



Ask The Experts!

Brad Bauman, VMEC Professional Manufacturing and Business Growth Advisor

[bbauman@vmec.org/](mailto:bbauman@vmec.org) (802) 353-6836

Question: My General Manager just put me in charge of the plant layout for our company's planned expansion. HELP!

My Answer: First, don't panic! Now is your chance to correct all the floor plan issues you've struggled with for years. You know the processes at your plant. You spend weeks developing the "ideal" detailed floor plan and you can't wait to present it to management. But when the day comes, they see things differently and send you back to the drawing board. After hundreds of hours of drafting, six revisions later, you still don't have an approved layout. You're starting to wonder if there is a better way.

This scenario is not uncommon. Sometimes the process is shortened by a CEO that is good at making quick decisions, but this can end in a plant layout that is worse than the original. What makes plant layout so difficult? It's all about flow, right? Product comes in one door, flows through the plant and exits out another door. It's so simple. The fact is it's often much more complicated than that. What's important when determining the ideal floor plan is different depending on who you ask. Yes, for production, it's mostly about flow, but supervisors may need visibility to multiple areas depending on the areas for which they are responsible and these areas may not be in the same proximity when the plant is laid out strictly with product flow in mind. Loud or dangerous operations may need to be isolated from other operations regardless of flow. Access to common tooling may need to be considered. The Maintenance Department will have suggestions that are unrelated to product flow such as access to utilities or ceiling height. And even the Sales Department gets involved when it comes to customer visits and plant tours. Will our new layout support anticipated changes in the market? We want this new floor plan to meet the needs of the organization today as well as five to ten years down the road.

There is much more to the equation than how product flows through the plant. Even if you decide that, in your situation, all that matters is flow, how do you sort out the flow of a complex manufacturing process that includes forklift traffic, tote box hand carries and overhead crane moves?

So what is the answer? How do you incorporate everyone's input while reducing the number of costly drawing changes? One answer is a process referred to as Systematic Layout Planning or SLP. Systematic Layout Planning is a highly structured process designed to gather input from all stakeholders and prioritize this input early in the process before a draftsman gets involved. Several simple block diagrams are developed and rated and presented to the final decision makers. Only after the entire team and the final decision makers have reached consensus is the detailed floor plan developed. By doing this, many hours of costly drafting are eliminated and even if there are aspects of the final floor plan that some consider to be less than ideal, they have participated in the design process and understand the tradeoffs and compromise that took place along the way. SLP is truly a collaborative process that simultaneously considers both flow relationships and non-flow relationships between the different areas in the plant. And SLP is not limited to factories. **This process works for any organization that wants to maximize the layout of a complex floor plan such as a hospital or office space; the system can be applied anywhere.**

If you are considering revising your floor plan and would like more information about Systematic Layout Planning we encourage you to attend our full day workshop *Introduction to Systematic Layout Planning and Work Cell Design* or contact VMEC for an onsite visit to discuss your specific plant layout needs.