

Space Planning

When completing any workplace transformation project, identifying the 'envelope' of built space required to facilitate the efficient running of your organisation is integral. This tool aims to highlight the main issues you should consider when defining the 'space envelope' and the space brief that will inform the project as it moves forward.

Project Timeline

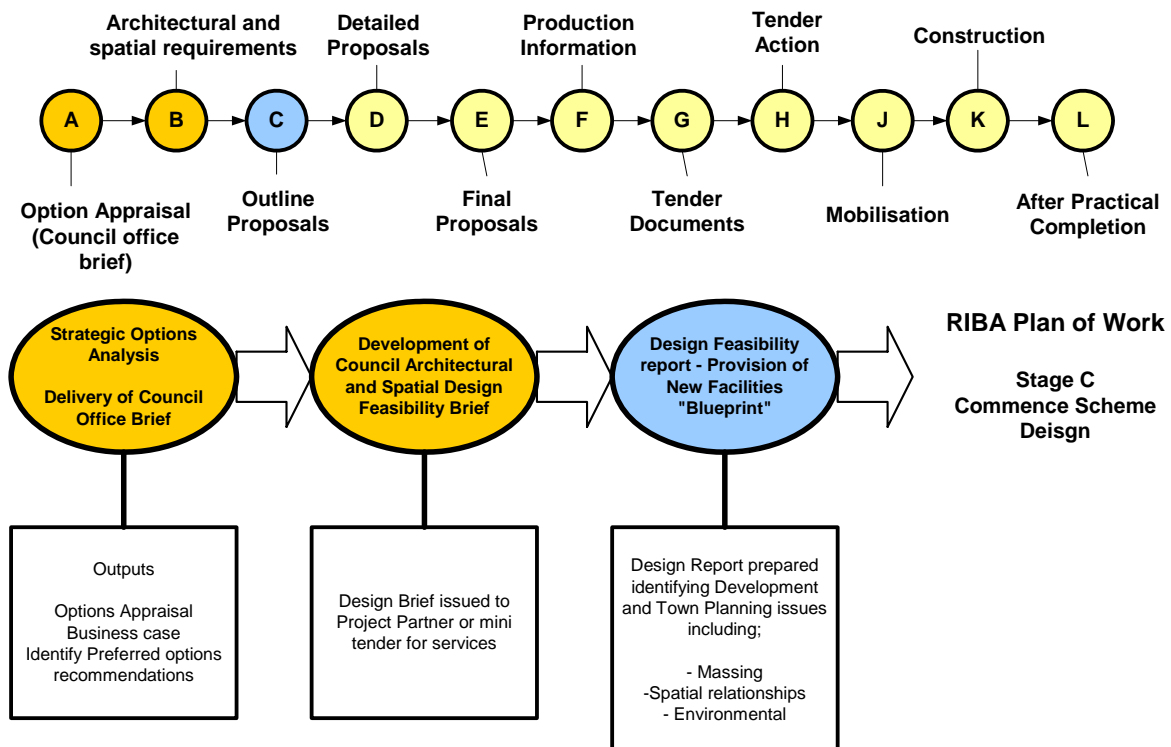
Firstly it is essential that the project team understand the stage at which a project is currently at before they begin to define the space envelope required. If the project is at a high, strategic level then it is more acceptable to have an approximate space calculation to use in the early feasibility testing. For example a blanket 'core space' need metric might be applied to a defined workforce number. Clearly as the project becomes more detailed then the assumptions underpinning the space need to become more robust.

Given the space need is a key driver in determining both capital and revenue costs, the project team should strive to ensure as much accuracy in determining the space need as possible. This needs to be tempered, however, with the following issues:

- 1) The project may not be at a depth which allows accurate space need definition.
- 2) An organisations' space need will vary over time, with constantly altering workforce numbers and individual staff's space needs.
- 3) Potential for reducing individual staff's space needs will improve as technology etc improves.

Considering the three issues above, there needs to be a balance identified between a reasonably fixed space need assumption to allow feasibility calculations, but with enough scope and flex for the space need to be altered as greater depth and project knowledge is gained. It is usually recommended that within feasibility testing the space need is one of the variables focused on within sensitivity testing.

The diagram below highlights the need for the project team to be aware of the need for 'in depth' space analysis and the timing of it within a workplace transformation project. The top line shows a lifecycle for a workplace transformation, aligned with RIBA's plan of work below. The use of blue for the two lozenges show where in a project the two processes might align, and where more detailed space need should be defined.



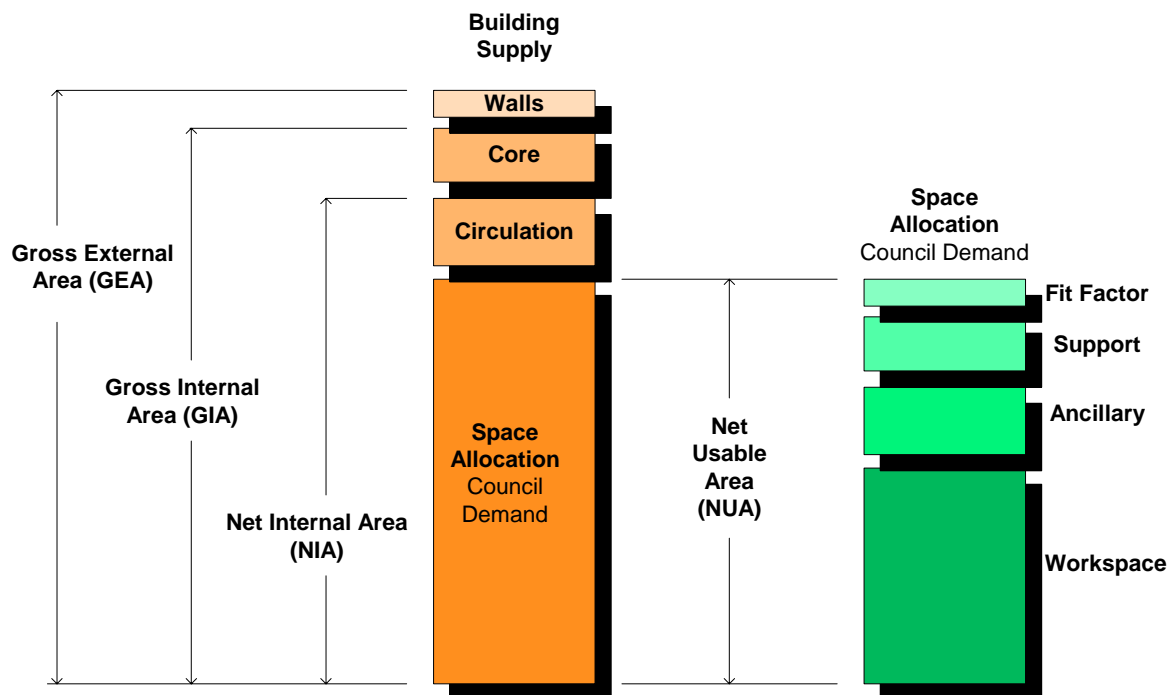
Definition for space

Before the project team begins to define the space need, it is necessary for to understand the definition of the space required. Many organisations use the term 'office space', but they may not all be describing the same space. Definitions for 'office space' vary, and this should raise awareness that many areas might be defined as 'office space', without looking like a person's traditional perception of what 'office space' consists of. Key is the understanding that the project team's defined 'space need' should consist of any area which aids in someway to achieving the following statement.

'Meeting corporate objectives within any given or proposed stock of space, through achieving appropriate and functional spatial relationships of business functions, and through satisfying the needs of the people who perform these functions, in such a way that resulting physical solutions are cost-effective, can be managed efficiently and, above all, are capable of accommodating change.'

Determining the Space Need / Budget

With the recognition that defined space budget needs to be both flexible, and include a much wider definition of 'office space' than initially thought, the following diagram initially begins to determine the space budget a project team may arrive at.



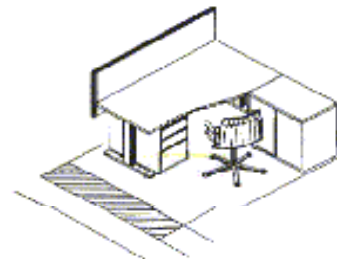
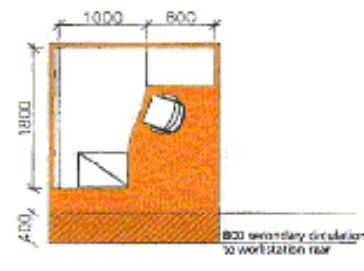
The diagram shows that the technical breakdown of space within an organisations 'office'. It is the green areas that Project teams will need to concentrate on most accurately defining, and it is largely within this area that efficiencies can be gained. These areas are defined as the 'Net Usable Area (NUA)' within a building.

When determining the space budget, there are a number of issues and potential 'space types' that must be considered before the NUA of a building can be accurately defined. Firstly the 'typical' types of space that create a workplace should be defined, and it is usual that the workplace is an amalgamation of these space types. Equally, within each of these space types, there are a number of sub-issues which must be considered. The space types and their sub-issues are detailed below.

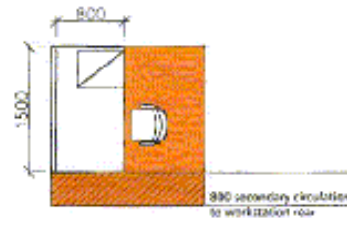
Open Plan Offices

- *Configuration* – Open plan office design is most easily accommodated within modern buildings, providing large uniform floor plates with minimal internal structural supports. The design principle centres round easily adaptable working space with few if any internal partitions.
- *Function - Administrative v Technical* – If the workplace function is largely administrative, as opposed to technical, then a differing open plan office configuration should be identified to maximise the efficiency of space and best align it to the functional needs of the workplace users.
- *Team working* – Open plan office design is often useful for organisations that require team working within internal groups. The physical and often mental barriers are removed by way of minimal internal partitioning which in turn allows for more free flowing and informal ways of working.
- *Department orientated* – The office layout should primarily be determined by the departments using the space. What might suit one department might not necessarily suit another and therefore care needs to be taken to ensure that the layout chosen is conducive to effective working.

The following images give indicative sizes for basic unit desk layouts within typical open plan floorplates.



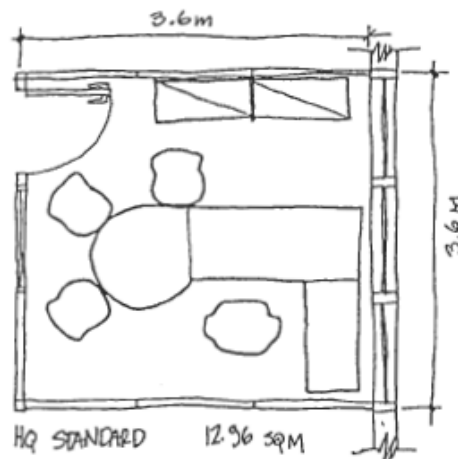
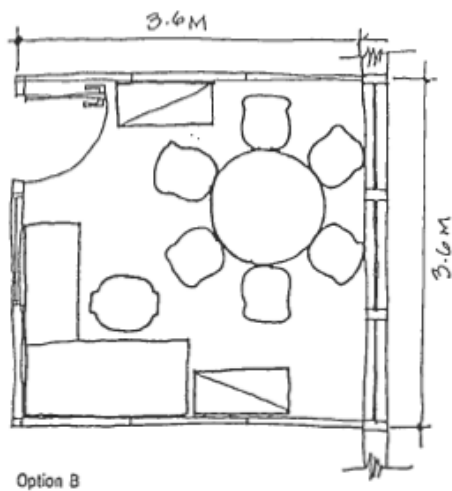
3.4 SQM WORKSPACE



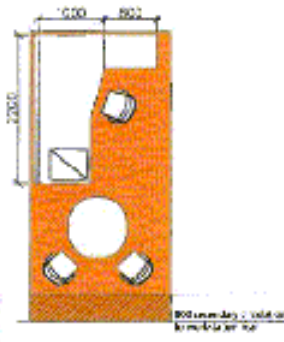
Cellular / Executive Offices

- *Senior Management team* – Cellular offices often comprise a series of internally partitioned offices for individuals or small groups. The hierarchy of the individuals within the organisation often determines the location and size of the office allocated.
- *Department heads* – Department heads will often have their own office. This space can serve as a quiet working space and an appropriate location for small internal meetings.
- *Additional meeting space* – Additional meeting space is often required where there is the need for large internal group meetings or for workshops and meetings where visitors are required to attend. The extent of additional meeting space is dependant on the structure of the organisation and the need for group decision making and team working.

The following diagrams highlight some typical space examples of cellular and executive office layouts.



9 SQM WORKSPACE - CONFIGURATION 1



Breakout space

- *Quiet areas* – These can be areas that have been sectioned off either by way of furniture or internal partitioning where individuals can carry out functions such as report writing and reading. The emphasis is here is to create an area in which an individual can concentrate with the minimum of disruption.
- *Touchdown meeting space* – These areas are flexible and informal by nature. They provide a common meeting point for small groups to interact where the formality of a meeting room is not required. The areas are typically grouped together and should not require that the space be 'booked' in advance.

Ancillary Space

- *Reception* – This space should be the first thing that people see when they enter a building or floor and effectively acts as a funnel in order to filter initial enquiries. The area should be made to look as inviting as possible and if possible should incorporate a waiting area for visitors.
- *Formal Meeting rooms* – The quantity and size of these rooms will depend on the nature of the organisation. There may be a requirement for a range of differing sized meeting rooms and where this is the case, a flexible approach is best. For example, meeting rooms are able to be interconnected via sliding doors, should you wish to expand the space.

Public and Democratic

- *Council Chamber* – These are often historic and traditional looking spaces. The layout and flexibility of the space should be determined by the organisation in collaboration with members. Historically many Council's chambers are inflexible due to their nature, but if its felt that the space is used infrequently enough to warrant this inflexibility, this should be addressed and a balance between formality of space and flexibility of space should be identified.
- *Member facilities* – A Council may need to attribute some space to members facilities, particularly members ante-rooms and break out space / touchdown areas.
- *Café/Restaurant* – In larger organisations, on site café and restaurant facilities are often provided for. The location of the facility will depend on factors such as services, accessibility and available space. The seating space of such facilities can often double up as an informal meeting area and therefore regard should be given to providing comfortable and flexible furniture where possible.

Support Facilities

- *Storage/Archive* – These are usually located either in a remote part of the building or sometimes in an annex. Documents stored in such spaces do not generally need to be accessed on a regular basis and can therefore be located in less desirable areas. It is however essential that adequate storage space, with acceptable storage conditions are provided for. For example, basement storage in a basement that is prone to damp may not prove adequate.
- *ICT/Communications/Server areas* – These spaces are often seen as a 'back office' function. Consideration should be given to the location of the facilities so as not to be susceptible to flooding, given the nature of equipment being operated. Examples of this include locating a communications and server room beneath a floor with WC facilities or a flat room directly above.
- *Emergency Planning rooms* – Councils may need to identify space that can be used in the event of emergency planning needs.

Fit Factor

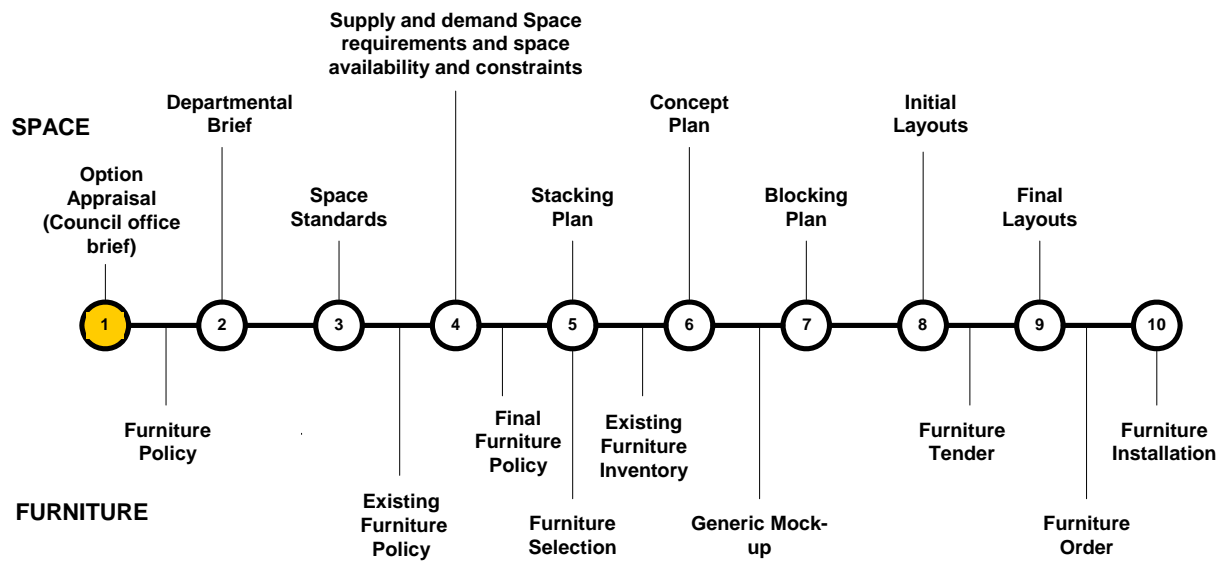
Detailed above are the main types of space that will make up a typical workplace. This list is by no means exhaustive, and should be adapted by Councils to align with their individual need. Once the type of space and quantum of space has begun to be identified, it is also necessary to consider the 'fit factor' of buildings. In essence, a building shape and design will have a marked effect on its functional suitability, and this should be considered when defining the space quantum. The main issues that determine the fit factor of a building are detailed below.

- *Building Configuration* – The configuration of a building can impact significantly on the efficient use of the space within it. A more uniform shaped floor plate will be more easily adaptable to layout configurations to that of a building with an irregular floor plate. Consideration should be given to services, wash room facilities, meeting rooms and communal circulation space.
- *Additional allowance* – Additional allowance dependant on the building envelope's shape is required. The more 'interesting' and 'oddly' shaped building, the greater the loss of efficiency and the increased need for additional allowance. Most simple rectangular buildings require an additional allowance of 3%, and irregular in shape buildings require a 5% additional allowance. Below is an example of a building shape which would typically lose 5% efficiency due to an irregular floor plate.



Developing the Space model

With an understanding of the issues above it should be possible for the project team to initially undertake the development of a space model and identify the space need for project which can be taken through to initial feasibility testing. Developing the space model will need to continue, and increase in depth and robustness of assumptions, the further the project gets to completion. The diagram below shows how the space model develops, and the input of space planners and architects will increase as the project evolves and nears a final build option and completion.



Space Related Definitions

The final section of this tool presents a table that contains a number of common space related definitions

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| Ancillary Space | The area given over to functions that support a section or working group includes items such as local machine rooms, storage areas, shared terminals and meeting rooms. |
| Fit Factor | Percentage addition to the organisation demand space requirements to allow for building configuration and obstruction. A Fit Factor of 5% is common for rectangular buildings and 7.5% for irregular plan shapes. |
| Gross External Area (GEA) | The building measurement taken to the front face of the external walls. |
| Gross Internal Area (GIA) | The building measurement taken to the inside face of the external walls and comprising Net Occupiable Area, Primary Circulation and Core/Common areas. |
| Net Internal Area (NIA) | The building measurement comprising Net Occupiable Area and Primary Circulation areas only. |
| Net Lettable Area (NLA) | The rent charge to be paid by the Council for space. Needs to be checked to ensure no inconsistency with GIA or NIA. |
| Net Usable Area (NUA) | Represents the Space Budget for the organisation comprising allowances for work space, ancillary, support and fit factor. |

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|-----------------------------|---|
| | Sometimes also known as Net Occupiable Area (NOA) |
| Support Space | The area given over to functions that support the whole organisation or building including areas required for despatch, mail, restaurant, archive, conference, central meeting, telecomm and IT Server rooms etc. |
| Work Space | <p>The area given over to workstations and their immediate requirements such as personal filing.</p> <p>Total Work Space is calculated by multiplying the allocated standards by the number of people.</p> |
| Primary Circulation Space | The portion of a building that is a public corridor or lobby, or is required for access by all occupants on a floor to stairs, elevators, toilet rooms and building entrances. |
| Secondary Circulation Space | The portion of a building required for access to some subdivision of space (whether bounded by walls or not) that is not defined as primary circulation |