



by Craig Corsi, Lean/Continuous Improvement Specialist

Consider 3P when relocating, expanding, or introducing a new product

The Lean methodology for plant layout and process design is formally known as the Production Preparations Process (3P). It is a powerful means of taking a big-picture look at how a product is designed and manufactured. It guides companies through the creative process of generating ideas, and then whittles the ideas down to one that will be implemented.

A 3P project can focus on either the process or on the product design. The goal is to finish with a good idea of how the design should look, and a good understanding of how it will be built. A 3P project is traditionally done with a facility expansion or relocation, but may also be used for a new product release. The purpose of a 3P event is to create products that are designed to be built in a flow operation. This is very similar to design for manufacturability.

When to use 3P

- When rolling out a new product
- When experiencing a significant change in demand that requires an overhaul of a production line
- When moving production to a new location or expanding upon your current facility
- When needing a major design change due to external competition
- When you need to free up a significant amount of production space

Phases of 3P

- **Define the problem.** Every project should start with an understanding of the need.

- **Set goals and objectives.** The production preparation process will often have significant profit and loss ramifications. Projects should have clear goals and objectives, as they are often closely tied to corporate strategies.
- **Analysis and diagramming.** This step will involve gathering a significant amount of information about the processes and assembly of the product. It will often involve product layouts.
- **Screen and vet the ideas.** This is a prioritization step that whittles down the best ideas. Most refined production preparation processes will have a decision matrix specifically designed to compare ideas.
- **Select the best ideas.** This step changes the options from concepts on paper to more developed designs, complete with process flow. It can be a mock-up of the new product or process, but it must prove that the concept works.
- **Choose the best process/design.** The ideas are compared and often merged into a final result that will act as a blueprint for how the product should be built.

These steps are very high level, most formal processes will have supporting processes and documents to streamline the event, and provide clear structure to the projects. A solid 3P project can significantly reduce the amount of production problems a poor design or process will have down the road, as well as greatly streamline the production processes.