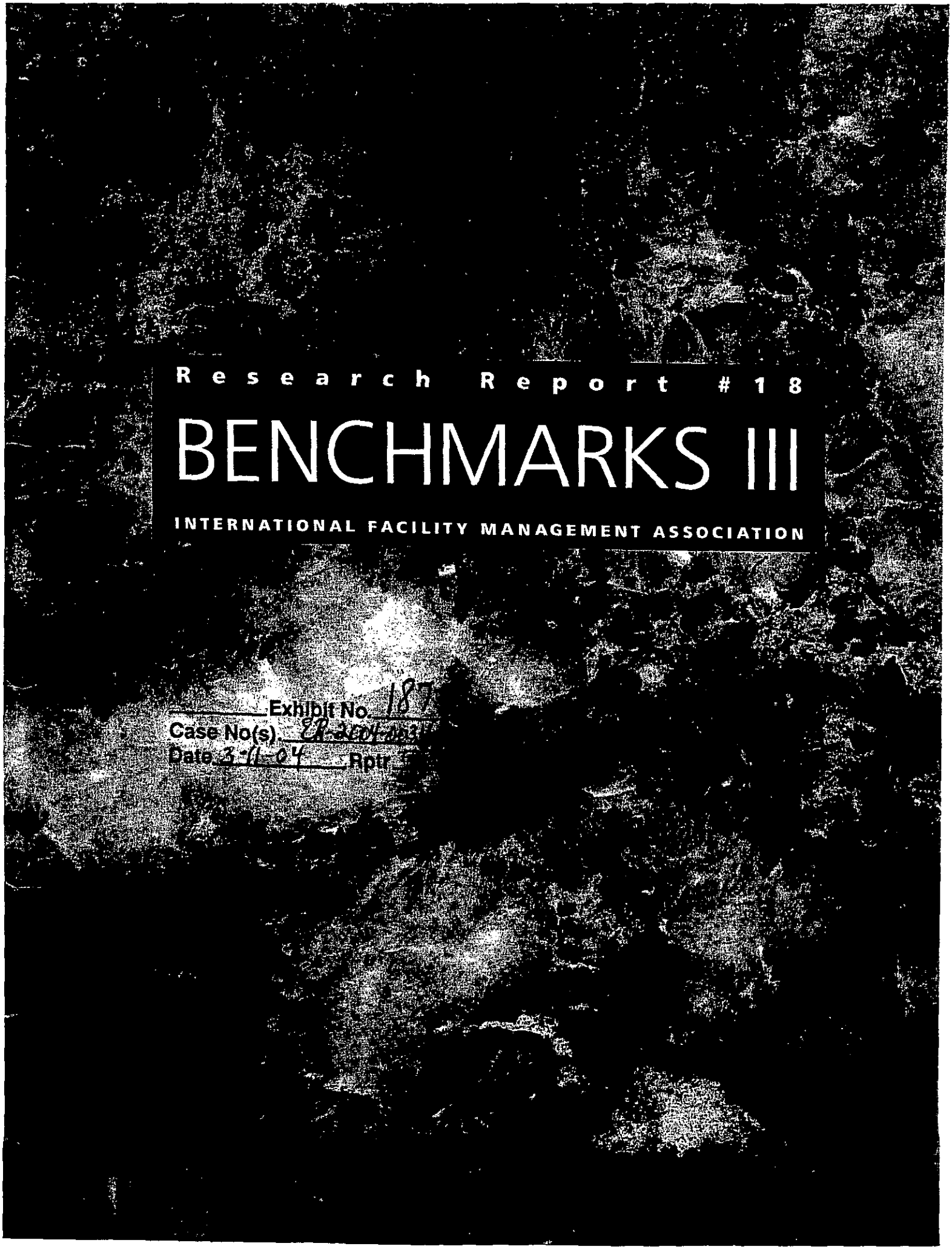

Exhibit No. 187
Case No(s). 03-2144-GA-AIR
Date 3-11-04 Rptr.

Corporate Services
2004th

CREDITS

Many thanks to participants who were willing to share information and take time to complete the Benchmarks III survey.

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Research Report #18

BENCHMARKS III

INTERNATIONAL FACILITY MANAGEMENT ASSOCIATION

Research Report #18:

TABLE OF CONTENTS

Research Report #18:

TABLE OF CONTENTS

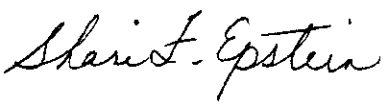
Benchmarks III is a continuation of IFMA's facility management benchmarking efforts. IFMA started collecting benchmarking information in 1987 and has published three reports—*Facilities Benchmarks* in 1987, *Benchmarks* in 1992 and its last benchmarking publication, *Benchmarks II* in 1994. In addition to collecting benchmarking metrics, IFMA has published information related to practices in its 1996 report *Facility Management Practices* and collected various practices from IFMA's Best Practices Forums held around the world.

This report provides IFMA members with benchmarks for managing facilities. These benchmarks are reference points, or standards, for the facility management profession. Benchmarking relies on uniform definitions, so one can measure "apples to apples." As in previous research efforts, IFMA continues to define key terms and cost categories. Many of the same benchmarking metrics from the previous two reports have been used in this report to provide consistency and trend analysis. Several new industry and regional categories have been added. To provide further consistency, respondents were asked to submit area measurements using IFMA's ASTM standard, E-1836-96, Standard Classification for Building Area Measurements.

With the assistance of IFMA's research committee, the research department shortened the questionnaire while further defining several cost categories and key indicators. The survey was mailed to all IFMA professional members in the United States and Canada. More than 300 surveys were returned. A total of 303 surveys were used for analysis. Every effort has been made to ensure accuracy and provide complete data; however, IFMA and its research committee cannot assume responsibility for errors from research of this nature.

Additional copies of this report may be purchased by contacting IFMA. In addition, the database used to create this report is available to members on a fee basis. The database also may be obtained in Microsoft® Excel and other spreadsheet formats for a fee. Those organizations which participated in this study receive a discount on benchmark database inquiries.

IFMA thanks all respondents who completed the *Benchmarks III* survey. For some, it was not an easy task to assemble the information. Without their willingness to share their information, we would not be able to produce this report. Thanks to the research committee members for their assistance in developing the questionnaire and analyzing the data.



Shari Epstein
Associate Director of Research

WHAT IS BENCHMARKING?

"Benchmarking is the continuous process of measuring products, services, and practices against the toughest competitors or those companies recognized as industry leaders," according to David T. Kearns, chief executive officer of Xerox.

Another definition says benchmarking is "the search for and implementation of best practices. The adoption or adaptation of the best practices allows an organization to raise the performance of its products, services, and business processes to leadership levels. It is a proactive process, rather than a reactive one, aimed at changing operations in a structured manner to achieve superior performance" (Camp, Robert C., *Business Process Benchmarking: Finding and Implementing Best Practices,* Milwaukee, Wis.: ASQC Quality Press, 1995). For a facility manager, this means instead of waiting for some event or upper management decision requiring a change in facilities operation, the facilities department that participates in benchmarking constantly looks for the best practices it can implement.

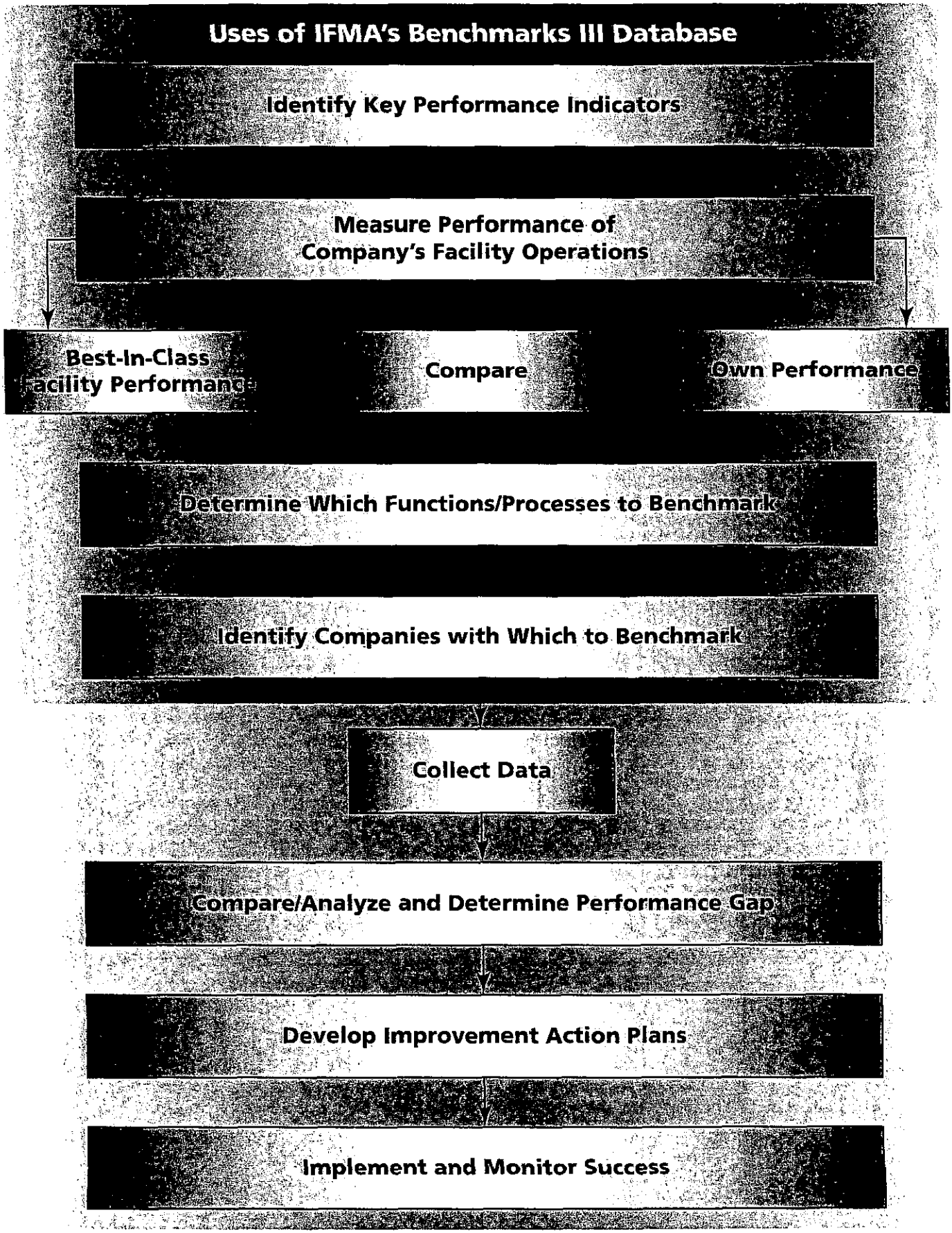
Benchmarking can be accomplished in various ways. Some large companies use a form of internal benchmarking. For example, a manufacturer might compare the facilities operations of its plant in Toledo to its plant in Seattle. Another form of benchmarking is functional benchmarking in which companies in different industries compare similar processes. In 1979, Xerox started a process called competitive benchmarking. This ongoing management process allows a company to assess its products, services and practices in comparison with the "best-in-class" performers in areas of cost, quality and reliability. The knowledge and data gathered are used to develop and implement strategies and operating plans to maintain positive performance and improve negative performance. (*Competitive Benchmarking: What it is and What it Can Do For You,* Quality Office, Xerox Corp., internal publication, Stamford, Conn.,1987)

Some authors break benchmarking into four, six, seven, eight, or 10 steps. IFMA has used the approach illustrated by the figure on page 3 to guide its benchmarking program. The highlighted areas show where IFMA's *Benchmarks III* report and database may be put to use.

Two additional ingredients are necessary for successful benchmarking. First, a serious commitment from top management is required. Because benchmarking requires time and dollars, the support of upper management is essential. Facility managers who have benchmarked in the past claim that upper management has been pleased with the outcome because the discovery of a single process or practice used by other companies resulted in significant savings.

Second, for a successful benchmarking program, the organization and its employees must be willing to change. New methods may need to be adopted; organizational structures may need to be revised. After the "best-in-class" practices are identified, the organization must be ready to implement the practices. Too often, novice benchmarkers stop the benchmarking process after comparing their performance with others and learning they are ahead.

Facility managers experienced in benchmarking believe it is an evolving process. Many started with small benchmarking projects such as comparing janitorial costs and have progressed to collecting more extensive data on all aspects of facility management. To learn more about applying benchmarking to facility management, IFMA offers a how-to guide called *Benchmarking for Facility Management Workbook.*


Uses of IFMA's Benchmarks III Database
Identify Key Performance Indicators
Measure Performance of Company's Facility Operations
Best-In-Class Facility Performance
Compare
Own Performance
Determine Which Functions/Processes to Benchmark
Identify Companies with Which to Benchmark
Collect Data
Compare/Analyze and Determine Performance Gap
Develop Improvement Action Plans
Implement and Monitor Success

USING THIS REPORT

Benchmarking has made a measurable impact in both the private and public sectors. As more organizations apply for the Malcolm Baldrige National Quality Award, they learn benchmarking is one of the stated requirements and makes a difference in the scoring of the application. As organizations attempt to become more competitive in the global marketplace, there is a real need for usable data to compare their performances with the "best-in-class" or at least industry averages. The purpose of *Benchmarks III* is to provide facility managers comparable metrics on facility performance.

It is important to understand the definitions and standards used and the method of calculating various performance indicators. These definitions are found on pages 5 through 7. The ASTM area measurement standard, E1836-96 can be obtained through IFMA and ASTM. Methodology also is an important factor to consider when interpreting the data. More information on methodology used to conduct this study is found in the Methodology section on page 72. It is critical to note sample size, indicated by "N."

The information contained in the report represents a "self-report" from IFMA members. All information was provided voluntarily and was not checked with site visits or by any other means. If a response appeared suspect, a call was made to verify information. When interpreting the data, it is important to remember that every facility is different and has different accounting practices. The benchmark data will not provide a perfect comparison of your organization to that of another, but it should give you a good idea how your facility fits into the range of performance.

Use the percentile charts to learn how your operation ranks against other organizations. The arrows beside some charts show the "best-in-class" direction. Using your facility's numbers for the performance indicator, determine whether your building is above or below the median (50th percentile). If your facility falls below the median, you may want to examine your costs or procedures on that subject. However, it may fall below the median due to its facility type, region or labor market. The data should help determine and explore areas where you can improve your facility's operation.

"Best-in-class" for facility operations is a difficult concept. For example, allocating the least amount of space for offices may be "best-in-class" in terms of the efficient use of space, but it may have a detrimental effect on employee morale and productivity. In this report, we have designated a direction on the percentile charts to indicate "best-in-class," but we have not defined a specific level of performance as "best-in-class."

We suggest using this report as the first step in benchmarking. After you have identified areas where your facility operations could be improved, you will need to do additional research. You should not immediately rush to find out which company is "best in class" and copy their practices. Instead, look for a more homogeneous group in which to compare. Specialized analysis from the *Benchmarks III* database is available to find a more similar group to compare with your facility. Informal networking with fellow IFMA chapter members is a good way to continue exploring how to improve facility operations. More sophisticated benchmarking would involve conducting a more detailed analysis which delves deeper into the subject of concern. Collecting information on staffing, process cycle times, wage rates, user satisfaction and outsourcing practices will lead to a better understanding of how to improve facility operations.

When asked if they have an interest in participating in future benchmarking activities, 79 percent of respondents said "yes." Some topics suggested for benchmarking include occupancy costs, operations and maintenance, space utilization, renovation costs, energy usage, custodial services and alternative officing. If you would like to participate in more detailed benchmarking studies or need assistance in finding other facility managers wishing to benchmark, contact IFMA.

Whether you use this report as a starting point for a benchmarks program or as a final output, the goal is the same: to improve facility operations.

Assignable Area
The portion of usable space that can be assigned to occupant groups or functions. Assignable area includes interior walls, building columns and projections. Assignable area excludes exterior walls, major vertical penetrations, building core and services areas, primary and secondary circulation.

Average
Also referred to as the mean, the sum or total of all responses divided by the number of respondents.

Building Efficiency Ratio
Usable area divided by rentable area, multiplied by 100 percent.

Building Maintenance
The preventive and remedial upkeep of building components (HVAC, electrical, plumbing, elevators, carpentry, painting, etc.), excluding janitorial and grounds maintenance.

Building Core and Service Area
The floor area of a facility necessary for the facility's operation and not available for general occupancy. This includes building lobbies, mechanical rooms, electrical rooms, telephone rooms, restrooms and custodial rooms.

Categories of Moves
Employees moved to existing workspaces – No furniture moved, no wiring or telecommunication systems required. Files and supplies moved.
Workstation/furniture moves – Reconfiguration of existing furniture and/or furniture moved or purchased. Minimal telecommunication reconfiguration needed.
Moves that require construction – New walls, new or additional wiring, new telecommunication systems or other construction needed to complete the move.

Common Support Space
Space devoted to common support services. Common support space is a portion of the usable area that is not attributed to any one occupant but provides support for several or all occupant groups. Examples include cafeterias, vending areas, auditoriums, fitness facilities, building mailrooms and first aid rooms.

Cost of Operation
The total costs associated with the daily operation of a facility. It includes all maintenance and repair costs (both fixed and variable), administrative costs (clerical, time-keeping, general supervision), labor costs, janitorial, housekeeping and other cleaning costs, utility costs and indirect costs, (i.e. all costs associated with roadways and grounds).

Cost of Providing the Fixed Asset
Capital costs, capital leasehold improvements, taxes, insurance and depreciation charges. It does not include lease costs, project or support costs.

Facility Management
The practice of coordinating the physical workplace with the people and work of the organization. Facility management integrates the principles of business administration, architecture, and the behavioral and engineering sciences.

Gross Area
The sum of the floor areas on all levels of a building that are totally enclosed within the building envelope. Gross area includes rentable area, exterior walls, major vertical penetrations and interior parking.

Leases
Net lease – Base rent plus tenant pays directly a share of real estate taxes.
Triple-net lease – Base rent plus tenant pays directly a share of real estate taxes, insurance, maintenance, repair and operating expenses.
Gross lease – One payment in which owner has included estimated cost of operations.

Major Vertical Penetrations
Major vertical penetrations include stairs, elevator shafts, flues, pipe shafts, vertical ducts and their enclosing walls.

Mean
See definition for average. Mean and average are used interchangeably and the interpretation is the same.

Median
The middle value in a range of responses is the median. One-half of all respondents will be below this value, while one-half will have a higher value. The median also is known as the 50th percentile. The advantage in using the median is that it is not affected as much by extreme highs or lows in the range of values as is the case with the mean.

Multi-Usage
Used in this report to describe facilities with two or more primary uses, such as a single site that encompasses headquarter offices as well as production or research facilities.

N
N is the number of cases supplying the data being described. It is important to note the size of the sample for the value you are comparing.

Occupancy Cost
The total cost incurred by an organization to provide space for operations. It includes the cost of operations and the cost of providing the fixed asset.

Occupant Churn Rate
Total number of office or workstation moves made in a 12-month period, divided by the average number of employees occupying offices or workstations during the 12-month period.

Office Plans
Private offices – Enclosed by floor-to-ceiling walls.
Open plan offices – Spaces divided by movable partitions.
Bullpen style – Open areas with no partitions.

Percentile
Indicates dispersion of data and a specific percentile indentifies where a value lies in relation to other values in a range of responses. The 25th percentile is the lower one-fourth point in the range of values in the group. The 50th percentile, also referred to as the median, represents a value of which one-half of the group falls below and one-half falls above. It is not affected by respondents who have extreme values that may distort the average or mean.

Preventive Maintenance
Planned actions undertaken to retain an item at a specified level of performance by providing repetitive scheduled tasks which prolong system operation and a useful life, (i.e. inspection, cleaning, lubrication, part replacement). (Cotts, Lee, 1992)

Primary Circulation
The portion of a building that is a public corridor or lobby, or is required for access by all occupants on a floor to stairs, elevators, toilet rooms and building entrances.

Rentable Area
Computed by measuring to the inside finished surface of the permanent outer building wall, excluding any major vertical penetrations of the floor. The areas of columns and building projections are included in rentable area. Excluded from rentable area are exterior walls, major vertical penetrations and interior parking spaces.

Rentable Square Foot or Meter (RSF or RSM)
Basis for most benchmark calculations.

Secondary Circulation
The portion of a building required for access to some subdivision of space (whether bounded by walls or not) that is not defined as primary circulation.

Standard Deviation
The square root of the variance is called the standard deviation. One frequent use of the standard deviation is in the interpretation of the percentage of scores in a distribution that are one standard deviation above the mean and one standard deviation below the mean. If the scores have a "normal" distribution, the range between one standard deviation below the mean and one standard deviation above the mean contains 68.26 percent of the scores. Most distributions are not perfectly normal, but in general, approximately two-thirds of the scores are in this range.

Usable Area
The floor area that can be assigned to occupant groups. Usable area includes the area of interior walls, building columns and projections and secondary circulation. Usable area excludes exterior walls, major vertical penetrations, primary circulation, building core and building service areas.

Vacancy Rate
The vacancy rate of a facility is the current total square footage or meters available for usage divided by the total usable area and multiplied by 100 percent.

Workstation
Any type of space designated for occupant usage. May be open or enclosed area.

Section 1:

DESCRIPTION OF FACILITIES

INDUSTRIES REPRESENTED
- INDUSTRY SECTORS
- INDUSTRY TYPES

FACILITY USE
- FACILITY DESCRIPTION

OWNERSHIP
- OWNED VS. LEASED BY INDUSTRY TYPE
- OWNED VS. LEASED BY FACILITY USE

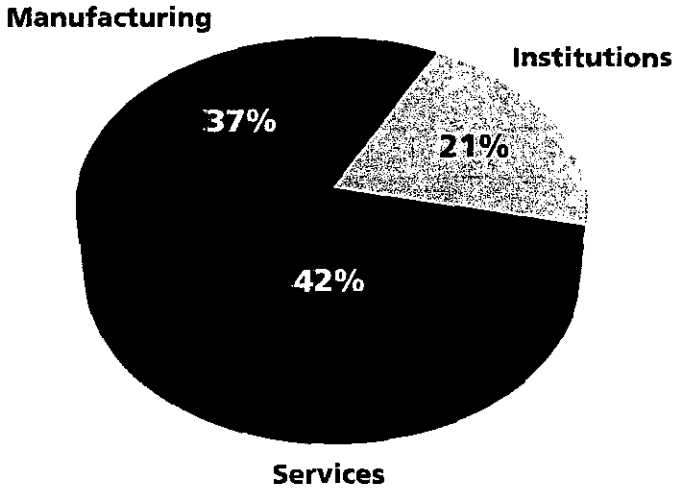
HOURS OF OPERATION
- DAYS OF OPERATION

NUMBER OF OCCUPANTS

LOCATION OF FACILITY

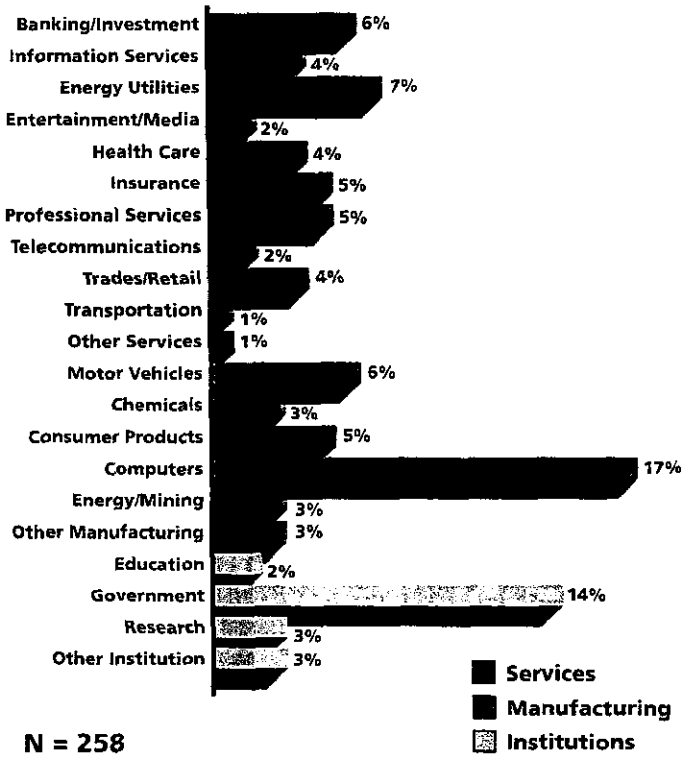
INDUSTRIES REPRESENTED

Industry Sectors



N = 303

Industry Types



N = 258

When asked which of the 22 industry categories listed best represented the major end product of work performed at the facility, the majority responded in the services or manufacturing category. The service industry was expanded from five to 12 categories. New added categories include insurance, data processing/information services and professional services. The largest category overall is computer/electronics/telecommunications equipment manufacturers. The second largest category is government institutions.

Listed below are the abbreviated chart labels and their components for each industry type represented throughout this report.

SERVICES

Banking/Investment– Consumer, Commercial, Savings, Securities and Investment Services
Information Services– Data Processing, Information Services
Energy Utilities– Energy-related Utilities
Entertainment/Media– Entertainment, Media, Broadcasting
Health Care
Insurance– Life, Casualty, Other
Professional Services– Accounting, Law, Real Estate, Engineering, Architecture, Consulting
Telecommunications
Trades/Retail– Wholesale, Retail, Consumer Products
Transportation
Other Services

MANUFACTURING

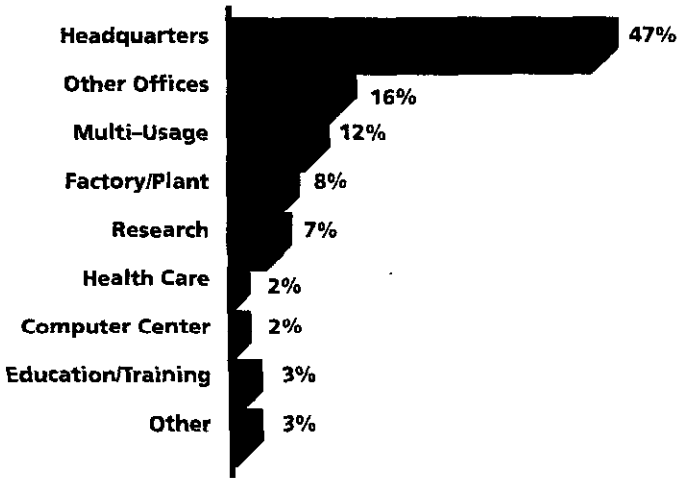
Motor Vehicles– Aircraft, Motor Vehicles, Industrial Equipment
Chemicals– Chemicals, Pharmaceutical
Consumer Products– Food or Related
Computers– Electronics, Computer, Telecommunications Equipment
Energy/Mining– Energy-related, Mining, Distribution
Other Manufacturing

INSTITUTIONS

Education
Government
Research
Other Institutions

FACILITY USE

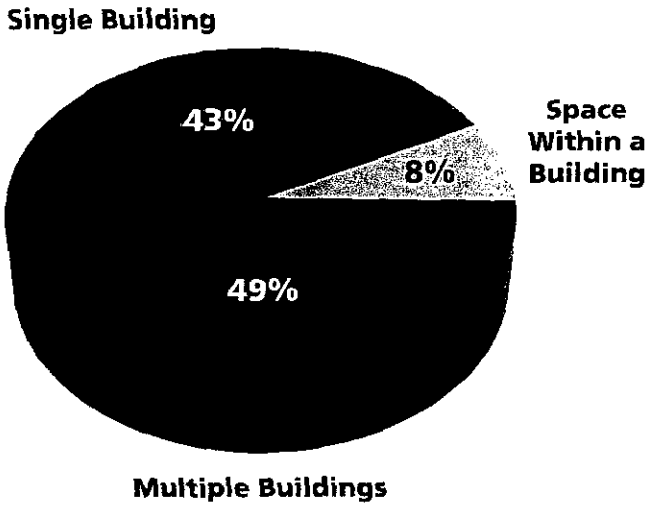
Another method of comparison used in this report is facility use. Eleven categories for facility use were provided, but only eight categories were used consistently. The most common responses were headquarters offices and other offices. Those included in the multi-usage category also may contain office space, but office space does not exceed more than 50 percent of the facility.



N = 303

Facility Description

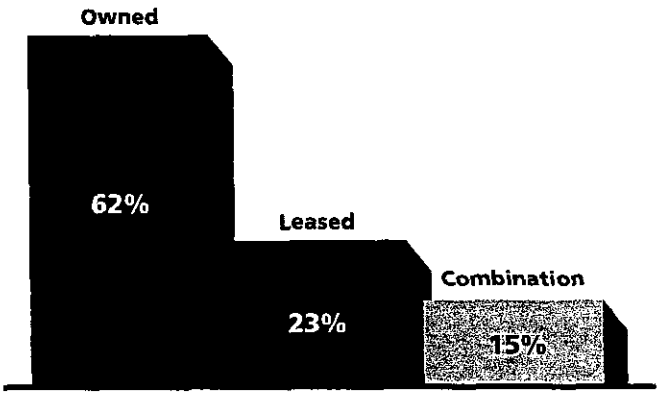
Almost half of the respondents indicated they manage facilities with multiple buildings. Another 43 percent manage a single building. The remainder occupied space within a building. Those with multiple buildings managed from two to 520 facilities; however, the median number of facilities managed is six.



N = 303

OWNERSHIP

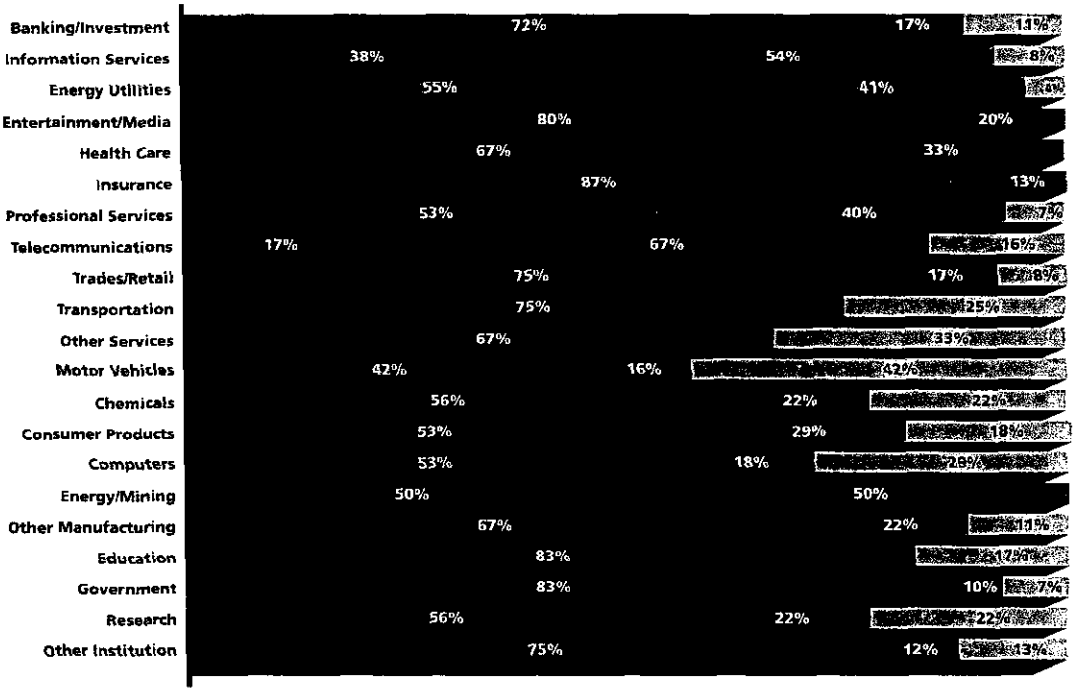
Overall Ownership



The majority of the facilities in this study are owned. Almost one quarter of the respondents lease their facility and the remainder are a combination of owned and leased. In this combination category, the ratio of owned to leased facilities is 67 percent to 33 percent.

N = 300

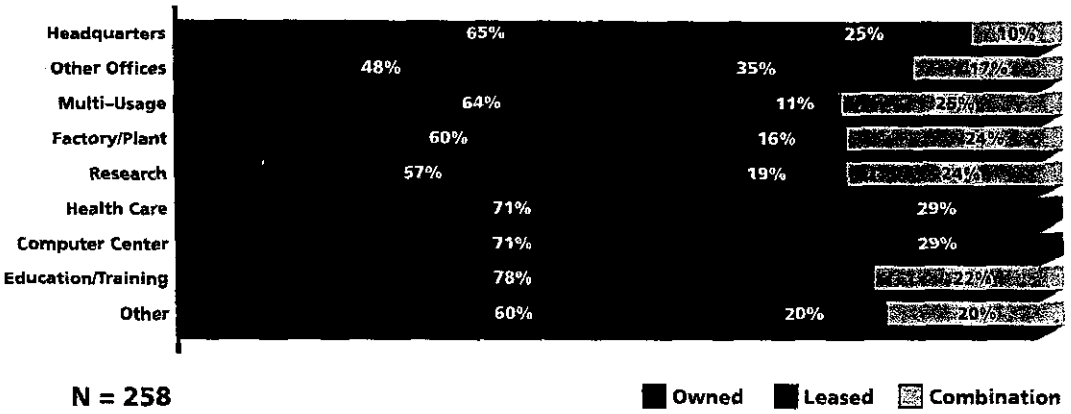
Owned vs. Leased by Industry Type



N = 258

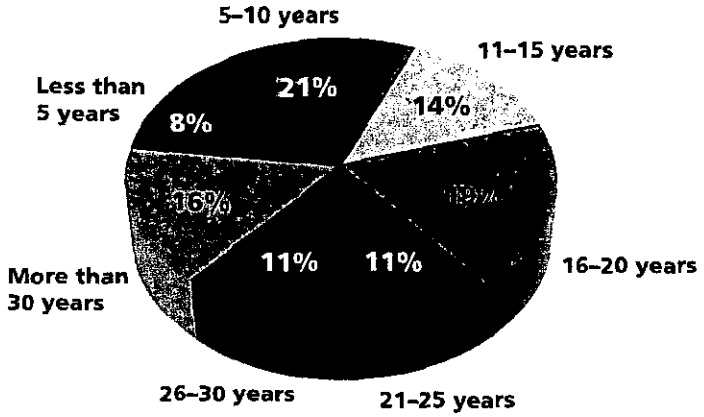
OWNERSHIP

Owned vs. Leased by Facility Use

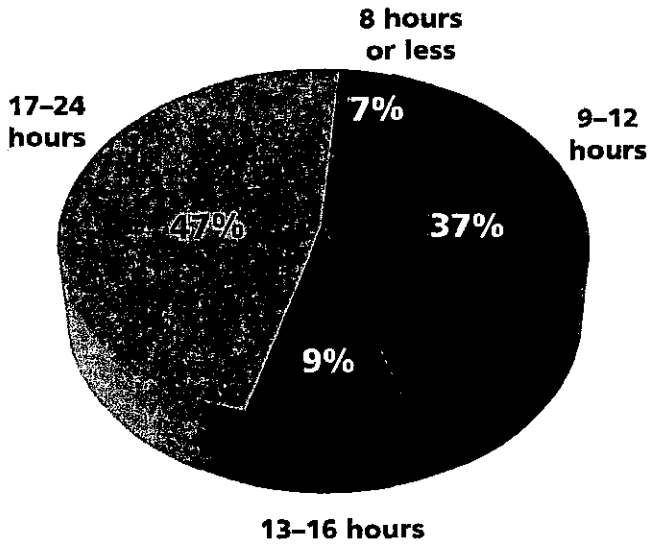


Age of Facility

The age of the facility influences several factors such as maintenance costs. More than half of the facilities included in this study are 16 years or older. On average, educational facilities are the oldest at 41 years.



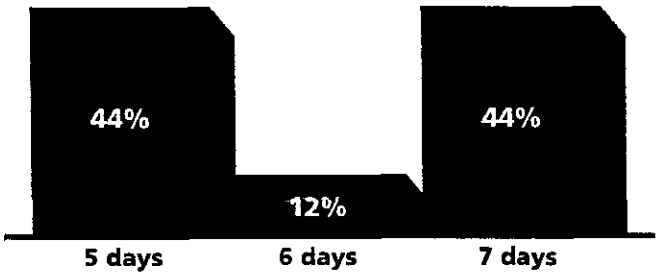
HOURS OF OPERATION



N = 303 Mean = 17

Almost half of the facilities operate more than 16 hours a day. The facilities that are open the longest include computer centers, health care and factories. Those within transportation, information services and energy utilities industries reported higher than average hours.

Days of Operation



N = 297

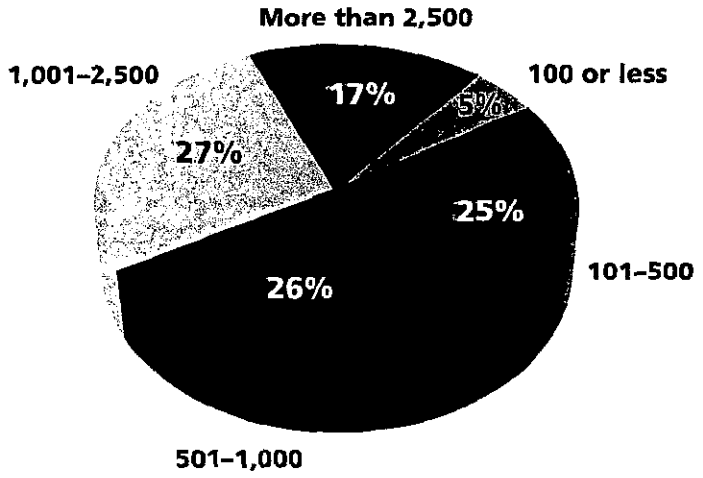
N = 297

Upon further examination, there were several combinations of hours and days of operation that were more prevalent. Facilities open 24 hours a day, seven days a week were 40 percent of the sample.

NUMBER OF OCCUPANTS

In the survey, respondents were asked to provide not only the number of full-time employees at their facility, but also part-time employees, contract workers and tenants in their occupant count if they provide space for these groups of workers. Educational and research facilities along with factories had the highest numbers of occupants.

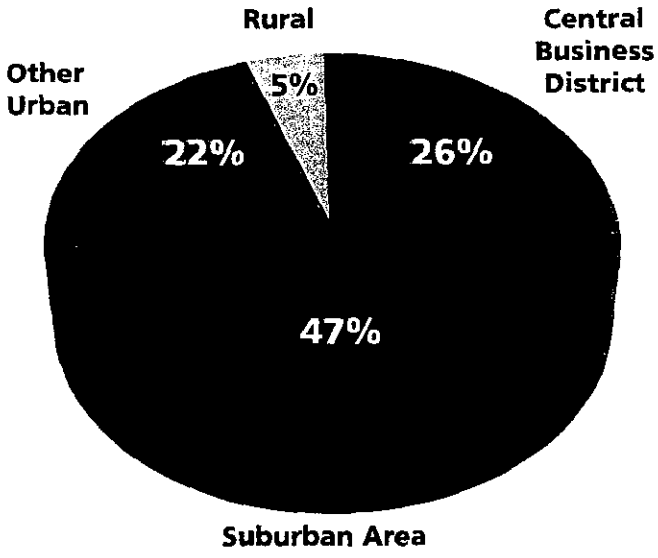
Number of Occupants at Facility



N = 299

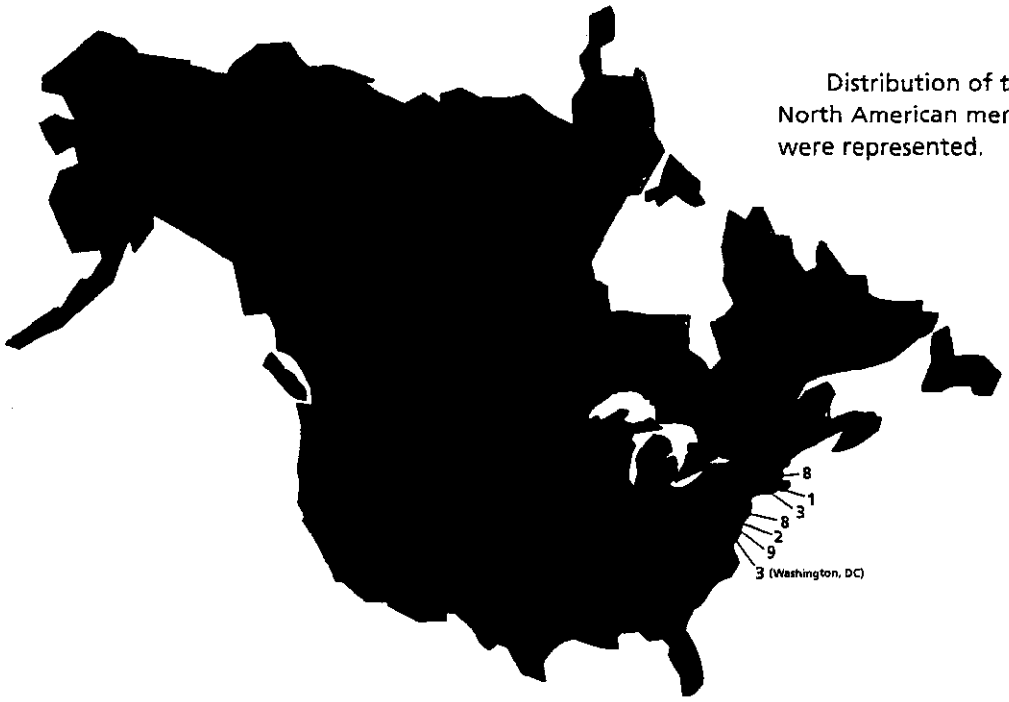
Mean = 1,830
Median = 900
Range = 20 to 28,950

Facility Setting



N = 302

LOCATION OF FACILITY



Distribution of the survey was restricted to IFMA's North American members. Not all states and provinces were represented.

Facilities by Region

Canada	10%
New England	7%
Northeast	9%
Mid-Atlantic	10%
Southeast	6%
Midwest	10%
North Central	8%
Heartland	6%
South Central	8%
Mountain	9%
Pacific	17%

N = 303

Because costs and labor wages vary geographically, facilities are grouped into the following regions to be used consistently throughout this report.

Canada (AB,BC,MB,ON,QU,SK)
New England (CT,MA,NJ,RI)
Northeast (DE,NY,PA)
Mid-Atlantic (DC,MD,NC,SC,VA,WV)
Southeast (AL,FL,GA,TN)
Midwest (IN,KY,MI,OH,)
North Central (IA,MN,WI)
Heartland (IL,KS,MO,NE)
South Central (AR,LA,OK,TX)
Mountain (AZ,CO,ID,NM,UT)
Pacific (CA,OR,WA)

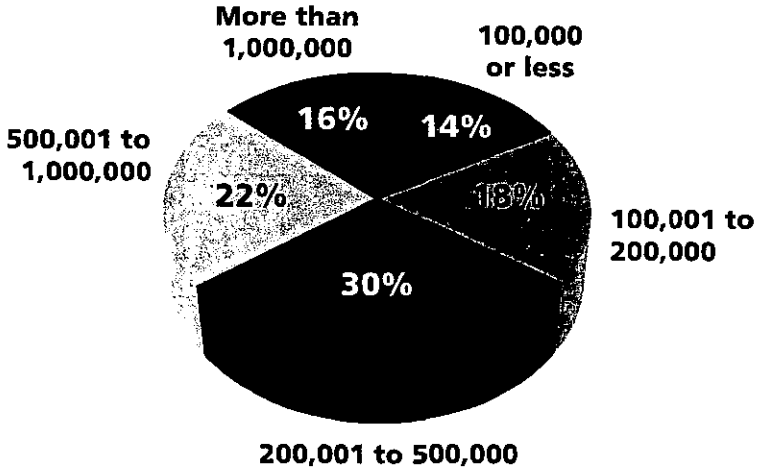
Section 2:

SIZE AND USE OF FACILITIES

GROSS AREA
RENTABLE AREA
USABLE AREA
GROSS, RENTABLE AND USABLE BY
INDUSTRY TYPE AND FACILITY USE
SQUARE FOOTAGE PER OCCUPANT
BUILDING EFFICIENCY RATES
WORKSTATION UTILIZATION RATES
OFFICE SPACE PER WORKER
SUPPORT AREA

GROSS AREA

Gross Area by Size of Facility



N = 261

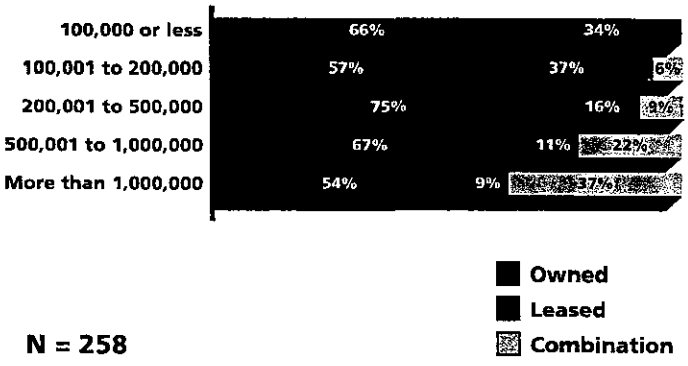
Respondents were asked to provide total gross area of their facilities using IFMA's measurement standard, ASTM E-1836. Gross area is the sum of the floor area on all levels of a building that are enclosed totally within the building envelope. Gross area encompasses rentable area and exterior walls, major vertical penetrations and interior parking.

Gross Area

Percentile	Sq. Ft.
99	9,847,338
95	2,545,607
90	1,560,572
75	793,753
50	337,152
25	151,825
10	71,642
5	37,596
1	11,398
Mean	750,278

N = 261

Owned vs. Leased by Size of Facility



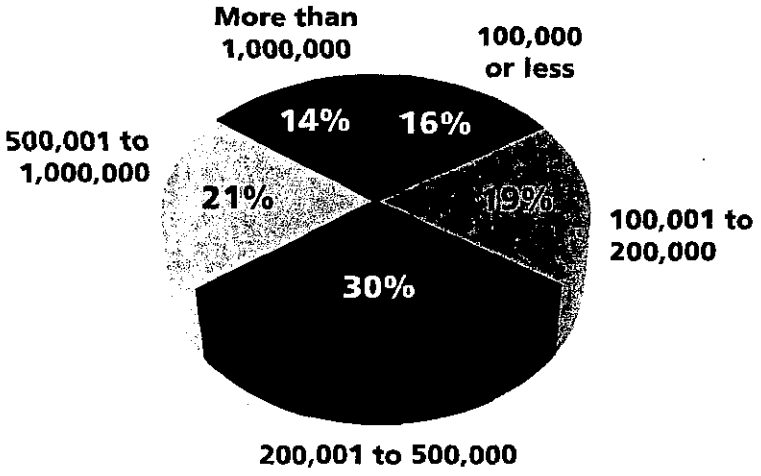
N = 258

In general, leased facilities tend to be smaller than owned facilities for gross, rentable and usable area.

RENTABLE AREA

Rentable area is derived by measuring to the inside finished surface of the permanent outer building wall, excluding major vertical penetrations.

Rentable Area by Size of Facility



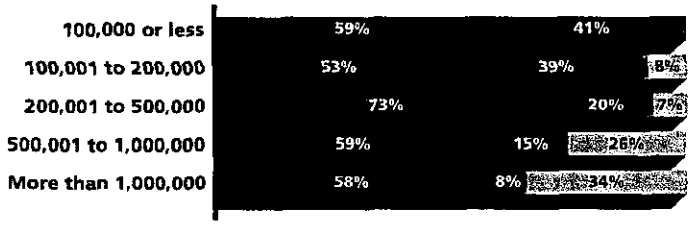
N = 280

Rentable Area

Percentile	Sq. Ft.
99	8,714,250
95	2,433,718
90	1,419,952
75	697,226
50	287,400
25	137,524
10	61,103
5	34,632
1	11,440
Mean	688,246

N = 280

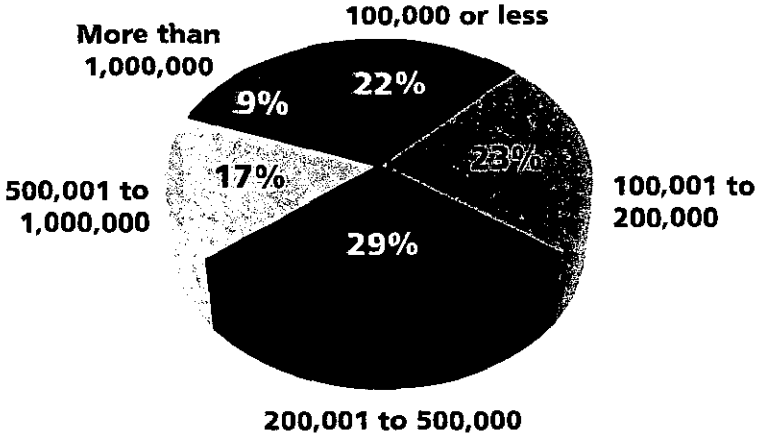
Owned vs. Leased by Size of Facility



N = 277

USABLE AREA

Usable Area by Size of Facility



N = 256

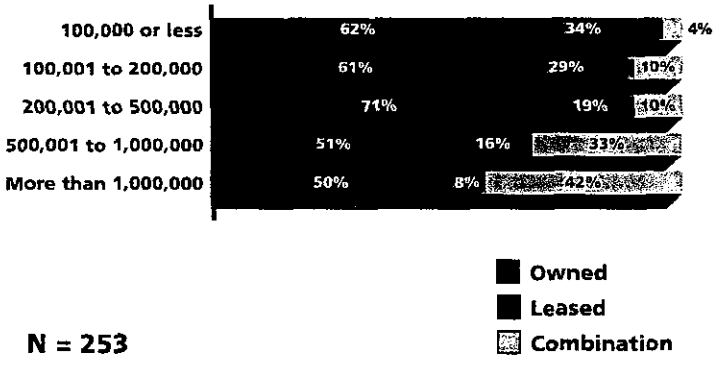
Usable area is computed by measuring to the inside finished surface of the permanent outer building walls and to the finished surface of the walls surrounding major vertical penetrations and building core services areas. Usable area excludes primary circulation (lobbies and public corridors).

Usable Area

Percentile	Sq. Ft.
99	6,101,390
95	1,812,488
90	946,544
75	526,939
50	223,847
25	109,822
10	51,090
5	27,518
1	10,268
Mean	507,722

N = 256

Owned vs. Leased by Size of Facility



N = 253

GROSS, RENTABLE AND USABLE BY INDUSTRY TYPE AND FACILITY USE

The tables below show the average gross, rentable and usable areas of the responding facilities. Overall, the average size of these facilities are larger when compared to previous benchmarking reports.

		Means		
Industry Type	N	Gross Sq. Ft.	Rentable Sq. Ft.	Usable Sq. Ft.
SERVICES				
Banking/Investment	17	440,298	376,555	267,859
Information Services	13	312,373	253,522	202,272
Energy Utilities	23	539,821	449,323	379,627
Entertainment/Media	4	840,069	738,584	493,632
Health Care	11	601,976	467,181	298,001
Insurance	16	370,215	357,845	267,942
Professional Services	15	290,513	226,541	224,577
Telecommunications	5	371,503	312,568	273,564
Trades/Retail	12	640,188	529,225	400,108
Transportation	4	495,281	402,841	320,929
Other Services	3	520,988	218,321	153,691
MANUFACTURING				
Motor Vehicles	18	2,161,136	1,955,947	1,290,673
Chemicals	8	1,005,246	780,839	737,507
Consumer Products	17	602,873	432,194	289,980
Computers	49	908,499	880,833	640,241
Energy/Mining	7	592,868	546,385	447,687
Other Manufacturing	8	260,576	219,472	174,776
INSTITUTIONS				
Education	5	3,100,037	2,944,708	2,143,970
Government	37	559,844	471,893	345,913
Research	9	1,492,258	1,347,882	1,015,096
Other Institution	7	177,398	159,513	148,941

		Means		
Facility Use	N	Gross Sq. Ft.	Rentable Sq. Ft.	Usable Sq. Ft.
Headquarters	135	465,463	414,604	318,687
Other Offices	45	574,144	391,448	379,102
Multi-Usage	33	861,758	647,475	632,397
Factory/Plant	22	2,120,304	2,159,864	1,250,649
Research	21	1,170,580	1,087,134	864,048
Health Care	7	836,676	633,570	413,819
Computer Center	7	179,426	172,013	140,379
Education/Training	8	2,271,756	1,954,995	1,485,411

SQUARE FOOTAGE PER OCCUPANT

	Sq. Ft. Per Occupant		
Percentile	Gross	Rentable	Usable
99	2,225	2,111	1,623
95	1,083	823	676
90	790	651	540
75	522	453	374
50	391	346	284
25	292	265	215
10	221	202	166
5	179	170	137
1	90	84	37
Mean	471	410	333

BEST IN CLASS

A common measurement for comparing space utilization is square footage per person. Respondents were asked to provide occupant count, not employee count. This metric along with several others in this report indicates space per person is decreasing in comparison to similar measurements from previous years.

		Means		
Industry Type	N	Gross Sq. Ft.	Rentable Sq. Ft.	Usable Sq. Ft.
SERVICES				
Banking/Investment	17	404	357	293
Information Services	13	335	302	251
Energy Utilities	23	435	417	309
Entertainment/Media	3	414	408	287
Health Care	11	419	381	298
Insurance	16	306	257	223
Professional Services	15	469	338	315
Telecommunications	5	281	270	217
Trades/Retail	11	575	491	444
Transportation	4	367	289	235
Other Services	3	456	368	278
MANUFACTURING				
Motor Vehicles	18	447	431	342
Chemicals	8	662	504	402
Consumer Products	17	587	513	360
Computers	48	420	404	333
Energy/Mining	7	482	441	358
Other Manufacturing	9	462	392	368
INSTITUTIONS				
Education	5	540	439	256
Government	36	576	472	364
Research	9	605	540	427
Other Institution	7	539	399	349

SQUARE FOOTAGE PER OCCUPANT

The average space per occupant is smaller for those working in headquarters and other offices. Higher averages are reported for computer centers, educational and research facilities.

		Means		
Facility Use	N	Gross Sq. Ft.	Rentable Sq. Ft.	Usable Sq. Ft.
Headquarters	135	399	353	280
Other Offices	45	456	379	327
Multi-Usage	33	484	477	374
Factory/Plant	22	592	512	463
Research	21	610	525	418
Health Care	7	447	372	280
Computer Center	7	826	668	484
Education/Training	7	702	603	495

BUILDING EFFICIENCY RATES

Percentile	%
99	100%
95	96%
90	93%
75	87%
50	82%
25	76%
10	70%
5	66%
1	54%
Mean	81%

BEST IN CLASS

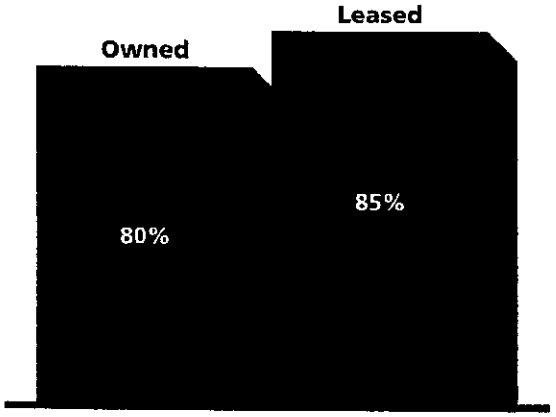
N = 266

One way of evaluating facilities is to compare the ratio of usable space to rentable space. This metric is known as the building efficiency rate. A higher rate indicates less space is used for primary circulation and building core and services areas such as building lobbies, restrooms, mechanical, electrical and communication rooms. When comparing leased and owned facilities, leased buildings have a higher building efficiency rate (85%) than owned buildings (80%).

Facility Use	N	%
Headquarters	129	81%
Other Offices	44	82%
Multi-Usage	30	83%
Factory/Plant	20	81%
Research	20	80%
Health Care	6	86%
Computer Center	7	81%
Education/Training	6	71%

	Industry Type	N	%
SERVICES	Banking/Investment	13	83%
	Information Services	12	87%
	Energy Utilities	21	84%
	Health Care	9	85%
	Insurance	12	81%
	Professional Services	13	84%
	Telecommunications	4	83%
	Trades/Retail	12	88%
	Transportation	4	82%
MANUFACTURING	Motor Vehicles	19	81%
	Chemicals	7	75%
	Consumer Products	16	77%
	Computers	47	81%
	Energy/Mining	8	82%
	Other Manufacturing	8	84%
INSTITUTIONS	Education	4	68%
	Government	34	70%
	Research	9	78%
	Other Institution	6	83%

Efficiency Rates by Owned vs. Leased



N = 263

WORKSTATION UTILIZATION RATES

Workstation utilization is the ratio of workstations used to workstations available for use. For the purposes of this study, a workstation is defined as either private, open plan or bullpen and any other workstations such as lobby or security stations. The results show half the sample has a workstation utilization rate of 95 percent or above. This measurement shows many facilities are at full capacity for seating.

Percentile	%
99	100%
95	100%
90	100%
75	100%
50	95%
25	88%
10	76%
5	69%
1	48%
Mean	91%

BEST IN CLASS

N = 239

Facility Use	N	%
Headquarters	120	92%
Other Offices	41	88%
Multi-Usage	28	87%
Factory/Plant	17	92%
Research	15	93%
Health Care	4	97%
Computer Center	7	87%
Education/Training	5	96%

	Industry Type	N	%
SERVICES	Banking/Investment	18	89%
	Information Services	11	90%
	Energy Utilities	18	87%
	Health Care	8	98%
	Insurance	12	93%
	Professional Services	14	93%
	Telecommunications	4	90%
	Trades/Retail	9	96%
	Transportation	3	98%
MANUFACTURING	Motor Vehicles	15	93%
	Chemicals	6	97%
	Consumer Products	17	94%
	Computers	44	84%
	Energy/Mining	5	91%
	Other Manufacturing	7	86%
INSTITUTIONS	Education	3	98%
	Government	30	93%
	Research	7	95%

OFFICE SPACE PER WORKER

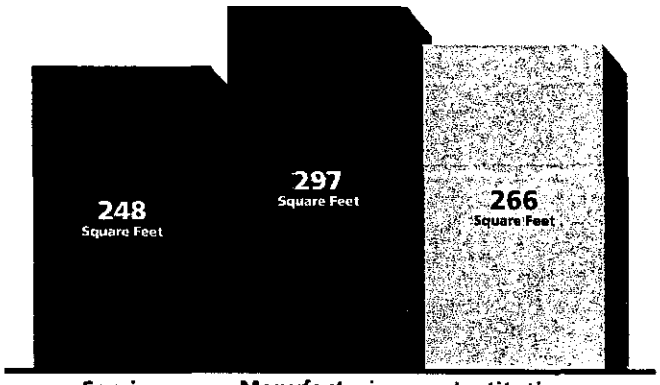
Percentile	USF
99	1277
95	523
90	396
75	304
50	221
25	163
10	126
5	96
1	52
Mean	271

N = 262

In space planning, how much space to allocate for offices is a major concern. The following charts show office worker space by percentiles and facility use. On average, manufacturers allow more office space per person.

Facility Use	N	Sq.Ft.
Headquarters	128	284
Other Offices	43	291
Multi-Usage	29	255
Factory/Plant	21	286
Research	20	195
Health Care	3	229
Computer Center	6	261
Education/Training	7	222

Office Worker Space by Industry Type



SUPPORT AREA

A common question that arises when designing space is how much space to allow for support area. The charts below provide ratios for conference, cafeteria and storage space. The average amount of conference space per occupant is 15 feet. As a percentage of usable space, the average is 14 percent.

Percentile	%
99	38%
95	27%
90	21%
75	16%
50	11%
25	7%
10	5%
5	4%
1	2%
Mean	14%

N = 189

Facility Use	N	Conference Rooms/USF	Cafeteria/ USF	Storage/ USF
Headquarters	109	5%	3%	4%
Other Offices	35	6%	4%	5%
Multi-Usage	28	8%	4%	12%
Factory/Plant	19	3%	3%	4%
Research	17	3%	3%	7%
Health Care	5	2%	2%	10%
Computer Center	7	5%	4%	4%
Education/Training	5	4%	2%	5%

Facility Use	N	Conference Rooms SF/Occupant	Cafeteria SF/Occupant	Storage SF/Occupant
Headquarters	116	15	12	8
Other Offices	38	15	15	10
Multi-Usage	29	17	21	9
Factory/Plant	20	9	17	8
Research	17	12	28	11
Health Care	5	6	18	5
Computer Center	7	15	20	18
Education/Training	6	15	20	11

Section 3:

OFFICE SPACE PLANNING

VACANCY RATES
SPACE ALLOCATION POLICIES
OFFICE TYPE AND SIZE

VACANCY RATES

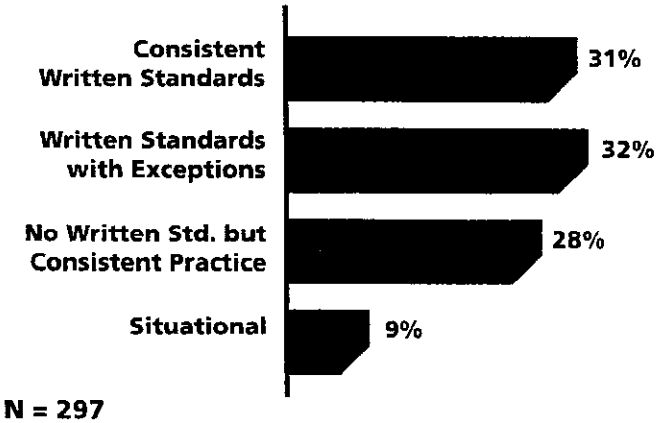
Percentile	%
99	27%
95	18%
90	13%
75	7%
50	2%
25	0%
10	0%
5	0%
1	0%
Mean	4%

N = 239

By taking the total amount of unoccupied space as a proportion of total space, vacancy rate can be determined. Like workstation utilization, this indicates how well space is managed. The average vacancy rate for this sample is 4 percent. A quarter of the sample has a 0 percent vacancy rate.

Facility Use	N	%
Headquarters	113	4%
Other Offices	43	6%
Multi-Usage	28	5%
Factory/Plant	17	5%
Research	19	3%
Health Care	6	7%
Computer Center	6	5%
Education/Training	5	1%

Space Allocation Policies



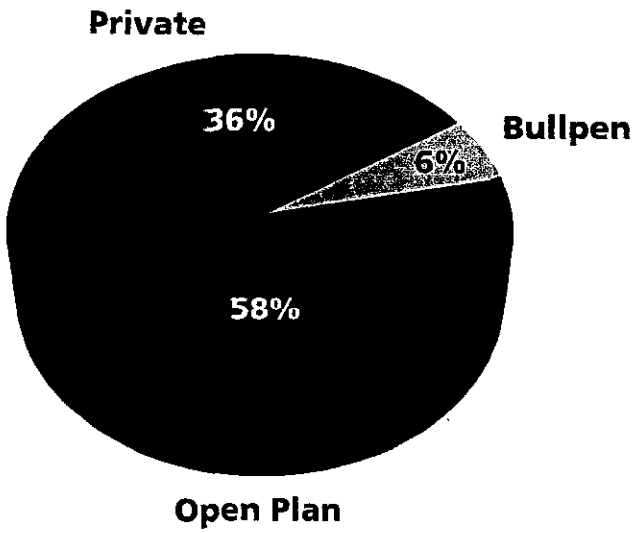
N = 297

More than 60 percent of the organizations report that they use formal written standards for allocating space, but only half of this group uses them consistently. Another 28 percent does not maintain written standard but is consistent in applying standards. Further analysis shows larger facilities are more likely to use written standards.

OFFICE TYPE AND SIZE

Office Type

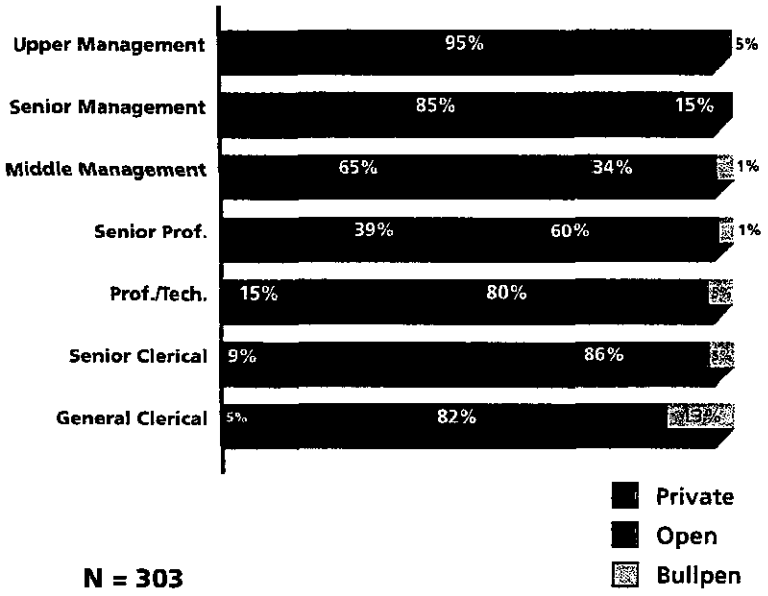
The ratio of open plan to private offices is consistent with previous studies. Bullpen seating, or open areas with no partitions, is declining.



N = 289

Office Type by Worker

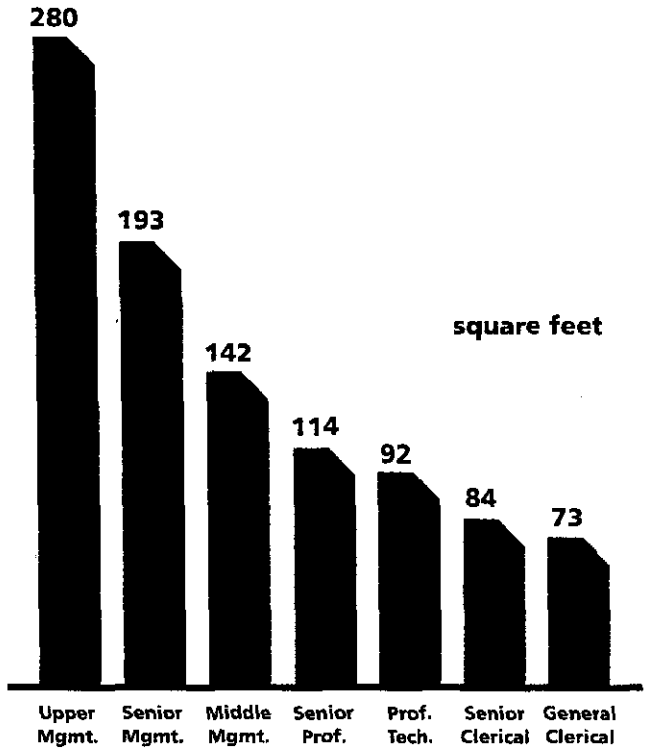
Since our 1994 report, a few more upper, senior and middle management offices have become open plan, but the majority remain private offices. For technical, professional and clerical workers, open plan is becoming more prevalent.



N = 303

OFFICE TYPE AND SIZE

Office Size



N = 265

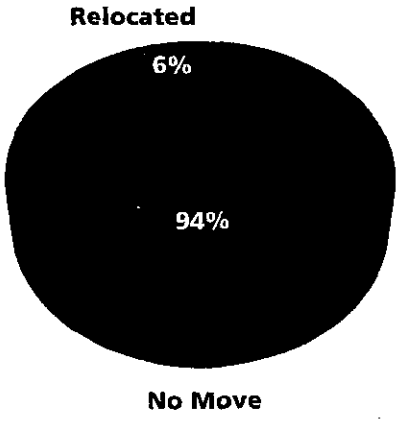
In addition to moving from private to open plan seating, upper, senior and middle management space standards are decreasing slightly.

Section 4:

RELOCATION AND CHURN

ORGANIZATIONAL MOVES
COST OF MOVES
CHURN RATE

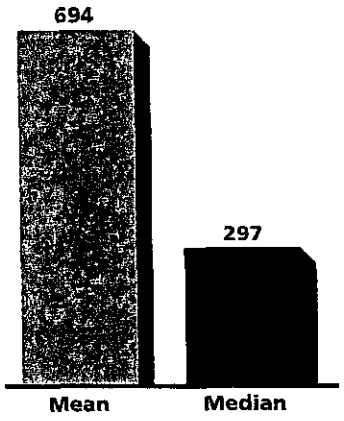
ORGANIZATIONAL MOVES



N = 251

Moves are becoming more of a norm than an exception. This section focuses on relocations within the facility, for the cost of these moves often are included in the facility management budget. In this sample, six percent of the respondents indicate they moved entirely to a new building or different location. The remainder, which will be examined more closely, moved individuals within the existing facilities.

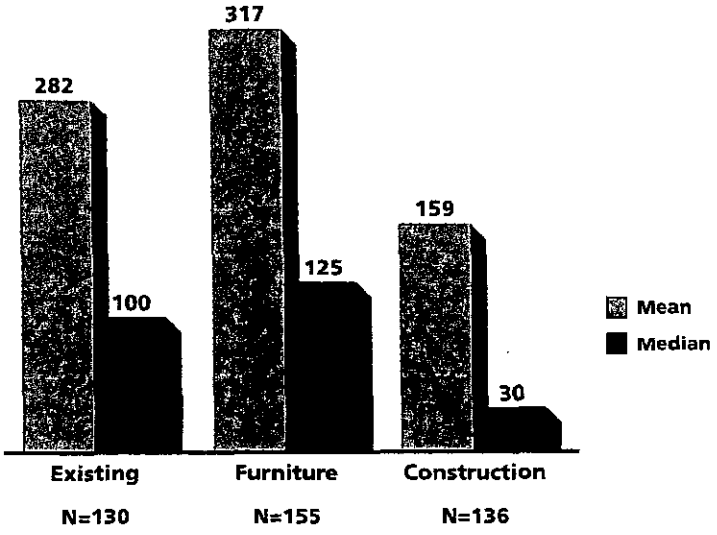
Number of Moves



N = 193

There are several reasons for moves. They include reorganization, normal business growth, downsizing and efforts to improve organizational effectiveness.

Number of Moves by Type



For comparison purposes, moves have been divided into the following three categories:

Existing (Box) – No furniture moved, no wiring or telecommunication system required. Files and supplies moved.

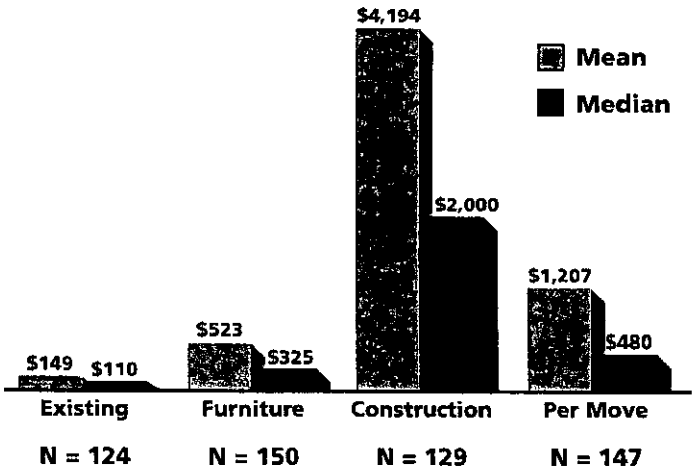
Furniture – Reconfiguration of existing furniture and/or furniture moved or purchased. Minimal telecommunication reconfiguration needed.

Construction – New walls, new or additional wiring, new telecommunication systems or other construction needed to complete the move.

COST OF MOVES

Cost of Moves by Type

Like most other facility management costs in this report, the cost of moves has increased since the last report. In addition to showing the mean and median cost of each type of move, the overall average cost per move is provided.



	Industry Type	N	Box Move	Furniture Move	Construction Move	Average Move
SERVICES	Banking/Investment	11	$171	$678	$6,559	$1,008
	Information Services	9	$54	$242	$2,555	$427
	Energy Utilities	14	$101	$613	$3,522	$1,094
	Health Care	4	—	—	$5,168	$709
	Insurance	10	$40	$252	$872	$427
	Professional Services	6	$115	$321	$2,476	$503
	Telecommunications	3	—	$305	$5,455	$283
	Trades/Retail	8	$209	$361	$1,678	$471
	Transportation	3	$204	$519	$6,321	$1,093
MANUFACTURING	Motor Vehicles	13	$164	$689	$6,809	$729
	Chemicals	4	$116	$468	$5,703	$978
	Consumer Products	14	$125	$655	$7,727	$748
	Computers	35	$150	$444	$3,948	$655
	Energy/Mining	6	$178	$256	$1,044	$582
	Other Manufacturing	5	$225	$861	$6,376	$1,662
INSTITUTIONS	Government	17	$166	$613	$3,640	$1,340
	Research	9	$271	$920	$2,808	$969

CHURN RATE

Percentile	%
99	162%
95	110%
90	95%
75	63%
50	39%
25	17%
10	7%
5	3%
1	1%
Mean	44%

BEST IN CLASS

N = 206

To determine churn rate, respondents were asked to divide the total number of moves made in a 12-month period by the total number of occupants and multiply by 100. Since the number of moves is up significantly, it is not surprising that churn rates have also increased.

Facility Use	N	%
Headquarters	105	39%
Other Offices	33	66%
Multi-Usage	26	41%
Factory/Plant	13	53%
Research	16	40%
Health Care	4	32%
Computer Center	3	43%
Education/Training	4	44%

	Industry Type	N	%
SERVICES	Banking/Investment	13	42%
	Information Services	11	51%
	Energy/Utilities	16	39%
	Entertainment/Media	3	48%
	Health Care	7	30%
	Insurance	12	62%
	Professional Services	6	56%
	Telecommunications	4	69%
	Trades/Retail	10	39%
MANUFACTURING	Motor Vehicles	16	45%
	Chemicals	5	41%
	Consumer Products	16	44%
	Computers	37	62%
	Energy/Mining	6	64%
	Other Manufacturing	5	33%
INSTITUTIONS	Education	3	20%
	Government	20	27%
	Research	9	24%
	Other Institution	4	23%

Area Churn Rate

For non-office facilities, another way of comparing moves is to use an area churn rate. To derive this measurement, rentable area affected by moves is divided by total rentable area and multiplied by 100.

Percentile	%
99	100%
95	100%
90	79%
75	46%
50	20%
25	8%
10	4%
5	2%
1	1%
Mean	31%

BEST IN CLASS

N = 140

Section 5:

MAINTENANCE, JANITORIAL AND INDIRECT COSTS

MAINTENANCE COSTS
- BY AGE OF FACILITY
- AS A PERCENTAGE OF REPLACEMENT COST
- REPAIR VS. PREVENTIVE MAINTENANCE
- OUTSOURCING OF MAINTENANCE FUNCTION

JANITORIAL COSTS

INDIRECT COSTS

MAINTENANCE COSTS

Percentile	$/RSF
99	$9.03
95	$5.24
90	$4.02
75	$2.73
50	$1.57
25	$0.98
10	$0.56
5	$0.37
1	$0.14
Mean	$2.09

BEST IN CLASS

N = 267

Maintenance is the preventive and remedial upkeep and repair of a building and its components (HVAC, electrical, plumbing, elevators, carpentry and painting). Cost includes service contracts, direct labor and worker tools. To allow further comparison, maintenance costs are categorized by industry, facility use, geographical region and age of facility. As anticipated, geographical location and building age directly affect the cost of maintenance.

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	14	$1.73
	Information Services	11	$1.60
	Energy Utilities	21	$1.67
	Health Care	11	$1.79
	Insurance	14	$2.15
	Professional Services	12	$1.57
	Trades/Retail	11	$3.12
	Transportation	4	$2.26
MANUFACTURING	Motor Vehicles	19	$2.69
	Chemicals	8	$2.58
	Consumer Products	17	$2.80
	Computers	45	$2.27
	Energy/Mining	7	$2.02
	Other Manufacturing	7	$1.91
INSTITUTIONS	Education	5	$1.35
	Government	35	$1.33
	Research	9	$3.53
	Other Institution	7	$1.45

Facility Use	N	$/RSF
Headquarters	126	$1.76
Other Offices	44	$1.95
Multi-Usage	30	$1.82
Factory/Plant	21	$2.45
Research	20	$3.35
Health Care	7	$2.04
Computer Center	6	$2.64
Education/Training	8	$1.38

MAINTENANCE COSTS

Maintenance Cost by Age of Facility

Country/Region	N	$/RSF
Canada	27	C$2.31
New England	18	$2.34
Northeast	23	$2.36
Mid-Atlantic	25	$1.89
Southeast	14	$1.57
Midwest	26	$2.51
North Central	23	$1.79
Heartland	17	$1.71
South Central	22	$1.91
Mountain	25	$2.43
Pacific	46	$2.26

Age of Facility	$/RSF
Less than 4 years	$1.70
5 – 10	$1.88
11 – 15	$1.75
16 – 20	$1.75
21 – 25	$2.31
26 – 30	$2.64
More than 30	$2.20

N = 267

Maintenance Cost as a Percentage of Replacement Cost

The Building Research Board of the National Research Council published a 1990 report in which they recommended an appropriate budget for routine maintenance of a facility should fall within a range of two to four percent of current replacement value. When the same measurement is applied to the respondents for this study, more than 75 percent of the sample was out of range, the majority under two percent.

Percentile	$/RSF
99	12.1%
95	5.3%
90	4.0%
75	2.2%
50	1.3%
25	0.7%
10	0.5%
5	0.3%
1	0.2%
Mean	1.9%

N = 150

MAINTENANCE COSTS

Maintenance activities can be placed into several categories including preventive, repair, deferred and corrective maintenance. To simplify the completion of the survey, respondents were asked to provide only preventive and repair maintenance costs. In most cases, dollars spent on repair maintenance exceeded those spent on preventive maintenance.

Repair Maintenance

Percentile	$/RSF
99	$6.24
95	$3.51
90	$2.79
75	$1.37
50	$0.73
25	$0.40
10	$0.18
5	$0.11
1	$0.03
Mean	$1.20

N = 213

Preventive Maintenance

Percentile	$/RSF
99	$3.82
95	$2.73
90	$2.06
75	$1.05
50	$0.60
25	$0.24
10	$0.10
5	$0.05
1	$0.02
Mean	$0.84

N = 210

Repair vs. Preventive Maintenance

Facility Use	N	Preventive Maintenance	Repair Maintenance
Headquarters	100	45%	55%
Other Offices	33	38%	62%
Multi-Usage	25	49%	51%
Factory/Plant	17	31%	69%
Research	14	45%	55%
Health Care	7	32%	68%
Computer Center	6	80%	20%
Education/Training	7	34%	66%

Repair vs. Preventive Maintenance by Facility Age

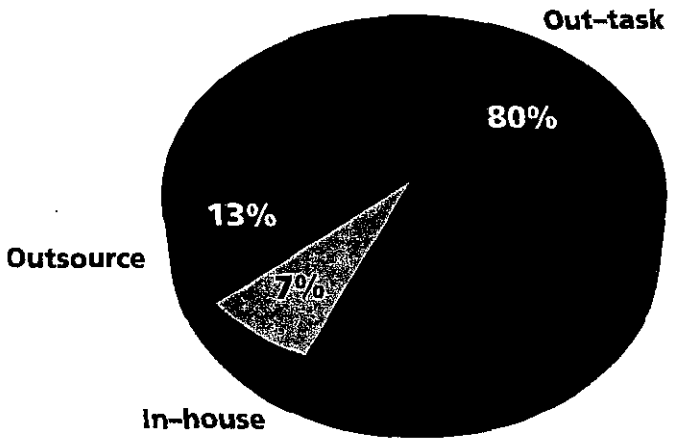
Facility Age	N	Preventive Maintenance	Repair Maintenance
Less than 4 years	15	50%	50%
5 – 10	40	48%	52%
11 – 15	31	46%	54%
16 – 20	41	48%	52%
21 – 25	27	44%	56%
26 – 30	24	42%	58%
More than 30 years	26	36%	64%

MAINTENANCE COSTS

Outsourcing of Maintenance Function

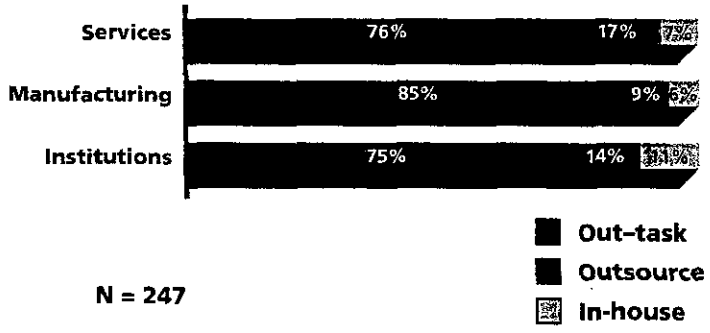
To gain a better understanding of the maintenance function, respondents were asked how they handle the staffing relative to outsourcing. The following categories were provided:

Outsource – Hire a full-service, single source vendor to provide many services bundled together
Out-task – Hire individual, specialized vendors to provide one or more functions
In-house – All services are provided internally



N = 247

Outsourcing of Maintenance Function by Industry Type



N = 247

Maintenance Function	N	$/RSF
Outsourced	32	$1.80
Out-tasked	180	$2.14
In-house	15	$2.81

Facilities that outsource this function generally paid less for maintenance than those that out-task or provide maintenance internally.

JANITORIAL COSTS

Janitorial costs are associated with cleaning offices, other work areas, restrooms and common support spaces. These costs include wages, benefits, staff support, supervision, administration, supplies and non-capital equipment (e.g., brooms, floor polishers), as well as costs associated with contract service providers. Janitorial costs vary among different types of facilities and geographic regions.

Percentile	$/RSF
99	$4.54
95	$2.54
90	$1.96
75	$1.36
50	$1.01
25	$0.72
10	$0.52
5	$0.35
1	$0.18
Mean	$1.17

BEST IN CLASS

N = 268

Facility Use	N	$/RSF
Headquarters	126	$1.14
Other Offices	42	$1.15
Multi-Usage	30	$1.06
Factory/Plant	23	$1.17
Research	20	$1.08
Health Care	7	$2.31
Computer Center	7	$0.87
Education/Training	8	$1.38

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	15	$1.25
	Information Services	10	$1.13
	Energy Utilities	21	$1.10
	Health Care	11	$1.93
	Insurance	15	$1.11
	Professional Services	12	$1.47
	Trades/Retail	11	$0.97
	Transportation	4	$1.00
MANUFACTURING	Motor Vehicles	17	$1.02
	Chemicals	9	$1.22
	Consumer Products	16	$1.44
	Computers	47	$1.08
	Energy/Mining	7	$0.85
	Other Manufacturing	7	$1.17
INSTITUTIONS	Education	5	$0.95
	Government	35	$1.16
	Research	9	$0.89
	Other Institution	7	$1.08

Country/Region	N	$/RSF
Canada	27	C$1.19
New England	17	$0.98
Northeast	24	$1.42
Mid-Atlantic	26	$1.22
Southeast	15	$0.95
Midwest	25	$1.27
North Central	24	$1.01
Heartland	18	$1.23
South Central	21	$1.37
Mountain	24	$1.09
Pacific	46	$1.20

INDIRECT COSTS

Indirect costs are associated with maintaining roads, walkways, grounds, landscaping, parking lots and garages. Respondents were asked to include costs for service contracts, expenses and employee compensation associated with landscaping, paving, patching, line-painting, snow removal and de-icing, and exterior lighting. To make the measurement more meaningful, indirect costs are divided by the number of developed acres instead of rentable square footage. The median cost per developed acre is $2,541, and the average is $3,605. Headquarter and health care facilities have some of the highest indirect costs.

Percentile	$/Developed Acre
99	$15,580
95	$9,424
90	$8,187
75	$5,208
50	$2,541
25	$1,061
10	$100
5	$42
1	$11
Mean	$3605

N = 129

Facility Use	N	$/Developed Acre
Headquarters	51	$4,746
Other Offices	23	$2,891
Multi-Usage	19	$2,929
Factory/Plant	15	$2,199
Research	11	$2,580
Health Care	4	$6,085
Education/Training	3	$2,698

Country/Region	N	$/Developed Acre
Canada	9	$8,267
New England	9	$6,866
Northeast	11	$5,283
Mid-Atlantic	17	$3,576
Southeast	6	$2,806
Midwest	18	$3,418
North Central	7	$3,602
Heartland	9	$4,567
South Central	12	$6,648
Mountain	12	$3,380
Pacific	28	$3,760

	Industry Type	N	$/Developed Acre
SERVICES	Banking/Investment	6	$4,863
	Information Services	5	$5,301
	Energy Utilities	6	$2,773
	Health Care	5	$5,468
	Insurance	8	$4,401
	Trades/Retail	5	$2,920
MANUFACTURING	Motor Vehicles	12	$4,316
	Chemicals	5	$4,315
	Consumer Products	6	$2,769
	Computers	33	$2,956
	Energy/Mining	4	$2,915
	Other Manufacturing	4	$3,538
INSTITUTIONS	Government	10	$3,892
	Research	7	$3,096

Section 6:

UTILITY COSTS AND USAGE

UTILITY COST
UTILITY USAGE

UTILITY COSTS

Utility costs comprise a large part of a facility's operating costs, as much as 40 percent. The average utility cost is $2.51 per square foot.

Percentile	$/RSF
99	$7.66
95	$4.77
90	$4.26
75	$3.02
50	$2.24
25	$1.51
10	$1.17
5	$0.94
1	$0.50
Mean	$2.51

BEST IN CLASS

N = 273

Facility Use	N	$/RSF
Headquarters	128	$2.36
Other Offices	44	$2.07
Multi-Usage	31	$3.04
Factory/Plant	23	$4.00
Research	20	$3.65
Health Care	7	$2.13
Computer Center	7	$5.06
Education/Training	8	$1.36

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	17	$2.32
	Information Services	11	$2.46
	Energy Utilities	21	$2.24
	Health Care	11	$2.02
	Insurance	15	$2.49
	Professional Services	12	$2.05
	Trades/Retail	11	$3.28
	Transportation	4	$2.15
MANUFACTURING	Motor Vehicles	19	$2.63
	Chemicals	9	$4.41
	Consumer Products	16	$4.09
	Computers	47	$3.36
	Energy/Mining	8	$2.37
	Other Manufacturing	7	$2.98
INSTITUTIONS	Education	5	$1.44
	Government	34	$1.64
	Research	9	$3.25
	Other Institution	7	$1.66

Country/Region	N	$/RSF
Canada	29	C$5.41
New England	18	$3.66
Northeast	23	$3.62
Mid-Atlantic	25	$2.99
Southeast	14	$2.81
Midwest	27	$2.37
North Central	24	$1.77
Heartland	18	$2.09
South Central	23	$2.59
Mountain	25	$2.42
Pacific	46	$3.23

UTILITY COSTS

To better gauge what is spent on various utilities, respondents were asked to divide their utility costs into seven categories. These include fuel oil, gas, electricity, central steam, central cooling, water and sewage. Most of the respondents could provide costs for gas, electricity and water but not all could for fuel oil, central steam and central cooling. More than 50 percent of the sample included sewage cost with water cost.

Percentile	Fuel Oil	Gas	Electricity	Central Steam	Central Cooling	Water	Sewage
99	—	$1.61	$7.70	—	—	$1.18	$4.51
95	$0.46	$0.93	$4.15	$2.88	$5.30	$0.40	$0.40
90	$0.39	$0.62	$3.34	$1.94	$2.63	$0.29	$0.28
75	$0.18	$0.36	$2.64	$1.01	$1.60	$0.15	$0.11
50	$0.03	$0.19	$1.84	$0.46	$0.67	$0.09	$0.05
25	$0.01	$0.09	$1.29	$0.33	$0.13	$0.05	$0.02
10	$0.002	$0.03	$0.78	$0.04	$0.06	$0.03	$0.02
5	$0.001	$0.01	$0.62	$0.03	$0.03	$0.02	$0.01
1	$0.001	$0.003	$0.16	$0.03	$0.03	$0.01	$0.01

BEST IN CLASS

Facility Use	Fuel Oil	Gas	Electricity	Central Steam	Central Cooling	Water	Sewage
Headquarters	$0.08	$0.22	$1.88	$0.53	$0.96	$0.10	$0.07
Other Offices	$0.20	$0.18	$1.75	$0.37	$0.24	$0.09	$0.07
Multi-Usage	$0.07	$0.32	$2.29	—	$0.92	$0.18	$0.10
Factory/Plant	$0.47	$0.36	$2.89	—	—	$0.32	$0.57
Research	$0.10	$0.52	$2.47	$1.10	—	$0.16	$0.20
Health Care	$0.02	$0.41	$1.84	—	—	$0.17	—
Computer Center	—	—	$4.27	—	—	$0.10	$0.07
Education/Training	—	$0.26	$0.88	—	—	$0.07	—

UTILITY COSTS

When comparing electricity costs among regions, there are some major differences. The Northeast and Pacific regions reported some of the highest electrical costs.

Industry Type	Fuel Oil	Gas	Electricity	Central Steam	Central Cooling	Water	Sewage
Services	$0.07	$0.22	$1.99	$0.70	$1.06	$0.11	$0.10
Manufacturing	$0.15	$0.32	$2.51	$1.74	$1.20	$.018	$0.22
Institutions	$0.25	$0.26	$1.40	$0.44	—	$0.10	$0.07

Country/Region	Fuel Oil	Gas	Electricity	Water	Sewage
Canada	—	C$0.36	C$1.88	C$0.12	—
New England	$0.22	$0.38	$2.30	$0.12	$0.11
Northeast	$0.15	$0.28	$2.63	$0.12	$0.10
Mid-Atlantic	$0.08	$0.44	$2.06	$0.13	$0.07
Southeast	—	$0.15	$2.28	$0.08	$0.07
Midwest	—	$0.29	$1.79	$0.12	$0.07
North Central	$0.03	$0.32	$1.25	$0.09	$0.16
Heartland	—	$0.16	$1.71	$0.12	$0.04
South Central	—	$0.26	$2.18	$0.22	$0.14
Mountain	$0.09	$0.21	$2.01	$0.15	$0.09
Pacific	—	$0.23	$2.73	$0.15	$0.10

UTILITY USAGE

Electricity usage was provided in kilowatt hours divided by gross square feet. When tracked by facility usage, research and computer centers are the heaviest users of electricity.

Electricity Usage

Percentile	kWh/GSF
99	93.83
95	68.70
90	51.46
75	39.98
50	26.50
25	18.73
10	10.75
5	8.20
1	2.33
Mean	30.55

BEST IN CLASS

N = 192

Electricity Usage by Facility

Facility Use	N	kWh/GSF
Headquarters	88	26.82
Other Offices	29	28.27
Multi-Usage	25	37.76
Factory/Plant	14	35.78
Research	18	40.37
Computer Center	4	44.39
Education/Training	6	21.02

Gas usage was provided as cubic feet per gross square feet. One MCF is equal to 10 therms.

Gas Usage

Percentile	MCF/GSF
99	1.320
95	.6614
90	.3913
75	.1608
50	.0500
25	.0185
10	.0057
5	.0018
1	.0001
Mean	.1543

BEST IN CLASS

N = 129

Gas Usage by Facility

Facility Use	N	MCF/GSF
Headquarters	51	.1052
Other Offices	20	.1521
Multi-Usage	19	.0825
Factory/Plant	13	.1413
Research	13	.1375

Section 7:

ENVIRONMENTAL AND LIFE-SAFETY COSTS

ENVIRONMENTAL COSTS
LIFE-SAFETY COSTS

ENVIRONMENTAL COSTS

Environmental costs are associated with providing satisfactory levels of air and water quality and waste removal, as well as ensuring regulatory compliance with federal, state/provincial and municipal laws. Environmental costs also include consulting fees, monitoring and waste removal. A few organizations did not incur environmental costs, but instead generated funds through recycling.

When broken down by industry, those within the manufacturing sector incur some of the highest environmental costs. Respondents managing research facilities also experience high environmental costs. The higher costs are due to the higher incidence of monitoring and hazardous waste removal expenses.

Percentile	$/RSF
99	$5.50
95	$1.04
90	$0.59
75	$0.30
50	$0.13
25	$0.05
10	$0.02
5	$0.01
1	—
Mean	$0.30

BEST IN CLASS

N = 225

Facility Use	N	$/RSF
Headquarters	100	$0.20
Other Offices	37	$0.18
Multi-Usage	28	$0.40
Factory/Plant	20	$0.39
Research	20	$0.88
Health Care	7	$0.34
Computer Center	4	$0.25
Education Training	6	$0.78

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	14	$0.12
	Information Services	9	$0.09
	Energy Utilities	12	$0.12
	Health Care	10	$0.29
	Insurance	12	$0.07
	Professional Services	10	$0.27
	Trades/Retail	8	$0.36
	Transportation	4	$0.16
MANUFACTURING	Motor Vehicles	18	$0.22
	Chemicals	8	$0.46
	Consumer Products	14	$0.40
	Computers	42	$0.40
	Energy/Mining	5	$0.10
	Other Manufacturing	7	$0.04
INSTITUTIONS	Education	4	$0.03
	Government	27	$0.16
	Research	9	$0.55
	Other Institution	5	$0.07

Country/Region	N	$/RSF
Canada	23	C$0.19
New England	15	$0.17
Northeast	21	$0.38
Mid-Atlantic	22	$0.23
Southeast	10	$0.09
Midwest	19	$0.51
North Central	21	$0.36
Heartland	16	$0.15
South Central	16	$0.21
Mountain	22	$0.55
Pacific	39	$0.33

ENVIRONMENTAL COSTS

Despite falling prices for recycled commodities, more than 25 percent of the sample generated revenue from recycled materials.

Percentiles	Monitoring	Consulting Fees	Solid Waste Removal	Hazardous Waste Removal	Recycling
99	$1.98	—	$1.04	$2.03	$0.33
95	$0.24	$0.31	$0.33	$0.98	$0.12
90	$0.15	$0.19	$0.21	$0.37	$0.07
75	$0.04	$0.04	$0.12	$0.15	$0.03
50	$0.02	$0.03	$0.07	$0.05	$0.007
25	$0.01	$0.01	$0.04	$0.01	–$0.005
10	$0.005	$0.006	$0.01	$0.004	–$0.04
5	$0.002	$0.004	$0.01	$0.002	–$0.14
1	$0.001	$0.001	$0.002	$0.001	–$1.49

BEST IN CLASS

N = 225

Facility Use	N	Monitoring	Consulting Fees	Solid Waste Removal	Hazardous Waste Removal	Recycling
Headquarters	100	$0.03	$0.07	$0.09	$0.04	$0.01
Other Offices	37	$0.04	$0.07	$0.09	$0.14	$0.03
Multi-Usage	28	$0.06	$0.06	$0.10	$0.12	—
Factory/Plant	20	$0.07	$0.05	$0.15	$0.23	—
Research	20	$0.30	$0.12	$0.08	$0.45	$0.01
Health Care	7	—	—	$0.10	$0.24	$0.01
Education/Training	6	$0.01	—	$0.01	$0.02	$0.01

LIFE-SAFETY COSTS

Life-safety costs are those associated with compliance to building regulations required by federal (OSHA), state/provincial and municipal laws to maintain and operate the facility. These include safety equipment, fire and egress requirements such as signage, exit doors and building alarms/ strobes, mandated training, nurses, doctors and emergency medical technician crews. The average life-safety cost is $0.25 per rentable square foot; the median is $0.11. As anticipated, factories and research facilities experience some of the highest life-safety costs. Facilities within the research and computer industry sectors exhibit higher than average life-safety costs.

Percentile	$/RSF
99	$1.62
95	$1.14
90	$0.66
75	$0.31
50	$0.11
25	$0.04
10	$0.02
5	$0.01
1	$0.003
Mean	$0.25

N = 193

Facility Use	N	$/RSF
Headquarters	94	$0.30
Other Offices	29	$0.21
Multi-Usage	24	$0.41
Factory/Plant	16	$0.45
Research	18	$0.37
Health Care	4	$0.10
Computer Center	4	$0.27
Education Training	4	$0.05

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	11	$0.31
	Information Services	6	$0.16
	Energy Utilities	13	$0.25
	Health Care	5	$0.16
	Insurance	10	$0.08
	Professional Services	9	$0.07
	Trades/Retail	9	$0.22
MANUFACTURING	Motor Vehicles	13	$0.13
	Chemicals	6	$0.19
	Consumer Products	13	$0.16
	Computers	38	$0.52
	Energy/Mining	5	$0.21
	Other Manufacturing	6	$0.28
INSTITUTIONS	Government	22	$0.15
	Research	9	$0.47
	Other Institution	5	$0.08

Country/Region	N	$/RSF
Canada	18	C$0.19
New England	13	$0.19
Northeast	19	$0.26
Mid-Atlantic	15	$0.30
Southeast	8	$0.10
Midwest	15	$0.49
North Central	22	$0.26
Heartland	11	$0.17
South Central	15	$0.18
Mountain	21	$0.44
Pacific	38	$0.45

Section 8:

SUPPORT AND PROJECT COSTS

SECURITY COSTS
PROJECT COSTS
- NUMBER OF PROJECTS
- CAPITAL VS. EXPENSED PROJECTS
- EXPENSED PROJECT COSTS
- DOLLAR VALUE FOR CAPITALIZATION
- TYPE OF CONSTRUCTION

SPACE PLANNING COSTS
EMPLOYEE AMENITIES COSTS

SECURITY COSTS

Percentile	$/RSF
99	$5.42
95	$2.78
90	$2.06
75	$1.20
50	$0.73
25	$0.29
10	$0.12
5	$0.05
1	$0.006
Mean	$0.95

BEST IN CLASS

N = 243

Security costs are the only costs that have experienced a slight decrease since the *Benchmarks II* report. Security costs include direct labor and contract services. Manufacturers are more likely to experience higher security costs.

Facility Use	N	$/RSF
Headquarters	117	$0.82
Other Offices	38	$1.16
Multi-Usage	30	$0.93
Factory/Plant	19	$1.22
Research	19	$1.14
Health Care	7	$0.87
Computer Center	5	$1.01
Education Training	5	$0.90

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	14	$0.68
	Information Services	11	$0.98
	Energy Utilities	20	$0.79
	Entertainment/Media	4	$0.97
	Health Care	10	$0.74
	Insurance	14	$0.89
	Professional Services	13	$0.50
	Trades/Retail	10	$0.53
MANUFACTURING	Motor Vehicles	17	$1.19
	Chemicals	8	$0.59
	Consumer Products	17	$1.27
	Computers	43	$1.26
	Energy/Mining	7	$0.52
	Other Manufacturing	6	$1.26
INSTITUTIONS	Government	24	$0.96
	Research	9	$1.51
	Other Institution	5	$0.88

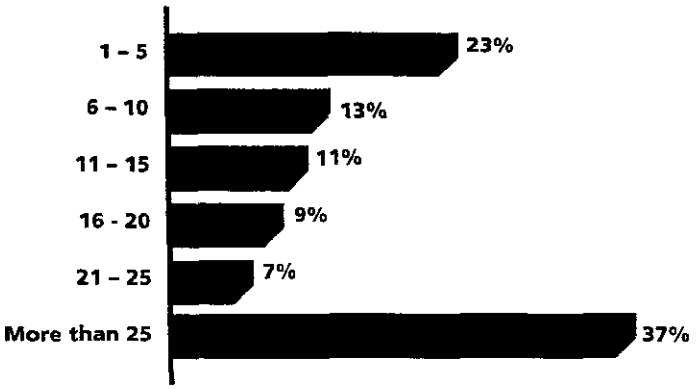
Country/Region	N	$/RSF
Canada	27	C$0.63
New England	17	$0.84
Northeast	24	$1.06
Mid-Atlantic	22	$0.88
Southeast	12	$0.85
Midwest	26	$0.76
North Central	21	$0.90
Heartland	12	$0.88
South Central	18	$0.94
Mountain	21	$1.32
Pacific	42	$1.30

PROJECT COSTS

Project costs are (leasehold) improvements or the reconfiguration of existing space to meet new needs or requirements. Some project costs may be considered capital expenditures. Improvements and reconfigurations can be initiated by the facility management group or by other operating units within the organization. They can be budgeted in advance or in response to some unforeseen condition or circumstances. Respondents were instructed to include expensed project costs associated with relocation costs with cost of moves, detailed on page 35.

Number of Projects

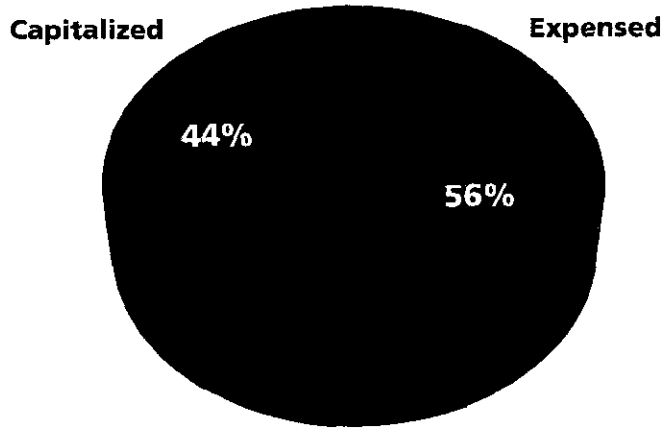
In addition to keeping their facilities operating, facility managers oversee numerous projects. The median number of projects managed in a 12-month period is 18. Half of the respondents manage more than 15 projects per year.



Median = 18

Capital vs. Expensed Projects

Of these projects, 44 percent are capitalized and the remainder are expensed.



N = 229

PROJECT COSTS

Expensed Project Costs

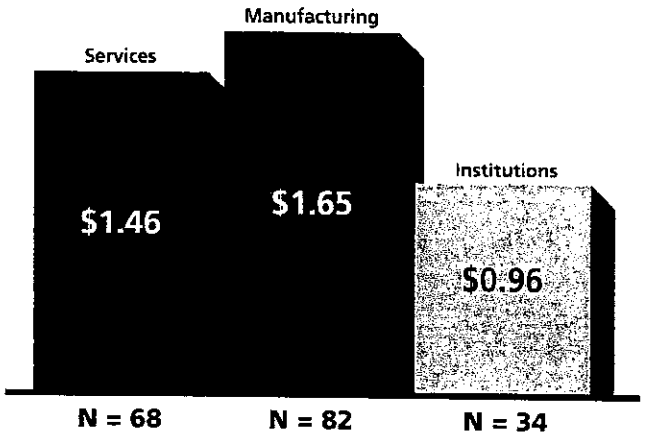
Percentile	$/RSF
99	$10.93
95	$4.76
90	$3.02
75	$1.59
50	$0.64
25	$0.24
10	$0.11
5	$0.05
1	$0.01
Mean	$1.27

BEST IN CLASS

N = 184

Facility Use	N	$/RSF
Headquarters	85	$1.48
Other Offices	27	$1.84
Multi-Usage	25	$0.80
Factory/Plant	16	$1.72
Research	16	$1.44
Health Care	4	$0.75
Computer Center	4	$1.38
Education Training	4	$1.52

Expensed Project Costs by Industry Type

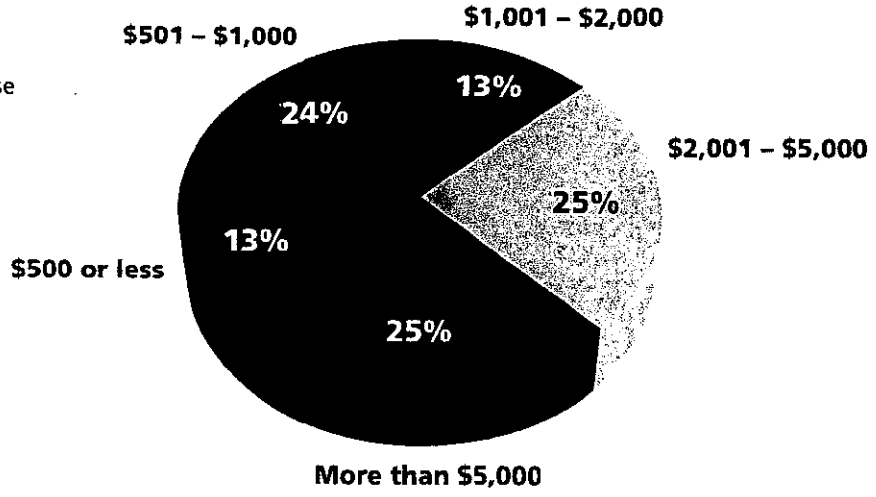


Country/Region	N	$/RSF
Canada	18	C$0.82
New England	13	$1.21
Northeast	18	$2.08
Mid-Atlantic	17	$1.44
Southeast	9	$2.79
Midwest	17	$0.63
North Central	15	$0.87
Heartland	12	$0.98
South Central	17	$1.17
Mountain	17	$2.17
Pacific	30	$2.01

PROJECT COSTS

Dollar Value for Capitalization

When asked at what dollar value do projects become capital expenditures, the median response was $2,000.

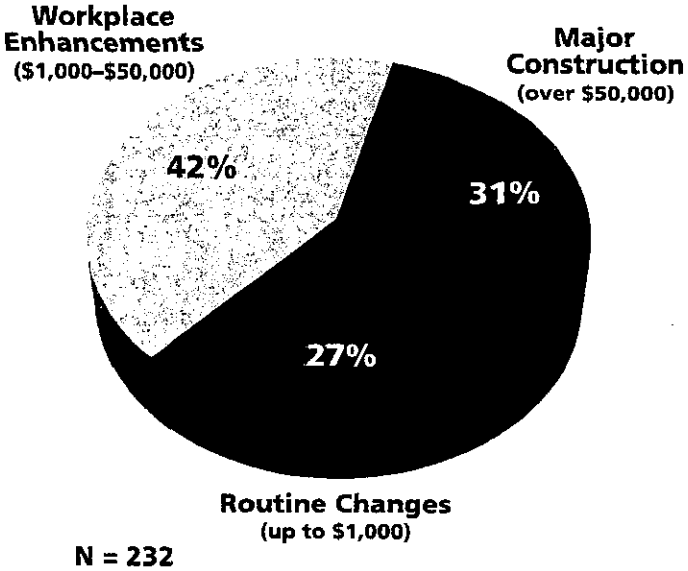


N = 207

Mean = $5,375
Median = $2,000

Type of Construction

To further define the types of projects undertaken, respondents were asked to categorize their projects into three categories based upon cost. These categories include routine changes, workplace enhancements and major construction.



N = 232

SPACE PLANNING COSTS

Percentile	$/RSF
99	$7.94
95	$2.19
90	$1.49
75	$0.68
50	$0.29
25	$0.13
10	$0.04
5	$0.02
1	$0.009
Mean	$0.63

N = 189

The following are included in space planning costs: facility planning, furniture management, relocation support, CAD/CAFM as well as labor and service contracts. With higher churn rates, it is no surprise to see higher space planning costs. Those managing professional offices, such as accounting, management consulting and law firms, experienced the highest costs for space planning.

Facility Use	N	$/RSF
Headquarters	91	$0.86
Other Offices	32	$0.79
Multi-Usage	26	$0.49
Factory/Plant	15	$0.33
Research	15	$0.42
Computer Center	6	$0.50

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	14	$0.35
	Information Services	10	$0.75
	Energy Utilities	17	$0.96
	Health Care	4	$0.10
	Insurance	10	$0.50
	Professional Services	11	$1.27
	Trades/Retail	7	$0.33
MANUFACTURING	Motor Vehicles	15	$0.74
	Chemicals	5	$0.28
	Consumer Products	13	$0.69
	Computers	39	$0.49
	Energy/Mining	7	$0.39
	Other Manufacturing	6	$0.36
INSTITUTIONS	Government	14	$0.32
	Research	9	$0.37

Country/Region	N	$/RSF
Canada	17	C $0.44
New England	14	$0.60
Northeast	13	$2.25
Mid-Atlantic	14	$0.25
Southeast	12	$0.60
Midwest	21	$0.48
North Central	15	$0.78
Heartland	10	$2.32
South Central	19	$0.60
Mountain	21	$0.36
Pacific	33	$0.45

EMPLOYEE AMENITIES COSTS

Many organizations provide employee amenities such as cafeterias, outside eating areas, fitness centers, lounges, libraries, fleet service and parking. In many cases, facility management is responsible for these amenities. Not many of the respondents could provide information for each of these amenities, so the costs listed below have been combined into one cost for employee amenities.

Percentile	$/RSF
99	$6.42
95	$2.90
90	$2.42
75	$1.23
50	$0.49
25	$0.16
10	$0.06
5	$0.03
1	$0.01
Mean	$0.88

N = 140

Facility Use	N	$/RSF
Headquarters	71	$0.82
Other Offices	21	$0.89
Multi-Usage	19	$1.13
Factory/Plant	7	$0.28
Research	14	$1.00

Country/Region	N	$/RSF
Canada	16	C$1.04
New England	13	$1.58
Northeast	11	$0.80
Mid-Atlantic	12	$0.53
Southeast	6	$0.22
Midwest	8	$1.30
North Central	11	$0.66
Heartland	8	$1.43
South Central	12	$0.72
Mountain	14	$1.11
Pacific	28	$0.73

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	6	$0.66
	Information Services	9	$0.92
	Energy Utilities	11	$1.66
	Insurance	10	$1.06
	Professional Services	6	$0.97
	Trades/Retail	8	$0.86
MANUFACTURING	Motor Vehicles	6	$0.93
	Chemicals	5	$1.14
	Consumer Products	13	$0.96
	Computers	26	$0.50
	Energy/Mining	6	$0.93
INSTITUTIONS	Government	12	$0.77
	Research	9	$0.82

Section 9:

FINANCIAL INDICATORS

REPLACEMENT VALUE OF FACILITY
LEASE TYPE AND COST
COST OF OPERATIONS
COST OF PROVIDING THE FIXED ASSET
OCCUPANCY COST
FINANCIAL RATIOS
TOTAL ANNUAL FACILITY COSTS

REPLACEMENT VALUE OF FACILITY

Percentile	$/RSF
99	$476.29
95	$263.07
90	$229.17
75	$173.18
50	$119.72
25	$79.84
10	$58.47
5	$39.19
1	$12.85
Mean	$133.58

N = 149

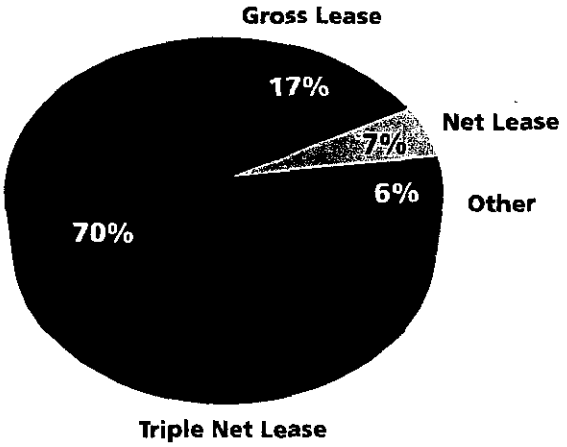
The average current replacement value for owned facilities is $133.58 per rentable square foot. The median cost is $119.72.

Facility Use	N	$/RSF
Headquarters	74	$118
Other Offices	23	$138
Multi-Usage	18	$105
Factory/Plant	6	$157
Research	12	$165
Computer Center	4	$92

LEASE TYPE AND COST

Lease Type

As mentioned on page 12, 23 percent of the respondents lease their facilities. Of those who lease, 70 percent use a triple-net lease. Another 17 percent pay rent through a gross lease. The remainder use either a net lease or some other type. To determine which costs are covered in these three types of leases, please refer to the definitions section on pages 5-7.



N = 99

By region, lease costs are the highest in the New England, Midwest and Mid-Atlantic states. These regions are primarily comprised of respondents in Boston, Chicago and Washington, DC, and surrounding areas.

Country/Region	N	$/RSF
Canada	7	C$22.45
New England	11	$16.45
Northeast	9	$11.70
Mid-Atlantic	6	$12.91
Southeast	4	$14.45
Midwest	7	$10.70
North Central	9	$10.68
Heartland	6	$13.47
South Central	12	$11.07
Mountain	10	$7.38
Pacific	20	$7.96

Triple-Net Lease Cost

When compared to the previous *Benchmark II* report, triple-net lease costs have decreased on average by 25 percent.

Percentile	$/RSF
99	$28.21
95	$24.05
90	$19.94
75	$15.36
50	$8.35
25	$4.13
10	$1.43
5	$0.66
1	$0.17
Mean	$10.25

BEST IN CLASS

N = 66

COST OF OPERATIONS

Percentile	$/RSF
99	$21.81
95	$12.81
90	$10.17
75	$7.64
50	$5.37
25	$3.93
10	$3.10
5	$2.57
1	$0.87
Mean	$6.25

BEST IN CLASS

N = 266

Four cost categories—maintenance, janitorial, indirect and utility—when added together result in a facility's cost of operations, (i.e., the costs associated with a facility's daily operation). Cost of operations is a common measurement for comparing facilities. The cost of operations shown in the charts below may not necessarily equal the cost of the four components listed earlier since each number is based upon an individual average.

Facility Use	N	$/RSF
Headquarters	127	$5.59
Other Offices	43	$5.67
Multi-Usage	30	$6.23
Factory/Plant	21	$8.43
Research	19	$8.18
Health Care	7	$6.95
Computer Center	7	$8.37
Education/Training	7	$4.00

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	16	$5.99
	Information Services	11	$5.55
	Energy Utilities	21	$5.20
	Entertainment/Media	4	$10.92
	Health Care	11	$7.77
	Insurance	15	$6.04
	Professional Services	13	$5.35
	Trades/Retail	11	$8.14
	Transportation	4	$5.28
MANUFACTURING	Motor Vehicles	19	$7.24
	Chemicals	8	$7.15
	Consumer Products	16	$7.18
	Computers	45	$7.01
	Energy/Mining	7	$4.94
	Other Manufacturing	7	$6.26
INSTITUTIONS	Education	4	$3.69
	Government	32	$4.52
	Research	9	$8.12
	Other Institution	7	$4.56

Country/Region	N	$/RSF
Canada	27	C$11.58
New England	18	$6.38
Northeast	24	$7.98
Mid-Atlantic	24	$5.85
Southeast	14	$5.52
Midwest	26	$6.99
North Central	23	$4.87
Heartland	17	$5.17
South Central	22	$6.42
Mountain	25	$6.13
Pacific	46	$7.36

COST OF PROVIDING THE FIXED ASSET

Facility managers often find it difficult to derive the cost of providing the fixed asset. This cost is the sum of all annual business capital costs and charges not directly related to the facility's operation. It includes leasehold improvement amortization, asset write-off/disposal, taxes on building and contents (not product), insurance (fire/extended coverage), furniture/equipment depreciation charges, interest expense for lease or interest expense on purchase of building assets, but not the actual purchased capital asset value (capitalization). Government facilities have lower costs, for many are self-insured and do not pay taxes.

Percentile	$/RSF
99	$29.03
95	$21.51
90	$15.86
75	$9.36
50	$5.06
25	$2.47
10	$1.59
5	$0.75
1	$0.16
Mean	$7.15

BEST IN CLASS

N = 220

Facility Use	N	$/RSF
Headquarters	104	$7.89
Other Offices	33	$6.87
Multi-Usage	27	$5.38
Factory/Plant	17	$7.74
Research	19	$6.81
Health Care	5	$9.95
Computer Center	7	$6.32
Education/Training	4	$4.89

Country/Region	N	$/RSF
Canada	22	C$8.83
New England	18	$7.00
Northeast	18	$8.24
Mid-Atlantic	18	$8.33
Southeast	10	$6.37
Midwest	22	$5.45
North Central	20	$7.47
Heartland	10	$7.15
South Central	21	$5.57
Mountain	20	$6.23
Pacific	40	$8.82

	Industry Type	N	$/RSF
SERVICES	Banking/Investment	13	$5.60
	Information Services	9	$6.54
	Energy Utilities	18	$6.69
	Health Care	8	$6.80
	Insurance	12	$10.30
	Professional Services	13	$11.50
	Trades/Retail	9	$8.06
MANUFACTURING	Motor Vehicles	18	$6.91
	Chemicals	7	$15.92
	Consumer Products	16	$6.72
	Computers	41	$8.23
	Energy/Mining	7	$4.20
	Other Manufacturing	7	$6.36
INSTITUTIONS	Government	18	$2.90
	Research	8	$4.27
	Other Institution	6	$5.97

OCCUPANCY COST

Percentile	$/RSF	Cost per Occupant
99	$30.87	$15,024
95	$25.42	$10,896
90	$23.48	$8,690
75	$16.91	$6,192
50	$10.82	$3,916
25	$7.78	$2,491
10	$5.62	$1,732
5	$4.57	$1,180
1	$2.09	$542
Mean	$12.66	$4,655

BEST IN CLASS

Occupancy cost is the total cost incurred by an organization to provide space for operations. It includes the cost of operations plus the cost of providing the fixed asset. This cost is broken down by rentable area and cost per occupant. The occupancy cost per rentable square foot averages $12.66; the median is $10.82. When broken down by the number of occupants, the average occupancy cost is $4,655 per occupant and the median is $3,916 per occupant.

Facility Use	$/RSF	Cost per Occupant
Headquarters	$13.75	$4,403
Other Offices	$11.73	$3,715
Multi-Usage	$11.60	$5,330
Factory/Plant	$13.67	$4,379
Research	$16.15	$7,422
Health Care	$16.99	$6,483
Computer Center	$14.69	$4,786
Education/Training	$8.57	$3,709

	Industry Type	$/RSF	Cost per Occupant
SERVICES	Banking/Investment	$13.49	$3,416
	Information Services	$12.10	$4,526
	Energy Utilities	$11.90	$4,612
	Health Care	$15.42	$5,822
	Insurance	$16.36	$4,114
	Professional Services	$16.85	$4,137
	Trades/Retail	$14.81	$5,473
MANUFACTURING	Motor Vehicles	$14.13	$4,778
	Chemicals	$22.86	$8,644
	Consumer Products	$14.88	$4,563
	Computers	$14.18	$5,395
	Energy/Mining	$9.27	$3,956
	Other Manufacturing	$12.63	$4,092
INSTITUTIONS	Government	$7.05	$3,010
	Research	$12.54	$6,743
	Other Institution	$10.42	$3,847

Country/Region	N	$/RSF	Cost per Occupant
Canada	22	C$15.20	C$4,942
New England	17	$13.38	$5,121
Northeast	18	$16.22	$5,882
Mid-Atlantic	19	$14.18	$5,767
Southeast	10	$11.89	$4,935
Midwest	23	$12.44	$4,319
North Central	20	$12.34	$3,900
Heartland	12	$12.32	$4,053
South Central	21	$11.99	$3,288
Mountain	23	$12.36	$4,230
Pacific	39	$16.18	$5,677

FINANCIAL RATIOS

The facility operating budget ratio is the total facilities budget as a percentage of the organization's total budget. The median is 5.2 percent; the average is 8.5 percent. There is a wide range of responses for this percentage because some participants compared one facility to the organization's entire budget while others were comparing an entire portfolio of facilities to the organization's budget.

Facility Operating Budget Ratio

Percentile	%
99	35.7%
95	27.6%
90	23.1%
75	12.0%
50	5.20%
25	2.10%
10	1.00%
5	0.34%
1	0.04%
Mean	8.53%

BEST IN CLASS

N = 127

Facility Operating Budget Against Facility Assets Ratio

Percentile	%
99	44.00%
95	35.65%
90	28.46%
75	19.25%
50	11.55%
25	6.65%
10	2.30%
5	0.45%
1	0.003%
Mean	13.67%

BEST IN CLASS

N = 110

Total Annual Facility Cost to Sales Ratio

A new ratio added to this report compares the facility's total annual costs to sales or revenue of the organization.

Percentile	%
99	43.79%
95	16.96%
90	7.55%
75	2.55%
50	0.65%
25	0.16%
10	0.02%
5	0.01%
1	0.01%
Mean	2.90%

BEST IN CLASS

N = 173

TOTAL ANNUAL FACILITY COSTS

Percentile	$/RSF	Cost per Occupant	Cost per Work Station
99	$48.03	$18,591	$19,308
95	$40.14	$14,875	$15,665
90	$35.44	$12,904	$14,073
75	$26.88	$9,637	$10,055
50	$19.38	$6,442	$6,699
25	$11.52	$4,089	$4,166
10	$8.09	$2,798	$2,569
5	$6.41	$2,098	$2,026
1	$3.51	$1,361	$1,238
Mean	$20.52	$7,185	$7,524

BEST IN CLASS

All of the costs outlined in this report are included in the total annual facility cost. These include occupancy costs, lease costs, support costs, environmental costs and life-safety costs. Below, total annual facility costs are listed by rentable square footage, occupant and workstation. Once again, government facilities operate at a lower cost which is partially due to their reduced costs of providing the fixed asset.

Facility Use	N	$/RSF	Cost per Occupant	Cost per Work Station
Headquarters	110	$20.36	$6,781	$6,932
Other Offices	40	$21.48	$6,897	$6,204
Multi-Usage	28	$18.84	$8,247	$9,022
Factory/Plant	19	$20.27	$6,534	$11,039
Research	20	$24.22	$10,708	$10,644
Health Care	7	$20.59	$6,963	—
Computer Center	7	$21.63	$6,639	$6,724
Education/Training	6	$12.21	$3,525	—

	Industry Type	N	$/RSF	Cost per Occupant	Cost per Work Station
SERVICES	Banking/Investment	14	$21.71	$6,250	$5,882
	Information Services	12	$22.23	$6,706	$5,625
	Energy Utilities	19	$24.36	$8,682	$7,688
	Health Care	11	$18.62	$7,148	$11,902
	Insurance	12	$20.49	$5,185	$4,802
	Professional Services	12	$23.45	$7,031	$10,388
	Telecommunications	4	$20.46	$5,664	—
	Trades/Retail	10	$23.53	$8,394	$8,625
MANUFACTURING	Motor Vehicles	18	$17.35	$7,224	$8,255
	Chemicals	9	$26.24	$10,535	$6,666
	Consumer Products	17	$24.86	$7,767	$8,529
	Computers	41	$21.95	$7,781	$8,576
	Energy/Mining	7	$18.63	$8,887	—
	Other Manufacturing	7	$23.50	$7,314	$9,587
INSTITUTIONS	Government	24	$11.60	$5,106	$4,911
	Research	9	$23.89	$10,917	$12,640
	Other Institution	6	$13.08	$5,794	—

Country/Region	N	$/RSF	Cost per Occupant	Cost per Work Station
Canada	23	C$25.17	C$9,830	C$10,197
New England	19	$26.19	$9,504	$10,170
Northeast	23	$25.54	$7,309	$6,556
Mid-Atlantic	24	$21.74	$7,872	$12,642
Southeast	12	$20.35	$7,453	$8,164
Midwest	25	$16.79	$5,934	$6,685
North Central	22	$17.95	$5,393	$5,284
Heartland	12	$20.24	$7,362	—
South Central	21	$21.68	$8,966	$9,091
Mountain	23	$18.96	$7,219	$5,958
Pacific	42	$24.37	$9,364	$12,297

The *Benchmarks III* questionnaire was developed over a four-month period. Members of IFMA's research committee examined questions used in previous surveys and determined which questions to repeat. Along with IFMA staff, the committee examined the definitions and cost categories used in previous surveys and worked to clarify many terms. To help respondents calculate space, a diagram of IFMA/ASTM space measurement standard and space measurement worksheet was added. The final questionnaire was 20 pages, which included a three-page glossary. This survey was substantially shorter than the previous survey administered in 1993.

The survey was mailed in May 1996 to IFMA's 8,465 North American Professional members. A postage paid envelope accompanied the survey. Respondents were asked to provide information on their facilities for a 12-month period. Approximately 290 surveys were returned during the summer and fall 1996. A letter was sent to previous participants to encourage a larger response in December 1996. By February 1997, 346 surveys had arrived. A total of 303 surveys were deemed usable for tabulation purposes. A completion rate of 60 percent was considered usable.

The data was analyzed using SPSS/PC+™ software. Extreme high and low values were omitted from data analysis to prevent the data from being skewed. Responses were subjected to 100 percent verification, meaning each data point was entered twice to ensure accuracy. Additional calculations were made if information was provided. For example, cost per rentable area was calculated if the respondent provided both the cost and square footage. If data was out of range, the respondent was called to determine how the information was derived. In many cases, new calculations were performed and the information was subsequently entered. Canadian cost data was converted to U.S. currency by multiplying cost by a factor of .75.

Procedures used for analysis include univariate procedures such as frequencies, cross tabulations, mean comparisons and descriptives. This report contains the results of those analyses deemed to be of most interest to IFMA members. *Benchmarks III* is a self-report survey. All data including respondent identification was voluntary.

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