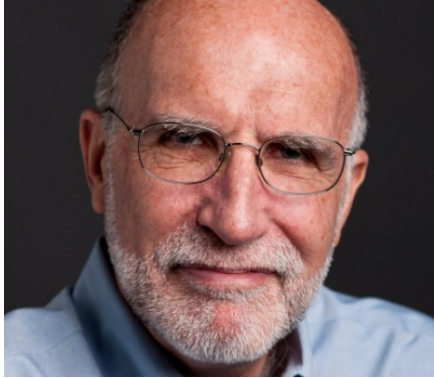


# Best Practices for Space Management

By Michael Schley





## About Michael Schley

- Began career as registered architect.
- Founded FM:Systems in 1984
- Retired from CEO role in 2017.
- Currently Chairman of the FM:Systems Board of Directors

### Industry Activities

- Named IFMA Fellow in 2008
- Chaired the AIA CAD Layer Guideline Task Force
- Serve as Chair of the IFMA Foundation Board of Trustees
- Serve on FM Advisory Councils for Georgia Tech and Cornell University

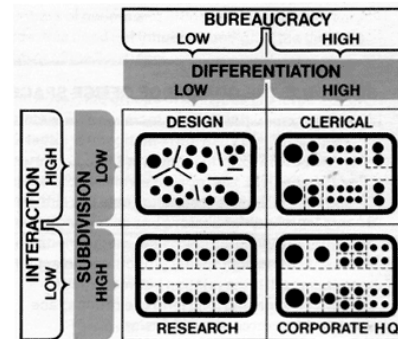


# 50 Years of Offices in 5 minutes



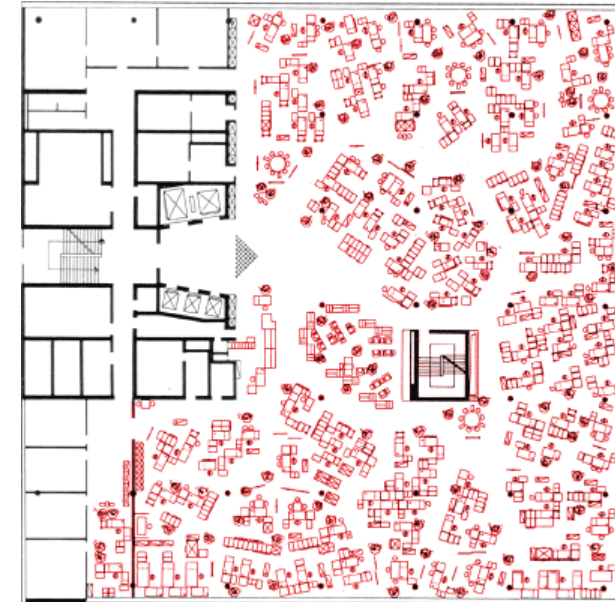
Typical Mid-Century Office Space

# 1960's - Bürolandschaft

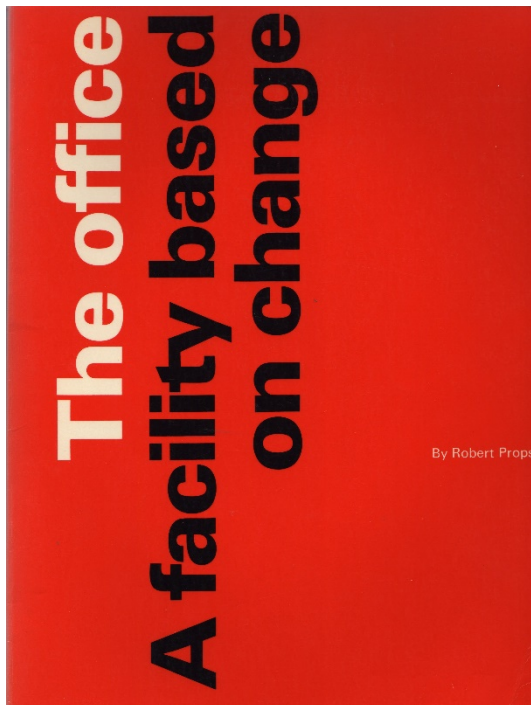


Derived from [organisational theory](#), the rationale of bürolandschaft was based on a more complex scientific 'model' of 'human relations' rather than [Taylorism](#). For the first time the widely diverse nature of kinds of office work was recognised and the Quickborner team devised criteria for fitting a particular kind of office to a specific type of layout.

<http://www.carusostjohn.com/media/artscouncil/history/burolandschaft/index.html>



# Herman Miller- Action Office - 1968



The new system included plenty of work surfaces and display shelves; partitions were a part of it, intended to provide privacy and places to pin up works in process.



Herman Miller's Action Office 2 circa 1976

All photos courtesy of Herman Miller

# 1980's - The Computers are Coming!



# 2000's – Space Management Standardized

- 8x8 Workstations
- 10x15 Offices
- Conference Rooms
- Printer Stations
- Filing
- Break Rooms
- Track Vacancies
- Chargebacks



# 2010's - The computers are leaving!

- Portable Devices
- Ubiquitous Wi-Fi, 4G, 5G
- Work from Anywhere, Anytime



# 2010's - New Ways of Working

- Shared Desking
- Hoteling
- Co-Working
- Workplace Strategy

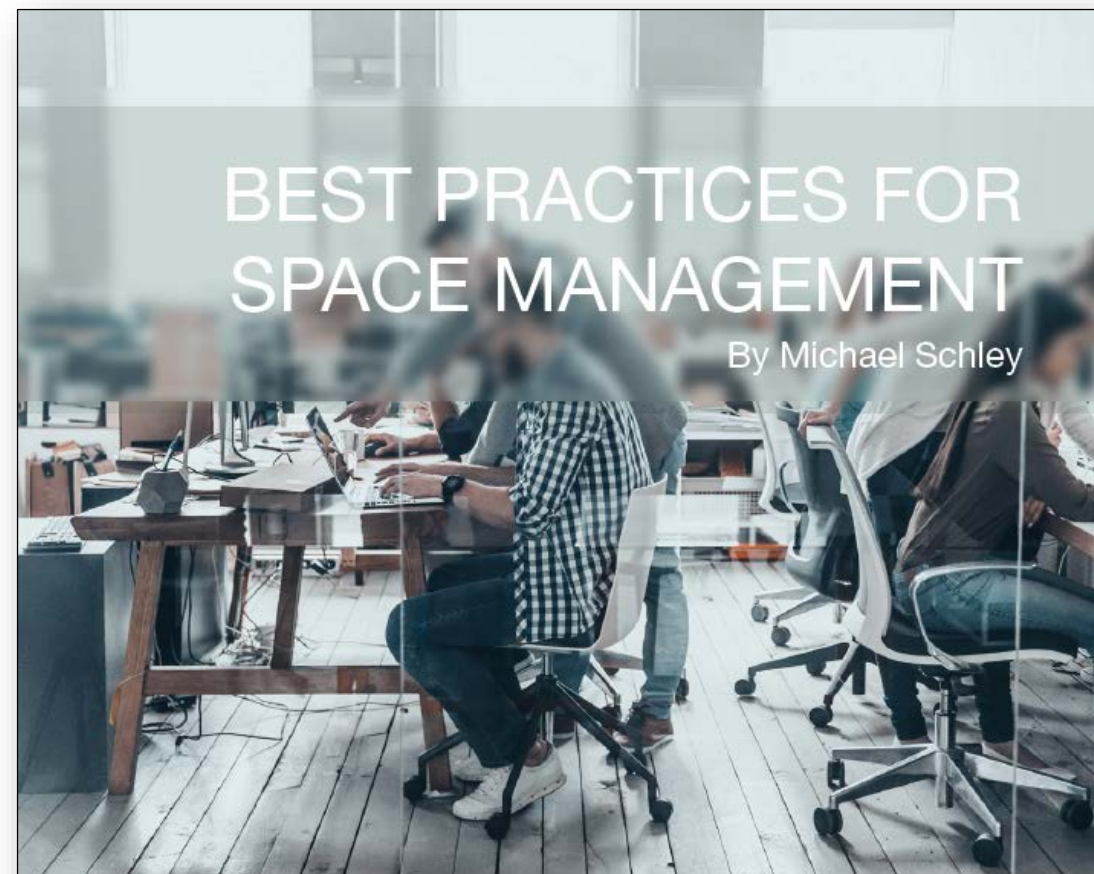


# Why a Best Practice?

1. Formalize what we know.
2. Share our experience.
3. Help new customers get a fast and solid start.
4. Provide a guide on emerging trends.

## What the whitepaper is not:

1. It is not a how-to guide.
2. It is not an advertisement.
3. It is not intended to cover all situations.



## Introduction

---

Understanding space is a critical component of effective facility management practices. It is the foundation for occupancy management as well as move management, strategic planning, room reservations, facility maintenance and real estate management. The purpose of this whitepaper is to share the best practices that have developed in the profession over the past several decades, explain key decisions that organizations must make and discuss current trends in the use of workspace.

# Benefits of Space Management

- Efficiency
- Effectiveness
- Foundation

## Benefits of Space Management

Space is at the heart of facility management and effective space management is key to professional facility management. Understanding the types of spaces within a real estate portfolio and knowing how they are used is essential in a well-managed facility operation.

A good space management system will provide three major benefits:

### Efficiency

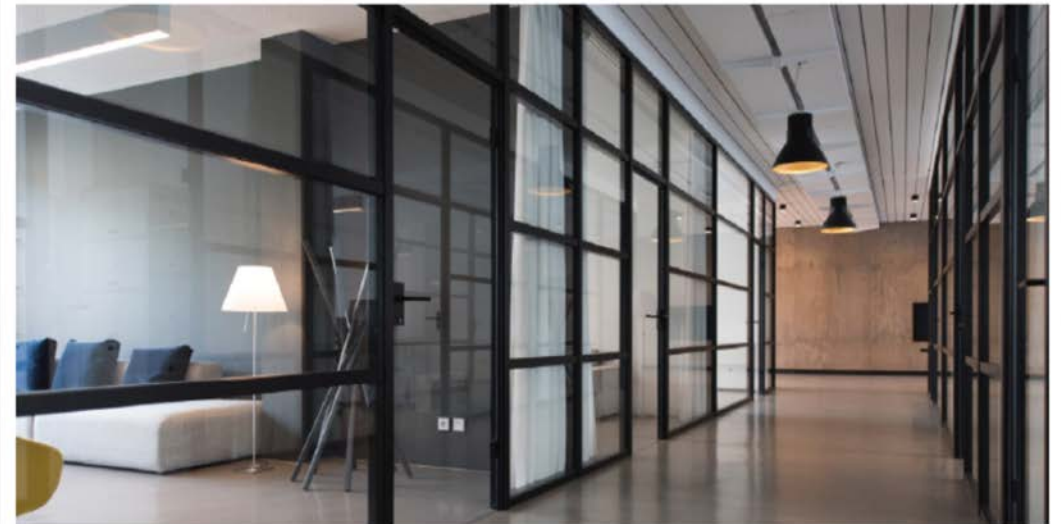
Information about how space is being used or not used provides the basis for decisions on expansion, reduction or changes. These actions can produce major savings in real estate expenses by reducing wasted space and producing a better fit between space demand and supply.

### Effectiveness

Information about how space is occupied provides guidance for departmental assignment, allowing work groups to work in proximity in space suitable to their tasks. Knowing locations of available workspaces supports a smooth on-boarding process for new employees and avoids the frustration having to search for empty desks.

### Foundation

The information collected for space management will serve as the base for most other functions in facility management including move management, facility maintenance and strategic planning.



# Top Ten Things Every Facility Manager Should Know About Space

## Definitions

- Seat – An office or workstation that can be assigned to an occupant on a full-time or shared basis.
- Occupant – An employee, contract worker or temporary worker who is assigned a seat on a full-time, shared basis or on-demand basis.

A good space management system will provide a facility manager with essential space information for benchmarking against other organizations, planning for future growth and evaluating a building's efficiency. We find that there are ten key measures of space that every facility manager should know.

---

### 1. Total Area

Although a more detailed breakdown of space is useful, knowing at any given time how many square feet or square meters an organization uses is essential information. The choice of area measurement will depend upon the type of facility. Gross square feet or square meters are useful for all building types. For office buildings rentable square feet or square meters are equally useful.

### 2. Capacity

The number of office and workstation seats in a facility. This is a measure of the number of occupants that can be assigned in a given building.

### 3. Occupant Count

The number of occupants assigned to a given building.

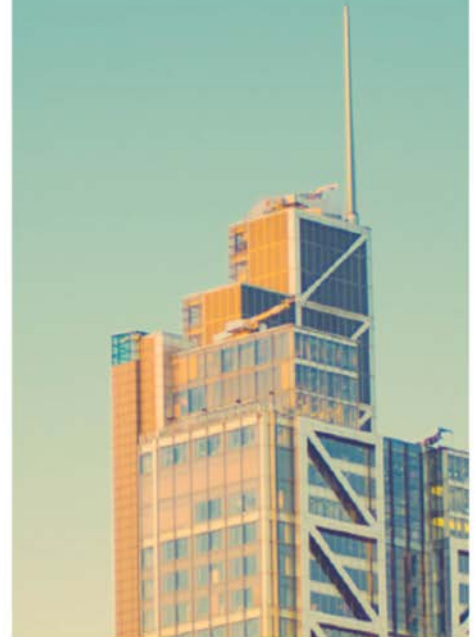
### 4. Occupancy Rate

The percentage of seats assigned to occupants. The calculation is produced by dividing occupant count by capacity.

### 5. Vacancy Rate

The percentage of seats not assigned to occupants. The calculation is produced by subtracting the occupancy rate from 100%.

THE TOP TEN  
THINGS  
EVERY  
FACILITY  
MANAGER  
SHOULD  
KNOW  
ABOUT  
SPACE



# Top Ten Things Every Facility Manager Should Know About Space

1. Total Area
2. Capacity – Number of office and workstation seats.
3. Occupant Count – Number of Occupants assigned to building
4. Occupancy Rate – Occupied Seats / Total Seats
5. Vacancy Rate – Vacant Seats / Total Seats

A good space management system will provide a facility manager with essential space information for benchmarking against other organizations, planning for future growth and evaluating a building's efficiency. We find that there are ten key measures of space that every facility manager should know.

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# Top Ten Things Every Facility Managers Should Know About Space

6. Planned Density – SF/Seat as shown in space plan.
7. Space Assignment by Occupant – Who sits where
8. Vacant Seats – Where are my vacant workstations
9. Space Assignment by Department
10. Open Plan/Closed Plan Percent – by seat

## 6. Planned Density

The average square feet or square meters per seat. The choice of area measurement will depend upon the type of facility. For office buildings rentable square feet or square meters are recommended since the results can be compared to published benchmark surveys. For other building types, gross square feet or square meters would be more applicable. The measurement is calculated by dividing the total area of a building by the building's capacity. A related calculation is Actual Density which is a measure of average area divided by occupancy.

## 7. Space Assignment by Occupant

A list of all occupants and their assigned workstation or workstations.

## 8. Vacant Seats

A list of office and workstation seats not currently assigned to occupants.

## 9. Space Assignment by Department

A list of all departments and their assigned workstations and associated square feet or square meters.

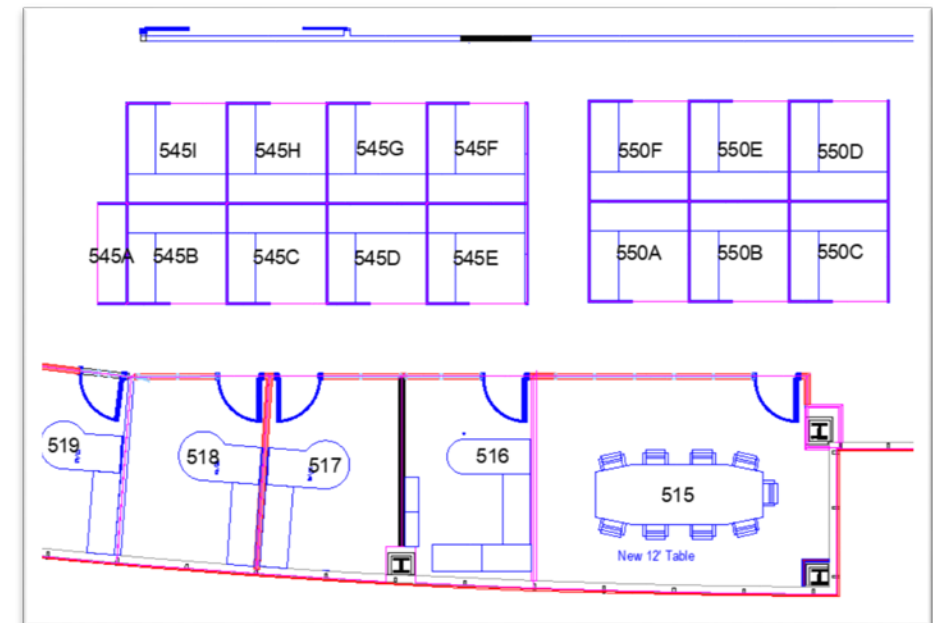
## 10. Open Plan/Closed Office Percent

The number of open-plan workstations divided by the total number of seats (including offices, desks and open-plan workstations) in a given building.



# Space Inventory Data

- Space Hierarchy
  - Region
  - Site
  - Building
  - Floor
  - Space
- Coding Systems for buildings and spaces (room numbers)



# Classifying Space – Space Types

- For office space, there is no accepted standard. We suggest using our default.
- For university space, we suggest FICM, the classification system defined by the US federal government.



## Classifying Space – Space Types

Remembering that spaces serve a range of functions, attributes are used to designate general classifications of space. For some facility types such as higher education, an industry-defined system for space classifications exists. In the United States, colleges and universities use the Facilities Inventory and Classification Manual (FICM) coding for classifying space according to use.

For office space, there is no generally accepted classification system. Space classification systems have been developed by Omniclass (Table 13-Spaces by Function) and by OSCRE. However, neither standard has yet to see significant adoption. Furthermore, the OSCRE standard is not a public standard and is available only to companies that have paid to join OSCRE.

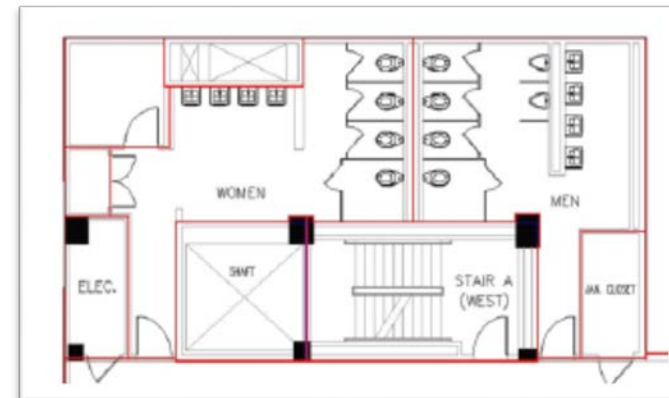
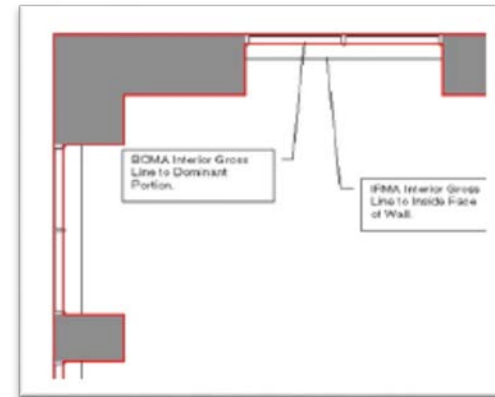
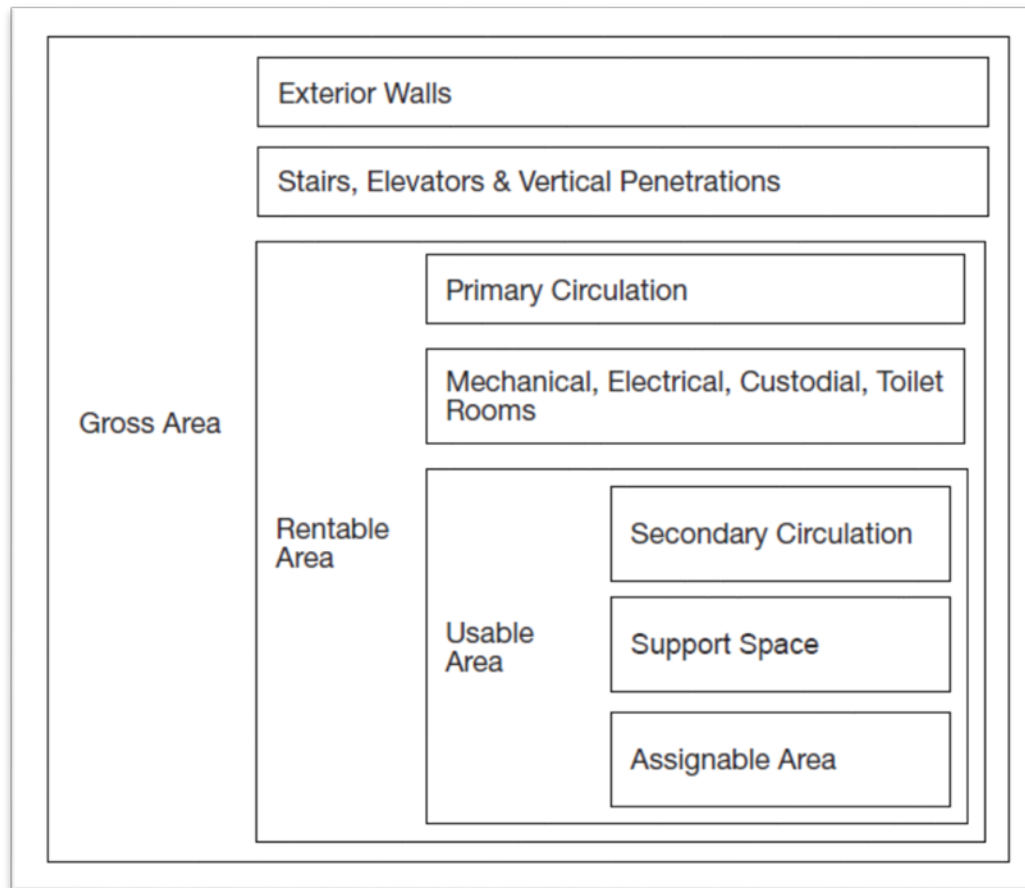
FM:Systems recommends a practical classification system that is easily understood. In FM:Interact, the system is implemented using the Space Type field in Space Inventory and it is a required field for all spaces. The list of valid Space Type values uses an initial letter of "P" for personnel space, "S" for support space and "X" for core or building support space. The partial list below shows typical space type codes for office facilities.

P-OFFC	Office
P-WKS	Workstation
S-CONF	Conference Room
S-BREAK	Break Room
S-LOBBY	Lobby
X-ELEV	Elevator
X-STAIR	Stairway
X-WALL	Exterior Walls

**Decision:** The default list is a suggested starting point. The organization implementing space management should modify this to accommodate the particular spaces in the organization's facilities.

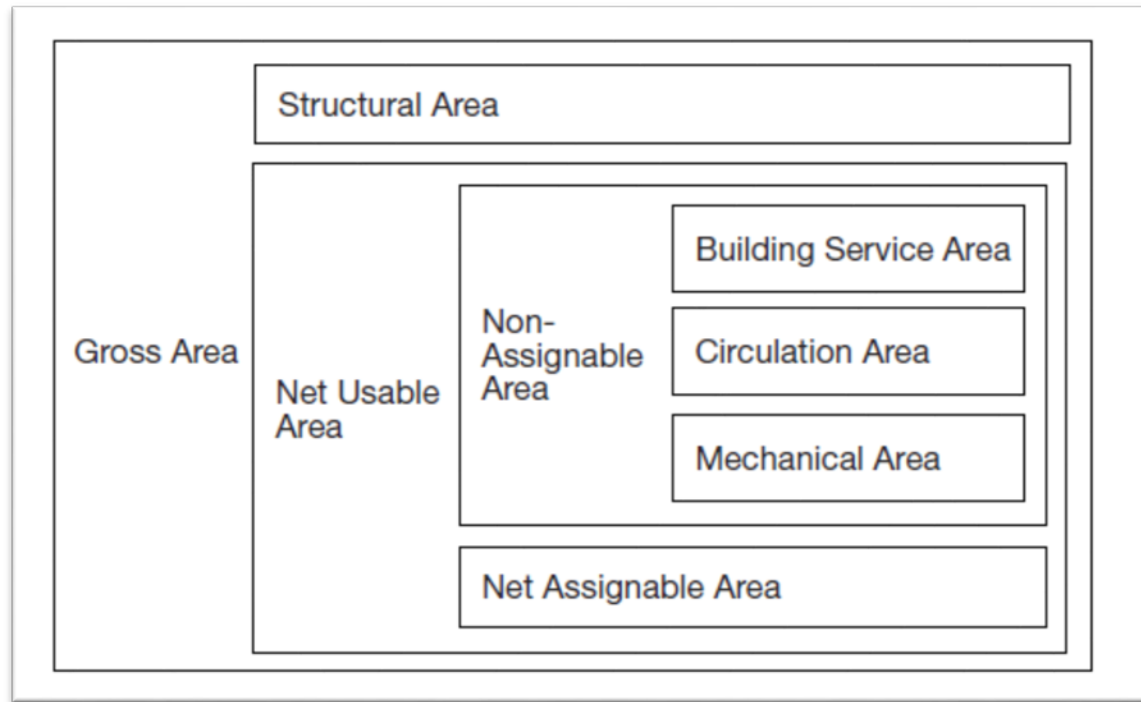
# Understanding Space Measurement

## Office Space – Use BOMA and IFMA



# Understanding Space Measurement

## University Space – Use FICM



# Graphics Sources for Space Inventory – CAD and BIM

## Preparing AutoCAD Drawings

- Locate all floor plan drawings
- Establish naming and file storage conventions.
- Review for accuracy
- Layer standards
- Organize reference files
- Determine version of AutoCAD

## Preparing BIM Models

- Streamline model
- Consolidate linked models
- Create area boundaries
- Link equipment of interest

### Preparing AutoCAD Drawings for Space Management

Implementing a space management system requires accurate, organized and consistent CAD drawings. Although some organizations may already have a good system for achieving this, FM:Systems will typically find that organizations need to undertake this as a project as part of the implementation work. In those cases, the general steps are as follows:

1. Identify and locate CAD drawings for each floor of the portfolio.
2. If necessary, establish naming and file storage conventions for all drawings.
3. Review all drawings for accuracy with respect to walls, doors, columns and workstation boundaries (open-plan workstation panels).
4. Establish CAD layer guidelines and bring all drawings into reasonable conformance.
5. Decide if reference files will be maintained for related disciplines. If so, establish a naming and filing convention for all reference files and bring reference files into conformance.
6. Determine the version of AutoCAD to standardize on and update all drawings to that version.



Add boundary lines known as polylines around all rooms, workstations and spaces placing lines in accordance with the area measurement standard selected. See Appendix 1 for specific information.

Clearly, establishing the system for CAD drawings may entail a good amount of effort. It is an important part of the process though and a well-managed system of CAD drawings will provide great value in the future as the graphic base for all space management activity.

This is an activity that can be contracted to a CAD services firm. Where the work is substantial, FM:Systems recommends using a service firm to avoid delays in implementation. It is worth noting that the work described in the seven steps above can be achieved without connection to the FM:Interact database, making it easier to contract this work to service providers who specialize in CAD or BIM services.

# Special Topics

- Using Space Types for Shared and Prorated Space
  - Decide what to share, how to share it.
- Populating the Space Inventory Database
  - Data Imports
  - Integration with CAD and BIM

## Using Space Types to Designate Shared and Prorated Space

As discussed above, space management entails the definition of several groupings and calculations of space. For office space, these are Gross, Rentable, Usable and Assignable. For college and university space these are Gross, Net Assignable, Building Service Area, Circulation Area, Mechanical Area and Structural Area.

In FM:Interact, these calculations are driven by designation of certain space types as common spaces. For example, in calculating Rentable area using the BOMA standard on a multi-tenant floor, each tenant receives a share of the common spaces serving all tenants on a floor such as the such as common circulation, toilet rooms and mechanical rooms. Depending on the version of the BOMA standard being used, there may also be allocations for common areas shared by the entire building such as the main floor lobby.

*Decision: The organization implementing a space management system will need to decide how common spaces are allocated within buildings.*

## Populating the Space Inventory Database

Once basic decisions have been made about coding for buildings and floors, space types and area measurement standards an organization can begin data entry for the key space inventory elements of the system. This is logically done as follows:

**Region and Site Codes** – If additional hierarchical levels have been defined for grouping buildings such as sites or regions, values for these tables should be entered.

**Building Codes** – Values for identifying code, description and optionally address should be entered for all buildings. For organizations with a large number of buildings in their real estate portfolio, this might best be done by data import.

**Floor Codes and Drawing Names** – Values for all floors for all buildings should be entered along with the name of the associated CAD file.

**Space Types** – The default space type list should be edited as appropriate.

**Room and Space Data** – This data is based on CAD floor plans or BIM models with CAD or BIM defining the geometry of each space and the space management database being the authoritative source on various attributes of the space.



# Space and Room Attributes

- Space ID
- Space Name
- Capacity
- Space Standards

A1	Large Private Office
A2	Medium Private Office
A3	Small Private Office
B1	Large Workstation
B2	Small Workstation
C1	Large Conference Room
C2	Medium Conference Room
C3	Small Conference Room
P1	Large Project Room

Judgment should be used to keep the list specific enough to be informative but not so detailed that it becomes unusable. The intent is that a system user can judge the adequacy of a space based

- Customer-Specific Attributes

## Space and Room Attributes

### Space ID

Each space or room needs an identification number or code that is unique by buildings.

### Space Name

This information is useful to understand the character and purpose of a space, particularly when the space type and space standard codes are not obvious. The name should be general in nature such not imply a specific department or occupant. In other words, the field should have values such as "Office" or "Conference Room" rather than "John Smith Office" or "Finance Conference Room."

### Capacity

An essential attribute of each space is its capacity for assignment to occupants. When totaled, this will tell us the capacity for occupancy by floor, building, campus or organization. Matching this against the total occupancy will tell us the number of unassigned (vacant) workplaces.

The capacity for meeting rooms should be tracked in a separate field so as to not be confused with workspace capacity.

Generally, the capacity value of an office or workstation will be 1, but in the case of a shared office, the value could be 2 or greater. In the case of a workstation that is not meant for assignment such as a visitor's station, the capacity might be set to 0.

In cases where workspaces are used for multiple shifts, the capacity of the space at a given point in time should be used. For example, a desk that is used by three different people on three different shifts should have a capacity of 1 since only one person can occupy the space at a time.



# Occupant Data

- Organizational Hierarchy
- Occupant Attributes
  - Unique Identifier
  - Employee ID
  - First and Last Name
  - Email
  - Phone Number(s)
  - Title
  - Department
  - Network User Name

## Occupant Data

The second major information system in space management is Occupant Data. Occupant Data comprises data on all individuals in the organization and all organizational units.

### Defining the Organizational Hierarchy

The organizational hierarchy is a standard way that companies use to understand the relationship between functional units. This information is used to produce roll-up reports that summarize space by higher levels of the organization and graphic floor plan views that depict rollups visually.

#### Creating the Organizational Hierarchy

The organizational hierarchy is ideally created by data import. The most common source of data is the finance department that maintains the list of all valid organization codes. These might be called cost centers, organizational ID's, department codes or some other term. The essential characteristic is that they provide a unique code and description for each organizational unit. Generally, these sources of data will also contain data on the reporting structure. Part of the implementation process is to create a routine that will import this data on a regular basis, updating codes as they are added or when the reporting structure changes.

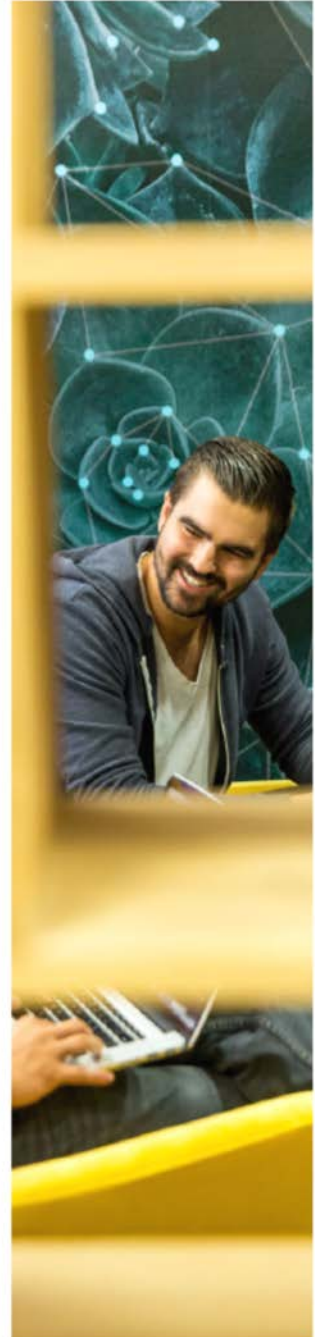
### Defining Attributes for Occupants

Data about people is at the heart of occupancy management. The space management system must include a list of all individuals who occupy space.

This data is almost always available from an external source and it should be obtained through a data import routine. Since the data is dynamic, the import routine should be run regularly, ideally nightly. In theory, import routines could be run more often or even in real-time, but practically speaking there are natural lag times in the entry of personnel data at the source that makes a daily import the most practical.

#### Unique Identifier

Just as with buildings, floors, spaces and groups, occupants need unique, stable identifying codes. This allows us to retain data about a person even if their name, department or position change.



# Special Topics

- Job Code Attribute – Can be useful for space assignment
- Contract & Temporary Workers – May need to track “manually” (Not usually in HR system).
- Remote Employees – Track them, but tag them as remote.
- Location Attribute – FM department will need to collect this data.

## Defining Attributes for Occupants

It usually makes sense to track any occupant attributes available from the source data that might be relevant to space management. At a minimum these would include:

- Employee ID
- First and Last Name
- Email
- Phone Number(s)
- Title
- Department or Organization Code
- Network User Name where the occupant will also be a user of the system.

### Job Code Attribute

Some organizations track employees by a job code or classification that is associated with a space standard. This is valuable information since it can be used by the facility manager to evaluate the best space assignment. This is done by associating each job code with a space standard. In organizations where the job codes do not relate to space standards, the codes can still be useful information.

### Contract and Temporary Employees

Typically, the list of occupants of a building who are regular employees can be obtained by way of a data import or integration with an organization's human resources (HR) system. Occupants who are contract employees or temporary employees may be missing from the HR list. Additional data feeds from the network login directory system or the security badge system can often be used to produce a complete list of occupants. When these systems are not available or not suitable, users may need to maintain the list of contractors and temporary employees by manually editing the occupant list.

### Remote Employees

There may be value in tracking remote employees in the system. In these cases, a “pseudo” building code designating a general remote location can be used.

### Location Attribute

An important attribute that typically does not exist in external data, at least not in a reliable state, is the employee location. In other words, we must find out who sits where. The FM:Interact system uses the employee Space ID fields to track this information. Part of the process of implementing a space management system is the task of determining and entering data on employee location. A recommended practice is to use the help of departmental liaisons, tasking them with using the floor plan view to associate employees in their department to workspaces. Special attention should be paid to individuals who have multiple space assignments. Another method is to collect initial data in a spreadsheet, then use a data upload function to populate the location attribute.

We do sometimes encounter HR systems that carry employee location data. This information can be useful as a cross-check but typically has a low degree of accuracy. Furthermore, location values are typically not validated against a list of valid locations, so there is usually a good amount of invalid data. A recommended practice is to import this attribute into a location reference field that can be used for information but not used as validated data.

# Data Maintenance

- Sites, Buildings and Floors – Tie to process for real estate “on-boarding”
- Spaces – Driven by updates of CAD drawings or BIM models.
- Space Attributes
- Occupancy Data – HR import

## Keeping Space Management Data Accurate

Information in space management systems needs to be maintained if the systems is to be useful. Over time, information changes and it is essential to establish procedures for updating data.

### Buildings and Floors

Changes to buildings and floors are fairly infrequent. Updates can be done on an as-needed basis. A procedure should be established for “on-boarding” a new building since other corporate data systems may be affected. A procedure should also be established for adding new floors, in particular with respect to CAD drawings or BIM models.

### Updates to Spaces

Changes that entail reconfiguration of walls, doors or open-plan furniture panels should be done in the source CAD floor plan files or source BIM model. Once the change is made in the floor plan graphics, floor plans should be re-published to establish accurate floor plans in the space management system.

Changes that entail changes in space attributes or classifications can be done in CAD or BIM, but updates can also be done directly in the space management system. In the FM:Interact system a user could make these changes in the data views or the floor plan views.

Employee data and organizational hierarchy data should be maintained with regular data imports. Employee location data is best maintained by using move management software that uses move events to update occupancy data.

## Associating Spaces with Organizational Units

Besides associating spaces with occupants, it is important to associate spaces with organizational units. In most cases, the occupant's group and the group to which the space is assigned are the same. In other words, if John Smith in Finance is assigned to workspace 5102, generally space 5102 is associated with the Finance department.

Users will need to specifically assign support spaces like project rooms and dedicated conference rooms to groups. Users will also need to manage spaces that are shared by several groups, specifying the percentage of the room associated with each respective group.

Users also need a way to deal with exceptions, cases where the space is charged to a different group than the assigned occupant.

Color-coded floor plans are a tremendous aid in communicating departmental space assignments and obtaining confirmation or correction of these assignments from the departments occupying the space.

# Chargebacks

- Value of chargebacks.
- Process issues:
  - Frequency of calculating and billing.
  - Common spaces
  - Providing information to departmental managers to verify data.



## Chargebacks

Many organizations calculate the space used by each department and produce internal charges to each department for the space the department uses. Chargeback systems can result in departments using space more responsibly and provide an incentive to give back space that is not needed.

Some organizations that don't use space chargebacks still find value in calculating and reporting the cost of space by department to better communicate the expense of occupancy.

Chargeback systems require well-defined processes and procedures. Among the issues to be determined are:

- What is the frequency for calculating chargebacks? We find that a monthly cycle is the most common.
- What types of spaces will be considered prorated common spaces and included in the space charge?

Our experience is that most support spaces like conference rooms are included in the chargeback. Special purpose areas like cafeterias, training facilities and data centers are not prorated as common areas but charged to their respective cost centers.

- What information needs to be provided to departmental managers so that they can verify their occupancy?

Generally, a monthly report including a color-coded floor plan is a good practice for communicating space that is charged to each department.

A benefit of a chargeback system is that the space charges serve as an incentive to keep data accurate. Organizations that use their space management systems for chargebacks should make sure that the group codes used in the organizational hierarchy support the accounting needs of the chargeback system.

# Metrics

- Rentable Square Feet
- Occupant Count – Number of people with assigned seats.
- Capacity – Number of seats.
- Vacant Seats
- Utilization – Number of occupants at a given point in time.
- Assignable, Net Assignable, Usable and Gross Square Feet
- Cost measures.

## Recommended Reports and Metrics

Defining the list of standard reports and metrics starts with identifying the key counts or calculations and providing a clear definition of the measure.

### Metrics

We generally recommend tracking the following metrics:

- **Rentable Square Feet or Square Meters for Office Space** – This is the most common way of understanding a building useful area and is commonly used in industry benchmarks.
- **Occupant Count** – The number of people with assigned office and workstation seats in a building or floor.
- **Capacity** – The number of assignable office and workstation seats in a building or floor.
- **Vacant Seats** – The number of office and workstation seats that are available for assignment to an occupant but that are not currently assigned.
- **Utilization** – The number of occupants using a building, floor or space at a given point in time.
- **Assignable Square Feet or Square Meters for Office Space** – The areas of offices, workstations or other spaces without allocation of common space.
- **Net Assignable Space for Universities** – The areas of classrooms, laboratories, offices, dormitories, meeting rooms and other functional spaces without allocation of common space. This is defined by FICM.
- **Gross Square Feet or Square Meters** – The total area of a building or floor measured from the outside of exterior walls. This is applicable where space is owned and less applicable for rented space.
- **Cost Measures** – Measures of facility costs that will generally include rent, utilities, taxes, insurance and maintenance. Cost measurements should be carefully defined so that the user understands which costs are included or excluded and can make fair comparisons between buildings.



# Reports

Although each organization will have unique reporting needs, most will be well served with the following reports:

- Vacancy by Count and Square Foot or Square Meter
- Departmental Occupancy by Square Foot or Square Meter
- Cost per Square Foot or Square Meter by Site
- Planned Density – Average Area of Office and Workstation Seats
- Space Types Per Floor
- Remote and Non-Remote Workforce
- Average Office and Workstation Areas

# Emerging Trends in Space Management

- Agile Workspace
  - Also known as shared workspace, flex space, shared desking, alternative workspace and activity based workspace.



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- Departmental Occupancy by Square Foot or Square Meter
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- Planned Density – Average Area of Office and Workstation Seats
- Utilization Rates by Building
- Space Types Per Floor
- Remote and Non-Remote Workforce
- Average Office and Workstation Areas

### SHARED WORKSPACES AND NEW WAYS OF WORKING

Mobile technology has made it possible for many people to work anywhere, anytime. Remote workers have become common and efforts to achieve better work-life balance have resulted in many employees working remotely on an as-needed basis. The relatively low use of offices and workspaces have caused many organizations to re-think the premise of one workstation per employee. Given the fact that on any given day a large number of employees are “not at their desks” many organizations are experimenting with shared workspaces. Some companies have reported dramatic cost savings. In one case, a pharmaceutical company was able to cut their real estate holdings in half.

The terminology for this approach to occupancy is still unsettled, but practices are often described as flex space, agile workspace, shared desking, alternative workspace and activity based workspace. We suggest the term “agile workspace” to describe this practice, but we also endorse any term an organization chooses to describe these new approaches to space management.

While few organizations have moved completely to agile workspace many companies are either piloting some form of non-assigned workspace or have designated parts of their workforce as mobile workers.

In addition to reducing real estate footprints, there is an argument to be made that this less structured approach to occupancy results in breaking down departmental silos and enhanced collaboration.

#### Neighborhood Concept

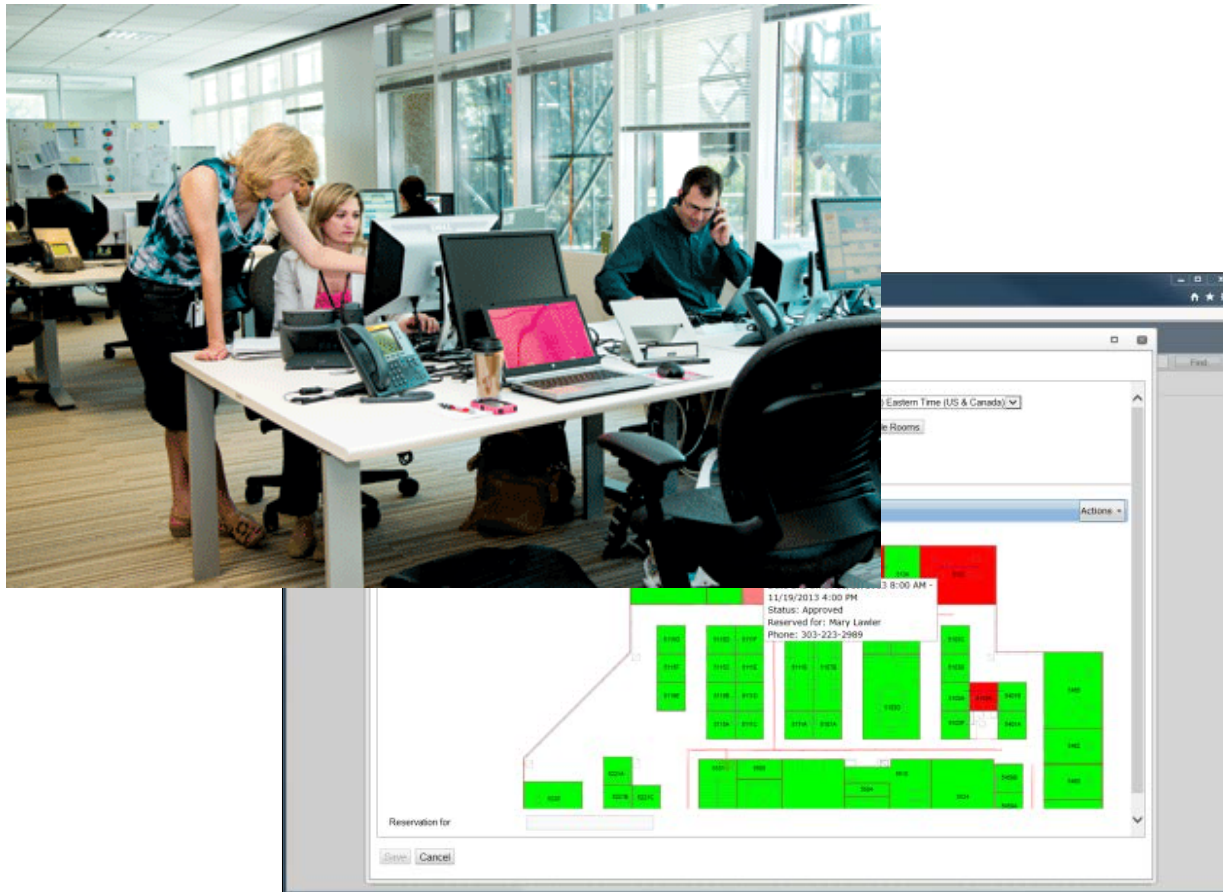
A practice for bringing some order to the practice of non-assigned seating is the neighborhood concept. Space is delineated into zones or neighborhoods and assigned to groups of occupants. The practice has the benefit of keeping work groups in proximity. By establishing ratios between seats and occupants, the facility manager can monitor the adequacy of the space assignments. Groups that engage in frequent travel would have low ratios, as low as 1 occupant:2 seats. Groups doing administrative work might have a 1:1 ratio.

#### Metrics for Agile Workspace

The new flexibility in using space results in some complexity in how we understand the quantitative measures of space use. We suggest adopting the following additional measurements to understand the new workspace environment.

# Emerging Trends in Space Management

- Neighborhood Concept



## Emerging Trends in Space Management

Although each organization will have unique reporting needs, most will be well served with the following reports:

- Vacancy by Count and Square Foot or Square Meter
- Departmental Occupancy by Square Foot or Square Meter
- Cost per Square Foot or Square Meter by Site
- Planned Density – Average Area of Office and Workstation Seats
- Utilization Rates by Building
- Space Types Per Floor
- Remote and Non-Remote Workforce
- Average Office and Workstation Areas

### SHARED WORKSPACES AND NEW WAYS OF WORKING

Mobile technology has made it possible for many people to work anywhere, anytime. Remote workers have become common and efforts to achieve better work-life balance have resulted in many employees working remotely on an as-needed basis. The relatively low use of offices and workspaces have caused many organizations to re-think the premise of one workstation per employee. Given the fact that on any given day a large number of employees are “not at their desks” many organizations are experimenting with shared workspaces. Some companies have reported dramatic cost savings. In one case, a pharmaceutical company was able to cut their real estate holdings in half.

The terminology for this approach to occupancy is still unsettled, but practices are often described as flex space, agile workspace, shared desking, alternative workspace and activity based workspace. We suggest the term “agile workspace” to describe this practice, but we also endorse any term an organization chooses to describe these new approaches to space management.

While few organizations have moved completely to agile workspace many companies are either piloting some form of non-assigned workspace or have designated parts of their workforce as mobile workers.

In addition to reducing real estate footprints, there is an argument to be made that this less structured approach to occupancy results in breaking down departmental silos and enhanced collaboration.

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# Emerging Trends in Space Management

- Hoteling- Booking Systems for On-demand space assignments.



**Mobility Ratio** – The ratio between a group's population and the number of seats needed. This is a number that would typically range from .10 to 1.00. Estimating the ratio by departmental group allows for different approaches for different work styles. For example, an accounting group might require complete assigned seating and would have a mobility ratio of 1.00. A field sales operation on the other hand might need only limited office seats and might have a mobility ratio between .10 and .50. Applying the ratio to the organizational side of the equation accommodates moving groups between locations since the seats aren't changing, only the group using the seats.

**Population** – The number of people in a departmental group needing assigned or shared seating.

**Equivalent Occupant Count** – This measurement is calculated by multiplying the total population of a departmental group by the group's mobility ratio. For example, a field sales group of 100 people with a .25 mobility ratio would have an equivalent occupant count of 25. To satisfy their space requirements we would therefore look for 25 seats.

## Hoteling

Hoteling is the practice of providing a workspace that can be used for short periods of time. Many companies will utilize a booking system that allows occupants to reserve space for several hours or days. It is beneficial in ensuring that visitors, employees that usually work remotely and part-time employees are assured of adequate workspace without the expense of providing these individuals with full-time assigned workspace.

Hoteling can also be used for special workspaces such as focus rooms, allowing these spaces to be booked when needed.

## Coworking

Coworking is a relatively recent phenomenon that has its roots in start-up business incubators. Coworking has some similarities to traditional "executive offices" where conference rooms and a reception function are shared by independent professionals. Coworking however typically provides space that is open rather than enclosed and is not assigned. Coworking spaces typically operate with memberships where members contract for a specified number of hours of usage per month.

In the past five years coworking spaces have opened in most major cities around the world. They have become popular with start-up companies whose future space needs are uncertain and with freelance creative professionals who benefit from interaction with other creative professionals.

Coworking has not yet seen significant use by larger companies, but the field is evolving rapidly and we could see corporations use coworking for remote offices.



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- Coworking



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# Emerging Trends in Space Management– New Metrics

- **Mobility Ratio** – Ratio of People to Seats for a given group.
- **Population** – The number of people needing assigned or shared seating.
- **Equivalent Occupant Count** – Population divided by appropriate mobility ratio.
- **Utilization** – The number of occupants using a building or floor at a given point in time.
- Example: A Sales department has a population of 20 people with a mobility ratio of 2.0. They therefore have an effective occupant count of 10 and need 10 seats. On a given Thursday afternoon in January at 3:00pm they might have utilization of 9 people.

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# The use of IoT Sensors to Determine Real-Time Occupancy

- Benefit- Determine how space is really being used. Valuable when establishing mobility ratios.
- Heat and motion sensors
- Indoor GPS
- Stereoscopic Cameras
- RFID



# Questions?

## Best Practices for Space Management

By Michael Schley

