening of space use evaluation beyond utilization rate to other types of performance measures can add value by increasing Federal agencies' strategic focus on space use issues.** We feel there is value in bringing key issues to Federal agencies' attention, encouraging the incorporation of space use objectives into the strategic planning process, measuring space use performance and letting agencies manage accordingly. Each agency should measure and control its space use as a responsible manager of taxpayer funds.

The Recommendations are:

1) **Stay current with the latest trends and best practices in space management.** Space is the second largest administrative cost after personnel. Agencies can no longer afford to treat the cost of space as a pass through item in the budget. A fundamental change in thinking has occurred due to the National Performance Review and the Government Performance and Results Act. Agencies must be accountable for their expenditures, including those made on real property. GSA must be a leader and source of best practices, and must not use its regulatory role as an obstacle. Agencies should look to best practices for guidance and support when undertaking their real property operations.

2) **Agency strategic plans should focus on mission but not overlook administrative costs such as real property.** We recommend that agencies use planning and measurement to manage their real property use and costs. GSA can help by providing sensible standards, guidelines, and measures used in the public and private sectors. Each agency's space needs and space portfolio are ultimately unique and mission-specific, so each agency should compare itself to the common standards and track its own unique space use and costs. If agencies understand that real property costs can be managed, the overall savings may provide some fiscal relief in a tight budgetary environment.

3) **Utilization rate should be managed at the agency level in the strategic planning process.** In our Space Use Review, we have advocated a more flexible, strategic and comprehensive approach to space management. Considering the continuous evolution of the workplace, a return to the D-76 "building block" approach to space utilization or to tracking utilization rates through Form 3530 is inappropriate. In the spirit of the National Performance Review, we recommend that agencies be empowered to manage their own space use through the strategic planning process. In return, the Office of Real Property will commit itself to an ongoing educational effort to identify and disseminate best practices in space management.

The Next Steps are:

1) The Office of Real Property's Governmentwide Performance Measurement Initiative, already underway, will collaboratively identify a comprehensive index of measures and establish a baseline for annual measurement and improvement.

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2) The Office of Real Property will assume an increased leadership role in the area of alternative workplaces through the establishment of a new Worklife Enterprises division.

3) GSA will explore ways to encourage agency planning for administrative costs, such as an appendix to the mission-focused strategic plan.

Finally, the Research section contains useful information beyond what the reader will encounter in the findings and recommendations. We encourage readers to take advantage of our research with private sector contacts, state governments, other national governments, and professional trade organizations, as well as the latest information in professional journals and on the Internet.

Introduction

In 1993, the National Performance Review (NPR) recommended that the Administrator of General Services develop asset management principles to guide the Federal Government's real property ownership enterprise. In response to the recommendation of the NPR, the General Services Administration (GSA), Office of Governmentwide Policy, Office of Real Property, using collaboration, partnering and customer involvement, developed a set of goals and principles for management of the Federal real property portfolio.

Issued in October 1996, the Federal Real Property Asset Management Principles serve as a guide and a frame of reference for making sound real property decisions. They promote lower costs, incentives to improve property management, and improved efficiency and performance of real property. As a follow-on action, the Office of Management and Budget (OMB), in its fiscal year 1998 budget passback, requested that GSA develop guidance and best practices to implement these principles by September 30, 1997. In particular, OMB requested that GSA, using the same interagency collaborative approach, develop guidance on "utilization standards for various uses of building space, such as office space, storage, laboratory space, etc."

Since the early 1980's, there have been several attempts to regulate office utilization rates and establish reporting requirements. For various reasons, all have been problematic. Pursuant to Temporary Regulation D-75, GSA and OMB attempts to track office utilization rates through the Work Space Management Plan and Budget Justification (GSA Form 3530) have been frustrated by both the inability and reluctance of agencies to provide data. Temporary Regulation D-76 set standards for a subset of office space only. There has been concern that classification of general purpose office space as office, storage and special, with standards only for office, has led to inconsistent application and the use of the storage and special categories to obtain additional "office" space.

We have attempted to satisfy the spirit of OMB's request through the verification of an overall average for space use in a traditional office building setting. We also wanted to prepare a review of best practices and emerging trends in space use that would be of value to all Federal landholding agencies. In doing so, we identified a more significant issue than utilization rates—the radical and rapid transformation of the workplace beyond the traditional office building setting.

Consistent with the vision of the President's Management Council's National Telecommuting Initiative, the workplace of tomorrow will no longer be the traditional workplace of today. The need to be competitive, to support new ways of working, and to keep a skilled work force will require flexibility. Technology has made it possible, and a growing consensus in society that work and home life have become unbalanced has made it desirable.

To cite a few examples:

- The Defense Investigative Service established a Work-From-Domicile program heavily used by its investigators.

- The first U.S. General Store providing one-stop government services recently opened in Houston.

- GSA's Federal Supply Service employs virtual officing in implementing its quality assurance programs.

The recent movement to reengineer and downsize has resulted in a more business-like, customer-oriented Federal Government. This situation has provided us with an opportunity to achieve improvements in productivity, employee morale, and space efficiency through the use of alternative work strategies.

This report summarizes many months of research, analysis and discussions. In February 1997, we began a literature review to identify available reports, articles, policy documents and other information on space management in the public and private sectors. We used both traditional approaches and on-line search capabilities in the review. In addition, we consulted with private industry (corporate America, trade and professional associations), state and local governments, other Federal agencies and other national governments, and the academic community to identify best practices and emerging trends. We obtained information and made contacts through personal meetings, telephone interviews, fax, traditional mail, electronic mail, and an on-line Facilities Management conference. We present the results of our review in this report.

Findings

Finding #1 The workplace is changing, and evaluating space use is more complex as a result.

Temporary Regulation D-76, which expired in November 1996, established a standard for office space only of 125 occupiable square feet per person, plus up to 22 percent additional support space. Although the regulation defined many categories of storage and special space, it did not specify utilization standards for different categories of space use beyond what GSA classified as "office." At the same time, OMB and GSA attempted to track adherence to an outdated standard of 135 occupiable square feet per workstation through the Workspace Management Plan included in Form 3530, part of the annual budget submission process. While the 135 target was a Governmentwide number, the D-76 standards applied to GSA space only.

The common flaw in each of these approaches is an overestimation of the value of the utilization rate (the amount of square feet of space allocated per person) as a relevant measure of the way people use space to work. Although all organizations look at some kind of utilization rate as a target or benchmark, a utilization rate is an oversimplified way of looking at space use. There are many issues to consider when using utilization rates to evaluate current space:

- Agency-specific needs
- Accounting for all space users (full-time, part-time, contractors, shift work, vacancies, etc.)
- Space measurement methodology
- Actual cost of the space
- Age of facility
- Productivity and morale issues
- Cost of consolidation

From a strategic planning standpoint, we recommend that customer agencies not rely totally on utilization rate but consider a range of measures such as:

- Total cost per employee
- Total occupancy cost per square foot
- Real property cost as a percentage of total administrative budget
- Rental cost per square foot
- Operating costs per square foot
- Total square feet owned and leased
- Building efficiency ratio (net to gross)
- Ratio of shared space to dedicated space
- Increased use of alternative work environments
- Telecommuting cost versus real property cost
- Ratio of enclosed offices to open plan workstations
- Tenant satisfaction
- Vacant space
- Amount of space occupied by contractors
- Track and eliminate redundant support spaces
- Churn rate and associated costs
- Number of remote versus non-remote workers

In our research, we came across an excellent example of a national government that looked at space use in a more comprehensive way. Public Works and Government Services Canada (PWGSC), the department responsible for the Canadian government's general purpose office accommodation and facilities, undertook a groundbreaking analysis in 1994 to measure and report on the total and comparative use of office accommodation across the Canadian government. The analysis generated three measures of the office inventory: space per person (utilization rate), cost per square meter, and cost per person per annum. PWGSC benchmarked these numbers against the Canadian private sector, the U.S. private sector, and the U.S. government sector. (See the Research section for more details on this study.)

Although a study such as this is a marked improvement over simply tracking a utilization rate, the way that people work is changing rapidly and inevitably due to improvements in technology and evolving attitudes about work and society. This means that we need to be even smarter about how we measure and evaluate space use in a world where an employee, a workstation, and a piece of office real estate are no longer a discrete, interconnected unit of productivity.

Consider just a few examples of the rapid changes in the way that people work (see sidebar on opposite page).

If we were to replicate the Canadian government study today, we would have to adjust the way that we calculate the three performance measures in order to account for and make sense of the changing work environment:

Space per person: As a measure of space efficiency in an office building environment only, we would need to be sure that the denominator consists of only those employees who have a full-time need for a workstation in an office building environment. If we divided by total employment, the utilization rate would be

Changing the Way We Work

- The Federal Railroad Administration (FRA) currently has 125 field inspectors working full-time out of their homes. FRA anticipates that by the end of fiscal year 1998 all of its inspectors will be telecommuting. As a result, FRA has closed 10 field offices saving thousands of dollars in facility costs.
- Starting in early summer 1996, GSA's Northwest Arctic Region expanded its Hotelling Work Station Program. Housed in the region's PBS Customer Service Centers, the hotelling workstations offer full service temporary space to GSA and other Federal agency employees on a daily reservation basis. Hotelling workstations are now available in Anchorage, Seattle and Auburn.
- Using alternative work sites, the Department of Education reduced facility costs but, more importantly, saved the jobs of 24 employees.
- One of the longest telecommutes so far: a Department of Agriculture employee was able to maintain her job in Ohio and stay with her family...in a rural town in France.
- Defense Investigative Service (DIS) instituted a Work-From-Domicile program that is heavily used by investigators. DIS recently reported 1,170 telecommuters working from home or alternative sites.
- Since the early 1990's, GSA's Federal Supply Service has been employing virtual officing. Conducting FSS's quality assurance programs, approximately 85 Industrial Operational Analysts work/office anywhere through the use of computer technology. The results are increased productivity, timely service delivery, reduced office space needs, and high retention of employees.
- GSA has established, in the greater Washington metropolitan area, ten telecenters and arranged for Federal participation in a regionally established center.
- Early in 1994, offering a direct and measurable benefit in responding to natural disasters, GSA established three emergency telecommuting centers in the Greater Los Angeles metropolitan area in response to the Northridge earthquake.
- Under a pilot program, the National Labor Relations Board (NLRB) currently has 40 employees (including 5 judges) working at home. NLRB anticipates expanding the pilot in conjunction with an agency-wide space reduction plan (21 judges volunteered and received approval).
- GSA established two emergency telecenters in the Oklahoma City area within weeks after the bombing of the Federal Building and four telecenters in Atlanta in response to traffic congestion needs associated with the 1996 Summer Olympics.
- The National Guard Bureau established a program to convert armories and other facilities into distance learning centers for the Guard. Since the Guard activities are typically limited to evenings and weekends, these high-tech centers are being made available for use during normal business hours by other activities such as Federal, state, and local telecenters.
- Governmentwide, almost all Federal agencies have existing alternative officing policies to assist and retain valued employees during special situations or in response to specific needs.
- Beginning as a Federal Executive Board initiative, the first U.S. General Store recently opened in Houston, Texas. The General Store's purpose is to serve as a model business center providing one-stop government services to business owners, potential entrepreneurs and individuals, totally meeting governmental needs of the community.
- The President's Management Council's National Telecommuting Initiative established targets for the number of Federal employee telecommuters of 60,000 by the end of fiscal year 1998 and 160,000 by fiscal year 2002.

understated due to the fact that we included employees who do not need a full time workstation in the home office (teleworking) or who do not need space in the home office at all (virtual officing).

Cost per square foot: Once again, this measure only provides useful information about space in office buildings; it ignores the costs of alternative officing.

Cost per person: In order for this number to make sense in the new environment, the numerator would have to include all costs associated with how people work. This includes, not just the cost associated with office space, but costs associated with alternative work environments such as computers, facsimile machines, dedicated telephone lines, home office furniture, telecommuting centers, etc. In fact, when we consider the wide range of costs associated with work environments outside of the traditional office environment, we conclude that *cost per person is probably the best internal measure of space use for these changing times.*

Finding #2 All organizations look at some type of square feet per person measure.

Both government and private sector organizations pay attention to efficiency measures based on square feet per person. Utilization rate remains a common sense space use measure in a traditional office setting, despite the measure's drawbacks (oversimplification, differing support and circulation needs, perception of an entitlement rather than a maximum allotment, differences in how space is measured, different functional requirements, space implications of alternative work environments). Some organizations use an overall square foot per person number as a planning guide. Most organizations set space use standards according to job function or rank. Some organizations are starting to move away from the concept of allocating space based on rank. This move towards egalitarianism in the workplace may be driven more by economics and the teaming concept, rather than by any attempt at "fairness."

Private sector organizations pay attention to utilization rate but also look at measures such as cost per person and cost per square foot. These cost-based measures are difficult to translate into equivalent measures for the government sector. In the private sector, every cost has a directly measurable effect on the bottom line. Increased cost may even be acceptable if it can be directly linked to increased productivity and greater profits. One cost measure that may be useful to the government sector is space cost as a percentage of total revenue. Federal agencies could measure space cost as a percentage of the total administrative budget. An agency could use this measure to track performance in its strategic planning process. However, an agency should use caution when comparing this number to other agencies or to private sector firms.

Although everyone looks at some type of square foot per person measure, there is no uniform approach. Comparing standards across organizations is difficult without making numerous confusing adjustments.

Some of the reasons that the standards vary are:

- Different ways of measuring usable square feet
- Different ways of handling support and circulation space
- Differences in job classification
- Differences in rank or grade scales
- Global approaches versus building block approaches

For example, we collected information from 10 State governments. However, the approach to space standards varies widely and the data do not lend themselves easily to tabulation. What the State government space standards have in common is:

- All of the States in our sample express their space standards in terms of square feet per person.
- Almost all of the States have individual standards by job category. Rank or grade often counts when it comes to allocating space.

In spite of these problems, we were able to make some generalizations and draw some meaningful comparisons based on our research.

One point to keep in mind when reviewing the space use data is the difference between standards and actual performance. Standards are useful for planning new space assignments, but they may be difficult to apply to existing ones, particularly in older buildings. In our research, we came across examples where an organization's actual utilization rate exceeded the target utilization rate cited in its space standards. We discuss the Federal government's utilization rate in terms of an average or standard for comparison. The measurement of actual utilization can be expensive and time consuming. As with any performance measure, an organization should be certain that the information to be obtained will be useful and relevant enough to warrant the time and expense of collecting it.

Space standards based on square feet per person are usually flexible. Individual functional elements have particular needs that are not always envisioned by even the most elaborate set of standards. Perhaps the real test of an organization that is serious about controlling space use is not the strictness of the actual standards, but the discipline with which they are enforced when individual space requests exceed them.

Finding #3 The appropriate U.S. Government average for space use is 200 usable square feet per person, as compared to the U.S. private sector average of 250 usable square feet per person.

We examined the utilization rate data in the BOMA Experience Exchange Reports over the last five years. Please refer to the chart on page 9. We found that the private sector office utilization rate is about 250 usable square feet per person for this period, while the government sector office utilization rate is consistently in the range of about 200 usable square feet per person. Although the U.S. government sector is defined by BOMA as including Federal, state and local governments, in practice many

of the government sector buildings in the reporting sample belong to GSA's Public Buildings Service (PBS). For example, in the most recent Experience Exchange Report (1997), 185 out of 246 government buildings were PBS buildings.

The BOMA data represent a sample of the GSA office building inventory, which in turn represents only about 30 percent of the Governmentwide office building inventory. Based on this sample, however, we feel that Federal agencies should be commended for consistently achieving lower office utilization rates than the private sector. From a theoretical perspective, we can quantify this achievement by pointing out that housing 1.8 million Federal employees at a rate of 200 rather than 250 usable square feet per person represents an annual savings of over $1.5 billion (assuming the difference is in leased space averaging $17 per usable square foot).

Such a consistent and sizable difference between private and government sector utilization rates cannot be explained by statistical anomalies alone. Although we cannot be sure of the explanation in the absence of detailed space planning studies, we can speculate (in consultation with BOMA personnel) as to some of the reasons why the private sector would use more space per person:

- Private offices for private sector executives are generally larger than offices for top government officials. The culture of a larger and fancier office denoting more status still prevails throughout much of the private sector.

- Private sector firms may be more generous in providing conference rooms, especially firms with high customer or supplier contact.

- Motivations differ. In the government sector, space should be modest in order to convey the proper sense of frugality to the customer (the public). In the private sector, space must often convey a much different message to customers, a message of prosperity and longevity. However, this cultural bias can be overcome in firms faced with the urgent need to cut costs.

Having established what seems to be a reliable figure for comparison, we examined the 200 usable square feet per person number to see if we could confirm it through analysis and benchmarking.

We examined PBS inventory data to see if a benchmark of 200 usable square feet per person was a practical number. Our analysis started with the D-76 standards of 125 occupiable (which is virtually identical to what we now call usable) square feet per person, plus up to 22 percent for support space. We believe that these standards were and still are valid. The challenge was to determine how much should be added per person to yield an average allocation of storage and special space. In other words, what was the total space (office plus storage plus special) equivalent to the D-76 standards for office space alone? We calculated ratios of the different space types as classified in the inventory, and we determined that the equivalent total space number is around 185 usable square feet per person.

We also analyzed GSA lease prospectuses submitted to Congress during the fiscal year 1996 and fiscal year 1997 cycles. We found that the proposed utilization rate for total

space for the sample as a whole was 181 usable square feet per person.

We benchmarked the number against those standards and actual utilization data that yielded the best "apples to apples" comparisons. The table on page 10 presents the benchmark data.

Based on the historical trend in the BOMA experience data, our analyses of the PBS inventory and lease prospectuses, and the benchmark data, we believe that the average of 200 usable square feet per person (office, storage and special) is appropriate and typical for Federal space use in office type buildings.

The following questions and answers explain exactly what we mean by "the appropriate average for Federal space use in office-type buildings is 200 usable square feet per person."

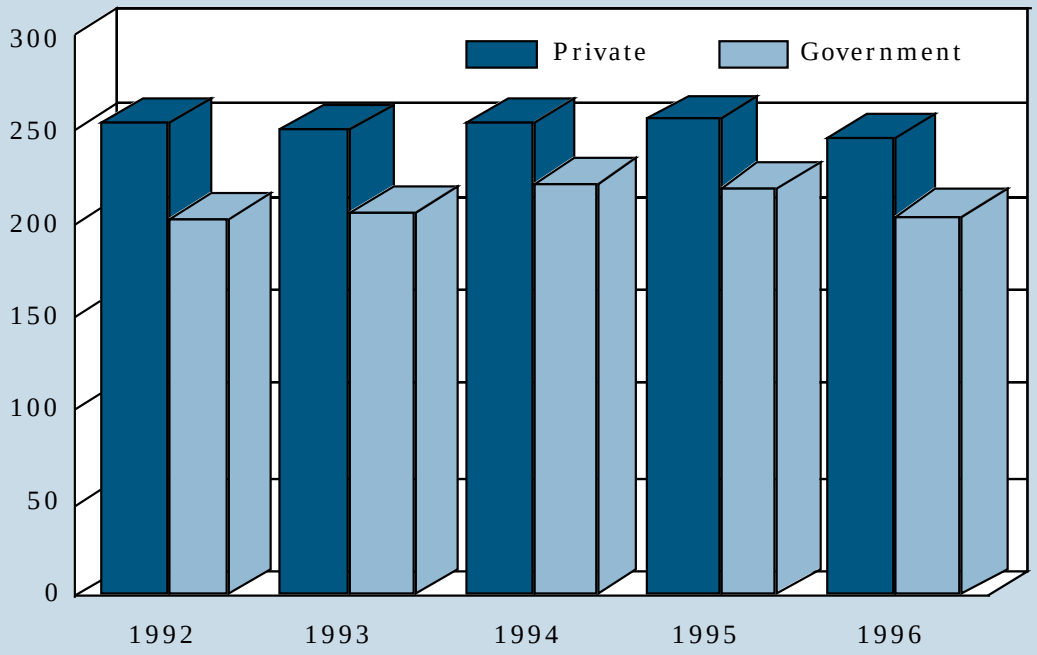
What do we mean by "the appropriate average for Federal space use?"

In contrast to the D-76 approach of setting standards for "office" space but not for "storage" and "special" space, the average of 200 usable square feet per person applies to total space in a traditional office building environment (office plus associated storage and special).

We want to move away from restrictive standards and provide flexibility within a framework of responsibility.

When planning new assignments, we encourage Federal agencies to accommodate user needs within the framework of this average.

BOMA Utilization Rates



Note: Utilization rates expressed in terms of usable square feet per person (converted from BOMA rentable)

The average should not discourage efficient space utilization below 200 usable square feet per person. Such efficiency is possible for some functions and we should recognize and reward such efforts.

An agency should compare its performance to the average as a starting point in the strategic planning process. Two possible courses for further development are agency-unique space standards and benchmarking.

Agencies, particularly those whose mission-specific space needs will result in performance consistently above the average, may want to adopt professionally developed unique space standards that will accommodate their needs in a systematic fashion. If an agency already has developed standards, we recommend that it review their adequacy and timeliness in light of the research and best practices discussed in this space use review.

Another option for consideration is benchmarking. If an agency knows that its performance will be consistently above the average utilization rate, the question still remains: what is the appropriate number above the 200 usable square feet average? For example, an agency that employs many attorneys may want to benchmark itself against comparable private sector law firms to find the right standard for comparison.

Comparable Office Space Utilization Rates

Source	Description	Usable SF Per Person
BOMA 1997 Experience Report	U.S. private sector	245*
	U.S. government sector	204*
	Canada private sector	220*
	Canada government sector	292*
Arthur Andersen LLP	Private sector (target)	250
	Technology firms (actual sample)	206
Lucent Technologies	Occupancy density targets	174 – 190
Mobil Corporation	Overall target	225
Dun & Bradstreet Corp.	Standards for headquarters	190 - 200
Australian government	Planning figure	161 to 194
State of Virginia	Maximum allowed per person	250
State of Texas	Current statewide average	234
State of Missouri	Current statewide average	200
State of Oregon	Maximum allocation (threshold)	200
U.S. Government	Overall average	200

*Data converted from BOMA rentable

Looking at the issue from the other side, an agency that may be consistently below the average should also benchmark to ascertain the right standard for comparison. For example, an agency that processes a lot of paperwork might benchmark against an insurance company that processes a high volume of claims.

What do we mean by "office-type buildings?"

GSA formerly established a standard for primary office work area of 125 occupiable square feet per person, with up to 22 percent added for support space (for a possible maximum overall office allocation of 153 occupiable square feet). Office space assignments also included space classified as storage space and special space. There were no standards for the latter two categories; subsequently a lot of time and effort went into arguing the merits of every single space request (particularly at the prospectus level).

Our review did not find examples of other organizations that divided an overall office space assignment into office, storage and special. Office space is office space. The identified average covers all space in an office-type building formerly classified under the Federal Property Management Regulations (FPMR) as office, general storage, and special.

In other words, we are referring to a traditional office environment with associated general storage and special areas. We are excluding inside parking and warehouse space (formerly classified under the FPMR as ST-2 and ST-3). Buildings that are primarily special in nature, such as warehouses, laboratories, border stations and courthouses, are excluded.

What is the definition of "usable square feet?"

GSA's Public Buildings Service recognizes the ANSI/BOMA (Z65.1-1996) standard definition of usable square feet. Generally speaking, the usable area is where a tenant normally houses personnel and/or furniture. Consult the ANSI/BOMA standard for detailed information on the measurement of usable versus rentable space.

What is the definition of "per person?"

FPMR Temporary Regulation D-76 defined personnel for the purposes of calculating utilization rates as the peak number of persons to be housed during a single 8-hour shift, which included permanent employees of the agency, temporaries, part-time, seasonal, contractors, budgeted vacancies, and employees of other agencies and organizations who are housed in the space assignment. This definition is still relevant.

One final note about benchmarking: some of the major corporations we spoke with reported relatively aggressive space standards (although, at least in once case, actual utilization exceeded the standards). Big corporations have the advantages of market clout and a tight span of control. Although on the surface some may be tempted to compare the Federal government with a major corporation due to its size, in reality our culture is more decentralized agency by agency. We are actually a collection of smaller and different Federal governments and may compare more appropriately to smaller corporations.

While the private sector often looks at space cost measures with an eye towards cost reduction, in some cases the reduction is accomplished by locating "back office" functions in low cost areas away from high cost urban or Central Business District environments. This leads to lower cost, but not necessarily due to less space per person. This option is not readily available for Federal agencies that are directed by policy to be located in downtown urban areas. The result is a relatively greater proportion of assignments in older buildings with less efficient, smaller floor plates.

Finding #4 Federal agencies could use additional incentives to improve or reduce space use.

The downsizing of the Federal workforce has not resulted in a proportionate reduction in office space for the Government as a whole. The following data from the Worldwide Inventory indicates a flat office space inventory:

Fiscal Year	Office Space (GSF)	Decrease (percent)
1993	674,000,000	n/a
1994	674,000,000	0.0
1995	668,000,000	0.1
1996	662,000,000	0.1

There are many issues to consider concerning downsizing. There will always be a time lag involved. Space does not disappear overnight. Organizations downsize in pockets of space here and there. Taking advantage of those pockets means moving people around and consolidating facilities. That costs money. Also, lease expiration dates must be favorable to such plans.

While there are many explanations as to why it hasn't happened quickly, there are some possible reasons why it may not happen at all:

- Agencies may be holding on to space, especially owned space, in the event it may be needed at some future date.
- Agencies may be holding on to space because they do not receive any proceeds or benefits from disposal.
- Agencies may simply be using more space per person, as it becomes available.
- Government data on space utilization is not current or reliable; updating it could be expensive.
- Space may sit vacant or be occupied by contractors working in place of the downsized employees.
- Agencies are not taking appropriate measures to reduce office space such as introducing a space-sharing program consistent with its number of teleworkers.

We believe that downsizing, combined with the trend towards alternative workplaces, must eventually lead to some space reduction. We would like to see an improved incentive structure for Federal agencies so that it can happen.

While profit and loss are motivating factors for the private sector, Federal agencies lack similar incentives to improve real property asset management. Under existing provisions of law, most Federal landholding agencies are prohibited from retaining proceeds from the disposal and outleasing of real property. In addition, agency real property professionals may not believe there is any benefit from savings realized from a reduction in use, particularly if the payback is not immediate. These factors, coupled with the tacit belief that an agency's budget will be reduced by the amount of money not spent, create a reduced incentive.

GSA continues to promote legislation that would allow agencies to share in the proceeds from the disposal and outleasing of real property. Enactment of such legislation would provide much needed business-like incentives to improve asset management and assist agencies in times of budgetary constraints.

Agencies receive appropriated funds based on estimated space needs. If less space than anticipated is used, agencies may feel like they cannot use the savings for other purposes such as program or personnel costs. Consequently, agency space costs are considered a pass through expense. There is in reality more flexibility in the process than some of us may realize. Perhaps the key is greater coordination between real property and budget personnel.

One approach to creating additional incentives would be to establish annual targets for utilization rates and cost per square foot. Based on authorized personnel levels, OMB and Congress could use these targets to "control" space use and associated costs. This approach requires high commitment and centralized management. It is also an overly simplistic approach that averages everything and disregards important issues such as:

- Different missions of Federal agencies
- Shift work
- Contractors working on site
- Geographic area
- General market conditions
- Employee morale
- Productivity
- Alternative officing strategies

This is an oversight and control approach that does not intrinsically motivate agencies to improve their asset management and space utilization. It is also inconsistent with reinvented Government as envisioned by the National Performance Review.

Another approach would be for agencies to set space reduction objectives as part of their performance plans and the Government Performance and Results Act (GPRA) process. This approach is discussed in greater detail below under Recommendation #2.

Also worthy of consideration is a recent initiative conducted by Public Works and Government Service Canada (PWGSC), the Canadian equivalent of GSA. In response to downsizing and a mandate to reduce space use by 10 percent over a five year period, PWGSC used a spreadsheet analysis to establish customer-specific space reduction targets. If a customer agency reduces space below the target, the agency receives the funds that PWGSC would have otherwise spent on the space. If the agency fails to achieve the target, it must reimburse PWGSC for the excess space.

Some agencies may have the will to reduce space but not the means. For example, agencies may identify opportunities to cancel leases, consolidate offices, and implement alternative officing strategies, but may not have the money to make it happen. Agencies should identify these opportunities and associated costs during the strategic planning and budget formulation processes. A cost/benefit analysis will tell us if we need to "spend money to save money."

Finding #5 Our space use review, advocacy of an overall average utilization rate, and broadening of space use evaluation beyond utilization rate to other types of performance measures can add value by increasing Federal agencies' strategic focus on space use issues.

We feel there is value in bringing key issues to Federal agencies' attention, encouraging the incorporation of space use objectives into the strategic planning process, measuring space use performance and letting agencies manage accordingly. Each agency should measure and control its space use as a responsible manager of taxpayer funds. For example, agencies in Australia are responsible for annual strategic real property plans.

As discussed in Finding #4, we believe that Federal agencies tend to incorrectly view the cost of space as just another line item request in their budget process. Ironically, Congress created the Federal Buildings Fund and required agencies to pay rent for their GSA space in the hope that some kind of market discipline would be imposed on the use of space. However, the treatment of funding for rental costs in the actual budget process counteracts any motivational benefit that we might derive from a user pay system. We face the challenging task, in the absence of practical incentives, of convincing Federal agencies of the broader benefits of responsible space management.

Recommendations

Recommendation #1 Stay current with the latest trends and best practices in space management.

Space is the second largest administrative cost after personnel (albeit a distant second). Agencies can no longer afford to treat the cost of space as a pass through item in the budget. A fundamental change in thinking has occurred due to the National Performance Review and the Government Performance and Results Act. Agencies must be accountable for their expenditures, including those made on real property. GSA must be a leader and source of best practices, and must not use its regulatory role as an obstacle.

Agencies should look to best practices for guidance and support when undertaking their real property operations. No single practice will be "best" for everyone. Thus, best practices are ideas that have worked well elsewhere and should be considered when appropriate to an individual situation.

Using collaboration, partnering and customer involvement, the Office of Real Property works with Federal agencies to provide them with policies and tools to promote good asset management. We consult with other national governments, State and local governments, the private sector, professional associations, and the academic community to ensure that the best practices and emerging trends of each are considered in the Federal arena.

In the following section, we present some best practices identified during the course of the space use review. We recommend that you read the entire "Research" section for more information and additional ideas and best practices.

Use alternative work strategies to improve productivity and/or space efficiency.

The movement to reengineer and downsize is generating a need for alternative officing and new office environment solutions. This situation provides an opportunity for organizations to maximize their business benefits by combining non-traditional work arrangements with non-traditional space arrangements. Alternative work strategies (AWS) are techniques that reconsider the nature of the workplace and work processes in order to improve productivity and/or space efficiency. By focusing on places and their interaction with people and processes organizations can be more productive and improve the bottom line.

As suggested by Franklin Becker, a leading authority on workplace innovations, when considering whether an AWS is suitable, careful consideration should be given to the nature of physical settings (where work is conducted); information technology (how information and ideas are accessed, processed and communicated); and work patterns

and processes (when and how tasks must be performed to achieve business objectives). It is rare that a single strategy will serve an entire organization. Different business areas may require different tools and perhaps different strategies. Many AWS techniques are technology-dependent and emphasize team-based work and collaboration. For success, it is imperative to have collaborative input from end-users during both the design and implementation processes.

If you work in teams, plan space accordingly.

Organizations heading into the new millennium are relying increasingly on knowledge sharing and group-based work. Effective solutions for collaborative work are not likely to yield a single model, since needs are quite varied. Nor are they, in themselves, likely to result in space savings. If anything, more space may be needed. For example, it may be more beneficial for workers involved in multiple cross-functional projects to have several small individual workspaces near other team members rather than a traditional office in their functional unit. The net effect in group-intense organizations is likely to be a reallocation of space from individual to group uses. However, if having ample, well-organized space, including the possibility of increased space, plays a vital role in increasing productivity and efficiency, the outcome is likely to yield a greater return to the organization than direct savings on space. Some team-based interaction strategies are discussed below:

Teaming requires flexible space that supports interactive collaborative work processes. Teaming environments tend to have fewer (and smaller) dedicated workspaces, with shared spaces for collaborative functions or activities. These environments encourage the exchange of ideas and communication. Teaming spaces should be flexible and easy to reconfigure in order to adapt to changing requirements. Most organizations or functional units within them are candidates for teaming.

Team Setting is a space designated as a group or teamwork environment, usually for a particular project and a specified period of time. Staff often continues to have their own workspace. Team settings are also known as neighborhoods or group addressing.

Activity Settings provide a variety of work settings to suit diverse individual or group activities such as desk work area, conference area, telephone work area, lounge area, etc. Facilities are available on a first-come, first-served basis. Activity settings encourage interaction across departmental or functional boundaries.

The workplace is rapidly expanding beyond the boundaries of the traditional office setting.

The need to be competitive, to support new structures and ways of working, and to attract and keep a skilled work force has also contributed to the development of the remote worker and alternative officing strategies. Remote workers include all employees who spend some portion of their week away from the regular office. The two most common remote workers are those who spend a significant amount of time

away from the office and generally work from multiple locations in a single day (mobile workers), and those who normally would work in a central office but who instead work at home or in a center based site (telecommuters/teleworkers). Properly implemented, remote workers perform the primary portion of their job (intensive work) outside of the traditional office. The traditional office is more likely to be used for interactive or group type endeavors (meetings, interviews, and information sharing).

Coupled with the idea of remote work is the realization by organizations that everyone does not need his or her own private assigned desk or office all the time. As a result, several strategies have evolved which center around the concept of a collection of work spaces (fewer than the number of potential occupants) not occupied continuously by the same individual but used on an assigned, reserved, or first-come, first-served basis.

Free Address means multiple offices or workspaces shared by individuals on a first-come, first-served basis. Potential candidates for free addressing, also known as motelling, spend a significant amount of time away from the office (for example, at a client base or on the road) and are equipped with portable technology (laptop, portable printer, cellular modem and phone). These candidates may include sales, marketing, outreach, audit, inspectors, examiners, contractors and customer services. An organization can achieve significant savings by providing one workspace for every 2 to 8 employees.

Hotelling refers to work space that is reserved on a first-call basis and not dedicated to any specific worker beyond a specified occupation time. Most typically, a small staff will handle reservations, reprogram telephones and prepare the reserved space for occupancy. Hotelling can also include teaming and conference facilities, and is similar to free addressing.

Virtual Office is a briefcase approach to the office. Employees have the freedom to work/office anywhere (home, car, plane, hotel) through the use of portable technology. Virtual office workers rarely require main office space. In the ultimate virtual office scheme, workers have no assigned main office space. Potential candidates may include sales, legal, research, audit, investigators, inspection, and customer service functions.

Shared Space is when two or more employees share a single, assigned work space and work tools, either simultaneously or on different shifts/schedules. Telecommuters most typically use shared space.

Teleworking/telecommuting is a combination of assigned off-site workspace and workspace at the main office facility. Such off-site locations could include at home accommodations or remote telecenters. The teleworker generally works from the alternative site 2 to 3 days a week and is linked to the main office by various means such as a desktop computer, fax and telephone. Many job functions lend themselves to telecommuting. Participating occupations could include program analysts, engineers, accountants, administrative assistants, budget analysts, computer specialists, contract specialists, managers, management analysts, personnel specialists,

telecommunication specialists, scientists, and other occupations. Previously seen as an employee benefit, telecommuting viewed from a management perspective can mean fewer dollars for space and improved performance. By providing one workspace for every 3 to 5 telecommuters, space requirements can be reduced.

Telecenters are generally geographically convenient (located near where people live) facilities and have on-site managers. Centers can be an economical way to provide sophisticated office technology (computers, high-speed printers, video conferencing) and administrative support not always available at a telecommuter's home. By sharing facility and overhead costs, participating organizations can minimize expenses.

Satellite Offices are remote facilities that are linked to the main facility by technology and are generally located near employees and customers. Employees are assigned to work at the alternative site on a full-time basis. Although satellite offices may not reduce the amount of space needed, they do provide an excellent opportunity to improve customer service and a firm may reduce the cost of space by moving to less expensive locations.

The ever-growing lexicon of remote work makes it a challenge to include and define all terms precisely. For example, telecommuting and telework are synonymous. Many people prefer to use the term telework as it more directly implies working from a remote location. Telecommuting is sometimes viewed as just replacing the commute (therefore an employee rather than employer benefit). Non-territorial and virtual officing typically refer to the mobile worker but these terms are also used conceptually to include all forms of workspace sharing (hotelling, motelling, free addressing).

The private sector has taken the lead and stimulated interest in alternative work strategies. Technology has made it possible, while a growing consensus in society that work and home life have become unbalanced has made it desirable. Alternative officing in the Federal sector, after a slow start, now seems to be accelerating. The President's Management Council has established Governmentwide telecommuting (working in an environment outside of the traditional office) goals to accelerate the pace of change. The initial goal is to increase the number of Federal employee telecommuters to 60,000 by the end of fiscal year 1998. This figure represents three percent of the Federal civilian workforce and, while challenging, is a realistic target given the number of agencies that have already established policies and programs. Viewed as part of an overall reinvention strategy, achieving this goal should help organizations meet other requirements necessitated by agency streamlining such as the need to reduce overhead costs and maintain program effectiveness with fewer staff.

Through the use of information technology organizations are becoming flexible network teams combining strategic goals with real property needs. Changes have to be made carefully, and must be based on careful analysis of tasks, workflow, technology, and organizational priorities and goals. However, when found to be appropriate and properly implemented, alternative work strategies offer significant opportunities and benefits. The three most common areas in which benefits are achieved are employers, employees and society.

Benefits to Employer

Employer Productivity and Quality Gains: Based on studies and anecdotal evidence, productivity increases range from 10 to 40 percent. Although knowledge-worker productivity is difficult to measure, both remote workers and their managers consistently report productivity gains. Gains are generally attributed to fewer interruptions, less stress and proximity to customers.

Cost Savings: The main savings are in premises costs and office overhead. Academic studies are scarce, and most anecdotal reports reflect other organizational changes (downsizing, relocation) that occurred at the same time. Regardless, organizations with a well-planned remote work program can reduce the amount and cost of space. The key is to institute a space-sharing program. Of course, remote work also has costs (one-time start-up costs and ongoing operating expenses) that must be factored into any calculation of cost savings.

Reduced Absenteeism: Reports indicate that alternative officing results in reduced absenteeism since employees can use an hour rather than the entire day to handle personal and health concerns.

Enhanced Customer Service: Employees can be closer to a client base. Using flexible hours, customer services can be extended beyond the normal 9-to-5 working day.

Benefits to Employee

Studies and first-hand accounts on alternative officing report the following advantages:

- Increased personal productivity
- Increased flexibility to balance the demands of work and home life
- Personal savings (for example, clothing and transportation costs)
- Stress reduction associated with commuting
- Improved morale
- Decreased commuting time
- Greater control over work process and time

Benefits to Society

- Reduced traffic congestion and consequent pollution
- Reduced total travel and consequent pollution
- Less stress on deteriorating transportation infrastructure
- Improvement in air quality
- Reduction in energy usage

Increase flexibility by minimizing the number of space standards.

Some organizations are moving away from the traditional space by rank approach and moving toward universal plan offices—one-size-fits-all workstations. One of the benefits of a universal standard is an increase in flexibility.

The one-size-fits-all workstation will accommodate a number of different work styles and job functions by fitting out the footprint with different furniture components arranged in different ways. The components a space planner uses depends on job function. Furniture components can then be standardized and modularized, and they are interchangeable.

In practice, most organizations use a variation of the universal plan that limits the number of different office sizes. When determining the proper size for a workstation or office, it is important to consider both the job function and how the different space standards will interact. Workstations should share a common module so they can be easily combined. For example, 8 feet by 8 feet, 8 feet by 12 feet, and 12 feet by 16 feet standards all share a 4 foot module. Consequently, three 8 by 8 workstation could easily become two 8 by 12 workstations. In addition to accommodating different job functions, standardized workstation modules can easily be reconfigured to address changing requirements (such as reorganizations) and to support team settings.

Universal workstations or fewer standards allow much greater flexibility and result in fewer barriers to change, less disruption when change does occur, and lower costs in money and time.

Don't expect to achieve state of the art space utilization in older facilities.

Research indicates that an improvement in space utilization rate is not a simple matter of squeezing people into less space. In reality, such a simplistic approach could have a devastating effect on an organization. There are certain factors that support and facilitate more efficient space use. Emerging trends indicate that organizations are seeking newer box type (vanilla) office buildings with large floor plates, capable of meeting heavy power and technology related demands.

Larger floor plates (greater than 18,000 sq. ft.) lend themselves to more efficient, flexible office layouts. Generally, a larger tenancy allows for smaller workspace per person. Consequently, organizations are consolidating into single large locations to reduce real property costs and non-real property costs. By leveraging size, firms can reduce other costs such as mailroom and custodial.

The use of teaming approaches, telecommuting, hotelling and other shared office concepts, and greater reliance on power and new technology all have implications for space use. Considering the continuous and rapid changes in the ways people work and use space, buildings and furniture systems must provide sufficient flexibility to allow for cost-effective reconfigurations.

These factors sometimes make it difficult for the Federal government to achieve improvements in space utilization in an environment of constrained resources. Agencies, lacking funds for acquiring space in the newer, more efficient facilities, must do the best they can with existing space in aging Federal buildings. An impressive aspect of the GSA/PBS utilization standards and performance is that they are achieved in a disproportionately older inventory of facilities.

Recommendation #2 Agency strategic plans should focus on mission but not overlook administrative costs such as real property.

We recommend that agencies use planning and measurement to manage their real property use and costs. GSA can help by providing sensible standards, guidelines, and measures used in the public and private sectors. Each agency's space needs and space portfolio are ultimately unique and mission-specific, so each agency should compare itself against the common standards and track its own unique space use and costs. If agencies understand that real property costs can be managed, the overall savings may provide some fiscal relief in a tight budgetary environment (assuming a tradeoff among real property, operations, personnel, and program costs during the agency's own budget development process). Furthermore, agencies that are struggling with measuring performance will find that the area of real property provides an opportunity to plan and manage a discrete and quantifiable cost of doing business.

Each agency should be aware of the following about their own space use:

- Space use is a cost of doing business, like personnel or supplies.
- Space use can be measured.
- Space use can be tracked, controlled, and planned for.
- If you pay attention to it and measure it, space use usually can be improved.

Each agency should plan strategically for its own space use. There are several reasons why this is preferable to having a central source such as GSA mandate standards for space use:

- Each agency's space use profile is unique and dependent on the particular mission, not just of the overall agency, but of the specific agency elements using the space. Each agency will have a different learning curve for alternative space use methodologies based on employee profile, agency culture, or operational issues. GSA's role is to identify and share best practices.
- The available data sources (Worldwide Inventory, Foundation Information for Real property Management (FIRM)) are not comprehensive or current enough to facilitate centralized space management. GSA's role is to use available resources to "take a snapshot" of space management issues.
- Each agency should, in light of the Government Performance and Results Act (GPRA), think in terms of setting its own goals and measuring its own performance. GSA's role is a leadership role.

GPRA is mission-focused and agencies are rightly concerned with efforts to measure the outcomes of their particular programs. However, an agency still requires infrastructure to carry out its mission. There is a link between agency mission and administrative functions such as real property. Executive agencies can improve and expand upon GPRA by including this link in their strategic plans, even if it is only an appendix to the plan itself.

We recommend that each Federal agency plan strategically for future real property costs, in the same way that each agency prepares future year projections for budget and staffing. Such planning would enable each agency to consider real property as a manageable cost of business, to plan for projected changes in space use, and to track performance in controlling space use and real property costs.

Some issues to consider are:

- There should be consistency of direction among your future year projections for overall budget, staffing, and real property costs. If you are projecting flat budgets and downsizing, your projected real property costs probably should not be rising.
- Always consider the full economic cost of real property. For leased space (space leased from GSA as well as other lessors), consider the rent plus any additional costs. For agency-owned space, there is an actual cost for operations, utilities and maintenance. However, there is also an economic cost for use of the space. An agency should make some attempt to value the cost of use of its owned space, whether that be opportunity cost, market cost, or depreciation. For example, a possible measure of cost could be to assume a fair market rental value as an opportunity cost. Therefore, an agency's total real property cost would be the sum of:
  - Actual lease costs (both GSA and non-GSA controlled locations)
  - Operating costs in agency-owned space
  - Some measure of fair market rental value of agency-owned space

  If owned space is perceived as being free of charge it is easy to over-allocate space, to let vacant space remain vacant, or to provide excessive free space for contractors.
- After establishing the baseline real property cost, the future year projections should reflect the outcomes of strategic objectives designed to maximize efficiency of space use and contain the cost of real property use.
- When projecting reduction of real property costs attributable to personnel downsizing, keep in mind that there is a time lag between losing people and giving up space. PBS data suggest a 2-year time lag. Timing depends on factors such as whether the space is owned or leased, lease expiration dates, ability to consolidate, and the disposal process.
- Are there fundamental differences between the types of space you tend to own versus the types of space that you tend to lease?
- What is the influence of sub-markets (geographical areas) on your overall space portfolio?
- What is the influence of alternative work strategies on your overall space portfolio?
- Do costs vary across different segments of your space portfolio? Are there any implications for additional savings?
- Are there ways to save money in current space assignments?
- If your current or future year budget proposes new programs or initiatives, consider the real property implications if the programs are approved. Make sure

you have included funding projections for associated real property costs as well as cost of the programs themselves.

- Think of real property as a true cost and not a pass through. Start with your baseline real property cost as a percentage of your total agency budget. Set a target for reducing real property cost. Consider what you could do with the funds if they were applied to your program. Such an approach may be more realistic than assuming a pass through of steadily increasing real property costs coupled with increased appropriations for new program elements.
- Remember to take full advantage of GSA's expertise if you need help in strategic planning for real property.

When planning for space use at the strategic level, focus on total space as we have defined it in this review. Compare new assignments to the government sector average of 200 usable square feet per person. Use this number as a guideline, not as a rigid limit or a minimum entitlement. Plan according to your actual needs, but be aware of the implications for your utilization rate.

Utilization rates are useful to management and should be considered in strategic plans, but they do have drawbacks:

- There are problems associated with collecting the data. Both PBS and the private sector bill according to the amount of space, not the number of people using it.
- Utilization rates ignore market factors that are more likely to have a greater impact on cost, for example, geographic area, market fluctuation, urban versus suburban, or location in or away from the Central Business District.
- Since the Federal government is not a commercial business, there is no obvious way to establish a link between space use and productivity. Simply squeezing people into less space is a misguided attempt to control costs and can be counterproductive to morale and productivity.
- A one-size-fits-all utilization rate ignores the mission-specific needs of agencies. That is why we framed the discussion in terms of an overall average for office space utilization.
- In this era of rapidly changing workplace environments and technologies, the most important quality is flexibility. Any attempt to develop utilization standards for alternative workplace environments misses the whole point.
- The nature of agency-owned space is different from PBS space. There is limited value in comparing a space utilization standard developed for office space use with space use in Government buildings that have more mission-specific uses (hospitals, laboratories).
- Space planning is not the same thing as strategic inventory management.
- Verification of space utilization data is complicated by the presence of work shifts, contractors, temporary help, or shared workstations.
- The relationship between space utilization rate and cost is not a simple one. We might achieve a more favorable utilization rate in newer, technologically modern

building with larger floor plates, but the rent may be higher. It may be more economical to settle for a higher utilization rate in an older and less expensive building.

When thinking about the implications of upcoming space actions on utilization rate, consider the following issues:

- Can you justify the variation from the average on the basis of mission or unique requirements?
- Is the facility materially different than the standard GSA vanilla office-type building and, if so, what are the space implications?
- Is the facility an older building with an inefficient design?
- Is the planned assignment based on an open floor plan with systems furniture, with one workstation per person?
- Can adjustments be made for workstation sharing, telecommuting, hotelling, working in shifts, etc.?
- Are there extraordinary circulation needs?

When you look at real property in your strategic plans, keep in mind that space provided to contractors has value. Although contracting rules require that we evaluate the value of space provided to contractors, agency real property professionals may not be aware of the implications. There is an opportunity cost since you could have provided the space for your own employees' use. Consider whether a stricter space standard should be applied to contractor-occupied space. Consider whether it is in the Government's best interest to excess, outlease or dispose of the property. We should be aware of the tradeoffs and open to other ways of doing business. For example, the policy of the Canadian government is to not supply any space for contractors whatsoever.

When you look at performance measures as part of the strategic planning process, we would like to reiterate that you should look at a broad range of performance measures to evaluate the real property function. Look at measures that tell you how much you are spending on real property, measures such as cost per employee, cost per square foot, and percentage of administrative budget.

Recommendation #3 Utilization rate should be managed at the agency level in the strategic planning process.

In our Space Use Review, we advocated a more flexible, strategic and comprehensive approach to space management. Considering the continuous evolution of the workplace, a return to the D-76 "building block" approach to space utilization is inappropriate. As we stated earlier, space planning is not the same thing as strategic inventory management. The Federal Government is not a highly centralized bureaucracy. We are a collection of diverse agencies with different missions and space needs. We could conceivably develop "standards" for every type of space needed by each and every agency. This would be a costly effort that would not yield

commensurate benefits. We can accomplish the same end through the suggested approach of strategic planning, performance measurement and benchmarking.

A number of people that we spoke to expressed concern that OMB would attempt to enforce whatever benchmark we put forward through the budget process, in the same way that OMB and GSA attempted to track adherence to the old 135 square feet per workstation standard in the GSA Form 3530. We recommend that OMB not use the utilization rate as an indirect means of controlling real property cost. In the spirit of the National Performance Review, we recommend that agencies be empowered to manage their own space use through the strategic planning process. In return, the Office of Real Property will commit itself to an ongoing educational effort to identify and disseminate best practices in space management.

The main point on the utilization rate is this: the utilization rate is what it is—a measure of space efficiency in the traditional office building environment. Space efficiency is one thing that you can measure; utilization rate is the most commonly used performance measure for space utilization.

Since it is simply a rule of thumb measure of space efficiency, don't use the utilization rate out of context as an indirect measure of cost. If you want to control cost, then you must measure cost. At best, a focus on utilization rate is a short-term strategy in lieu of a comprehensive long-term cost control strategy that considers a broader range of performance measures.

Next Steps

Governmentwide Real Property Performance Measurement Initiative

The Office of Real Property's Governmentwide Performance Measurement Initiative started in August 1997. The project team will determine, in collaboration with other Federal agencies, a set of appropriate Governmentwide real property performance measures and a methodology for annual measurement.

The initiative addresses two short-term goals:

1) Raise the awareness of and increase Governmentwide participation in real property performance measurement.

2) Establish a Governmentwide baseline for the agreed-to set of measures that will allow agencies and GSA to evaluate and benchmark performance.

The long-term goal is for the Government to demonstrate improved asset management relative to the baseline measurements. So far, the initiative has generated an enthusiastic response from our customer agencies.

Increased Leadership Role in Alternative Workplaces

The Office of Real Property will assume an increased leadership role in the area of alternative workplaces through the establishment of a new Worklife Enterprises division.

Follow Up on Recommendation #2 (Agency Planning Process)

GSA will explore ways to encourage agency planning for administrative costs, such as an appendix to the mission-focused strategic plan.

Research

In this section of our report, we summarize our research. We encourage our audience to read this section since it contains valuable information beyond what we discuss in the findings and recommendations sections of the report.

The following pages contain a broad overview of space use practices and trends based on our research and contacts with professional trade organizations, private sector firms, other Federal agencies and national governments, and state and local governments.

The research was conducted informally by telephone, personal interview, electronic mail, and over the Internet. Some materials were obtained directly from print sources or via the Internet.

Note: Although every effort has been made to define measurement terms, space measurement methods vary from market to market and sector to sector. Most of the space standards are quoted in some sort of "net" as opposed to gross square feet (i.e., measured from interior, not exterior walls). However, most of the net square feet standards are comparable with what we call usable. With this in mind, the reader can make broad comparisons based on the data.

Policies, Practices, and Background Information

Federal Property Management Regulation (FPMR) Temporary Regulation D-76

The FPMR Temporary Regulation D-76 established the basic GSA policy on space use. The regulation formally expired in November 1996. A brief summary of the policy follows:

- Office space is divided into two principal components: Primary area and Support area.
- Primary office area is the personnel-occupied area in which an activity's normal operational functions are performed. The utilization threshold for the Primary office area is 125 occupiable square feet per person.
- The 125 occupiable square feet per person review threshold was developed based on a professional analysis of the use of space by employees housed in GSA-controlled locations. This included clerical, administrative, professional, managerial and executive level employees using either conventional furniture or systems furniture and includes circulation. The 125 occupiable square feet per person Primary threshold is an average.

- Support office area is all secondary/shared workstations, extraordinary circulation space, and those specific and discrete areas constructed as office space and used to meet mission needs outside of the agency's requirements for housing personnel. The utilization threshold for the Support office area is 22 percent of the Primary office area utilization rate. When added to the 125 occupiable square feet allowed for Primary area, the maximum allowable standard for overall office space use is 153 occupiable square feet per person.
- The 22 percent review threshold is based on a survey and analysis of actual Support area requirements of GSA clients. The 22 percent Support area threshold is also an average.
- The threshold is the point at which further examination of a space request may be required. Space requests producing utilization rates below the threshold are processed with a minimum of review. Those above the threshold are subject to a second look; but exceeding the threshold by itself is not grounds for denying the request.

Public Buildings Service (PBS) Space Assignment Data

We obtained current space assignment data from PBS. The data cannot be used to assess the current utilization of the PBS inventory because it consists primarily of the number of personnel reported during the initial assignments. There is no way of knowing whether the data for any particular assignment represents full-time equivalent (FTE), primary shift employees, or number of workstations. If an agency adds or subtracts personnel during an assignment's lifetime, there is no reason for the agency to report the personnel change and no reason for PBS to keep track of it. The basic fact is that PBS bills according to amount of space, not according to number of personnel housed in that space.

We were able to analyze the data to compare relative ratios of space classified as office, storage and special. Based on our analysis, we concluded that the proposed benchmark of 200 usable square feet per person is reasonable. In other words, the previous FPMR overall office space standard of 153 occupiable square feet per person approximates a total standard of 200 usable square feet per person when appropriate per person amounts are added for storage and special space.

The potential cost of updating the utilization rate (i.e., personnel assignments) information for the PBS inventory would be considerable, based on an estimate of updating this information for a small sample of PBS buildings.

1997 BOMA Experience Exchange Report

The Building Owners and Managers Association (BOMA) has published this report annually since 1920. The Experience Exchange Report is a compilation of performance data from office building owners and managers across North America. The report is an industry benchmark that provides full income, operating and expense data on more than 4,000 buildings - more than 790 million square feet - in the public and private sectors. The report contains valuable benchmark data on office space utilization rates.

The 1997 BOMA report provides 1996 data on the average amount of square feet occupied by each individual office worker in a building. The average is calculated by dividing the total amount of occupied office square feet in the sample by the total number of office workers. The average square feet per office worker reflects the average square footage allotted to an office worker regardless of position, and includes workers at every level from receptionist to Chief Executive Officer.

Summary of BOMA 1996 Office Space Utilization Rates

	U.S.	Canada
Private Sector	282	253
Government Sector	235	336

The following utilization rate data is given in BOMA rentable square feet per office worker and refers to the U.S. private sector in 1996:

All buildings (2,286 in sample)	282
All downtown buildings	288
All suburban buildings	271

	Downtown	Suburban
Corporate facilities	306	290
Financial buildings	238	n/a
Medical buildings	255	134
Single purpose bldgs.	339	272

Building age (years)	Utilization rate
Less than 9	285
10 to 19	294
20 to 29	281
30 to 39	275
40 to 49	197
More than 50	280

The following utilization rate data is given in BOMA rentable square feet per office worker and refers to the U.S. government sector in 1996 (includes Federal, state and local properties):

All buildings (223 in sample)	235
All downtown buildings	237
All suburban buildings	211

Building age (years)	Utilization rate
Less than 9	224
10 to 19	266
20 to 29	189
30 to 39	207
40 to 49	362
More than 50	364

The following utilization rate data is given in BOMA rentable square feet per office worker and refers to the Canada private sector in 1996:

All buildings (144 in sample)	253
Downtown corporate facilities	259
Suburban corporate facilities	276
All downtown buildings	251
All suburban buildings	260

Building age (years)	Utilization rate
Less than 9	273
10 to 19	269
20 to 29	302
30 to 39	232
40 to 49	257
More than 50	245

The following utilization rate data is given in BOMA rentable square feet per office worker and refers to the Canada government sector in 1995:

All buildings (57 in sample)	336
All downtown buildings	342
All suburban buildings	303

Building age (years)	Utilization rate
Less than 9	n/a
10 to 19	292
20 to 29	314
30 to 39	322
40 to 49	243
More than 50	357

1996 National Summit on Building Performance

This conference, organized by the American Institute of Architects (AIA), the International Facility Management Association (IFMA), and the International Association of Real Estate Executives (NACORE), provided some interesting conclusions about space use from a more strategic viewpoint. Key ideas are:

- High-quality buildings can increase employee productivity by 10 to 20 percent. With nearly 100 million white collar workers averaging a salary of $43,680, this amounts to $437 billion annually from potential worker productivity improvements.

- According to research conducted by Fortune magazine, the largest impact on productivity would result from improvements in office layout, personal computers, and thermal comfort.

- Despite the potential impact on productivity, and by implication the bottom line, the majority of corporate strategic plans do not include real property and workplace objectives.

- Company size, industry and amenities offered can distort measures such as occupancy cost as a percentage of gross corporate revenues or cost per employee. They are best used as yardsticks within one's own company (source: FM DATA web page).

Benchmarking Occupancy Cost in the Private Sector

In most private sector benchmarking studies, the amount of space allocated per employee is only one aspect of occupancy cost (source: *Journal of Real Estate Research*). The other consideration is cost per square foot.

In a typical benchmarking study, a firm collects data on each competitor's average real property cost per square foot and average square feet per employee (overall utilization rate). For any particular company, the product of these two numbers yields the occupancy cost per employee. If we take the lowest average real property cost per square foot found in any of the firms, and multiply by the lowest average square feet per employee (best utilization rate) found in any of the firms, the product yields the "best in class" occupancy cost per employee for the benchmarking sample.

Unless the same firm has both the lowest cost per square foot and the lowest utilization rate, the best in class occupancy cost per employee is a fictional number, a goal to aspire to or a means of comparison (benchmark) for an individual firm's occupancy cost.

It is feasible to perform a similar exercise to establish a best in class occupancy cost per employee among Federal agencies. However, the following considerations should be kept in mind:

- GSA has historically found it difficult to obtain space data from the other Federal agencies.

- Agencies must agree on a consistent method of evaluating owned space. GSA has a leadership role relative to this issue.

- "Employee" must be defined, i.e., there must be an agreed upon consistent approach to handling issues such as FTE, contractors, shift work, and workstations versus personnel.

Alternative Office Solutions

The November 1996 edition of *Facilities Design and Management* reported on the 1996 World Workplace, an event organized by the International Facility Management Association. Some important points about alternative office solutions are:

- "Organizations are more customer-focused, deconstructed, team-based, geography-neutral, dispersed, lean on human resources, yet keen on the idea of the workforce as intellectual capital."

- Teleworkers are more productive because they spend less time commuting and dedicate one-third of that time to the job. Also, serious workers need less control.

- Telecommuting requires better remote managers and also threatens teaming, so groupware is required to keep teams interconnected.

- Work is geography-neutral partially because of global work hours.

- Hotelling is highly effective with workers who already spend considerable time out of the office.

- Radical redesign of the workplace environment should be driven by business strategy with the twin goals to use design to increase performance and to optimize or reduce space use.

A May 11, 1997 article in the *Washington Post* offers more insights about the hotelling concept:

- Because many executives, particularly people involved in sales or customer service, are out of the office most of the time, several can use the same space at different times, just as travelers use the same hotel rooms on different days.

- These types of alternative office environments usually include a small, enclosed office that provides privacy; larger open areas where teams can meet; and storage areas. Users can configure the space to their needs quickly.

- At Tandem Computers, Inc., each alternative office, on average, accommodates three people. This means that the company leases less space; they estimate a 50 percent reduction in leasing costs for people who use the alternative offices.

- Savings from real property should not be the only reason to adopt the hotelling concept. For example, Hewlett-Packard Co. is expanding its hotelling pilot from 6 to 23 offices as a way for employees to have greater flexibility and improve their

work-life balance. Big Six accounting firms in Silicon Valley (California) are adopting hotelling more frequently because of the area's traffic problems.

- Most companies provide users of alternative space with equipment they can carry with them or use in their home offices, such as laptop computers, cellular phones, fax-printers, monitors, keyboards, docking stations and business phone lines, including high-speed digital lines. In reality, the cost of connectivity is more significant than the cost of the equipment.

- Disadvantages to hotelling include loss of office camaraderie and personal contact, and increased difficulty in instilling corporate culture and values in new employees.

In April 1995, IFMA conducted a mail survey of facility managers in the United States and Canada on alternative officing practices. Key findings were:

- Most organizations are involved in some type of alternative officing practice. They expect use to increase significantly by 2000, with the greatest increase expected in use of telecommuting.

- The positions cited as most appropriate for alternative officing practices are sales positions.

- The primary barrier to implementing alternative officing practices is organizational culture.

- Constraints of the existing building frequently were a barrier to implementing on-site workplace redesign practices.

- On-site redesign practices (e.g., flexible work schedules, modified office standards) yielded cost reductions and productivity increases, while off-site practices (e.g., telecommuting) often resulted in improved morale and higher productivity.

- Most organizations supply telecommuting and home office employees with computers and modems. Six in ten companies provide other data lines and voice mail. Four in ten provide facsimile machines and telephones.

- Three-quarters of the facility managers surveyed evaluate the effectiveness of alternative officing practices by observation, while half use employee interviews and financial data.

- More than half of the facility managers reported cost reductions after implementation (rental, lease and property costs) while almost one-fourth reported increased costs (technological equipment and supplies).

Space Use Trends in the Private Sector

In May 1997 Arthur Andersen LLP provided us with a summary of space use trends in the private sector. Key points are:

- In the past, workspace was typically assigned based on position, seniority or status.

The current approach is more team-oriented and egalitarian, promoting functionality over entitlement. Modern office layouts are designed to optimize the benefits of technology; foster knowledge sharing and employee interaction; and improve customer service.

- Companies today use fewer, simpler, strictly applied space use standards instead of complex entitlement-based standards.
- Companies have improved space utilization rates (decreased average square feet per employee) on the order of 20 to 30 percent. These improvements vary widely depending on the type of company.
- By improving space utilization, companies can achieve occupancy and operating cost savings in the range of 20 percent. Again, this varies widely by type of company.
- By implementing universal space plan concepts, companies can save "churn" costs (contraction, expansion and relocation of business units) resulting from tenant fit out and interruptions to business operations.
- The most commonly used performance measurements for space utilization are square feet per person housed and square feet per employee (FTE).
- Some other performance measurements companies use are:
  - Assets as a percentage of revenues
  - Revenues per square foot and per employee
  - Gross profit per square foot and per employee
  - Net income per square foot and per employee
  - Total square feet owned and leased
  - Square feet by space use category
  - Occupancy costs as percentage of revenue, expenses or income
  - Occupancy costs per square foot and per employee
- Companies are trying to lower their square feet per person housed performance to below 250 usable square feet.
- For companies burdened with older infrastructure and legacy properties, the target of 250 usable square feet is too low and a higher target, closer to 300 to 350 usable square feet, seems more realistic.
- A sample of five mostly technology-oriented companies yielded an average usable square feet per employee rate of 206.

Institute of Real Estate Management (IREM)

Industry data was provided by IREM. The main source provided was an article in the November/December 1996 issue of the *Journal of Property Management* entitled "Less Opulence More Options." The article cites information from Equitable Real

Estate Investment Management Inc., and Real Estate Research Corp.'s *Emerging Trends in Real Estate 1996*. Some relevant highlights are:

- 73 percent of the corporate real estate executives Emerging Trends surveyed said they were charged with reducing square footage per employee. Executives were to cut space by 25 percent, reducing from 265 square feet per employee to 200 square feet.

- Three years ago a typical allocation was 350 square feet per employee; now, the allocation can be as low as 150 square feet.

- An important consideration is that, in order to attain the lower utilization rates, companies have moved to newer buildings with larger floor plates. Larger, more efficient floor plates allow companies to consolidate and pack in more people per square foot. Floor plates smaller than 18,000 square feet don't lend themselves to today's more efficient, flexible office layouts.

- The Dallas/Fort Worth metroplex of 11 suburbs, for example, is seeing a proliferation of big-box type office buildings that yield greater efficiencies in terms of space. These two-to-six floor mid-rises of 100,000 to 150,000 square feet typically look rather square with a center atrium and two 25,000-square-foot wings that yield 50,000-square-foot floor plates.

- Corporate users are less interested in high-end finishes and are opting for vanilla-type office space to utilize their dollars more efficiently.

- Corporate users also are attracted to build-to-suit, since large users can realize reduced loss factors (fewer non-usable corridors), lower operating costs of HVAC, and janitorial tailored to the level they need. Tenants are willing to live with lower levels of services in order to lower their costs.

- A lot of corporate users are moving and consolidating office functions. By leveraging their size, administrative functions, telecommunications, and mailroom services are reduced.

- A side effect of consolidation is an increase in parking requirements. Where three parking spaces per 1,000 square feet was once the rule, now five spaces are needed for every 1,000 square feet. (If the "rule" is based on square feet, then packing more employees into office square feet requires more parking per square feet, since there are now more employees using that space.) Proximity to public transportation is more desirable than ever among commercial tenants.

- Following the same rationale discussed for parking requirements, electrical power demands have increased from 2-3 watts per square foot to 4-6 watts per square foot.

- Continuing with the above logic, more bodies per square foot and more power per square foot (for computers and peripheral equipment) results in more heat and a concomitant need for more cooling.

- In addition to more electrical capacity, commercial tenants also want uninterrupted power service (UPS) with dual feeds so that if the power fails, it can pick up without losing any data.

- While commercial tenants may be seeking plain vanilla space in terms of build-out, they are also seeking what is called "high-tech" space - spaces where the line of sight for communications is already in place, spaces that have UPS systems, backup systems in generators, improved roof access for communications, high-speed wiring (fiber optics), and raised floors to allow ease of access for data cabling upgrades.

The most important point to note from the information provided by IREM is that an improvement in the space utilization rate is not a simple matter of squeezing people into less space. There are certain prerequisites that facilitate such an improvement: larger floor plates, ability to consolidate, higher power capacity, UPS, high-tech space, and generally a move towards newer, build-to-suit facilities. There are also certain outcomes associated with improving the space utilization rate, such as increased parking, power, and HVAC requirements.

Sydney, Australia, Private Sector Office Market

In 1995, BOMA and the Facility Management Association in Australia conducted an office space study of the Sydney market. Relevant findings were:

- Gross space use in the Sydney Central Business District (CBD) was 17.2 square meters (191 square feet) per person, down from 19.5 square meters (217 square feet) per person in 1993.

- Gross space use in the Sydney metropolitan area was 23.1 square meters (257 square feet) per person, up from 16.6 square meters (184 square feet) per person in 1993.

- Generally, the larger the tenancy, the smaller the workspace per employee.

- Executives, partners and directors in the Sydney CBD occupy the largest work areas at 17 net square meters (189 net square feet) per person.

- Support staff occupy 9.3 net square meters (103 net square feet) per person in the Sydney CBD and 11.9 net square feet (132 net square feet) per person in the Sydney metropolitan area.

- Of those firms that have introduced alternative space use practices, hot desking (workstation sharing) is the most common practice in the Metropolitan area, while hotelling is the most popular practice in the CBD. The conclusion drawn is that CBD offices have a greater need for allocating workspaces temporarily while Metropolitan firms may have a greater need for providing a permanent workspace that two or more people can share.

- Firms generally engage in hotelling and hot desking to achieve cost/space savings. The main reason firms undertake telecommuting was given as benefits to employees.

FM DATA Monthly: Kraft Foods, Inc.

Most of Kraft's cost control efforts involve the comparison of facilities to identify best practices in the lowest-cost buildings. In addition, Kraft does monitor space monthly to identify opportunities for consolidation or expansion, and they do keep track of such measures as operating cost per occupant. An interesting point is that the facilities management staff tries to help their operating divisions understand that it costs as much to house a temp or a consultant as it does to house an employee. As a result, they track contract workers and provide special smaller contractor workstations for them. Compare this with the policy of the Canadian government, which does not supply space for contractors (source of information on Kraft Foods, Inc. - March 1997 issue of *FM DATA Monthly*, a Tradeline publication, Orinda, CA).

FM DATA Monthly: J.P. Morgan

J.P. Morgan uses an "Office and Work Station Annual Rent Cost Analysis" as part of the project planning process. This analysis calculates a proposed project's area, annual rent, annual rent cost per square foot, square feet per workstation, and annual cost per workstation. Using a spreadsheet, the client can see how much money can be saved if all tenants keep their square feet per workstation below the J.P. Morgan benchmark of 130 square feet. The analysis quantifies the value of smaller workstations and the cost of "vanity space" (source of information - February 1997 issue of *FM DATA Monthly*, a Tradeline publication, Orinda, CA).

J.P. Morgan also measures annual facility cost per usable square foot, seat, and occupant. The facility information is available on a Computer Aided Drafting system. Real property costs are captured in the accounting general ledger system, in accounts dedicated to this purpose. These accounts include cash items (salaries, taxes, insurance, utilities, materials) and non-cash items (depreciation and cost of funds or interest). The human resources system captures headcount by various categories, including employees and contract personnel. The various systems (CADD, accounting, human resources) are not integrated; information is entered into a spreadsheet manually (source of information - March 1997 issue of *FM DATA Monthly*, a Tradeline publication, Orinda, CA).

FM DATA Monthly: Steelcase, Inc.'s Top Ten Telecommuting Tips

The following guidelines enhance a telecommuter's relationship with his or her company or supervisor:

1. Communicate with managers and supervisors in writing regularly to outline work for the week ahead.
2. Have a specific "at home" room dedicated to work.
3. Schedule regular face-to-face meetings with supervisors or managers.
4. Plan to attend team or group meetings at the company office.
5. Be as prepared as possible before attending meetings.

6. Organize the workday by batching tasks; compartmentalize like activities so that time is used efficiently. Tasks that can only be done in the office, such as copying, mailings, or meetings, should be saved for in-office time.
7. Budget time.
8. Establish "checkpoints," either face-to-face or written updates via e-mail, to ensure the work process is successful.
9. Learn methods of stress management.
10. Make time to periodically "reconnect" with in-office co-workers.

(Source of information - July 1997 issue of *FM DATA Monthly*, a Tradeline publication, Orinda, CA).

PBS Office of Portfolio Management (PT) FORM Report

In February 1996, the PBS Office of Portfolio Management published its Federal Operations Review Model (FORM) report, developed in conjunction with Arthur Andersen. Some relevant findings from the Industry Roundtable with the private sector are:

- The participants believed that the PBS target for general purpose office space was impressive; the private sector considers a utilization rate of 230 square feet per person to be good.
- The private sector is increasing its use of shared workspace programs. Hotelling, telecommuting, shared work space, and other alternative housing strategies have allowed some private sector companies to compress to a ratio of eight employees per single workstation when using a combination of these methods.
- PBS identified an issue specific to the Government: the real property component of the costs incurred by federal agencies is very small in relation to the other categories of expenses, such as payroll. Therefore, agencies may not be very concerned about efficient space utilization. Also, since Federal agencies do not experience profits or losses, there is a reduced incentive to save money, especially because there is a tacit belief that OMB will reduce the following year's budget by the amount of money an agency fails to spend in this year's budget.

International Centre for Facilities (ICF)

- ICF recommends benchmarking against other governments rather than the private sector, due to the difficulty in finding public sector equivalents to private sector measures such as percentage of total revenue or percentage of gross operating cost. Private sector sources generally recommended the opposite, citing cultural differences between countries. They argued that U.S. private sector companies would yield the best comparisons.
- Since the private sector can relate real property cost to profit, there can actually be situations where increased real property costs are justified in order to boost productivity and increase profits.

- A related point is something called undermanning theory. In downsized companies where a remaining worker is performing duties previously assigned to two workers, he or she can sometimes be more productive using two workstations to perform two discrete sets of duties. This is contrary to a simplistic emphasis on reducing utilization rates as well as the expectation that downsizing personnel automatically leads to a proportionate decrease in space use.

- The Federal Government is big enough that benchmarking space use between and among agencies is a valid concept.

- In the absence of a direct relationship of cost to profit, geographic difference and market fluctuations make the use of cost-based measures to track the Federal Government's space use problematic.

- For a true measure of real property cost, simply using operating costs for an agency-owned building is not enough. There must be some estimate of the opportunity cost of leasing the facility to make a valid comparison.

- Agencies lack incentives to manage space since it is just another appropriation request; we need to provide incentives.

- If agencies are to be accountable for real property costs, we must distribute the expertise that traditionally resided in GSA throughout the agencies.

- Since many national governments (e.g., Great Britain, Australia, Sweden) have already established incentives and distributed expertise, benchmarking against them may not be appropriate unless our government goes through similar steps.

City of Philadelphia, PA

A report on the city government's space leasing activities is available on the Internet site of the city Controller's office. Some key points are:

- Although the city has established a space utilization goal of 200 square feet per employee, a lack of commitment has resulted in many leases exceeding the goal.

- At the same time, some agencies that complained of cramped conditions had assignments well below the space utilization goal.

- Interestingly, the report recommended the re-establishment of the Department of Public Property as the sole leasing authority for City space (which is the opposite direction from "Can't Beat GSA Leasing").

- The report also recommends the establishment of a space allocation goal per employee for general office space and the requirement for high level approval for special space such as unusual storage needs.

Private Sector

AT&T

- The space use standard is 225 gross square feet per person.
- The standard covers all kinds of space, with the major types being call centers and marketing space.
- The organization's actual space use currently exceeds the 225 gross square feet per person standard.
- There are also personal standards according to position. The largest private office is 300 square feet. The other levels are 225 square feet, 150 square feet, and then cubicles.
- AT&T also fixes an occupancy cost target of $21 per gross square foot. This is the total occupancy cost including rent and operating costs.
- These standards were determined by benchmarking with their competition and other best-in-class corporate real property users.
- GSA should not benchmark with other national governments because of cultural differences. GSA should benchmark against best-in-class U.S. corporations.
- The Federal Government should match need with quality, i.e., certain industries might need to be located in class A space (e.g., corporate lawyers) while Government operations might be more appropriately housed in lower cost class B or C space.
- Having matched need with quality, we should procure according to competitive standards (no "monuments").

IBM

- Rather than benchmarking against industry standards (although that may be done), the approach is to measure current performance and to try to improve upon it.
- Space use varies according to the type of work being performed. For the product development environment, the range is 230 to 250 gross square feet per person (includes primary, core, building support, lab space, equipment labs).
- For the marketing environment, the average is 100 gross square feet per person all inclusive (core and common areas). Space use is minimized through the use of tele-commuting, hotelling and workstation sharing, which is appropriate for the marketing function. The ratio of staff to workstations can sometimes be as high as 6 to 1.
- For the administrative people, the range is 170 to 180 gross square feet per person.

- The corporate philosophy is to provide what is affordable. IBM looks at utilization measures as well as cost measures such as revenue per square foot and fully loaded occupancy cost per person.

- Rather than concentrating on space per person, the Federal Government could achieve greater savings by moving "back office" employees to lower cost areas.

Lucent Technologies

Lucent established space design standards for new assignments based on grade level. These standards are nominal and should not exceed targeted square footages:

E level . . . . . 225 - 300

D level . . . . . 150 - 225

C level . . . . . 75 - 150

B level & below . . . . . 50 - 75

These standards are given in net square feet. Add a circulation factor from 1.40 to 1.65 to obtain assignable square feet, which is roughly comparable to GSA's occupiable square feet. An additional factor of 30 to 40 percent must also be added for support space. Support space is comparable to special space and joint use space in GSA assignments.

On a project by project basis, the density target should be 200 gross square feet per person or less. Lucent's research has shown that, over the past decade, American corporations have been increasing occupancy density from 220-250 gross square feet per person to 150-180 gross square feet per person.

According to Lucent's benchmarking figures, over the past decade the following corporations have increased their occupancy density to within the "target zone" of 150 to 200 gross square feet per person:

- AT&T GBCS (Richmond, VA)
- AT&T Dallas (Dallas, TX)
- AT&T American Transtech (Jacksonville, FL)
- AT&T BCS Mexico (Mexico City)
- National Semiconductor (Santa Clara, CA)
- NYNEX (New York, NY)
- Tandem (Cupertino, CA)
- AT&T GBCS (Arlington, VA)
- AT&T Financial Services (Orlando, FL)
- Aetna - Claims Processing Center
- Kidder, Peabody & Co. (New York, NY)
- Swiss Bank Corporation (Stamford, CT)
- The American Kennel Club (North Carolina)
- Salomon Brothers (New York, NY)
- Chase Financial Services Center (Brooklyn, NY)
- PaineWebber, Inc. (New Jersey)
- Shearson Lehman/Hutton Plaza (New York, NY)
- Manufacturers Hanover Trust (London, England)

The following corporations achieved an occupancy density below the 150 gross square feet per person target:

- GTE (Lewisville, TX)
- IBM (Cranford, NJ)
- New York Mercantile Exchange (New York, NY)

The following corporations have yet to achieve the target zone (i.e., their occupancy density exceeds 200 gross square feet per person):

- AT&T Corporate Security (Bridgewater, NJ)
- AT&T GBCS (Basking Ridge, NJ)
- Southwestern Bell (San Antonio, TX)
- Merck (Whitehouse, NJ)
- Sun Microsystems (Milpitas, CA)
- Apple Computer (Austin, TX)

Traditional corporate space layouts have a ratio of dedicated space to shared space approximating 70:30. Several factors are driving a movement toward a ratio of 50:50:

- Mobility afforded by technological advances
- Reduction in size of space standards
- Fewer enclosed environment offices
- Team-oriented work spaces
- Task-oriented flexible furniture systems

Traditionally, enclosed environment offices have been apportioned on the basis of rank within the corporate hierarchy. The ratio of enclosed environment offices to open environment workstations has ranged from 30:70 to 20:80.

A greater emphasis on team work and shared team space, the desire to reduce churn, the need to "move people and not space," and the goal of reducing fit-out costs have all influenced the trend to have fewer "hard-walled" offices. Many companies now use enclosed environment offices only when a job function demonstrates very high security or confidentiality requirements.

The ratio of enclosed environment offices to open environment workstations is now approaching 5:95 in many best-in-class companies. The most aggressive companies can even achieve a ratio of 0:100 (i.e., all employees are housed in open environment workstations).

Lucent established targets to meet the following objectives:

- Improve space utilization
- Maximize real property asset value
- Improve productivity
- Promote teamwork
- Support cultural change

The targets are:

Occupancy Density . . . . . 150 - 200 gross square feet per person

Building Efficiency . . . . . 78 - 87 percent (high-rise buildings)
84 - 95 percent (low-rise buildings)

Building Quality . . . . . Class B or C

Shared Space . . . . . 50 percent

Dedicated Space . . . . . 50 percent

Enclosed Offices . . . . . 5 - 10 percent

Open Plan Workstations . . . . . 90 - 95 percent

Circulation Factor . . . . . 1.45 - 1.65

On the subject of alternative work strategies, careful study of work patterns and processes will determine which technique (if any) will suit a particular organization's needs. Different areas of business practice require different tools and strategies.

For the implementation of an alternative work strategy to succeed, it is imperative to have collaborative input from end-users early in the implementation process, as well as throughout the design process. The input can be in the form of intensive workshops, focus groups and/or interviews.

Teaming environments encourage the exchange of ideas and communication. Teaming spaces should be flexible and easy to reconfigure in order to adapt to changing requirements. All departments are candidates for teaming.

Significant space savings can be realized through the implementation of shared space procedures. Potential candidates for shared space include sales, information services, operations and accounting.

Hotelling is work space that is reserved on a first-call basis. By providing one workspace for every 2 to 8 employees, a firm can achieve significant space savings. Potential candidates for hotelling spend a significant amount of time away from the office (e.g., at a client base or on the road). These candidates include sales, customer services and audit.

Team settings, also known as group addressing, is a term that refers to a designated group or team work space for specified periods of time. Team settings often result in increased productivity and employee satisfaction. Potential candidates for team settings include legal, human resources, marketing, research and development, and engineering/design teams.

Activity settings provide a variety of work settings to fit diverse individual or group activities, such as a lounge area, desk work area, conference area, telephone work area, etc. Activity settings encourage interaction across departmental boundaries. Potential candidates for activity settings include marketing, sales, research and development, and engineering/design teams.

Telecommuting can reduce space requirements if employee use of office space can be held to a minimum. Potential candidates for telecommuting include sales, marketing, research and development, and customer service. Telecommuting is used by about 60 percent of Lucent's administrative people to some degree (1 or 2 days a week). Telecommuting does not reduce real property costs. However, it contributes to worker morale and productivity. Lucent's office space is specifically designed to promote interaction (small work areas, glass partitions). Working at home (telecommuting) provides "contemplative time" that is simply not available in the current office environment.

Remote telecenters are located near customers and staffed by employees dedicated to that site or by employees who split their time between that location and another. Potential candidates for remote telecenters include sales and customer service.

Satellite offices are located near employee residences and are used full time by employees living closest to the satellite site. Potential candidates for satellite officing include accounting, operations, audit, legal and marketing.

In virtual officing, employees have the freedom to work anywhere (home, car, plane, or hotel) through the use of portable technology. Potential candidates include sales, legal, research and development, audit and customer service.

For example, Lucent makes use of the "virtual office" concept (hotelling) for sales personnel. The physical space that supplements the portable technology can be as small as a "phone booth." The provision of virtual officing is actually a recruiting technique for sales personnel, many of whom do not want to commute to office facilities far from home.

The virtual office can be used for non-sales functions, depending on the culture and kind of work. For example, Lucent has used it successfully for project managers who spend a lot of time on site and only need office space to write up reports. At Lucent, the use of virtual officing has led to space reductions and associated cost savings.

Wausau Insurance

- Wausau recently adopted four uniform space standards based on position and grade (but excluding President and Vice-Presidents):

  Standard 1 . . . . . 12 feet by 12 feet with walls to ceiling

  Standard 2 . . . . . 8 feet by 12 feet modular

  Standard 3 . . . . . 8 feet by 8 feet modular

  Standard 4 . . . . . 8 feet by 6 feet modular

- These standards are part of the firm's corporate culture; they allow very few exceptions.

- There is a structural incentive to control space costs because each field office and business center is responsible for expenses through a chargeback system.

- Wausau has a national agreement on purchasing furniture that is distributed based on position/grade. Square foot standards coupled with standardized furniture affords greater flexibility.

- Wausau has recently introduced telecommuting for field office staff (sales people). The initiative is very new and so far there is no impact on total space requirements.

Eastman Kodak

- The basic space allocation guidelines for individual office space are (in square feet):

  Vice President 180

  Manager 150

  Professional/administrative 100

- The above allocations are for individual offices. The firm is moving towards what they call alternative work environments, but what is probably better described as space for teams. The team space planning addresses and coordinates issues of information technology, human resources, and space construction. Each person receives 70 square feet of individual office area. There is a lot of collaborative space ("lots of white walls").

- The current philosophy for space use is to emphasize flexibility while keeping individual space to a minimum. For the team space, the emphasis is on the work process, not individual functions. While Kodak went to this approach because it is believed to increase efficiency, they believe that it also saves money on space.

- Recently, Kodak targeted their real property area for cost savings. Since the local offices and functions are individual cost centers, the bottom line is the motivation for cutting costs. Cutting back individual space was just a part of the overall initiative, which resulted in annual savings of $120 million in operating costs and raised between $300 and $400 million in cash. For example, by re-stacking its 1.6 million square foot corporate headquarters, including elimination of hard walls and phantom space, the firm was able to free up 300,000 square feet of space.

- Kodak's marketing people are making use of alternative office environments such as work at home, hot desking and virtual (on the road) offices. They also make extensive use of commercial business centers (Kinko's type operations where you can rent access to computers, faxes, etc.). Again, Kodak believes that these alternative solutions both increase productivity and decrease costs.

- Kodak claims that many firms use 80 square feet per person as a rule of thumb allocation standard, doubling it (160 square feet) for managers.

Mobil Corporation

The old guidelines had 5 or 6 categories allocating square feet per employee; allocation was by rank or salary grade.

The current space allocation standards are based on function (these are maximum sizes, in square feet per person):

- 75 . . . . . workstation
- 150 . . . . . office
- 300 . . . . . office

The idea behind the standards is to maintain a 2:1 ratio to minimize the costs associated with churn (normal moving around and reconfiguring). A 300 square foot office can be turned into two 150 square foot offices by removing the common wall, a 150 square foot office can be turned into two 75 square foot workstations, etc.

Like the Federal Government, Mobil downsized staff significantly (more than 30 percent) but did not see a proportional decrease in space. Part of the answer was that contractors were hired as staff was laid off, using the same space as the former employees. Mobil also decided to tighten their space standards, and to consider users of the space, not just FTE. The facilities staff could not "take credit" for reduced space attributable to reduced staff; they could only take credit for reduced space attributable to tighter individual space allocation standards.

Mobil's overall space per person was in the range of 250 to 300 square feet per person. Mobil decided to target a 20 percent cut to an approximate topside number of 225 square feet per person.

Mobil attained the 20 percent cut in space using the following methods:

- reducing the size of individual workspaces and offices
- collocation policy when geographically feasible to eliminate duplicate support spaces
- using hotelling and team spaces for marketing employees
- standardizing office and workstation sizes (churn issue discussed above)
- dramatic shift towards open office plans

The ratio of closed to open office space layouts used to range from 60:40 to as high as 80:20. This has completely turned around, with the ratio currently as low as 8:92 in one location. The closed/open ratio in the corporate headquarters building went from 70:30 to 35:65.

When planning new space, a planning factor of 35 percent is added to the workstation allocations which includes circulation and a design contingency.

Mobil made use of virtual officing to an extent years ago since it's more efficient for certain types of workers.

Regarding team space, it sometimes reduces space (for business teams who always work that way) but often does not (e.g., project teams for exploration or research, who are brought together for 6 months to 2 years but still maintain primary workstations).

The key to successfully implementing a space reduction initiative is to not make the new standards quite as strict as you might like. Leave room for flexibility and individual management discretion. It also helps to have a good pilot study that makes a reasonable business case for the proposed reduction. The new standards will be ignored if people do not buy into them.

The Dun & Bradstreet Corporation

For general office space, the firm's standard is 200 rentable square feet per person. In terms of usable square feet, the standards are 150 usable square feet per person for a field office and 190 to 200 usable square feet per person for a headquarters element.

In response to downsizing, Corporate Real Estate searched their database of properties for field offices exceeding 200 usable square feet per person. This was the threshold for review and possible restructuring. They felt that it was not cost efficient to review and restructure (lease expiration or cancellation, moving, etc.) unless the 150 usable standard was exceeded by at least 50 feet.

The firm is involved in alternative officing concepts such as telecommuting and hotelling. However, the main motivation is employee accommodation and morale, not reduction in space or cost (which has been minimal). Corporate Real Estate feels this is the norm, despite occasional published reports of alternative officing success stories. The bottom line is to do it if it works for a particular employee or situation, and not to do it across the board.

In reference to our space use review, Corporate Real Estate felt that our benchmark was reasonable. They also agree that there is value in a central real property function like GSA, which has the expertise, setting standards and targets for agencies to shoot for. There is value in getting the field offices (in our case, the other Federal agencies) to pay attention to real property as a cost of doing business that can be managed and controlled.

Northrop Grumman Corporation

Northrop Grumman uses Space Allocation Module standards, which are predetermined modules of various sizes and components based on title (standards given in square feet):

- Division President, Corporate Vice President, Senior VP, Group VP . . . . 300 to 320
- Subsidiary VP, Division VP, Program VP, Level 1 Director, General Manager. . . . . 225 – 256
- Level 2 Director, Program Manager, Production Manager 190
- Senior Manager, Staff to above levels, Manager, Project Engineer, Section Head, Principal Engineer, Technical Advisor, Supervisor 140-150

Intel Corporation

Intel has used a 100 percent open space plan for their entire 30-year history. Their space standards are fairly rigid and have been in place long enough to be part of the corporate culture.

Within the last 5 years, Intel examined the "uni-office" concept, which is one size fits all. This would provide benefits such as limited configurations and standardized parts. Intel found a need for multiple office sizes, but they did move from grade-based to more functionally based criteria.

The standards are (in square feet):

Standard size	72
Managers (5 or more direct reports)	96
Cooperative students (Co-ops), technicians, contractors	48

Two co-ops, technicians or contractors can also share a 72 square foot work area.

Intel has found these standards to be space effective. They have kept move costs low, despite a high churn rate.

Sandia National Laboratories

- Sandia prioritizes space allocation on the basis of the programs identified in their Strategic Business Plan.
- Sandia has recently implemented a system of space chargebacks.
- SNL's space goal is to average less than 115 net square feet of primary office space, based on total number of employees.
- The following are the maximum allowable allocations in net square feet based on the existing configuration of offices. As renovations occur the standard one-person work area will be approximately 96 square feet.

  Management offices:

  Vice Presidents, Directors, and their staffs are provided office suites.

  Managers are provided private offices not to exceed 156 net square feet.

  Staff offices:

One-person office	70 – 143
Two-person office	144 - 210
Three-person office	211 – 300

- For an open office space (non-cubicle) plan greater than 300 net square feet Sandia assigns 56 to 96 square feet per person.
- Sandia assigns support space on an as-needed basis consistent with the organization's programmatic requirements.
- Sandia determines the proper utilization of laboratory space using a peer review of "line" scientists.

States

New York

- The New York State Bureau of Space Planning and Allocation controls space allocation for 20 million square feet of space for State executive departments.
- Each State agency must submit and justify their needs. Private offices are discouraged except for State Commissioners, whose offices are 400 usable square feet.
- Clerical personnel are allocated 65 square feet per person, plus extra space for any necessary large tables and files, and 20 square feet for miscellaneous use.
- Professional personnel are allocated 75 square feet per person, plus extra space for any necessary large tables and files, and 20 square feet for miscellaneous use.
- Mixed (clerical and professional) personnel are allocated 70 square feet per person, plus extra space for any necessary large tables and files, and 20 square feet for miscellaneous use.
- The State's ability to improve its space utilization is hindered by a lack of funding for systems furniture.

California

- The state government of California has very exacting space utilization standards.
- Standards exist for different job categories: executive, administrators, managers, supervisors, technical professionals, working professionals, clerical supervisors, and clerical workers.
- For each job category, there is a specific standard depending on space type: conventional furniture/private, conventional furniture/open, conventional furniture/group, modular systems furniture/open, and modular systems furniture/group.
- Some examples: an executive in a private office with conventional furniture is allowed 300 net square feet; a manager in an open office with conventional furniture is allowed 150 net square feet, but only 112 if modular systems furniture is used; and a clerical in a group office (two or more persons sharing the same working area) with modular systems furniture is allowed 40 net square feet.
- The state's Department of General Services "is available to assist agencies in the design of office space or the reduction of space through the use of alternative officing methods and telecommuting programs."

- "Existing state-owned or state-controlled space must be utilized before additional leasing can be considered. Special requirements such as conference, hearing, and training rooms will only be provided if suitable alternate facilities are not conveniently available or it is not economical to rent such facilities periodically."

- All requests for new warehouse or storage space exceeding 2,000 square feet must be reviewed.

Virginia

- Primary office space standards for open office plans range from 64 usable square feet per person for staff to 96 usable square feet per person for first level administrators. Primary office space standards for private offices range from 120 usable square feet per person for staff to 256 usable square feet per person for department or agency heads. (Note: Virginia uses usable area as calculated by ANSI.)

- Circulation space is added to the above totals: 25 percent if the total office area is less than 50 percent open space, 30 percent if the total office area is 50 percent or more open office space.

- The standards provide the maximum allowable area and do not constitute a standard to be followed. There is some flexibility from unit to unit, but in no event shall the aggregate space exceed 250 square feet per person without approval of the Division of Engineering and Buildings.

- There are standard allowances for reception areas, conference rooms (30 square feet each up to 10 people, 20 square feet each for more than 10 people), interview areas, training rooms, medical (examining) rooms, break rooms, and standard furniture and equipment.

- For all other needs, including special type space such as warehouse, retail and storage, the requesting agency must submit documentation for the approval of the Division of Engineering and Buildings.

- The state conducted a study a few years ago that suggested leaving the standards as is.

- There is no incentive for an agency to reduce space. Money saved on space goes back to the Virginia treasury. Agencies must go back through the appropriations process to obtain funds to recapture pockets of empty space.

- Currently, there are no space or cost reduction goals in place.

- Many state agencies are turning to the team concept management style, but space planning and utilization have not changed accordingly.

Texas

- The baseline space standard is 153 square feet per person. Cost per person is not used.
- The more people in an assignment, the less space per person is allowed. For example, an assignment of 200 people would be allowed 130 square feet per person.
- The average space use statewide (including everything such as libraries, congress, etc.) is currently 234 square feet per person.
- The state owns 5.5 million square feet of space and leases 12 million square feet of space. Many of the older state buildings were designed to accommodate 200 square feet per person.
- A recently constructed state building contains 70 percent open space built to accommodate functional groups (teams). The space provides individual cubicles and a group area.
- Legislation has been proposed which would reduce agency appropriations if space use exceeds 153 square feet per person. Since agencies don't pay rent for state-owned buildings, the cuts would come out of the agency's program or operations. Enforcing this would seriously tax the resources (6 people) of the state's Facilities Management staff.
- Work at home has been initiated for energy savings and employee morale. There are no cost savings attributable to work at home. Facilities personnel like the concept of hotelling, especially in the capital, but they have not been able to convince others of the concept's usefulness.

Colorado

- State agencies do not pay for space and the state government is not downsizing; therefore, there is no incentive to reduce space.
- The basic philosophy is to assign uniform workstation sizes according to job description. The space standards manual includes a series of diagrams ranging from 35 assignable square feet to 250 assignable square feet. There are also diagrams for various support space areas.
- Each assignment is then multiplied by a circulation factor of 1.37 to obtain usable square feet, or what is called the allowable tenant area.
- According to state policy, the standards apply to all executive branch groups that are candidates for relocation, expansion, renewal, or capital construction projects.
- According to state policy, standards are used to set the maximum space allowable. Space assignments smaller than standards permit may be necessitated by existing furniture, constrained real property budgets and other factors.

- According to state policy, where an organizational unit currently occupies more space than the standards permit, the standards must be applied to the existing space and the space fully occupied before any lease expansions will be allowed (except in rare instances where minimal tenant improvement costs exceed the cost of leasing additional space).
- According to state policy, space allowances for future expansion needs cannot be incorporated into the initial build out or lease commitment. If future growth is justified it can be considered only through the use of expansion options for adjacent vacant lease space.
- Although standards are employed when space is initially assigned, once a program is in place agencies have a tendency to drift away from the standards.

Florida

We obtained space use standards for the state government of Florida from the state's Department of Management Services' home page.

- Basic space is assigned according to pay grade (in square feet per person):

  Pay Grades 0 - 8 60

  Pay Grades 9 - 14 90

  Pay Grades 15 and up 120

  Agency Head 320

  Division Director 270

  Bureau Chief 220

- Allocate positions with unusual requirements an additional 30 square feet each.
- Allow only 40 square feet for positions that are in the office very infrequently.
- Add 20 percent for internal circulation space.
- For reception areas, add 25 square feet each for the average number usually in attendance.
- For conference areas, add 20 square feet each for the average number usually in attendance.
- Add all support areas at unspecified standards (storage, libraries, lounges, machine rooms, etc.)
- For new state-constructed office buildings, the state has developed a prototype building that is adaptable to change. The prototype is a functional building with a standard shell to facilitate flexibility in meeting organizational changes and tenant's needs.
- The state estimates up to a 40 percent savings in required square footage through the use of the open space concept (work areas designated with easily movable

partitions), leading to reduced rental costs. The open space concept contrasts with the suite concept (each unit has its own entrance, waiting area, offices and support areas) and the conventional concept (offices are side by side on either side of a hallway).

North Carolina

The Office of State Property provided information on the state's space use standards.

- Office space is allocated based on position or function (in square feet per person):

  Agency Head . . . . . 360 to 400

  Department Head . . . . . 225 to 270

  Manager . . . . . 140 to 180

  Supervisor . . . . . 100 to 120

  Professional . . . . . 96 to 108

  Clerical . . . . . 80 to 96

- Over the past 10 years, the introduction and enforcement of utilization standards have significantly reduced space. Since the state is not currently in a downsizing mode, they can afford to be more lenient on the standards.

- The state favors open office plans and systems furniture which enables maximum efficiency in space use.

Oregon

The state's Department of General Services (DGS) provided information on Oregon's space use standards.

- Workstation space is allocated by position, ranging from (for systems furniture layout) 48 square feet for data entry to 96 square feet for a section manager to 280 square feet for a director.

- There are different standards for conventional furniture layout. For example, a section manager would receive 150 square feet, which may be in an enclosed office.

- Support space is added to workstation space (30 percent of workstation space for conventional furniture, 45 percent of workstation space for systems furniture).

- Circulation space is added to the previous total of workstation and support (30 percent of total for conventional furniture, 60 percent of total for systems furniture).

- Additional special program space can be added on (interview rooms, training rooms, computer rooms, bulk storage space, etc.).

- DGS reviews all space assignment requests for compliance with the allocation standards. Requests that exceed the allowable square footage require written justification.

- According to state policy, the space standards apply to space being remodeled or newly constructed for use by a state agency. Application of the standards to an existing facility, where no major alterations are involved, is limited to the extent feasible and economically practical.

- According to state policy, the "square footages given are not entitlements, but are the maximum allowed, and shall be based upon actual budgeted FTE only."

- According to state policy, no space allocation can exceed an average of 200 usable square feet per FTE without written justification.

- The standard design approach is open office planning. The objective of this policy is "to reduce future remodeling costs by minimizing floor to ceiling walls without incurring major expenses for wall relocation, lighting and power reconfiguration, and air handling equipment modification."

- The state's policy encourages the use of systems furniture, which the state estimates can result in space savings of approximately 20 percent. The state estimates that the cost of these systems can be amortized in 3 to 6 years through rent savings.

Minnesota

The Department of Administration provided information on the state's space standards (all standards are given in square feet per person).

- The space standards for private offices are as follows:

  Commissioner 320

  Deputy Commissioner 224

  Assistant Commissioner 168

  Manager 140

  Supervisor 120

  Technical/Professional 120

- The space standards for open areas with traditional furniture are as follows:

  Manager 144

  Supervisor 100

  Technical/Professional 80

  Clerical. 64

  Student Worker/Part Time 48

- The space standards for open areas with modular furniture are as follows:

  Manager 140

  Supervisor 100

  Technical/Professional 64

  Clerical. 64

  Student Worker/Part Time 36

Note: Add space to the above workstations allocations for special areas, special use areas, unfinished storage, and circulation space (unspecified amounts).

- The state emphasizes open space with modular furniture and discourages private offices.

- The state realizes space savings through the use of modular furniture. When the Department of Administration receives requests for additional space, they attempt to provide or reconfigure modular workstations instead of automatically leasing new space.

- There are no incentives to reduce space since agencies don't get to use the money saved for other purposes.

Spurred by legislation requiring agencies to prepare telecommuting plans if requesting funds for additional space, the Department of Administration conducted a pilot from November 1995 to October 1996. The pilot was a success and will lead to a permanent telecommuting program for the department. The major findings of the pilot were:

- The telecommuting pilot did not demonstrate a reduction in office space use or reduced growth in space requirements. It had no impact on operating costs. In order to experience savings, the initiative would have to be dramatically increased in scope.

- Telecommuting enhances recruitment by making the job more attractive and by expanding the pool of potential candidates.

- Telecommuting can have a positive, measurable, and immediate effect on the environment, the community, and the family.

- There was no reported change in decision-making authority at the point of customer contact, although many participants thought that, in the longer term, telecommuting would offer that opportunity.

- Most of the perceived long-term barriers to telecommuting revolved around difficulties with technology, such as remote connectivity.

Missouri

The Office of Administration provided information on the state's space allocation standards.

- The standards are highly specific and consist of hundreds of pages. Missouri has developed standards for each state agency, and for each position classification within an agency.
- In general, the standards range from 48 square feet for clerical workers to 216 square feet for agency division directors. Middle management receives 120 square feet, with professionals averaging 80 square feet. Circulation and support areas are not included in the personal space standards.
- There are also standard for certain support areas like conference rooms, reception areas, break rooms and auditoriums.
- With all areas combined, the state's average is approximately 200 square feet per person. The state would like to improve this average to 165 to 185 square feet per person.
- The state is currently renovating an older building which they are considering using for hotelling.

Governments

Canada

Public Works and Government Services Canada (PWGSC) provided information on Canada's Office Accommodation Allocation Limits.

- Office space allocation standards exist by office type (general administrative, quasi-judicial, much public contact). There is a variable factor for support area, an allowance for workstation area, and a standard 25 percent of workstation and support area inclusion for circulation area.
- For general administrative space assignments, the first 5 FTEs are each allowed 10 square meters for support area, 8.3 square meters for workstation area, and 25 percent for circulation area (yielding an equivalent standard of 246 square feet). The next 5 FTEs are each allowed the equivalent of 192 square feet, with the remaining FTE allowed 170 square feet each.
- The standards clearly state that the "limit does not establish or imply a minimum workstation entitlement, and consideration should be given in each project to the potential to meet requirements in less space."
- The standards discuss special purpose space, but there are no set quantitative allowances. Space allocation is funded when supported by a business case and "only

within the minimum functional space required to meet the operational needs of the users of the facility." Approval of business cases rests with the regional offices.

- PWGSC will provide common-use areas (boardrooms, libraries, training and conference rooms, etc.) in multi-tenant facilities based on population and economies of scale. Once again, there are no specific quantitative standards.

- PWGSC does have separate standards for executive offices ranging from 18.5 usable square meters (206 square feet) to 37 usable square meters (411 square feet) for deputy heads of departments and agencies.

PWGSC conducted a study in 1994 to measure and report on the total and comparative use of office space across the Canadian government. PWGSC houses 167,000 people in more than 4,000 owned and leased facilities totaling over 42.8 million square feet of space. PWGSC worked with their major client agencies to verify their space use, costs, and the number of people occupying the space. PWGSC then cross-referenced the information with data in their own Facilities Inventory System. The study focused on three measures: annual cost per square meter; annual cost per person; and space per person. (Note: below figures provide square foot equivalents; however, costs are given in 1994 Canadian dollars.)

The findings on annual cost per square meter were:

- The annual space cost was found to be $219 per rentable square meter (or $20.35 per rentable square foot).

- The Canadian annual space cost compared favorably with the Canadian private sector cost of $247 per rentable square meter (or $22.95 per rentable square foot).

- The Canadian annual space cost compared favorably with the Australian government cost of $233 per rentable square meter (or $21.65 per rentable square foot).

- The Canadian annual space cost was greater than the U.S. government's cost of $195 per rentable square meter (or $18.12 per rentable square foot).

- The space categorized as "office" includes normal workstation space, support areas, meeting and boardrooms, circulation corridors, and special purpose space such as quasi-judicial hearing rooms, public interface areas, and task force and Royal Commission space.

- The definition of office space does not include warehouse and dedicated storage space, laboratory space, and other facilities which are not subject to office space use standards.

The findings on space per person were:

- The Canadian national average of rentable space used per person (FTE) was 23.8 rentable square meters per FTE (or 256 square feet per person).

- The Canadian annual space use was roughly equivalent to the Canadian private

sector space use of 23.3 rentable square meters per FTE (or 251 rentable square feet per person).

- The Canadian national average of rentable space used per FTE compared favorably with the Australian government average of 24.8 rentable square meters per FTE (or 267 rentable square feet per person).

- The Canadian national average of rentable space used per FTE was greater than the U.S. government average of 21.0 rentable square meters per FTE (or 226 rentable square feet per person).

- The study involved verifying population data with the client agencies to update national inventory records and to take accurate account of major government restructuring that had occurred.

- As a matter of policy, the Canadian government does not provide space for consultants or contractors; they are not included in the population figures.

- Some departments appear to be using more than the national average space per person, when in fact they require that space to meet the operational requirements of their program mandates.

- Some departments appear to be using much less than the national average space per person because they are engaged in processing type operations that require less space.

The findings on cost per person were:

- The Canadian national average for office space cost per FTE was $5,220 (in 1994 Canadian dollars).

- The Canadian cost per FTE compared favorably with the Canadian private sector cost per person of $5,842.

- The Canadian cost per FTE compared favorably with the Australian government cost per person of $5,537.

- The Canadian cost per FTE was greater than the U.S. government cost per person of $4,129.

Some other findings of the study were:

- There was a direct correlation between the size of an assignment and how space efficient the assignment was. (This may help explain the consistently better numbers for the U.S. government, which probably has a greater number of large assignments as well as additional economies of scale.)

- For a number of departments, space for specific uses such as hearing rooms or public interaction areas were included as office space. This skewed the data in terms of assessment of more traditional office use.

- Some of the Canadian departments have mandates that require that they supply space to other levels of government, which also distorts the data.

- Departments that require a high degree of confidentiality tend to need a higher number of closed offices, a factor that tends to increase space utilization.

- PWGSC anticipated changes in the data as a result of future restructuring and downsizing, and the introduction of alternative work environment solutions such as hotelling, telework, and space sharing initiatives.

Some other interesting information from PWGSC:

- Canadian Treasury directed a 10 percent reduction in space over 5 years. It was felt that this was feasible due to dramatic downsizing, technology, use of shared workspace, and more efficient design and layout concepts. The 10 percent reduction was roughly comparable to the announced reductions in departmental operating budgets. Most large occupancies were for 5-year periods and expired on a cyclical basis. PWGSC felt that the best case scenario for space recapture was tenant relocation in conjunction with lease expiration.

- PWGSC developed a spreadsheet to target individual agency reductions. This approach made use of weighted, client-specific targets rather than across the board reductions that punish efficient space users as much as inefficient space users. PWGSC claims success for this effort.

- Most agencies do not pay rent, as in our Federal Buildings Fund system. For incentives, PWGSC makes available to agencies that reduce space the funds that would otherwise be expended on the space. If clients fail to achieve their reduction targets, they must reimburse PWGSC for the excess space. Certain clients do pay rent. In their case, the same incentives and disincentives apply during the budget process because Treasury supports the utilization targets.

- At the same time as the space reduction initiative, extensive downsizing occurred as the size of the federal public service was reduced by 20 percent over 3 years. This is a separate issue and PWGSC tracked this reduction separately. PWGSC stresses the importance of specifying space savings achieved through downsizing versus space savings achieved through more efficient space standards.

- PWGSC reports that total inventory is reducing very slowly but they expect that actual tenant-occupied space will reduce more quickly. In other words, the space reduction effects of downsizing will show up first in vacancy rates before, somewhere down the road, being reflected in disposal of assets or termination of leases.

- PWGSC believes that the optimum benchmarks for our study are with other governments, since disparities between government and the private sector outweigh cultural differences among Western democratic governments. The Canadian government sector provides parallels for courthouses, border stations and state governments (provinces), whereas the private sector does not.

Australia

In 1975 the Department of Administrative Services (DAS) introduced the Commonwealth Office Accommodation Guidelines. They were based on an overall planning figure of 10 square meters per person (which did not include circulation space), or approximately 108 square feet per person.

In 1986, the guidelines were revised and the government adopted a "building block" approach rather than an "absolute" planning figure. Clients could assess their requirements across all functions and develop an accommodation profile that suited their particular operational needs. In a building block approach, for example, one allocates space for a desk, side table, filing cabinets, computer stand, and minimum allowances per person for meeting, training, public access space, etc.

As the management of government became less centralized, several problems relating to the management of real property became evident:

- There is a lack of accountability for money spent on real property outside of the individual department or agency.
- There is a lack of visibility of the real cost of the property management function, including the cost of in-house staff.
- Smaller departments and agencies lack the expertise to manage their real property holdings in a professional manner.

As a result, there is a move to revisit space accommodation standards. DAS is wrestling with the familiar problem of trying to achieve more efficient space use governmentwide while maintaining a decentralized management structure. Some of the obstacles foreseen by DAS:

- There is currently a lack of strategic real property planning by each and every department and agency. "This appears to be an area where Ad Hocery is rampant."
- Although there is a basic understanding of accommodation issues, most agencies lack understanding of strategic real property issues and the need to apply the philosophy of "Total Asset Management" to real property.
- Only a few major departments have the in-house re-sources to develop their own accommodation standards.
- Agencies and departments do not recognize that real property is a vital input to their core business of program delivery.

In order to ensure more efficient space use in a "devolved" government management structure, DAS foresees a need for the following:

- Responsibility must be accompanied by true accountability through the use of performance measurement and benchmarking to point the way to continuous improvement. There must also be total visibility of cost.

- Departments and agencies must have the intellectual tools and capabilities to manage their own real property operations including access to industry best practices through the publication of real property guidelines.

- Each department and agency must develop a strategic real property plan including details on current usage, proposed future usage, and financial and other impacts.

- The strategic real property plans should be reviewed centrally and consolidated in an annual report.

DAS has tried to assure efficient space by requiring strategic real property planning from the individual departments and agencies:

- Property operating expenses are treated as part of overall running costs. Once the department's accommodation profile has been established, a strategic property plan developed and a base level of funding agreed to (subject to an inflation factor), the department doesn't get any more funds.

- In an era of downsizing, each department must incorporate a strategy and planning timetable for dealing with accommodations issues using a range of initiatives (sale, subleasing, alternative government uses) into its strategic property plan.

DAS used a new approach in fitting out their own new offices:

- Everyone from the CEO down is in open space with exactly the same personal space allocation.

- There are a lot of enclosed meeting rooms that are available to all personnel for discussions, quiet work areas, etc.

- There are lounge settings sprinkled throughout the office for report reading or having an informal meeting.

- There are large team tables in each area for team-based discussions, spreading out a bunch of files or papers, etc.

- Innovative use of storage features directs traffic and isolates open areas that can be used for larger meetings (complete with drop down screens for presentations).

- Effective acoustics make for a normally quiet environment around workstations.

- The fit-out looks professional and DAS achieved a planning figure of 14.5 square meters (or 156 square feet) per person. This is compared to a range for other Commonwealth Government departments of 16 to 28 square meters (or 172 to 301 square feet) per person.

We asked DAS for suggestions on how GSA can monitor real property transactions without being a central manager:

- Tied to delegations of authority are strict reporting requirements to the Australian version of Congress.

- An agency could prepare an accommodation profile based on GSA standards, then receive a 3 to 5 year "bucket of money" to pursue the plan.

- Each agency could report on last year's property use in its Annual Plan to Congress. The plan would justify over-expenditure, justify vacant space for which rent is still being paid, report against benchmarks such as utilization rates or cost per square foot, etc.

- Each agency could prepare a strategic property report as part of its Annual Report (or, as we suggested earlier, include real property objectives in strategic planning as part of the GPRA process). This would deal with the agency's future needs over the next 3 or 5-year cycle. It would discuss existing holdings, plans for disposal of property, plans and justification for the acquisition of new property, cost estimates, etc.
- GSA would have the opportunity to review the Agency strategic real property plans and comment on opportunities to use existing vacant Government-owned or leased space, and to suggest alternatives.

United Kingdom (UK)

The UK dropped their space standards in response to ongoing improvements in information technology. The standards were (in square feet per person):

Permanent Secretary	500 – 550
Deputy Secretary	400 – 450
Under Secretary	250 – 350
Assistant Secretary	200 – 250
Principal	150 – 200
Senior Executive Officer	120 – 150
Higher Executive Officer	100 – 120
Executive Officer	75 – 90
Clerical Officer	55 – 65
Typists	40 – 60

Other comments and observations:

While there are benefits to using space standards to drive down accommodation, they can also be counter-productive.

Space should not be just a function of grade. Different elements might have different requirements for conference space or files, for example.

With the advent of advances in information technology, the most relevant measures

are space per workstation and cost per workstation. Multi-occupancy with hot desking and some staff working at home plus the introduction of new technology all serve to limit the number and potentially the size of workstations required.

Netherlands

The Dutch Government Buildings Agency (GBA) provided information on space use standards for the national government:

- They use a square meters per person standard. Under the old policy, this was based on salary scale. The current policy relates space allocation to the type of work. They are considering moving towards a policy based on type of work and attendance needed at the office.

- Currently, agencies do not pay for use of space. However starting in January 1999, agencies will begin paying for space.

- GBA provided a copy of the actual space standards. Unfortunately, the publication is written in the Dutch language. However, it is clear that the standards are, consistent with our findings, given in square meters per person. The actual numbers seem to be comparable to the square meters per person standards reported by Canada and Australia.

- GBA focuses on user requirements as they relate to building features and capabilities. They believe that it is not the individual space's characteristics that add value, but the availability of space and service - people need to interact. It is important that space accommodates present needs and has the potential to satisfy future needs, and it must effectively support the business process. GBA stresses continuous interaction with clients and they have account managers for the different ministries.

- Alternative officing needs to be promoted using management themes of lower space cost and improved performance. (GBA is not yet able to document where dollars have been saved but they are working on a proposal).

- GBA monitors space and provides agencies with information on building use. For example, they provide information on how to improve communication, attendance and occupancy rates. They provide management information on which to base real property decisions.

- GBA analyzes housing needs from different perspectives:

  Sector analysis -- what's happening in a given ministry and its effect on housing (long-term)

  Client brief -- survey of all functions within the organization, linked to the number of functions and the kind of space needed for each

  Housing analysis -- looks at various solutions to a housing requirement and client helps decide (renovate existing, different accommodation, cost associated with each)

Alberta, Canada

Alberta Public Works, Supply and Services (APWSS) provided information on Alberta's space use standards.

- APWSS is responsible for approximately 21.5 million square feet of owned space and 5.5 million square feet of leased space. Office space totals about 10.5 million rentable square feet or about 40 percent of government space. Office space represents about 90 percent of leased space.
- Workstation standards are based on function and status (in square feet per person):

  Executive Management . . . . . 290 . . . . . (private)

  Senior Management/Directors . . . . . 190 . . . . . (private)

  Mid Level Managers . . . . . 160 . . . . . (open plan individual)

  Senior Professional/Supervisor. . . . . 130 . . . . . (open plan individual)

  Technical/Professional . . . . . 95 . . . . . (open plan individual)

  Senior Clerical/Secretarial . . . . . 85 . . . . . (open plan shared)

  General Clerical. . . . . 85 . . . . . (bullpen)

- Client departments do not pay for accommodations. Non-government users (boy scouts, etc.) pay less than fair market value but a Minister has to sponsor them and it is reflected against his department. To keep clients aware of the cost of space, PWSS issues an annual accommodation cost report.

- Accommodation costs are very visible because they are included in an individual Minister's annual budget. The Auditor General and Ministry make comparisons.

- Rather than forcing payment, Alberta believes they can achieve the same ends by advising agencies on how they can improve space use and cost. (For example, they might advise an agency to consolidate and move into a less expensive facility. APWSS has been able to obtain funding for such consolidations by proving that you save in the end - "you have to spend money to save money").

- Over the past four years the government went through a total reorganization. Based on estimates of the amount of space that would be surplus to government requirements in light of downsizing, Alberta established a space reduction goal of approximately 5 million square feet to be accomplished by March 1998.

- Representing a shift in focus from reduction in space to effective utilization of space, Alberta recently established an average density target of 366 square feet of rentable area per employee to be achieved by the end of the 1998-1999 fiscal year. Currently, the density across government office accommodation is 441 square feet per employee.

- The following information was abstracted from Benchmarking Surveys comparing space management practices across a sample of Canadian public and private organizations of which APWSS was a participant.

Average Space Standards for all Participants in Square Feet

Workstations	1997	1996	1995
Executive Management	317	323	354
Senior Manager	198	215	255
Mid-Level Managers	159	161	202
Sr. Professionals/Supervisors	116	118	148
Technical/Professional	98	97	131
Sr. Clerical/Secretarial	90	86	111
General Clerical	76	75	101

The 1997 benchmarking survey indicated the following on the subject of Alternative Work Strategies:

- The trend towards less square footage per workstation/occupant will continue as organizations focus on cost savings from functionally designed workplaces and continue to respond to new ways of working.
- Alternative officing strategies will increasingly change the design of work environments, including the move away from the concept of my desk to anyone's desk. There will be fewer dedicated workspaces and increased use of generic space types.
- Both the public and private sectors expect the use of alternative officing strategies to triple by the year 2000.
- In the short term additional costs will be incurred to create the appropriate infrastructure that will allow alternative officing practices to take place.
- New infrastructure will include training for both employees and managers, the development of policies and procedures for the new ways of working, and the specification and supply of different types of furniture and equipment.
- Once infrastructure is in place, increased use of alternative officing strategies is expected to reduce space requirements and increase employee productivity and flexibility.

Federal Agencies

United States Postal Service (USPS)

USPS published a space requirements handbook which includes very exacting standards for all types of space use. Although most of it applies to specialized USPS space, there are some relevant comparisons for office space in major facilities that require administrative space:

- Private office space allocations for management staff range from 120 square feet for a supervisor to 270 square feet for an area vice president. Each category of manager (except for supervisor) also has an accompanying allowance for a secretary/reception area ranging from 75 to 225 square feet.
- Private offices are provided for certain human resources positions requiring confidentiality at 120 square feet each. Additional conference rooms for remaining human resources staff are provided at 120 square feet each.
- Primary office space is allocated to staff at 100 square feet each and secretaries at 75 square feet each. This allocation is reduced by 30 percent if the office uses modular or systems furniture.
- There are specific space allocation standards for files, office supplies, conference areas, library and reference areas, mail room/photocopy centers, lunch/break rooms, information systems/wiring, and employee assistance and training.
- For example, the standards provide 150 square feet for a library/reference area for the first 50 administrative employees, and an additional 50 square feet for each additional increment of 50 employees up to 250 square feet maximum.

Tennessee Valley Authority (TVA)

The standards are in square feet per person:

Executive	350 to 370
Vice President	230 to 250
Direct Report to VP or higher	140 to 160
Supervisor	95 to 115
All Others	50 to 80

TVA tries to reduce the high cost of churn (employees moving to new workstations due to reorganization or job changes) by using the following "planning concepts":

- Evaluate specific function types.
- Incorporate unit assembly construction.
- Consider levels of flexibility: versatility, convertibility, and expandability.

- Simplify and reduce building general and systems furniture standards.
- Incorporate modular office/conference guidelines.
- Consider the building grid modular guidelines.
- Reduce electrical and telecommunications costs by using a fixed utility spine and systems furniture standards.
- Move people, not walls.

Other notes of interest:

- TVA provides an open space environment and they have layouts to accommodate the team concept.
- TVA continues to downsize. They are looking for additional ways to consolidate in order to terminate additional leases.

National Aeronautics and Space Administration (NASA)

The following information on NASA's space standards is from their "Facilities Utilization Program Implementation Handbook":

- For general office space planning, 110 net useable square feet per person is the "optimum office density," within a range of 95 to 125 net useable square feet per person.
- An average density factor outside this range can be supported by the grade structure of the personnel housed, special office equipment, or internal circulation space.
- The handbook cautions that "ceaseless efforts to conform to rigid density standards can result in continuous and costly adjustments to space allocation."
- There are more efficient standards for facilities that accommodate systems furniture (square feet per person, including circulation):
  - General Staff. 88
  - Supervisors, Senior Staff, GS-13/14 132
  - Secretaries to Supervisor 108
  - Managers/GS-15 165
  - Secretaries to Managers 132

Department of Commerce

- Commerce does not have their own policy on space use standards.
- Commerce leases most of their "vanilla" office space through GSA. They adhere to the FPMR standards as discussed earlier.

- Non-GSA space tends to be technical facilities for agencies like NOAA. There are no associated space standards.

- Commerce has their own leasing authority to support the 2000 Census. There are no associated space standards for this temporary need.

Internal Revenue Service (IRS)

In 1994, IRS developed national workspace furniture and occupancy standards for its Computing Centers, Customer Service Centers, District Offices, and Submission Processing Sites. GSA approved the standards, which were developed in conjunction with the Tax System Modernization effort. The standards emphasize ergonomics and a healthy and productive work environment.

The standards for a District Office are based on job classification (occupiable square feet):

Paraprofessional (e.g., tax examiner). 70

Technical/Professional (e.g., revenue agent) 85

Technical/Professional (e.g., management analyst) 110

Technical/Professional (e.g., computer specialist) 135

Secretarial/Clerical 110

Specialized (e.g., tax auditor) 150

Managerial/Supervisory 145

These workspace furniture standards define the square footage allocation for personnel office space. Office support space and special space are added per GSA space classification guidelines to determine the overall space requirements for each operating site.

The National Occupancy Standards document indicates that the largest single issue affecting the future District Office is the level of participation with respect to alternative work locations (work at home and hotelling). If assumptions hold true, there will be a dramatic effect on the Districts' overall space requirements.

References

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Notes

OGP

Office of
Real Property