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Space Planning and Utilization Procedure

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1.0 PURPOSE

The purpose of this document is to provide the Entity with general standardized information that can be used in all Sectors to ensure that the Entity understands and deploys best practice in Space Planning and Utilization in their respective facilities.

2.0 SCOPE

This document is applicable to the following six Entity types:

- Healthcare
- Schools and Universities
- Office Facilities
- Municipal Facilities
- Housing Facilities
- Parks and Recreational Building Facilities

Both the core principles in Space Planning and Utilization that apply generally to all Entity Sectors, as well as Entity-specific considerations that need to be applied in individual Sectors, are addressed in Section 6 of this document.

This document provides the Entity with information that enables it to:

- Understand what is meant by 'Space Planning and Utilization' in a Facilities Management (FM) context
- Understand the benefits that may accrue from implementing a written procedure
- Ensure how implementing the Procedure informs and improves their business decision-making about their space requirements over time.

However, it is essential to recognize that this document will only deal with Space Planning and Utilization in the context of FM. Space Planning and Utilization has a breadth of context that involves far more than just FM services.

The scope of Space Planning and Utilization in the context of FM services includes, but is not limited to:

- Health & Safety Compliance
- Planning Moves Management and 'Churn'
- Use of Computerized Space Planning Systems
- Space Planning and Asset Management Systems (AMS)

It will not provide guidance or comment on topics that are directly related to Design or Construction, since these are dealt with in the 'White Book'. It will not offer definitive guidance on the content detail of any Space Planning or Utilization Policy, nor will it deal with topics such as municipal architecture/design or housing scheme design.

The principal function of this document is to provide guidance to the Entity about the management of Space Planning and Utilization in an FM context and to provide principles and measures with which to measure their FM service provider.

However, it will also provide guidance on potential sources of information that are to be considered by the Entity when reflecting on Space Planning and Utilization in the wider context of their business, but these considerations do not form part of this Procedure.

In order to apply the principles of this procedure, it is important to define 'Space Planning and Utilization' and, initially, it is useful to recognize that the two terms should be understood independently.

'Space Planning' can be defined most simply as '*the allocation of space in a Facility where activity will take place'*, but this definition is an oversimplification, as incorporating the concept of 'Space Utilization' introduces an additional dimension that includes elements such as:

- Business or process workflow design
- People costs
- Real estate costs
- Strategic business forecasting
- Facility user satisfaction

'Space Utilization' requires an Entity to understand the workflows of their current business or activity and the interrelationships of departments and functions to ensure that the way in which their space is currently organized or 'planned' meets current requirements.

Furthermore, forecasting future space requirements is inextricably linked to any business expansion or contraction the Entity may be planning together with their understanding of the marketplace in which they operate in order to anticipate market changes, opportunities and threats.

It is reasonable to assert that Space Utilization assumes a greater significance to an Entity whose business sector is Healthcare or Offices than if they have a Housing Facility because the cost of real estate and the complexity of the relationships between functions is likely to be greater. Even in Schools & Universities, Municipalities, and Parks & Recreation it is still important to understand current and future accommodation and space requirements.

Some of the benefits of implementing a written procedure for Space Planning and Utilization are summarized below:

- Understanding the true real estate costs of an Entity's business
- Understanding when available space in an Entity's Facility is used
- Sector benchmarking
- Implementing Space Utilization changes to reduce costs
- Understanding Facility user feedback about Space Utilization
- Understanding the principles of data storage associated with the use of space

The final benefit of a written procedure is the fact that it codifies and formalizes the information about how the Entity uses space, using industry standard best practices and benchmarks by Sector and enables this to inform future business planning and decision-making with greater accuracy

3.0 DEFINITIONS

Term	Definition
AutoCAD System	A software package that enables Entities to electronically create and record 2D and 3D drawings of their facility
Churn	The continuous cycle of moves and changes within a workplace
Computer Aided Facilities Management	A software package that records information about assets, issues work orders associated with those assets, and records the results
Downsizing	The act of moving from a larger facility to a smaller one, either for reasons of business efficiency or business contraction
Hot Desking	The practice, in an office environment, of allocating desks to workers when they are required or on a rota system, rather than assigning each worker their own personal desk space
Acronyms	
AIA	American Institute of Architects
AMS	Asset Management System
API	Application Programming Interface
ASHE	American Standards for Healthcare Engineering
BIM	Building Information Modeling
CAD	Computer-Aided Design
CAFM	Computer Aided Facilities Management
CBRE	Caldwell, Banker Richard Ellis – Largest Real Estate Investment Company Worldwide
CSA	Canadian Standards Association

FM	Facilities Management
H&S	Health & Safety
HSSE	Health, Safety, and Environment
HVAC	Heating, Ventilation, and Air Conditioning
ISO	International Organization for Standardization
IT	Information Technology
JLL	Jones Lang LaSalle (Real Estate Company)
KMD	Kaplan, Mclaughlan, Diaz Inc. (Real Estate Company)
KPI	Key Performance Indicator
LOD	Level of Development
MEP	Mechanical Electrical and Plumbing
ODBC	Open Database Connectivity
OSHAD	Occupational Safety and Health Center Abu Dhabi
RFP	Request for Proposal

Table 1 – Definitions

4.0 REFERENCES

- ISO 9241 ISO 9241-210:2010 Ergonomics of human-system interaction — Part 210: Human-centered design for interactive systems
- ISO 10075 Ergonomic principles related to mental workload
- ISO 45001:2018 Occupational Health and Safety Management Systems
- ISO 6385, Ergonomic principles in the design of work systems
- EXP-ZA0-SD-000002 Asset Management System (AMS) Standard Criteria and NAR Process Integration
- NPM-KD0-TP-000117 Asset Management System (AMS) Standard Request for Proposal (RFP)
- EOM-ZI0-PR-000014 AMS Inventory Integration Procedure
- ENT-ZA0-SD-000001 Asset Management System Standard Requirement
- ENT-ZA0-SD-000002 Assets Register Standard Requirements
- EOM-ZA0-GL-000001 – Asset Management Introduction
- EOM-ZA0-PR-000007 – Asset Management Policy Procedures

5.0 RESPONSIBILITIES

The extent of the involvement and the breadth of responsibilities for each sub-group identified below will be linked to the complexity and extent of the project. The responsibilities for all but the Entity Director are solely related to Space Planning and Utilization in an FM context.

5.1 Entity Directors

The role of an Entity Director is to:

- Determine the Entity's Policy on Space Planning & Utilization
- Set the business strategy that underpins the Policy
- Ensure that this Procedure, which should support the Policy and the Strategy, is executed
- Ensure that the budget required for the provision of the tools and equipment to execute the Policy and Strategy is provided
- Ensure that budget provision is made for the selection of electronic tools and media to record space planning and asset management information, such as a Space Management software package and an Asset Management System (AMS)
- Ensure that value for money for the budget is demonstrated

5.2 Facilities Managers

The role of a Facilities Manager is to:

- Execute the Procedure in line with Entity Policy
- Advise and collaborate with the Entity Director on the selection of suitable electronic media to record space planning and asset management activity
- Review and select potential external Space Planners (if used)
- Appoint the external Space Planner (if used)
- Oversee the activity of Space Planners (if used)
- Review and select potential suppliers of equipment, such as desks, chairs and storage units
- Ensure that selected equipment providers conform to the product selections included in the Entity's Policy and Strategy
- Ensure that all changes to existing Space Planning layouts are recorded on facility drawings
- Ensure that addition of assets, for example desks, chairs, storage units etc. is recorded in the Asset Management System (AMS), including their location
- Ensure that removal of assets is recorded in the Asset Management System (AMS) and that this removal is communicated to the Entity's Finance Department to reflect changes in asset capitalization
- Coordinate information gathering between the Space Planner (if used), Department Managers and Facility occupiers to ensure the occupier's space requirements are taken into consideration in planning facility moves. This should include understanding imminent changes in Departments' requirements for either more or less space.
- Manage the liaison with Department Managers and Facility occupiers to ensure that any move is executed smoothly and with the cooperation of the departments involved
- Produce/manage a project plan for all moves
- Hold planning meetings with all stakeholders
- Record and distribute minutes from planning meetings
- Employ a suitable organization to physically relocate equipment

5.3 Space Planners

The role of a Space Planner (if used) is to:

- Collaborate with the FM to ensure that Department space requirements are understood and reflected in space planning design proposals
- Record all changes to existing space planning layouts are recorded on facility drawings
- Record and share the addition and removal of Facility assets with the FM
- Liaise with Department Managers and Facility Occupants

5.4 Department Managers

The role of a Department Manager is to:

- Collaborate with the FM and Space Planner (if used) to ensure that their Department space requirements are understood and communicated.
- Manage the communication with their staff
- Coordinate their staff in the preparation for any move
- Manage expectations of their staff to align with the Entity's Space Planning and Utilization Policy and Strategy
- Coordinate the Storage and Space Inventories of their employees
- Manage reported defects in equipment to ensure the safety of their employees

5.5 Health, Safety and Environment (HSE) Manager

The HSE manager responsibilities for the Health, Safety and Environment may also include the responsibilities for Quality management (in some cases). Where this is not the case then the responsibilities for the quality monitoring and complacence shall fall upon the Quality manager.

The role of the HSE Manager in managing the safety of space planning and ensuring Entity moves are undertaken in a safe manner include but are not limited to the following:

- Ensuring that the requirements of all Health, Safety and Environmental (HSE) legislation and regulations are appropriately followed in all space management activities
- Ensuring there are relevant safety plans and procedures in place to protect the safety of employees and temporary visitors to the site(s)
- Ensuring that all activities conform to the requirements of the Entity's Quality Management System
- Ensuring contractors/suppliers employed in any move work in a safe manner
- Recording incident and accident information and providing reports to Entity management

5.6 Facility Occupants

The role of a Facility Occupant is to:

- Collaborate with the Department Manager in the provision of information for Storage and Space Inventories to ensure that their space requirements are understood and effectively communicated.
- Align their expectations with the Entity's Space Planning and Utilization Policy and Strategy
- Collaborate with any appropriate requirement related to a move, including packing

6.0 PROCESS

The prerequisite for an Entity to be able to implement a procedure for Space Planning and Utilization is a Space Planning and Utilization Policy. This policy needs to establish the basis on which the Entity uses space.

The following sections will explore the different types of space planning that are used in an office environment, although many of the principles are transferrable.

The sections will consider:

- Developing a Space Planning and Utilization Procedure
- Selecting Space Planning Styles
- Health & Safety in Space Planning
- Move Planning and Management

6.1 Developing a Space Planning and Utilization Procedure

6.1.1 Kick Off Workshop

Prior to the development of a Space Planning and Utilization Procedure, the Entity should conduct a kick-off workshop with stakeholders in attendance. This workshop should be minuted and provide the basis for the content of the Procedure.

The following sections identify considerations that should be taken into account in the development of the procedure. These are advisory and the Entity should determine their suitability for their own Entity-specific needs and adjust accordingly.

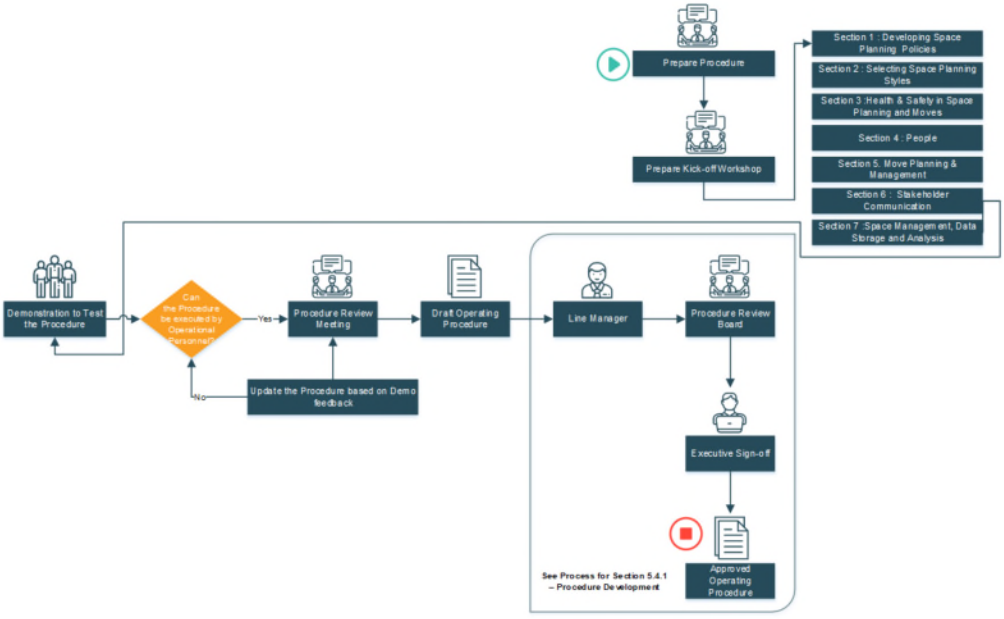

Figure 1: Effective Procedure Development

6.1.2 Policy and Procedure Development Considerations

Considerations that an Entity should take into account in the development of the Policy and Procedure should include, but are not limited to:

- Entity business marketplace
- Entity culture
- Entity organizational and business goals
- Entity business growth
    - Expansions and Downsizing
    - Frequency of 'churn'
- Short, medium and long-term business planning
- Sector Space Utilization Benchmarking – Reference materials will be suggested in this document, in Section 4.0 but the Entity should tailor them to their individual circumstances
- Space Management Tools – Systems may be referenced in the text of this document as an exemplar of the features that the Entity should consider adopting and tailoring to suit their own systems
- Information Gathering
    - Who does what,
    - How do workflows interconnect
    - Required departmental adjacencies
    - Parking vs public transport
    - Occupancy vs Utilization – who needs to be where and when, hours of work
    - Existing data
    - Accuracy of existing data
    - System tools used
    - Existing benchmarking data
    - Human Factors
    - Privacy
    - Productivity
    - Teamwork
    - Remote Working
    - Circulation Space
    - Breakout and Collaboration Space
    - Facilities

6.1.3 Space Planning and Utilization Best Practice

The reference materials cited in Section 4.0 are considered to add value to the Entity's development of a Space Planning and Utilization Procedure. They should be considered strictly as guidance and the Entity should tailor them to suit their individual needs. They do, however, provide assistance to the Entity in understanding the topic in greater depth and identifying principles to guide them in procedure development.

6.1.3.1 General and Multi–Sector Reference Materials

There are a number of useful links that Entities from all sectors should consult when determining their approach to space utilization and planning. These are consolidated in the References section of this document.

According to Gensler Architects, 83% of corporate real estate executives rank space utilization as the key metric for making workplace decisions. As more companies collect space utilization data, benchmarking across regions, industries and space types is now possible. Some space utilization statistics are provided below:

- 13% of organizations utilize their space more than 80% of the time
- 37% of workplaces globally were empty during any given workday in 2018
- A 2015 report from CBRE suggested that 40% of global office space was empty

6.1.3.2 Healthcare-specific Reference Materials

The following references can be found in Section 4.0 above.

The American Society for Healthcare Engineering (ASHE) provides members-only access to documentation that assists an Entity in the design, development and management of space in Healthcare Facilities.

KMD architects explores the interrelationship between building design and space usage in a healthcare environment and how the link between site and departmental design and the associated workflows can improve the operational efficiency of a Healthcare Facility.

6.1.3.3 Schools and Universities-specific Reference Materials

The two references specific to Schools and Universities provide a useful benchmark starting point for an Entity to formulate their Strategy and Policy for Schools and Universities respectively.

6.2 Selecting Space Planning Styles

For the purposes of this document, the principles of Space Planning and Utilization will be applied as an exemplar to Office Facilities. The design and planning of a space for occupation needs to be reflective of the Entity's Policy for how their buildings are portrayed to their occupants and members of the public.

The Entity needs to determine how their premises are laid out. This may be based on the type of work undertaken. Some may have significant confidentiality, while others may benefit from open plan working, and the provision of cellular offices is still seen in some quarters as a mark of status.

6.2.1 Styles of Space Planning

The Entity should select the type of layout that suits the needs of their organization. Typical styles of layout are described below.

6.2.1.1 Closed Plan

Closed Floor Plan offices have closed conference rooms and high walled cubicles and private office space. The private office space is often arranged along the sides of the building where each office space has its own window, as in the typical floor space design below:

Figure 2: Typical Perimeter Closed Plan Office Layout – *Image courtesy of Corporate Interiors*

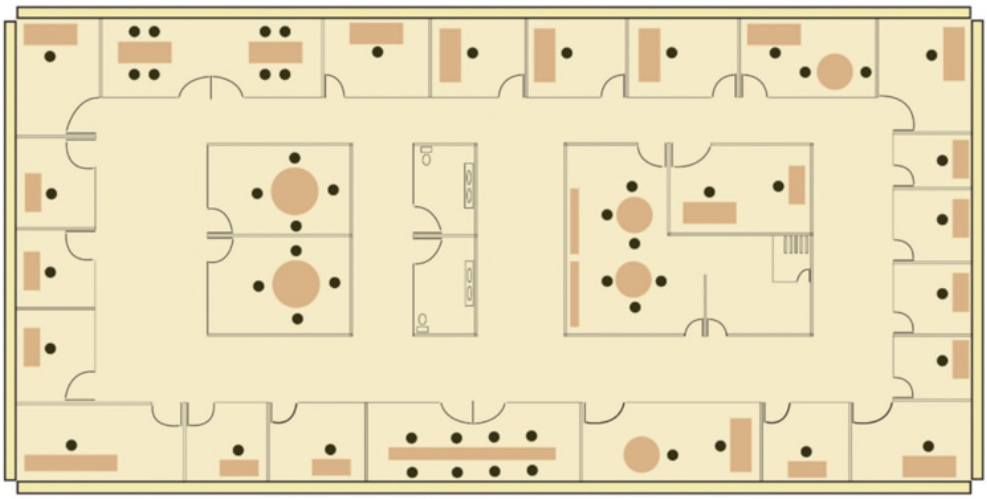

Figure 3: Typical Perimeter Cellular Office Layout – *Image courtesy of The Office Space Planning Guide for Facilities Managers" by Taylor Short dated April 11, 2016*

Some of the benefits of Closed Plan office layouts are:

- Confidentiality
- Privacy
- Reduced noise and other distractions
- Excellent for employee concentration
- Climate Control to individuals' preferences

Some of the disadvantages of Closed Plan office layouts are:

- Increased real estate costs
- Workspace is allocated to individuals and is not generally used by multiple users
- Status can dictate space requirements
- Isolation
- Lack of teamwork and collaboration
- Loss of management control

6.2.1.2 Open Plan

Over recent years there has been a significant and rapid increase in the number of organizations opting for open plan office designs. The principal reason for this is to reduce real estate occupation costs.

Open floor plans remove walls and replace them with bench or open area seating or multiple seating areas across the floor plan, low-walled cubicles, common areas and conference areas with glass walls, as illustrated in the sample floor space design below. This design greatly supports an organization “hot desk” working environment.

The hot desk enables desk space to no longer be the sole preserve of designated individuals but can be booked through a central facility. Using the examples from Section 6.2.1 earlier, it is easy to understand why this approach may be appealing. If genuine occupation levels are as low as have been identified, there is no need to have a facility available for people if it is being occupied ‘ineffectively’.

However, it is important to recognize that the provision of hot desks should normally only cover a proportion of the available desk space. Requiring every potential occupant to book their desk space in advance can cause more problems than it solves.

Figure 4: Typical Perimeter Open Plan Office Layout – *Image courtesy of Corporate Interiors*

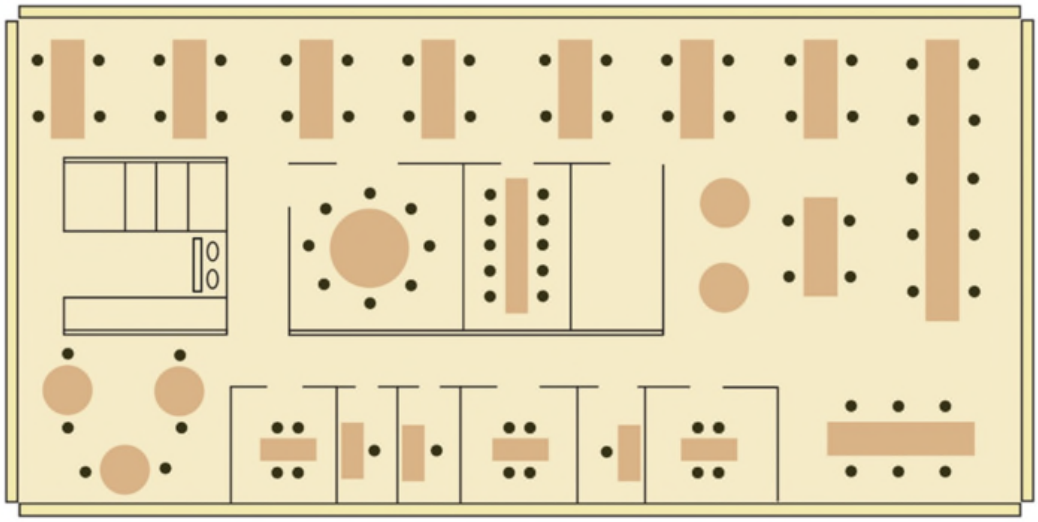

Figure 5: Typical Perimeter Open Plan Office Layout – *Image Courtesy of "The Office Space Planning Guide for Facilities Managers" by Taylor Short dated April 11, 2016.*

Some of the benefits of Open Plan office layouts are:

- Significant reductions in real estate costs
- No space allocation to individuals means workspaces can be used by multiple users
- Improved management oversight of employees
- Breaks down hierarchical barriers
- Building space can more accurately reflect occupation requirements
- Flexibility – layouts can be quickly and easily reconfigured
- Enhances employee collaboration and teamwork

Some of the disadvantages of Open Plan office layouts are:

- Loss of Confidentiality
- Loss of Privacy
- Increased noise and other distractions
- Poor disciplines can reduce employee concentration
- Climate Control may not suit all occupants
- Perceived loss of status by using hot desk approach

6.2.1.3 Hybrid Office Layout

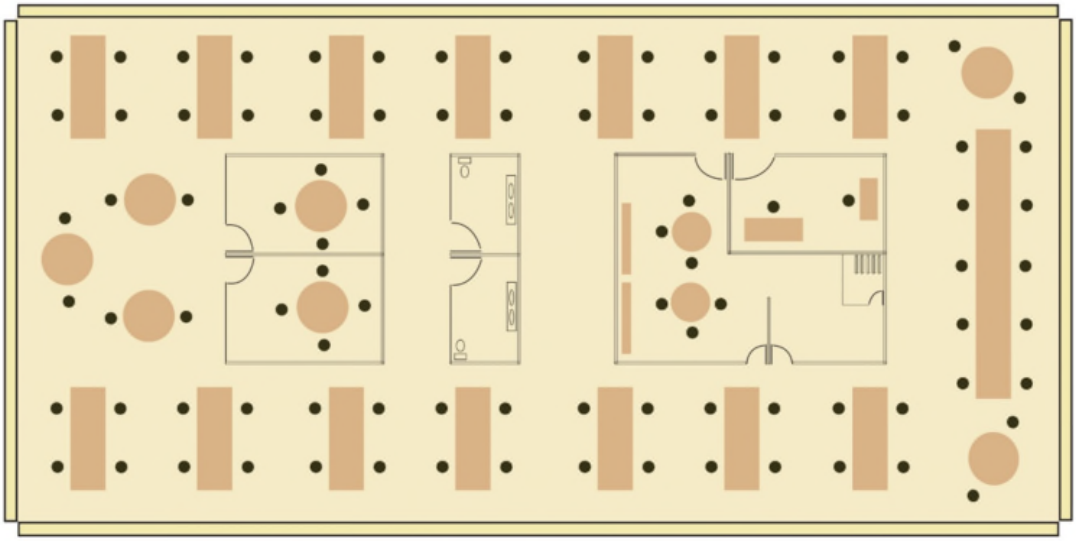

Figure 6: Typical Hybrid Office Layout – *Image Courtesy of "The Office Space Planning Guide for Facilities Managers" by Taylor Short dated April 11, 2016.*

The office layout above is a hybrid of an Open and Closed layout offering areas of privacy and confidentiality alongside significant areas of open plan working. It offers the best compromise between privacy and teamwork and cost-effective real estate costs.

6.2.1.4 Specialist Office Layouts

The image below is an illustration of a Unilever Corporate Office. This figure illustrates the importance of the design impact at certain facilities. In this image, the designer and space planner have reflected the aspirations and style of this worldwide corporate organization. In design terms, it is still a hybrid style layout but differs significantly from the example shown above.

Figure 7: Corporate Open Plan Office Layout – *Image courtesy of Corporate Interiors*

6.2.2 Space & Asset Data Management

The effective management of space requires investment in tools and equipment to manage the data held by an Entity.

The two core tools that are required are:

- A computer-aided design software package, such as AutoCAD, which enables the drawings of the Facility to be held securely and reconfigured to reflect changes.

It is likely that a Space Planer will use this or a similar tool. It is possible to view the output from an AutoCAD package with a drawing viewer, and this may suffice for many Entities rather than investing in the tools themselves.

A Space Planner will undertake the interpretation of information gathered from the Entity and their employees and convert the requirements to a space-planned design. Should the Entity, or its FM require the ability to independently reconfigure designs, then a full licensed copy of this, or a similar package will be required.

- An Asset Management System

An Asset Management System (AMS) should be used by the Entity to enable the recording of all assets owned by the Entity. This will need to be purchased by the Entity directly. However, it is important to understand that the purchase of such a product, regardless of whom it is purchased from will not be a universal panacea to asset management for the Entity. In order to obtain value from such a system, resources will need to be deployed to, as a minimum:

- Create a schedule of asset information
- Create and distribute barcodes for all locations – public circulation areas, stairwells, corridors as well as rooms and all asset, both fixed and moveable.
- Update the asset register as moves and changes in assets take place
- Update the capitalization records held by the Finance Department to reflect the changes
- Update the maintenance team to reflect the changes

If none of these activities are undertaken, the value of the AMS will diminish because although it may have started with good and detailed information, that position is only as good as the last change in site plans or asset deployment.

An AMS is also used as a core tool in determining maintenance frequencies and activities but in the context of Space Planning and Utilization. It allows the Entity to keep track of fixed and movable assets, from chillers and generators to tables and chairs. It also allows the Entity to accurately capture where their assets are positioned, their condition, and the frequency of replacement required.

6.2.2.1 AMS Technical Requirements

An AMS will be used by the Entity for a wider application than just managing the assets associated with Space Planning and Space Utilization. An AMS will enable the Entity to track and manage all assets, including those associated with a space planned environment.

The AMS shall meet the following general requirements:

- A robust and industry-proven product with the capability to cover the current and future requirements of an Entity that meets the functional needs of recording and reporting on asset information
- The product shall be scalable to meet future requirements
- The supplier shall have demonstrable experience in implementing the proposed software in similar organizations
- A dashboard capability with easy access to the data for robust reporting and query generation
- Support for user-friendly mobile technology that allows access to all system functionality

- The details for the installation, implementation, and commissioning of the software including the development of user acceptance testing, system integration, and connectivity to existing resources
- The technology architecture design uses standard IT systems and components in compliance with the Entity's data security standards
- Back-up and recovery capabilities, preferably cloud-based
- The IT server, storage and other components requirements sizing shall be provided by the implementation team along with architecture solution design (high-level and low-level design)
- Enterprise integration achieved through built-in configuration tools, Application Programming Interface (API), Open Database Connectivity (ODBC) and/or batch file processing

6.2.2.2 Asset Register

The Asset Register component of an AMS should provide the following capabilities:

- Be a source of truth for asset information at all times
- Individual asset register
- Structured data architecture
- Historical data by location

6.2.2.3 Planning and Scheduling

The Planning and Scheduling component of an AMS should provide the following capabilities:

- Asset Maintenance Strategies
- Reliability data analysis
- Standard Job Plans and Safety Requirements
- Job descriptions
- Supporting a standard Permit to Work (PTW) system
- Forward periodic planning/scheduling processes
- Resources (labor, materials, tools and services)
- Skilled Workforce availability
- Staff competency framework

6.2.2.4 Materials Management

The Materials Management component of an AMS should provide the following capabilities:

- Procure-to-pay process
- Inventory management process
- Contract management process for parts and labor services
- Critical spares strategy
- Materials demands forecast
- Third Party Maintenance provision

6.2.2.5 Lifecycle Costing

The Lifecycle Costing component of an AMS should provide the following capabilities:

- Asset life cycle costing processes
- Cost of ownership of Asset Class
- Investment Plans
- Optimum asset replacement
- Asset purchasing, maintenance and disposal
- Hire plant and equipment
- Asset operating location/condition

6.2.2.6 KPI Reporting

The KPI Reporting component of an AMS should provide the following capabilities:

- Position-based plant dashboards.
- Alternative Asset and Facilities Management strategies.
- KPI's e.g. availability, reliability, utilization, etc.
- Works Management KPI's e.g. PM compliance, scheduled vs unscheduled maintenance, backlog etc.

The following additional references, also noted in Section 4.0, should also be consulted by the Entity when determining the requirements of an asset management system to determine their space management and asset recording requirements.

- NPM-ZA0-SD-000002 Asset Management System (AMS) Standard Criteria and NAR Process Integration
- NPM-KD0-TP-000117 Asset Management System (AMS) Standard Request for Proposal (RFP)
- EOM-ZI0-PR-000014 CMMS Inventory Integration Procedure
- ENT-ZA0-SD-000001 Asset Management System Standard Requirement
- ENT-ZA0-SD-000002 Assets Register Standard Requirements
- EOM-ZA0-GL-000001 - EOM-ZA0-PR-000007 – Asset Management Procedures and Plans

6.3 Health & Safety in Space Planning and Move Management

When conducting office project moves or reconfiguration of office or department space, the Entity shall ensure compliance with Health and Safety Regulations and Environmental Regulations.

For example, if there is a physical reconfiguration of an office space that adds a closed office space, the HVAC System and Electrical systems shall be reconfigured accordingly as well.

The observance of these and other Health & Safety requirements will provide the Entity with assurance that their treatment of employees and the overall safety of their workplace remains at the highest standards, minimizes workplace hazards and, because of the standards that observance drives, encourages the recruitment of good quality employees.

The following legislation is a sample of the statutes and regulations that an Entity should follow in the management of their workplace and the management of change in their workplace. The sample of legislation outlined below is not intended as an exhaustive list but contains many of the key elements of safety management. The Entity should consult all applicable guidance in a manner that is suitable and tailored to its individual needs as they apply to the execution of change.

6.3.1 Health & Safety at Work Act 1974 (HASAWA)

HASAWA requires the employer to ensure a safe working environment for all employees and visitors to a facility. This is the overarching legislative requirement that is supported by the other specific items of legislation that address specific hazards.

6.3.2 The Management of Health & Safety at Work Regulations 1999

These Regulations introduce the principle of risk assessment for all tasks and require an Entity to ensure that individuals undertaking work at their facility are properly protected. It introduces the requirements for an employer to protect temporary workers in the same manner as permanently employed staff. This is particularly important in relation to subcontractors working on a site temporarily, e.g. a company employed to move furniture or reconfigure air conditioning or electrical assets in a move.

6.3.3 The Workplace (Health, Safety and Welfare) Regulations 1992

The Workplace (Health, Safety and Welfare) Regulations 1992 require employers to provide adequate lighting, heating, ventilation and workspace (and keep them in a clean condition), as well as staff facilities, including toilets, washing facilities and refreshment facilities.

These are key considerations in planning a move to ensure that Entities remain compliant in the facilities they provide. These Regulations, in providing support to employees, through the implementation of minimum standards, also improve workplace morale, which in turn should enhance employee productivity.

6.3.4 Manual Handling Operations Regulations 1992

These Regulations define how to conduct safe manual handling activity on a site. They include the need for risk assessment and aim to reduce workplace injuries due to poor manual handling. These will include load sharing, using mechanical aids etc.

In managing space planning changes and reconfiguration, the requirement to move furniture and equipment as well as physical space, will necessitate significant movement of equipment and materials, and the Entity should account for such provisions in these regulations to ensure the safety of both employees and temporary workers.

6.3.5 Noise at Work Regulations 2005

The Noise at Work Regulations are especially applicable to a factory or building site workplace or anywhere where noisy equipment is used on a continuous basis. It is more likely to apply to users of equipment that generate noise, rather than an office environment, which is only likely to be subject to the provisions of these regulations during refurbishment.

6.3.6 Working at Height Regulations 2005

These regulations were introduced in 2005 in recognition of the fact that one of the most significant workplace hazards was work at height. Work at Height does not necessarily mean working at the top of a step ladder but anywhere where a worker is not at ground level. Many frequent and serious injuries occurred as a result of working above but in close proximity to the ground, and these regulations introduced the requirement to risk assess work at height and ensure that workers were using the safest approach to the work.

Step ladders have now become used for mainly temporary activities, while, for example, reconfiguration work that requires the replacement or movement of light fittings should be completed using a mobile scaffold.

6.4 People

It is required that the people working in a Facility are consulted on the way that space is designed and used.

It can be tempting to restrict all office-based users to an entirely ‘hot desk’ environment but this can have unintended consequences. Staff need to feel they belong to and have an affinity with their workplace. Requiring that all workspaces be pre-booked not only make a workspace inefficient, but also reduces the staff’s sense of belonging to an organization and increases attrition.

In designing a new workspace, staff need to be consulted to understand how they work, with whom they need to interact, and how their contribution fits into the whole work process. Similarly, in order to plan changes to the workplace, people should have their opinions canvassed and shared so that designers understand the reasons behind the decisions that an Entity makes regarding changes to workspace design.

It is essential that the Entity plans for both the immediate and medium-term requirements of their business to avoid spiraling costs. This means that initial space requirements may not fall in line with existing benchmarked space utilization. To account for future expansion in the most cost effective manner, the

Entity should decide to procure or build larger premises that exceed their current requirements, rather than move or extend its premises as its business expands.

The following is a list of some aspects an Entity should take into account. The list is, however, not exhaustive and the Entity should determine their own list based on their own unique needs:

- All of the segmented activities to be accommodated in the space or area
- Current headcount
- Projected headcount for the following two to five years
- Number of employees whose work activity or status requires hard wall offices, whether closed or open plan in design.
- Circulation routes and circulation space
- Breakout areas

6.5 Move Planning and Management

6.5.1 Information Gathering

Information gathering by Entities covers information about the employees/workforce and the processes or procedures within their workplace. It includes, but is not limited to:

- Workplace space usage
- Employee numbers
- Roles
- Work activities
- Contiguous attendance
- Workflows

This information will assist the Entity in understanding the scope and size of any move or relocation and determining that the space allocated post-move will be sufficient to meet the needs of their organization. It also identifies the detailed information gathering requirement that will be needed to be retained to review the success of the move and be used as input for other future workplace moves.

Information gathered by the Entity will be used by the Space Planner in determining the most suitable layout that meets the requirements of the Entity and its staff, where possible. The Space Planner may need to ask questions of their own. Some of these questions may seem to mirror the Entity's own information-gathering exercise but they are intended to validate the information they have been provided with.

The following are examples of factors that should be taken into account in the information gathering process. However, the Entity should identify other considerations that are applicable to their own sector-specific requirements:

- **Entity culture** – If planning an office workspace, what type of impression and working environment does the Entity wish to create?

- **Workflow design** – How do the tasks and functions undertaken in a particular location interlink with other contingent tasks?

  This could be as simple as the siting of a central printing hub in an office facility, or as complex as ensuring that a hospital Emergency Department works effectively by ensuring that the location of X Ray Departments, Pharmacies and Discharge Rooms do not complicate the workflows associated with the patient journey.

- **Entity reporting hierarchy** – Determining if there is a requirement to place senior personnel in the area(s) for which they are responsible to enable effective oversight

- **Asset capture** – The Entity will need to determine the extent of the data they wish to hold about assets, e.g. whether they wish to constantly track the location of all assets, such as fixed building assets like MEP, or just key assets such as IT equipment, rather than non-key assets like desk pedestals or desktop fans.

It is also important to note that the Space Planner must have a good understanding of the organization's day to day processes and procedures. The Entity should collaborate with the Space Planner to ensure the information they receive is accurate and represents the Entity's aims and objectives. Space Planners should not be encouraged to please the staff at the expense of the Entity, and it is important to constrain staff input where it is not appropriate.

6.5.2 Relocation

The key to a successful department or building relocation or move is to plan the process and create a detailed Project Plan (see Figure 8 below) that covers all aspects of the work. The following sections provide some indicative activity that should be considered by the Entity. This is not an exhaustive list and the Entity should determine the contents of the plan most suited to their needs.

6.5.3 Create a Relocation Budget

The relocation budget should be an accurate reflection of the scale and cost of the move. The Entity Director shall be responsible for signing off the budget, but an accurate estimation of the costs should be prepared by the Entity Facility Manager.

The budget should include, but not be limited to the following considerations:

- Third Party contractor costs
- Space Planner costs
- Temporary relocation costs for existing staff (if required)
- Costs of disposal of existing furniture and equipment
- Opportunities to recycle existing equipment to contribute to budget
- New furniture/fixtures/fittings, including flooring
- Redecoration
- Waste disposal costs – including skip licensing
- Access equipment requirements
- Costs of labor for movement of furniture fixtures and fittings
- Costs of any procurement exercise/supply chain provision of equipment – including deposit
- Contingency fund
- Temporary storage for existing equipment – including packing of employee equipment

Once a budget has been created and signed off it needs to be reviewed on a regular basis, ideally weekly and this activity should be reflected in the project plan.

6.5.4 Allocating Responsibilities

For a project to be effective there needs to be a single Project Manager assigned to a part-time activity, who is responsible for managing the project, convening meetings, ensuring meeting minutes are published and circulated and updating and issuing the project plan. They should have strong decision-making instincts and be comfortable with taking decisions and assuming responsibility.

The Entity senior director should allocate this responsibility and should avoid taking on the responsibility themselves. There is value in having the role of a budget holder and Project Manager separated, since each can challenge the other objectively on the costs and/or the progress of the project. The Project Manager may also be the FM.

6.5.5 Creating a Project Plan

Creating a project plan is a straightforward task and does not necessarily require specialist software. Although Microsoft Project or similar can be used, it is possible to create a serviceable project plan using Microsoft Excel.

While many projects are often conceived and executed in a quick timeframe. The most successful projects are those that have been assigned ample time to undertake detailed planning, if the scale and scope of the project demands such.

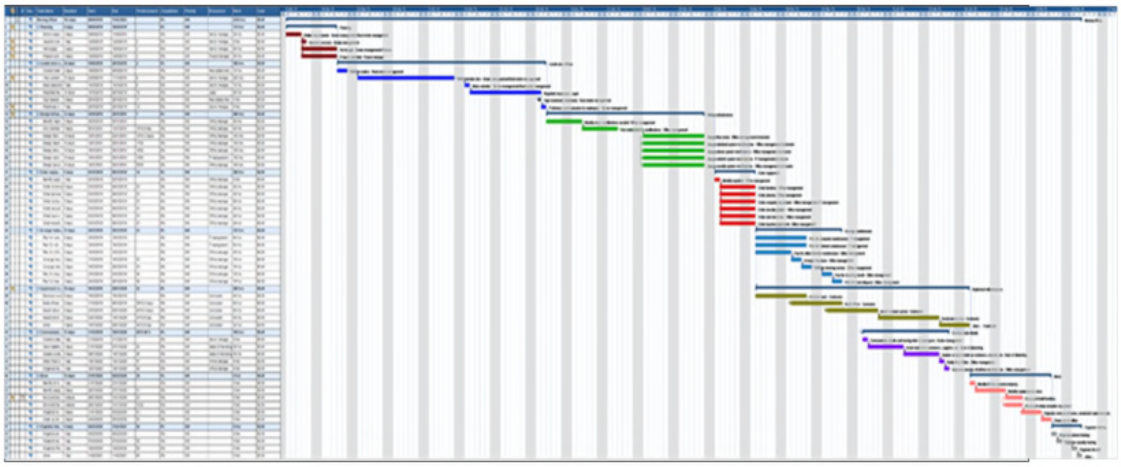

Figure 8: Example Gantt Chart

The example Gantt chart in Figure 8 above shows a large-scale project with a number of competing activities, many of which are contingent on the successful execution of a prior activity.

It will be the responsibility of the Project Manager to ensure that any dependencies are clearly identified. If time slippage is foreseen in the completion of a prior dependency, then the completion of its dependent activity is also moved to reflect an updated version of the truth.

A project plan, if managed properly, will enable the Project Manager to anticipate future issues and flag them early to the Entity Director. It may be that a change in the budget can overcome the issue. It is always wiser to be prepared with this information well in advance than trying to justify activity retrospectively.

The project plan should ideally include a customized relocation plan for the new office or building space, taking into account:

- Number of Staff and Employees
- Type of Movers to Use
- Office equipment and furniture
- Inventory of Existing Office Furniture and Equipment – to determine what will be retained and what replaced
- Floor Plan of New Building / Office Space, identifying the locations of the office furniture, workstations, workspaces, communal and breakout areas, office equipment, etc.

Developing a project plan provides an opportunity to identify issues with the current workspace and environment. This can be done by creating a new floor plan that resolves common issues like bottlenecks or over-used photocopiers.

To ensure common knowledge on the project, the Project Manager should provide a copy of the plan to the external moving service provider, IT Department, Electrical Contractors for the Data and Wiring requirements, Furniture Suppliers, Electricians and HVAC Technicians and the Heads of Departments, and to the staff and employees.

If the Entity does not employ full time Space Planners there are professional Office/Relocation Space Planners available, on a contract basis, for the design and build of new space who can help streamline the process and ease the transition from the old location to the new. Redesign should not be carried out mid-move.

6.5.5.1 Regular Meetings

The Project Manager of any move should meet regularly with the stakeholders to ensure that the plan stays on schedule and any changes to the deadlines are agreed and rescheduled. Routinely scheduled meetings such as weekly or bi-weekly meetings, increase accountability and help keep the project moving in the right direction.

6.5.6 Stakeholder Communication

The essential element to ensuring the success of any change is stakeholder communication and it is often the one that is given least attention. Some people find change unpalatable, but if they are communicated with at an appropriate frequency and made to feel part of the decision-making process, then the impact of their dissatisfaction can be reduced.

The chart in Figure 10, below, shows a typical Stakeholder Analysis Matrix. Using this tool will enable the Project Manager to identify the various categories of individuals who can have an impact on the success of a project. For instance, there may be those whose impact in the Entity's business is low but who are able to spread their dissatisfaction widely.

The key, shown in Figure 9. below illustrates the manner in which each stakeholder group should be treated and provides some background on their behaviors and ways in which they should be managed to ensure the success of the project. In order to improve the success of the project, the Project Manager and their Entity sponsor should analyze all individuals who have a capability to influence the project, identify which of the four categories the individuals fall in to, and treat them accordingly.

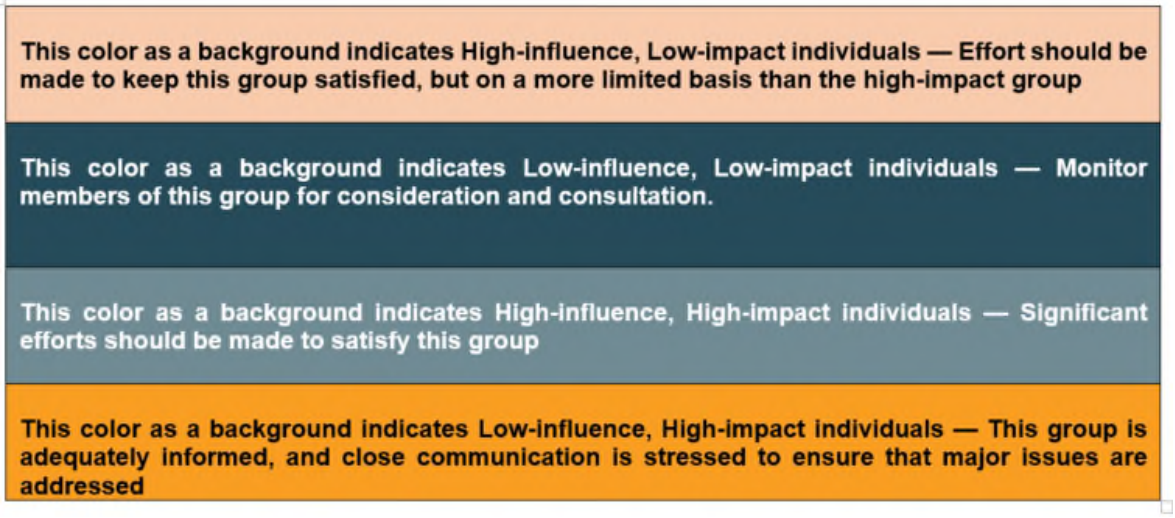

Figure 9: Stakeholder Analysis Matrix Key

Figure 10: Stakeholder Analysis Matrix Template

6.5.6.1 Communicate with the Professional Movers and other Service Providers

For office or building relocations that require the transfer of some or all of the Office Staff and Employees to another location, working with a professional moving service provider who has the expertise, skills and knowledge to assist with can simplify the moving or relocation process for the entire Entity.

Arrange several bids to ensure that the Entity receives optimum prices for the office relocation. If the Entity relies on specialist items such as medical equipment or transporting high value items such as expensive art or diagnostic equipment, it should ensure that they source a professional mover that specializes in providing these types of services.

6.5.6.2 Communicate with Current Service Providers

It is important to notify current Service Providers of the relocation. These include but are not limited to:

- **Government Departments and Organizations**
- **Telephone and Data Providers** – If the Entity is transferring the services, they should ensure the services are tested before occupation
- **Utilities Services** – Allow for several days for the overlap between the two locations
- **Courier Services**
- **Subscription Services** – such as newspapers or periodicals
- **Printing Service Providers** – for business cards, promotional information, stationery, etc.

6.5.6.3 Communicate with Customers

It is essential to notify customers early so that they are aware of possible delays in communications or service provision.

6.6 Space Management, Analysis and Data Storage

This document makes no recommendation about the selection of software package for the Entity's space planning and utilization requirements. An Entity should invest in a package that is able to integrate with their Asset Management Software package.

It is common practice for Space Planners and Facilities Managers to use AutoCAD programs to manage and control a space planning project. It can create a 1:1 plan or floor design, so that the design reflects the exact dimensions of the final floor plan and provide accurate information about floor space, layout etc.

AutoCAD programs can often be integrated into the Entity's CAFM System. This is considered to be the optimum best practice because it provides the Entity the ability to undertake a number of data analysis tasks. Some of these are identified below but the Entity will be able to moderate this to suit their own organization:

- Review and analyze space occupation by department or building area
- Create a benchmarking exercise for space usage by departments to inform future moves and re-planning
- Accommodate suitable civil and electrical systems, such as air-conditioning, electrical and data systems and apportion costs by department

6.6.1 Improved Space Utilization through Data Analysis

Organizations will have under-occupied, under-utilized or wasted space in their portfolio. By using an industry-standard best practice space planning tool the Entity can update the database with current data, which will assist in the identification of areas/rooms that are not being optimally used. In extreme circumstances this can allow Entities to shed locations from their property portfolio and consolidate staff. However, this space utilization tool is more likely to be used when creating a business case justification for expansion and acquiring additional property.

Entities should use the relevant space utilization benchmarking information, referenced in Section 4 to provide them with contextual information for their relevant industry sector.

Regardless of the complexity of the Entity's space planning requirements, it is essential to carry out an evaluation of CAFM and Space Management Software Packages and Tools available.

The package selected should incorporate the following features:

- **Enhanced space planning and forecasting:** The Entity will gain value from constant evaluation of their space usage and its effectiveness when benchmarked against industry standards by undertaking these regular reviews with a frequency that mirrors the pace of change in their organization.

  Having a review program will give the organization the flexibility to respond to changes quickly and assist in the provision of options appraisals when moves are planned.

- **Simpler and Quicker Space Planning:** The availability of the existing planning inventory, based on accurate metrics and usage information will assist with quicker and more accurate space usage forecasting and space planning.

- **Senior Management buy-in:** Having accurate data will enable the FM to provide senior managers in the Entity with objective and factual information which, when aligned with industry-standard benchmarks for space utilization, will enable the Entity's senior management to take decisions for future changes in space requirements based on objective evidence.

These features are sheer recommendations and the Entity should tailor them to suit their own needs. By making the Entity's departments accountable for the space they occupy, the Entity is able to cascade departmental costs and evaluate the true cost of each department's operations.

6.6.2 Data Storage

It is essential to maintain accurate asset and space occupation information, with any changes recorded to reflect a consistent single version of the truth. An appropriate and suitable database function and space management software solution ensures all relevant data is readily available and permits the FM or Space Planner to monitor and locate potentially available space.