

MANUAL
for
LAYOUT OF OFFICE FURNITURE

(C)
Center for Environmental Structure
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draft
for experimental purposes only
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INTRODUCTION

This manual is addressed to the workers and managers in an office.

The purpose of the manual is to allow people who work in offices, to create a new, and better environment for themselves.

In order to do it, please follow the instructions by answering certain simple questions.

We will then install a new type of furniture which will satisfy your needs as closely as possible.

GENERAL BACKGROUND

The general nature of the type of environment we hope to create for you, is described in the draft report pattern language for office furniture.

A copy of this draft pattern language is available for you to look at.

PROCEDURE

The procedure we shall ask you to follow, consists of six separate layout manuals, each one addresses to a particular individual or group of individuals.

It starts from the layout of the office space, as a whole, down to the layout and furnishing of the individual workplace.

The sections of the manual are the following:

- I. GENERAL LAYOUT OF THE WHOLE OFFICE SPACE WITH COMMON FACILITIES.
(to the directors of all departments).
- II. LAYOUT OF INDIVIDUAL DEPARTMENT.
(to the managers of all groups of each department).
- III. LAYOUT OF INDIVIDUAL GROUPSPACE.
(to all individuals of the group).
- IV. LAYOUT OF INDIVIDUAL WORKSPACE.
(to each individual separately).
- V. CLOSE ARRANGEMENT OF THE GROUPSPACE AND MAKE IT WHOLE.
(to the manager of each group).
- VI. CLOSE ARRANGEMENT OF THE DEPARTMENT.
(to the director of each department).

The whole procedure is meant to be quick, fun, and effective. We do not want you to spend more than half an hour on completing each one of the first four sections of the layout, and twenty minutes for the last two.

After you have made the necessary choices, we shall draw a sketch design of the whole thing which is generated by your decisions. When you approve it, we shall start to build it for you.

SECTION 1

GENERAL LAYOUT OF THE WHOLE OFFICE SPACE
WITH COMMON FACILITIES.

The first part of the layout process refers to the layout of the whole office, as a whole. The aim of this part of the layout process is to define the following three things:

- (a). The overall physical structure of the office space.
- (b). The type and location of the common facilities of the whole office.
- (c). The number and location of each department of the office.

This part of the layout process will be completed by the directors of all the departments of the office.

Office space consists of common space and work units.

Common space is being shared by all people working in an office, and guests.

Work units contain work space and common space, shared by people belonging to each unit.

The part of the procedure you are holding deals with the layout of the common space. You also need to allocate the work space among the work units.

In the next part of the procedure you will do the layout of each work unit.

The procedure of laying out the common space consist of ten steps:

- STEP 1. CHOOSE THE COMMON SPACES.
- STEP 2. CHOOSE THE TWO MAJOR CENTERS.
- STEP 3. LOCATE THE SPINE OF THE OFFICE.
- STEP 4. LOCATE THE TWO MAJOR CENTERS.
- STEP 5. CREATE TWO GROUPS OF COMMON SPACES.
- STEP 6. LOCATE THE TWO GROUPS OF COMMON SPACES.
- STEP 7. ALLOCATE WORKSPACE TO WORK UNITS.
- STEP 8. DEFINE BOUNDARIES.

STEP 9. CLOSE THE ARRANGEMENT.

STEP 10. CHOOSE FURNITURE FOR COMMON SPACE,
WITH DIMENSIONS.

STEP ONE: CHOOSE THE COMMON SPACES.

The following list contains various spaces of which the common space can be made.

Define how many of each kind you want in your office. There is only one requirement: you must include one Reception in your list of common spaces.

-Lounge

-Kitchen

-Sitting Rooms

-Library

-Conference Rooms for meetings between units, or meetings with guests.

-Special Technical Facilities (small photo lab, special copying machines, long-term storage of supplies).

-Small sitting alcoves for one to three persons, meant for a short break or conversation, formed at the periphery of bigger centers.

-Corridors

-Telephone alcoves, with some privacy, mainly for guests.

-Auditorium

-Ceremonies Room

-Archives

-Gymnasium

STEP TWO: CHOOSE THE TWO MAJOR CENTERS

Of the spaces chosen at the previous step, choose two, which will be the major centers of the common space.

These centers should be distinct from each other, and from all the other centers.

In order for you to define the distinct character of each one, consider:

- Is it centrally located?
- Does it have view to the outside?
- What is the scale of its size?

Write down all the above information in your list.

Now, you are going to define the area which each major center will occupy.

Do this, according to the following rule:

-calculate the 30% of the total office area; this will be the total common space area.

-now, calculate the 30% of the total common space area; this will be the total area of the two major centers together.

Share this area between the two major centers.

Finally, define the area that Reception will occupy.

STEP THREE: LOCATE THE SPINE OF THE OFFICE

Think of the common space as a continuous sequence of centers.

That is, all the centers on your list are connected one to another, in a formation which resembles a spine.

Draw a dotted line indicating the spine of the office; start at the entrance and finish at a destination point.

Finally, place the Reception at the entrance.

STEP FOUR: LOCATE THE TWO MAJOR CENTERS

Place one of the two major centers at the destination of the spine.

Of the two, choose the one which best fits there, according to the specific qualities you ascribed to the centers at step two.

Now, you are going to place the second of the major centers.

This center should be located closer to the Reception.

A distance of about one third the length of the spine from the Reception seems to work best. If there is a junction on the spine, close to this position, use it to locate the center.

Pay attention to keeping the area of the centers you draw, according to the sizes you have decided at step two.

Remember: the two major centers should preferably have different configurations.

STEP FIVE: CREATE TWO GROUPS OF COMMON SPACES

Go back to the list of common spaces you have created. Of the centers listed here, you have already placed the Reception and the two Major centers.

Now, create two groups of the remaining centers.

-The first group will contain the centers making the part of the spine between the Reception and the major center closer to it.

-The second group will contain the centers making the part of the spine between the two major centers.

Calculate the area each center occupies.

Remember, the area to be allocated to all the remaining centers is the total common space area, minus the area that Reception occupies, minus the area of the two major centers.

STEP SIX: LOCATE THE TWO GROUPS OF COMMON
SPACE

Place, one by one, all the centers contained in the two groups you created at the previous step.

-Place the centers of one group first, then all the centers belonging to the other group.

While placing them, pay attention as to actually make the spine out of these centers.

STEP SEVEN: ALLOCATE WORKSPACE TO WORK UNITS

The general layout of the common space is done. The remaining office area must be allocated to the work units.

FIRST: Decide the work units.

Each work unit will have a well defined space of its own and direct access from the common space.

In defining the work unit, you should include the number of people who belong to each unit, as well as the approximate size of the space required for each unit. The average of 140 sq. ft. per person can be used for the definition of the size of each unit.

Two important issues to pay attention to in laying out the units:

- possible connections between two or more units;
- desirable, or not desirable connection of units to certain centers of the common space.

SECOND: Draw roughly the place that each unit will occupy. Provide for access from every unit to the spine. In order to do so, you may need to use corridors; as a rule, use short corridors rather than long ones, and make them smaller than any you used for the spine.

NOTE: In order to accomodate all the units so that they are accessible from the spine, you might have to slightly change the position or the configuration of some of the centering.

STEP EIGHT: DEFINE BOUNDARIES

The general layout of the whole office space is done. At this step you must go back and define the nature of each boundary of the plan, according to the following code:

-A DOUBLE SOLID LINE: it indicates a solid boundary, at least 75% enclosed, with small openings (thick wall).

This type of enclosure is always the boundary of the units.

-A SINGLE SOLID LINE: it indicates a solid boundary, at least 50% enclosed (thick wall).

-A DOTTED LINE: it indicates a transparent boundary, enclosed by 25% at the most.

All three types of enclosures can be used as boundaries to the common space centers.

Draw a rough sketch of the boundaries.

Modifications will probably occur in the two following steps.

STEP NINE: CLOSE THE ARRANGEMENT

Check for any necessary adjustment in the layout of the common space and the work units.

This can include: correction of the exact position and the size of some centers, better arrangement of their access, more harmonious distribution of small, auxiliary centers.

STEP TEN: CHOOSE FURNITURE FOR COMMON SPACE,
WITH DIMENSIONS

At this step, the furniture needed for the common space centers, as well as the elements to define the boundaries must be chosen.

The furniture elements will be selected among those contained in the following list.

Each of the items can be manufactured in any size and shape you want.

It is very important that you think about the best arrangement of the furniture in each center, in order to choose the right items of furniture in the right dimensions.

THE ITEMS OF FURNITURE

Thick wall
Built-ins
Archway
Doorway
Arcade
Columns
Low wall
Platform
Flat ceiling
Domed or vaulted ceiling
Floor with patterns
Frieze
Curtains
Boards/projection
Lights
Alcove
Water/coffee fountain
Mailboxes
Interior opening
Sliding door
Opening door
Conference table
Lounge table/benches
Sofa
Armchair
Seat
Footstool
Kitchen counter
Bookcase
Straight chair

SECTION II

LAYOUT OF THE INDIVIDUAL DEPARTMENT

The second part of the process is addressed to the layout of the individual department. It aims at defining the following two things:

- (a). The workspace for each individual group of the department.
- (b). The common areas of the department to be shared by all groups.

This part of the layout process will be completed by the managers of all groups of the department.

It includes the following steps:

- STEP 1: DEFINE THE WORKGROUPS OF THE DEPARTMENT.
- STEP 2: DEFINE THE COMMON SPACE WHICH IS TO BE SHARED BY ALL GROUPS OF THE DEPARTMENT.
- STEP 3: CALCULATE THE SQUARE FOOTAGE ASSIGNED TO EACH INDIVIDUAL GROUPSPACE, AND TO THE COMMON AREAS.
- STEP 4: DEFINE THE CENTER OF GRAVITY OF EACH SPACE IN THE DEPARTMENT: BOTH OF THE INDIVIDUAL GROUPSPACES AND THE COMMON AREAS.
- STEP 5: DEFINE THE SPACE FOR EACH INDIVIDUAL GROUP, AND FOR THE COMMON AREAS.
- STEP 6: DEFINE THE ACCESS TO EACH GROUPSPACE AND TO EACH COMMON AREA.
- STEP 7: DEFINE THE DEGREE OF SEPARATION BETWEEN THE GROUPSPACES.

STEP 1: DEFINE THE WORKGROUPS OF THE DEPARTMENT.

In this step we want you to decide the best working groups.

We assume here, that each working group will, when we are finished, have a rather well defined space of its own: its own territory.

To some degree, the space of each workgroup will be surrounded by a boundary, which provides some acoustic and visual privacy. It does not mean that each group will be in a totally isolated room. The precise degree of enclosure and separation between groups, will be decided in step 7.

At this point, we should like you to DEFINE THE NUMBER OF WORKGROUPS IN YOUR DEPARTMENT, AS WELL AS THE NUMBER OF PEOPLE WHO BELONG TO EACH SMALL WORK GROUP.

You should bear in mind that empirical research has shown that a workgroup functions more effectively when the number of people working in it is not larger than 12 ????.

STEP 2: DEFINE THE COMMON SPACE WHICH IS TO BE SHARED BY ALL GROUPS OF THE DEPARTMENT.

In this stage, we want you to identify the nature of common group areas you would like to have; these areas will be shared by all groups of your department.

These would be areas where anyone can work, or where anyone can relax, or where meetings will take place.

The common group areas should occupy about 15% to 20% of the total available space.

The common areas will include a reception area, if necessary; otherwise, an entrance area into the department..

We should like you to define the following:

- (a). The basic functions of the common group areas.
- (b). The number of separate spaces they will occupy.
- (c). Anything special about their character which is important -- for example, daylight, sun, access, special facilities, water etc.

STEP 3: CALCULATE THE SQUARE FOOTAGE
ASSIGNED TO EACH INDIVIDUAL GROUP-
SPACE, AND TO THE COMMON AREAS.

At this step you should do some arithmetic to calculate the number of square footage occupied by each individual workgroup and by the common spaces.

On the overall, the common spaces will occupy about 15% - 20% of the total available area of the department. This will include the reception area and circulation space. All the group spaces will occupy 85% of the total.

First of all, make a rough sketch of your department with the basic dimensions, and calculate the total area.

On the basis of this, calculate the 15% of the total, to be given to common spaces. If you have more than one common space, distribute the available area accordingly.

Now calculate the approximate size of the space that each small group will occupy. The number 120 sq.ft. per person, as an average, will help you to define roughly the size of each small work group space.

AREA OF DEPARTMENT (A.D.)	_____SQ.FT.
COMMON AREAS (15% x (A.D))	_____SQ.FT.
GROUP 1(# OF PEOPLE x 120sq.ft.)	_____SQ.FT.
GROUP 2	_____SQ.FT.
GROUP 3	_____SQ.FT.
GROUP 4	_____SQ.FT.
.....	
.....	

STEP 4: DEFINE THE LOCATION OF EACH SPACE IN THE DEPARTMENT: BOTH OF THE GROUP-SPACES AND THE COMMON AREAS.

At this step we should like you to define roughly where each space of the department will be located; both each small work group and the common spaces. This is a crucial step of the layout process, since it will define the overall spatial organization of your department.

It is extremely important to lay out the work group spaces with the following thing in mind: the work group which functions as the heart of your operation should be located in a central position; it should be the center --geometrically, as well as functionally -- of your whole department.

In case the space allocated to your department has natural light, try to locate the groups in such a way so that each one gets direct advantage of it.

The common space of the department, depending on its particular character and function, might need to be located on a quiet or a busy spot, or a sunny place, or a place with plenty of light. Try to provide for these.

However, regardless of these particular requirements, when locating the major common space, think of it as a potential node of intensity. Even if it is intended to be used as an enclosed space, place it in an area that could develop next to it the most important node in the circulation realm of the department -- a point of meeting while moving into it.

Now, make a simple and rough sketch of the department. Make sure that you have located the entrance into it. Considering all previous points, do the following:

1. INDICATE WITH THE SIGN OF A SMALL CIRCLE THE CENTER OF GRAVITY OF THE LOCATION OF EACH WORK GROUP.
2. INDICATE WITH THE SIGN OF THE HEART THE CENTER OF GRAVITY OF THE COMMON SPACE.
3. INDICATE WITH THE SIGN OF A DIAMOND THE INTENSITY NODE NEXT TO THE COMMON SPACE.
4. INDICATE WITH THE SIGN OF AN ARROW THE CENTER OF GRAVITY OF THE RECEPTION OR ENTRANCE AREA.

While doing this bear in mind the difference in group sizes. You could indicate this, by variation in the diameter of the circle.

STEP 5: DEFINE THE SHAPE OF EACH INDIVIDUAL GROUP SPACE, AND OF THE COMMON SPACES.

At this point, you know both the size and the rough location of each group space and of the common spaces. It is time, now, to define PRECISELY the shape and location of each space.

The sketch you have made on the previous step, indicates the centers of centers of gravity of each space. Now, on the same sketch, DEFINE PRECISELY THE SHAPE OF EACH OF THE FOLLOWING SPACES:

1. EACH INDIVIDUAL GROUP SPACE.
2. THE COMMON SPACE.
3. THE INTENSITY NODE NEXT TO THE COMMON SPACE.
4. THE RECEPTION OR ENTRANCE AREA.

Shape each space around its center of gravity.

Make the shape of each group space as simple as possible. It could be either one rectangle or a combination of two rectangles, of which one is considerably larger than the other.

In order to finalize the exact configuration of each space you will need to go through a recursive process of space adjustments and size calculations, so that each group space has the area it needs, and it has the shape that will accomodate properly its needs.

While doing this, just pay attention to the shapes of individual spaces and to the spatial organization of the whole. Do not worry about access to each space, at this point. Make sure that each space has a simple and good shape, so that it is felt as a center.

STEP 6: DEFINE THE ACCESS TO EACH GROUPSPACE
AND TO EACH COMMON AREA.

In this step we want you to define the circulation into the department, as well as the access into each group space.

First of all, connect with a spacious corridor the reception or entrance area (whatever you have chosen) with the intensity node next to the common space, providing access to the adjacent group spaces .

In case there are group spaces still not accessible, connect the intensity node with the most remote group space with a corridor, considerably narrower than the previous one.

All other group spaces should be connected to this corridor.

Now, indicate the approximate location of the entrance into each group.

STEP 7: DEFINE THE DEGREE OF SEPARATION
BETWEEN THE GROUPSPACES.

At this last step, we want you to determine the degree of connection and separation between groups.

In order to do it, you must use the layout sketch that you already have, and then indicate the nature of each boundary of the plan, according to the following code:

A DOUBLE SOLID LINE: it indicates a thick and solid boundary, which is about 75% enclosed; like a thick wall with built-in furniture --counters, cabinets, drawers, with small openings, and so on.....

A SINGLE SOLID LINE: it indicates a solid boundary again, with more openings however, which is about 50% enclosed; like a wall with large doorways, or sliding doors, or a series of thick columns with walls and/or solid furniture pieces built in the openings -- at least half of them, and so on.....

A DOTTED LINE: it indicates a boundary that induces connection more than separation between adjacent spaces, about 25% enclosed; like a series of columns with low walls in between, or a wall trellis, or a wall which is partly defined by drapes or shades, or a series of low cabinets, and so on.....

You shall now try to depict the physical character of the boundaries you have envisioned, in a rough layout sketch, indicating major doorways, openings, columns. ??????Do not spend time to make things perfect; it is almost certain that modifications and adjustments will occur after you have completed the following steps.

SECTION III

LAYOUT OF INDIVIDUAL GROUPSPACE.

The third part of the process refers to layout of each individual group space. The purpose of this part is to define the following:

- (a). The size and location of each individual workplace within the group.
- (b). The major center of each group space.

This part of the layout process will be completed with the collective involvement of all individuals of the group.

It includes the following steps:

- STEP 1: SIZE AND LOCATION OF INDIVIDUAL WORKPLACES IN THE GROUP.
- STEP 2: DEFINITION OF MAIN CENTER FOR EACH WORKGROUP.
- STEP 3: CHARACTER ON ENCLOSURE BETWEEN INDIVIDUAL WORKPLACES.

STEP 1: SIZE AND LOCATION OF INDIVIDUAL WORKPLACES

Within the rough boundary positions of the individual group spaces you have chosen, we now want each person to choose his workplace.

Three things are important about the workplace.

1. SIZE.

It has to be the right size. You must decide, together with your manager, how much space you can be allotted, in square feet.

Of course, each workgroup must have a total working area which is about right. We assume that that decision has already been made. Within the area for your workgroup, each of you must now have a workable amount of space.

As a rule of thumb, you should assume that the areas of your individual workspaces, should add up to about 60% of the total area devoted to your group.

2. ORIENTATION

You must decide which way you want to face. You cannot be sure about the position you have chosen, until you know how you are going to sit there, or work there.

STEP 2: DEFINITION OF THE MAIN CENTER FOR
EACH WORKING GROUP

You know now, where each individual is going to work, and roughly how much total space is given to each one.

Now, you must do the most important thing: Fix the main group center for each working group.

Almost every working group needs some kind of center. It may be something big and elaborate, if the people in the group work together a great deal of the time.

But even if the members of a group spend most of their time working individually, still some kind of place may be needed for working together.

It may be no more than a table.

In an extreme case, it might even be the desk of one of the people in the group, and the others gather round it whenever they work together. But even in this case, it should be clear where the main center of the group is, and what its character is.

This center is the thing which holds the group together.

Now, make a rough sketch of each individual working group space and indicate the location and size of its main center, as well as of what it consists of.

STEP 3: CHARACTER ON ENCLOSURE BETWEEN
INDIVIDUAL WORKPLACES.

We now have a general layout of the group space, with all the individual workplaces.

At this third step, we want you to decide how open or how enclosed you want your individual workplace to be. Already the boundaries of the group work space have contributed to the enclosure of your individual workplace. However, you might need more privacy, more separation between you and your neighbor. This has to be a light form of enclosure that won't disrupt the unity of the group as a whole; it will have to allow more for connection than inducing separation.

It might be a low wall, or a trellis wall, or some furniture, or columns, or curtains or movable shades...or a combination of these, or finally something else that you might have in mind.

In order to do it, you must use the layout sketch that you already have, and then indicate the nature of each boundary of the plan.

SECTION IV.

LAYOUT OF INDIVIDUAL WORKSPACE

GENERAL

At this point you know the location, size and shape of your individual workplace, as well as its approximate extent of enclosure, which defines the amount of separation between you and your neighbors.

This procedure will help you to lay out the interior of your individual workspace, and to choose the necessary furniture and enclosure elements which will define precisely the boundaries of your individual workplace.

The procedure consists of the following ten steps:

- STEP 1: DEFINE THE MAJOR CENTER OF YOUR INDIVIDUAL WORKPLACE.
- STEP 2: DEFINE YOUR PRIMARY WORK SURFACE.
- STEP 3: DEFINE YOUR SITTING POSITION.
- STEP 4: DEFINE SECONDARY WORK SURFACES.
- STEP 5: SPECIFY ENCLOSURE ELEMENTS.
- STEP 6: SPECIFY AUXILIARY FURNITURE PIECES.
- STEP 7: DEFINE SECONDARY CENTER IN YOUR INDIVIDUAL WORKSPACE.
- STEP 8: SPECIFY THE LIGHTING OF YOUR INDIVIDUAL WORKSPACE.
- STEP 9: COMPLETE AND EMBELLISH THE LAYOUT OF YOUR WORKSPACE.
- STEP 10: GIVE DIMENSIONS OF ALL ENCLOSURE ELEMENTS AND PIECES OF FURNITURE.

The following layout steps have to be carefully completed one after the other, BY YOU INDIVIDUALLY. However, while doing this, you should take into consideration all layout

decisions regarding the group space, and the adjacent individual workplaces, already laid out, since some of these decisions might have an impact on the layout of your space.

If any of the steps of the process seems to be irrelevant to your particular needs and type of work, just skip it, and proceed to the following one.

Before starting on the process, PREPARE AN OUTLINE SKETCH of your individual workspace. It should be made on scale with actual dimensions and it should also indicate the following:

- (a) all sources of natural light
- (b) the position of entering into it
- (c) the desirable degree of enclosure, as it has already been decided in the previous step in relationship to the other people of your group.
- (d) the beginnings of spaces adjacent to yours, if already laid out.

STEP 1: DEFINE THE MAJOR CENTER OF YOUR
INDIVIDUAL WORKPLACE.

Each individual workplace has its major center of work; it is the area in which the individual performs his primary working tasks.

The major center occupies between 60%-100% of the individual workarea, depending on the type of work and the size of the area.

The major center of the individual workarea is primarily defined in physical means by the pieces of furniture which are mostly associated with the major task the individual performs.

Now, DEFINE on the sketch you have already made the approximate location and size of the major center of your workspace. Choose a position that will allow this place to function effectively as the center of activity of your work.

STEP 2: DEFINE YOUR PRIMARY WORK SURFACE.

Your primary work surface is the focal point of the area you have defined in the previous step.

It can be a desk, or a working table or a computer table, and so on...depending on the type of your work.

THEREFORE, CHOOSE from the following list of elements the piece of furniture which will mostly accomodate your primary needs.

1. DESK WITH BACK --a partly enclosed desk, withshelves and drawers at the back of the desk section.
2. DESK --a top, like a table, with drawers below.
3. TABLE --a table convenient for work.
4. LAYOUT TABLE --a larger, deeper and higher table, with shelves above or below
5. COMPUTER TABLE --a top with a deep back to enclose the computer and provide for shelves on both sides. Possibly, built-in a thick wall.

Then, PLACE it within your individual work-place so that it takes advantage of the existing natural light and in a way that it will potentially create a whole working area around it.

Now, UPDATE your sketch with the exact position of your primary work surface.

STEP 3: DEFINE YOUR SITTING POSITION.

DEFINE your sitting position in a way that will provide you the desirable amount of privacy and enclosure, while working.

Bear in mind that the best sitting position is the one that gives somebody the possibility to see at a distance, and, at the same time, allows him to see other people working close to him.

Now, CHOOSE your seat from the following list of items,

1. DESK CHAIR --a rolling chair with adjustable back.
2. CHAIR WITH ARMS --a comfortable chair with arms.
3. STOOL --a slightly sloping highstool, for extreme comfort and back posture.

and PLACE it on the sketch.

STEP 4: DEFINE SECONDARY WORK SURFACES.

Quite often it is necessary to provide your workplace with more than one working surfaces depending on the kind of work you are doing. For example, although you spend most of the time working on a computer table, you might need another table or desk next to it, to support and facilitate your work, and so on..

Therefore, CHOOSE from the following list of items the pieces of furniture to function as your secondary work surface/s.

1. COMPUTER TABLE (as described before)
2. LAYOUT TABLE (as described before)
3. WORKING TABLE (as described before)
4. BUILT-IN WORKING COUNTER --a counter top built-in a thick wall.

Now, PLACE on the sketch the additional work surface/s in relationship to your major work surface. They could be placed next to it, or behind your seat. All of them should be equally and easily accessible from your seating position. Arrange them so that your workspace is physically defined by these pieces of furniture. While sitting and working you should feel being at the center of a workplace.

STEP 5: SPECIFY ENCLOSURE ELEMENTS.

At this point you already know the rough amount of enclosure in your workplace. You have already thought in the previous steps to what extent the enclosure surfaces are solid boundaries --like thick walls with built-in elements-- or to what extent they are partly open with interior window and openings, or to what extent they induce more connection than separation with adjacent places --like a series of columns, a low wall, a trellis wall and so on, or to what extent it is completely open.

Certainly, the boundaries of your workplace consist of a combination of these elements; some of its boundaries will be more solid than others, as to enhance privacy and enclosure, and some others will be more transparent and open as to induce connectedness with other co-workers.

The boundaries which define your major center of work will most likely be made of thick walls with built-in elements as to provide for easily accessible storage and shelving areas.

Bear in mind that it is the physical definition of the boundaries will consolidate your workspace.

Now, SPECIFY the enclosure elements for each boundary of your workspace SEPARATELY, starting from the boundaries adjacent to the major center of your workspace, already defined by the primary and secondary work-surfaces. Think both of the functional characteristics of the boundaries, so that they support effectively your work, and of their feeling of solidity and harmony as a continuous enclosure.

Consider one after the other the boundaries of your workspace, and try to imagine how open or solid you need each one of them to be, as well as which ones of the following enclosure elements will be most appropriate for the kind of enclosure you need to achieve.

CHOOSE from the following list of enclosure elements:

1. SOLID THICK WALL PANELS --A thick enclosure with built-in shelves, drawers....
2. THICK WALL PANEL WITH BUILT-IN SHELVES --a set of shelves built into a thick wall.
3. THICK WALL PANEL WITH BUILT-IN DRAWERS --a chest of drawers built into a thick wall.
4. THICK WALL PANEL WITH BUILT-IN CUPBOARDS --a set of shelved cupboards built into a thick wall.
5. THICK WALL PANEL WITH BUILT-IN CUPBOARD CHEST --a tall chest with drawers and compartments built into a thick wall.
6. THICK WALL PANEL WITH BUILT-IN CATALOG COUNTER --a counter with slopping top and shelves below.
7. THICK WALL PANEL WITH BUILT-IN FILES --a filing cabinet built into a thick wall.
8. THICK WALL PANEL WITH INTERIOR OPENING --a wall opening between workplaces.
9. THICK WALL PANEL WITH INTERIOR WINDOW--an opening or sliding window, between workplaces with glazed or solid panels.
10. THICK WALL PANEL WITH SLIDING DOOR --a sliding door, single or double, with window.
11. SMALL COMPARTMENTS --a series of small compartments with doors, high on the wall.
12. LOW WALL --a platform thick wall.
13. COLUMNS WITH BEAM --Simple columns, stiff and fairly thick, connected with beam.
14. LOW WALL WITH COLUMNS --a low wall with columns arising out of it.

15. TRELLIS WALL --a wall with thin bracing.

16. CURTAINS --a curtain-like enclosure, on a wall opening or in between columns.

A combination of built-ins in each thick wall panel is also available. Please specify.

You should MAKE A LIST of the enclosure elements for each boundary of your workspace SEPARATELY.

You should, also, INDICATE the exact position of each enclosure element in the sketch of your workspace.

STEP 6: SPECIFY AUXILIARY FURNITURE PIECES.

Depending on the type of your work you might need some other smaller pieces of free standing furniture, to support your tasks.

Some of these pieces are on casters to be placed next to or under your desk or working table. The others are to be placed against a solid wall, behind your seat, or against a low wall, or as an element between you and your co-workers.

CHOOSE from the following list of items:

1. SMALL SIDE ROLLING TABLE --a side movable table, for auxiliary uses.
2. SMALL ROLLING CABINET --a thing like a tool cabinet with drawers, that goes below a desk or table.
3. BOOKCASE --a wall cabinet with shelves.
4. FILING CABINET --a long and narrow cabinet with filing drawers.
5. COUNTER WITH DRAWERS AND/OR SHELVES --a counter top with shelves and/or drawers underneath.
6. PIN UP BOARD --a wall board, made of soft materials, appropriate for pinning up paper.

Now, POSITION them on your sketch, so as to support your work and to enhance, at the same time, the enclosure feeling in the major center of your work.

STEP 7: DEFINE SECONDARY CENTER IN YOUR
INDIVIDUAL WORKSPACE.

At this point of the process you have completed the major layout of your primary workplace. You might have chosen to allot the whole of your individual workspace to the primary center of your work.

However, in a lot of cases, depending on the size of your individual workspace and the type of your work, you might need another place within the boundaries of your individual workspace --a social area-- in order to hold discussions and work meetings with others.

In that case, think of the social area as the secondary center of your workspace. It is an area considerably smaller than the primary center of work, about 20% to 40% of the total area.

DEFINE the area of the secondary center on your sketch. Most probably it will be the area of your individual office left after the definition of the primary center of work. Give to it as a good shape as that of the primary center of work. You might need to adjust slightly the primary center --but only SLIGHTLY-- as to accomodate it.

CHOOSE from the following list of items the pieces of furniture necessary to accomodate these kind of meetings:

1. ROUND TABLE --a small table for 2 to 3 people.
2. CHAIRS WITH ARMS(as described previously)
3. WHITEBOARD --a polished white board for drawing and writing with magic markers.
4. BLACKBOARD --a real slate blackboard for drawing and writing.
5. SEAT CHEST --a seat with hinged seat portions, and storage underneath.
6. SEAT --a long bench with cushions.
7. ARMCHAIR --a really comfortable chair.
8. LOW CONVERSATION TABLE
9. SMALL SOFA --a comfortable upholstered couch with pillows.

Now, POSITION them on the sketch as to create a comfortable, though small, meeting corner.

STEP 8: SPECIFY THE LIGHTING OF YOUR
INDIVIDUAL WORKSPACE.

Now that you have defined the layout of your whole individual workplace and you have specified all enclosure elements, you concentrate on the lighting of your entire workspace.

The lighting should not be homogenous through out your space. The areas of the primary and secondary should be enhanced with pools of light. At the same time, you have to pay attention to the overall level of ambience light in the space.

At this point of the process you should concentrate only on fixed lighting on the ceiling and walls.

First of all, DEFINE the places on the wall and ceiling where lighting is neccessary. It is crucial that there will be a major pool of light in your primary center of work.

CHOOSE from the following list of items, and specify their exact position on the sketch.

1. CEILING LIGHTS --flat light panel let into the ceiling.
2. LONG HANGING LIGHTS --long light in splayed shade, for intense work area.
3. SMALL COVE LIGHTS --wall lights for indirect and ambience lighting, squarish in shape.
4. LONG AND THIN COVE LIGHTS --the same as before, but different in shape and size.

STEP 9: COMPLETE AND EMBELLISH THE LAYOUT OF YOUR WORKSPACE.

At this point of the layout process you have to consider the arrangement in your individual workplace AS A WHOLE. There might be things you have to adjust as to reach a perfect fit and continuous fabric of space in your space.

Or, there might small things you would need to add as to create a really comfortable feeling and personal character in your space.

First of all, make all necessary small adjustments as to reach a really satisfactory level of continuity in your workspace.

Then, consider if any of the following items of accessories might be useful to you.

1. FOOTREST
2. CURTAINS --a curtain-like enclosure, on a wall opening or in between columns.
3. DESK LIGHTS --table or desk movable lights.
4. MAILBOX CABINET --an open cabinet with individual mailboxes.
5. PILLOWS
6. WASTEBASKET
7. FRIEZE WITH PATTERNS --a wide board that goes around the wall, below the ceiling, with ornaments or painted decorations on it.

STEP 10: GIVE DIMENSIONS TO ALL ENCLOSURE
ELEMENTS AND PIECES OF FURNITURE.

Each one of the enclosure elements and each one of the items of free-standing furniture has been laid out in direct relationship to your individual needs and to the particularities of your individual space. Therefore, their production cannot be based on modules. Modular pieces cannot achieve the degree of fit and continuity that you have established on your layout.

Therefore, at this point, that you know everything about your individual workspace, you need to SPECIFY CAREFULLY THE DIMENSIONS of the items you have chosen.

Go back to your sketch that indicates all items of enclosure and furniture and write all necessary dimensions on it.

SECTION V.

CLOSE ARRANGEMENT OF THE GROUPSPACE AND
MAKE IT WHOLE.

This part of the layout process refers again to the group space. After each individual has completed the layout of his own workplace, there is a need to look back at the group space, as a whole, and check things that need adjustment or repair, or things that are still missing in order to complete the arrangement and furnishing of the group space. They might be small things, but certainly important for the coherent feeling of the whole.

This part of the layout process is to be completed by the manager of the group.

It includes the following steps:

- STEP 1: COMPLETE THE LAYOUT OF THE GROUP-SPACE, AS A WHOLE.
- STEP 2: SPECIFY ENCLOSURE ELEMENTS AND FURNITURE ITEMS STILL NEEDED FOR COMPLETING THE ARRANGEMENT OF THE GROUPSPACE.
- STEP 3: SPECIFY DIMENSIONS FOR ANY ADDITIONAL ITEM.

STEP 1: COMPLETE THE LAYOUT OF THE GROUP-SPACE, AS A WHOLE.

At this stage everything is almost complete in the group space. Each person has a workplace and an arrangement of furniture in it, fit to his needs. And the members of the group have a common workplace together.

The only possible problem now, is a little roughness at the edges. In an ideal arrangement, the boundary, the doorways, the common storage space around the edge, the common table, the barriers, and boundaries, all work together smoothly to create a harmonious whole.

Thus what you have done in the previous steps may need some finishing touches, some final adjustment, to create this kind of harmonious "smoothness" in the whole.

The manager of the group could complete this step; or the members of the workgroup could get together to make a common decision about this. The necessary adjustments and additional elements won't be extensive --they will refer to elements of enclosure of the small group work space as a whole, which have not been considered by the individuals, like doorways, ceiling, floor, frieze,....

In the sketch of the group space that you already have make the necessary adjustments.

STEP 2: SPECIFY ENCLOSURE ELEMENTS AND FURNITURE ITEMS STILL NEEDED FOR COMPLETING THE ARRANGEMENT OF THE GROUPSPACE.

At this point we would you like to make definite decisions about two things:

1. The enclosure and completeness of the group space as a whole.

Certainly the layout, furnishing and definition of enclosure elements of the individual workplaces have contributed to the to the definition and enclosure of the groupspace as a whole.

However, there are things that refer specifically to the group space as a whole, and therefore, they have to be considered at this point.

So, DEFINE WHICH ONES OF THE FOLLOWING ELEMENTS are needed in addition in order to complete the layout and enclosure of the common spaces of the group, and to tie all the individual workplaces into one continuous space.

1. DOORWAY.
2. FLOOR WITH PATTERNS (for the whole group space).
3. FLAT CEILING (for the whole group space).
4. CEILING LIGHTS (for common areas).
5. WALL LIGHTS (for common areas).
6. FRIEZE.
7. ANY ADDITIONAL PIECES OF FURNITURE (for the common areas).
8. ANY ADDITIONAL THICK WALL PANELS (for the common areas).

Finally, make a sketch of the small group work area, that shows the arrangement of the additional furniture and enclosure elements. Again, don't worry too much about making the arrangement perfect.

STEP 3: SPECIFY DIMENSIONS FOR ANY
ADDITIONAL ITEM.

Please, specify dimensions for all additional elements you have ordered in the previous step, with reference to the sketch you have already made.

SECTION VI.

CLOSE ARRANGEMENT OF THE DEPARTMENT.

This is the last part of the layout process; it addresses the completion of the department, as the previous one addresses the completion of the individual group space. It wants to make sure that all common spaces have been laid out and furnished .

It consists of the following steps, which will be completed by the director of each department.

- STEP 1: COMPLETE THE LAYOUT OF THE DEPARTMENT, AS A WHOLE.
- STEP 2: CHOOSE FURNITURE FOR THE COMMON SPACES OF THE DEPARTMENT.
- STEP 3: SPECIFY ENCLOSURE ELEMENTS, STILL NEEDED, FOR COMPLETING THE ARRANGEMENT OF THE DEPARTMENT, AS A WHOLE.
- STEP 4: SPECIFY DIMENSIONS FOR ALL ADDITIONAL ITEMS.

STEP 1: COMPLETE THE LAYOUT OF THE DEPARTMENT, AS A WHOLE.

At this stage everything is almost complete. Every group space has been laid out and furnished.

The only possible problem now, is a little roughness at the edges of the department as a whole, and in its common areas, shared by all groups.

Thus what you have done in the previous layout sections may need some finishing touches, some final adjustment, to create this kind of harmonious "smoothness" in the whole.

In the sketch of the department, you already have, indicate all adjustments and additions.

Again, don't worry too much about making the arrangement perfect.

STEP 2: CHOOSE FURNITURE FOR THE COMMON
SPACES OF THE DEPARTMENT.

In this stage, we want you to choose the elements of furniture which will be needed to make the COMMON GROUP SPACES of the department pleasant.

In order to do it, make your choices from the list of available elements --in section IV.

The number of relevant pieces of furniture will tend to be fairly small.

STEP 3: SPECIFY ENCLOSURE ELEMENTS, STILL
NEEDED, FOR COMPLETING THE
ARRANGEMENT OF THE DEPARTMENT, AS A
WHOLE.

STEP 4: SPECIFY DIMENSIONS FOR ALL
ADDITIONAL ITEMS.