

Module 4

Facilities Planning

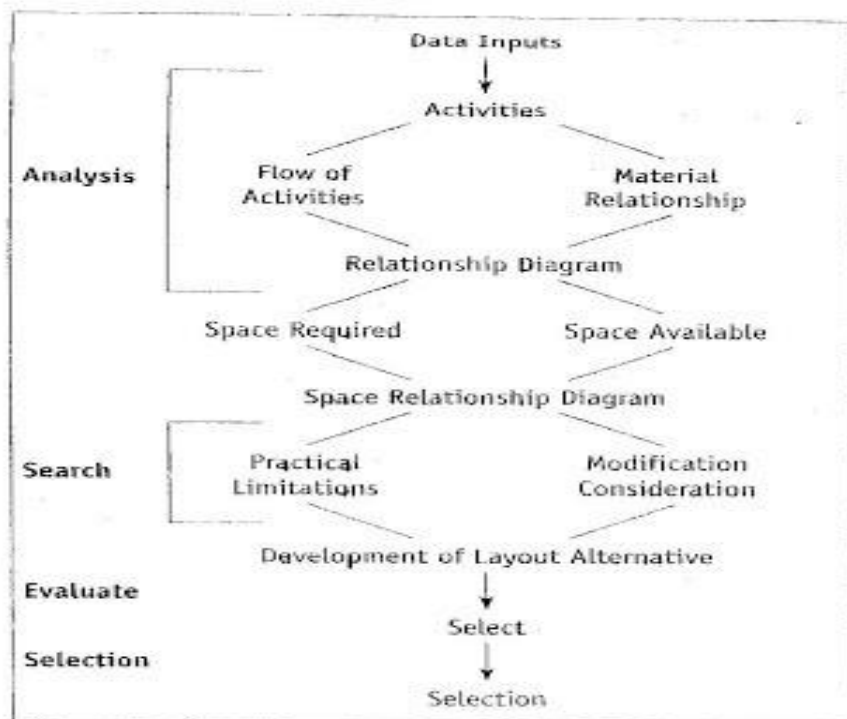
Systematic layout planning (SLP)

Systematic layout planning is an organized way to conduct layout planning, it consists of a framework of phases, a pattern of procedures and a set of conventions for identifying, rating and visualizing the elements and areas involved in a plan.

Each layout rests on three fundamentals

- **RELATIONSHIPS** – degree of closeness desired among things
- **SPACE** – the amount, kind, shape of config of the things to be laid out
- **ADJUSTMENTS** – arrangement of things into a realistic best fit

These are the heart of any layout plan regardless of products, processes or size of project.



Data input of the pattern is most significant in a process and by planning the layout around the sequence and intensity of material movement we attain a progressive flow through the areas involved. In addition many supporting service areas must be planned & integrated, thus developing activity relationships.

These are combined into Flow and / or Activity Relationship diagram. Here activities, departments or areas are geographically related to each other without consideration of actual space required.

Next the space requirements are developed from process machinery and equipment necessary or service facilities involved Area requirements must be balanced against space available.

Then the area allowed for each activity is hung on the activity relationship diagram to form a Space Relationship Diagram.

This is essentially a layout but is not effective unless adjusted or manipulated to integrate with space and modifying considerations hence we get various alternatives and each must be tested against practical limitations like

- cost
- safety
- employee preference

Remember each alternative has to work the problem lies in which one to select at this point a cost analysis of some kind should be made for comparison and justification as a result one may be chosen although frequently a modification or combination of two or more layouts may be chosen this completes phase II !

Tie in PQRST:

The product designs and sales forecasts must be woven together with PQ analysis also called as product mix or volume variety. A specific analysis of product mix, along with Routing, services and times leads to demarcation of individual activities or workgroups hence a final layout

FLOW OF MATERIALS

Routing means how an item is made – its process this is established by operations and sequences that will best produce P & Q wanted in optimum T This yields the basic data for analyzing the flow of materials “**Allan H Mogensen**” developed a simplification check which challenges each step in the process routing as below

- ELIMINATE- is the operation Necessary or can it be eliminated
- COMBINE – can the operation be combined with some other action or operation
- CHANGE SEQUENCE, PLACE OR PERSON- Can these be changed or rearranged ?
- IMPROVE DETAILS -can the method of operation or equipment be improved

