

2

Standardization: Steps and Prerequisites

2.1 RATIONALIZATION CRITERIA

It is important to rationalize the production line before implementing mass customization or any of the agile paradigms: just-in-time, build-to-order, flexible manufacturing, continuous flow manufacturing, or niche market competition. This step would be parallel to simplifying product designs before automating assembly, and simplifying the information structures before computerizing. Failure to perform these basic prerequisites leads to the industrial equivalent of ‘paving the cow paths’.

Rationalizing product lines may improve company profits by eliminating and/or outsourcing products that are currently depressing company profits. It will also lead to better understanding of company core competencies, help prioritize continuous improvement activities and facilitate better strategic planning.

When rationalizing products, one has to be sure to rationalize families of products rather than single products. Families of products do not necessarily share the same page in the catalogue, but do share some similar products; hence they could be considered together if their processing is almost the same with some minor differences that have little cost or throughput consequences.

The following techniques can be used to rationalize product lines for existing products. The techniques are presented in order of the most objective first and the most subjective last.

1. Sales volume—plot all products in Pareto order
2. Sales revenue—plot all products in Pareto order
3. Part commonality—plot products by percentage of common parts
4. Cost of variety—plot all products
5. True profitability—plot all products
6. Polls and surveys—plot responses
7. Factory processing
8. Functionality
9. Customer needs
10. Core competencies
11. Clean-sheet-of-paper scenario
12. Future potential